

Digital Food Marketing to Children and Adolescents

Problematic Practices and Policy Interventions

Kathryn Montgomery, PhD
American University

Jeff Chester, MSW
Center for Digital Democracy

October 2011



ChangeLab Solutions
Law & policy innovation for the common good.

nplan

NATIONAL POLICY & LEGAL ANALYSIS NETWORK
TO PREVENT CHILDHOOD OBESITY

The National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN) is a project of ChangeLab Solutions. ChangeLab Solutions is a nonprofit organization that provides legal information on matters relating to public health. The legal information in this document does not constitute legal advice or legal representation. For legal advice, readers should consult a lawyer in their state.

Support provided by a grant from the Robert Wood Johnson Foundation.

© 2012 ChangeLab Solutions

Cover photos from iStockPhoto.com and Elisa Laird-Metke.

Table of Contents

4	Executive Summary
6	Introduction
11	Digital Marketing Practices
11	<i>Immersive Techniques</i>
13	<i>Social Media Techniques</i>
16	<i>Data Collection and Behavioral Targeting</i>
19	<i>Location Targeting/Mobile Marketing</i>
23	<i>Neuromarketing</i>
26	Emblematic Campaigns: Case Studies
27	<i>Doritos Hotel 626 and Asylum 626</i>
32	<i>McDonald's Avatar Campaign</i>
36	<i>Mountain Dew's DEWmocracy Campaign</i>
42	<i>Coca-Cola's My Coke Campaign</i>
49	Creating a Fair Marketing Framework
55	Endnotes

Executive Summary

Food and beverage marketing has undergone a dramatic transformation in the digital age. Fast food, snack, and beverage companies are drawing from an expanding toolbox of sophisticated online and social media marketing techniques, and the next few years will see an explosive rise in new tactics targeted especially at young people.

Today's marketing efforts are increasingly multidimensional—simultaneously and purposefully integrated into a range of social media and online applications: Facebook, Twitter, YouTube, gaming, and mobile communications. The goal of contemporary marketing is not simply to expose young people to ads, but rather to foster ongoing *engagement*—by encouraging them to interact with, befriend, and integrate brands into their personal identities and social worlds.

These rapid developments call for comprehensive review and analysis in light of their potential consequences on the childhood obesity epidemic. This report is designed to help policymakers, scholars, health professionals, industry leaders, and consumer advocates develop and refine safeguards for protecting young people from inappropriate marketing in today's contemporary marketplace.

Of particular concern are adolescents, who have been largely overlooked in the public policy debates and in the self-regulatory initiatives developed by the food and advertising industries. Over the past four decades, obesity rates among U.S. teenagers have quadrupled. Today one out of three teens is either overweight or obese, with obesity rates significantly higher for African-American and Hispanic adolescents than for whites. Because of young people's avid use of new media, food and beverage marketers are aggressively targeting teens, particularly ethnic youth. Recent scientific research suggests that adolescents may be vulnerable to many of the new interactive marketing and advertising practices.

The report presents five broad categories of digital marketing techniques that are used routinely by fast food, snack food, and soft drink companies to target children and adolescents. Some of these practices are inherently unfair, others raise serious privacy concerns, and still others are deceptive. Several of the techniques are purposely designed to tap into unconscious processes, thus bypassing the rational decision making that is at the heart of our system of fair marketing. The categories this report examines are:

1. *Augmented reality, online gaming, virtual environments, and other immersive techniques* that can induce “flow,” reduce conscious attention to marketing techniques, and foster impulsive behaviors
2. *Social media techniques* that include surveillance of users' online behaviors without notification, as well as viral brand promotion
3. *Data collection and behavioral profiling* designed to deliver personalized marketing to individuals without sufficient user knowledge or control

4. *Location targeting and mobile marketing*, which follow young peoples' movements and are able to link point of influence to point of purchase
5. *Neuromarketing*, which employs neuroscience methods to develop digital marketing techniques designed to trigger subconscious, emotional arousal

The report also presents four detailed case studies of recent and current campaigns by major food brands—Doritos, McDonald's, Mountain Dew, and Coca-Cola—that integrate these practices into coordinated digital marketing promotions to target children and adolescents. The final section of the report discusses possible regulatory remedies for addressing the problems raised by these practices.

The Federal Trade Commission (FTC) has the authority to regulate advertising practices that are either deceptive or unfair, often acting on citizen complaints against particular companies. Advocates and others can file complaints against food and beverage companies that engage in such practices. Given the key role that data collection and behavioral targeting play in interactive food marketing, privacy issues raised by some of these new digital marketing techniques warrant particular attention.

However, a broader effort will be necessary to ensure adequate safeguards for children and adolescents in the rapidly expanding digital marketplace. These efforts should include new legal and regulatory approaches that can take into account both contemporary marketing practices and recent research on child and adolescent behavior. There is an urgent need to revisit the cognitive defense model that has provided the theoretical underpinning for both research and policy on children's advertising since the 1970s. It seems particularly out of date in light of the strategies used by today's digital marketers, many of which purposefully tap into unconscious, implicit, and social processes. By focusing primarily on the conscious mind, television advertising, and the vulnerabilities of young children, both U.S. regulatory policy and industry self-regulation have been eclipsed by the transformative impact of technological and commercial innovation in the digital marketing arena.

The present obesity crisis presents a window of opportunity to create a new regulatory framework for digital marketing to youth. A new framework will need to take into account the full spectrum of advertising and marketing practices across all media, and apply to all children, including adolescents. Intervention strategies will need to be inclusive and multifaceted, involving a wide range of government, public, and industry stakeholders at both the state and federal levels.

At the core of this new framework should be a set of *fair marketing principles and practices*. The goal should be to balance the ability of young people to participate fully in the digital media culture—as producers, consumers, and citizens—with the governmental and industry obligation to ensure that youth are not subjected to unfair and deceptive marketing, particularly for unhealthy products. These principles should also be designed to ensure that young people are socialized to be responsible consumers in the growing digital marketplace and to understand their rights.

Introduction

In 2008, when Frito-Lay's Doritos brand wanted to relaunch two older flavors that had been discontinued in the 1980s, the company created a digital marketing campaign called "Hotel 626" as part of a Halloween promotion to bring the defunct chips "back from the dead." The online campaign was targeted at teenagers, using a variety of under-the-radar techniques to entice them to "check in" to the online hotel (which was only open from 6 p.m. to 6 a.m.). By entering their names and email addresses, teens were immediately immersed in a nightmarish movie, trapped in a hotel room with frightening screams and pounding heart beats. They could escape only through a series of unpleasant challenges that required them to use their webcams, microphones, and mobile phones. Live Twitter feeds enabled users to share their experiences in real time, and they were encouraged to post and share photos of themselves as they participated. A custom Facebook app prompted teens to "send a scare" to friends in their social networks.

With a budget of less than \$1 million, the Hotel 626 campaign had a significant impact. By the following spring, more than 4 million people in 136 countries had visited the site and played the game, with an average stay of 13 minutes, making it "the most visited digital content property of 2008," according to the ad agency—although the site never mentioned the name of the product itself. Still, the relaunched flavors sold out, selling 2 million bags in just three weeks. Hotel 626 was awarded the Cyber Lion at the 2009 Cannes Advertising Awards—perhaps the most prestigious prize in marketing.¹ The campaign was so successful that it spawned an even more elaborate and terrifying sequel the following year.²

* * * * *

Frito-Lay and its parent, PepsiCo, are at the forefront of digital marketing, developing strategies designed to take advantage of the ways in which today's youth interact with new media. Young people are an especially lucrative market for advertisers; according to an August 2010 meeting of the Advertising Research Foundation, "kids' purchasing influence" was \$700 billion in 2009, up from \$50 billion in 2000.³ Along with other youth marketers, the food and beverage industries are investing large sums of money on research that closely monitors the ways in which digital media have become so integrated into the social relationships, behaviors, and buying habits of children and teenagers.⁴

Food and beverage companies are able to draw from an expanding toolbox of sophisticated interactive techniques that are transforming the nature of marketing in the digital age. Today's contemporary marketing efforts are increasingly multidimensional—simultaneously and purposefully integrated into a range of social media and online applications: Facebook, Twitter, YouTube, gaming, and mobile communications. Social media applications are deployed to encourage interactive, word-of-mouth messaging, endorsement, and "community-building" around a brand.

Sophisticated interactive techniques are transforming the nature of marketing in the digital age.

Advances in online production bring a cinematic, deeply personalized, and experiential quality to digital marketing.

Marketers seek not simply to expose young people to ads, but rather to foster ongoing *engagement*—by encouraging them to interact with, befriend, and integrate brands into their personal identities and social worlds.⁵ In some cases, this includes offering incentives to encourage youth to participate in developing new products, designing packages, and creating online advertising that they then distribute among their friends. Advertisers are using the tools of neuroscience to design campaigns that trigger subconscious and emotional responses. Employing Web analytics, conversation targeting, and other new forms of digital surveillance, marketers can now track individuals online, across media, and in the real world, monitoring their interactions, social relationships, and locations. Increasingly, these various forms of analysis can take place in real time, following users' movements and behaviors from moment to moment and in the process assessing users' reactions to marketing techniques. As a result, marketing messages can be tested, refined, and tailored for maximum effect.⁶

Contemporary marketing encourages people to interact with, befriend, and integrate brands into their personal identities and social worlds.

The next few years will see a dramatic expansion of digital food and beverage marketing, providing the industry an unprecedented opportunity to promote products linked to the youth obesity crisis. The major food and beverage companies are playing a leading role in shaping how new media platforms and services are designed. They are developing and implementing a new generation of marketing techniques, many of which operate below the level of parental or public awareness and push the boundaries of appropriateness. The ongoing transformation of food and beverage marketing poses serious threats to the health and well-being of young people, and requires both new thinking and comprehensive agendas for policy intervention and research.

Research has documented that food marketing is an important contributor to young peoples' health behaviors.⁷ Based on an analysis of hundreds of studies, the Institute of Medicine's comprehensive report, *Food Marketing to Children and Youth: Threat or Opportunity?*, found that most food and beverage marketing targeted at young people promotes products that are high in sugars, fats, and salt and low in nutrients, and that marketing influences children's preferences, purchase requests, and ultimately what they consume.⁸

The industry has acknowledged its responsibility to children's healthy eating by developing self-regulatory guidelines for food marketing to children. For example, in 2006, major food and beverage companies, working with the Better Business Bureau, launched the Children's Food and Beverage Advertising Initiative (CFBAI). A self-regulatory effort focused on food marketing to children younger than 12, CFBAI oversees a number of different pledges made by the 17 companies currently participating.⁹

This report is designed to help policymakers, scholars, health professionals, industry leaders, and consumer advocates develop and refine safeguards for protecting young

people from inappropriate marketing in today's contemporary marketplace. Its purpose is to identify, analyze, and document a set of digital marketing practices that pose particular threats to children and youth, especially when used to promote foods that are known to contribute to childhood and adolescent obesity. Some of these practices are inherently unfair, others raise serious privacy concerns, and still others are deceptive. Several of the techniques are purposely designed to tap into unconscious processes, thus bypassing the rational decision making that is at the heart of our system of fair marketing. As a consequence, such advertising may undermine other efforts to teach young people about good eating habits.

The impact of food marketing warrants particular attention where adolescents are concerned. Over the past four decades, the level of obesity among U.S. adolescents has grown at an alarming rate, quadrupling from 4.5 percent in the mid-1960s to 17.6 percent by 2006. Today, one of three teens is either overweight or obese.¹⁰ The teen years are a critical developmental period, during which consumer and eating behaviors are established that may well last throughout an individual's life.¹¹

While U.S. advertising policy has a long tradition of regulatory and self-regulatory safeguards for children under the age of 12, teens have been largely overlooked in the regulatory arena.¹² However, a growing body of research suggests that biological and psychosocial attributes of adolescence may play an important role in how teens respond to marketing, making this age group more vulnerable than they have been thought to be in the past.¹³ Research on brain development, for example, has found that the prefrontal cortex, which controls inhibitions, does not fully mature until late adolescence or early adulthood.¹⁴ In addition, children entering puberty experience hormonal changes that make them more receptive to stressful environmental stimuli. As a consequence, at the same point in their lives when their biological urges are particularly intense, adolescents have not yet acquired the ability to control these urges.¹⁵ They also experience greater emotional volatility than either younger children or adults, including frequent and intense negative emotions and fewer positive emotions. These factors may help make teens more susceptible to advertising, especially when they are distracted, are in a state of high arousal, or are subjected to peer pressure.¹⁶

Some practices are deceptive; others raise serious privacy concerns.

Because of their avid use of new media, adolescents are also primary targets for digital marketing, whose practices may have a powerful impact on their behaviors.¹⁷ According to scholars at the University of California at Irvine, because digital marketing “purposefully evokes high emotional arousal and urges adolescents to make consumption decisions under high arousal,” it can exacerbate existing tendencies among young people, who often make poor decisions when they are emotionally aroused. Teens are particularly likely to make unwise choices about such risky products as junk food, tobacco, and alcohol. Adolescents with low levels of self-esteem are more inclined to rely on advertising to bolster their self-image; moreover, “when they feel badly about themselves, they may impulsively consume junk food for mood repair.”¹⁸

Obesity rates are significantly higher for African-American and Hispanic adolescents than for whites, and ethnic youth are targeted aggressively by the food, beverage, and fast food industries.¹⁹ “Hispanics have become the most important U.S. demographic growth driver in the food, beverage and restaurant sectors,” notes a research group backed by McDonald’s, Kraft, PepsiCo, Subway, ConAgra, Nestlé, Sara Lee, Burger King, Diageo, Heineken, and others.²⁰

According to marketing scholar Sonya Grier and her colleagues, marketing targeted at African-American and Hispanic youth can have a particularly powerful impact on their consumption choices, influencing both awareness and availability of food-related information and options and contributing to perceived norms.²¹ Compared with other young people, ethnic minority youth view marketing more positively and are more influenced by it.²² Both African-Americans and Hispanics are more engaged than Whites in many new media platforms, a trend that is helping to fuel the growth of a large infrastructure of multicultural digital marketing designed to reach and engage this important demographic sector.²³

In the following pages, we present five broad categories of digital marketing practices that are used routinely by fast food, snack food, and soft drink companies to target children and adolescents. Within each of these categories, we will identify techniques that are particularly problematic when used to target young people. We will then present four detailed case studies of recent and current campaigns by major food brands that integrate these practices into coordinated digital marketing promotions to target children and adolescents. In the final section of the report we will discuss possible regulatory remedies for addressing the problems raised by these practices, and will offer a framework for developing fair marketing principles that can guide both industry leaders and government regulators in ensuring adequate safeguards for youth.

We issue this report during an intense period of highly polarized debate over food and beverage marketing to children. In the 2009 Omnibus Appropriations Act, Congress directed four agencies—the Federal Trade Commission, Food and Drug Administration, Department of Agriculture, and Centers for Disease Control and Prevention—to form an Interagency Working Group on Food Marketing to Children (IWG), charging the IWG with developing recommendations to industry about the nutritional profile of food and beverage products that are appropriate to market to children and adolescents.²⁴ In April 2011, the IWG released for public comment draft recommendations, which garnered intense criticism from the industry.²⁵ Food marketers, ad trade groups, and media companies launched a high-profile lobbying campaign to pressure policymakers into withdrawing or drastically modifying the recommendations.²⁶ Industry retained a well-known First Amendment expert to produce a memo arguing that the IWG recommendations violate marketers’ free speech rights.²⁷ In response, 38 law professors, including several of the nation’s leading First Amendment scholars, wrote a letter to the IWG affirming that government recommendations for voluntary guidelines—which industry is free to ignore—pose no threat to any rights guaranteed by the First Amendment.²⁸

In their campaign against the IWG, industry leaders framed government recommendations as regulations. In that vein, they invoked two recent Supreme Court decisions—*Sorrell v. IMS Health, Inc.*, and *Brown v. Entertainment Merchants Association*—arguing that the cases severely limit the government’s ability to regulate advertising targeted at children and adolescents.²⁹ First Amendment experts at the National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN), however, dispute the contention that these decisions foreclose any future government restrictions on advertising.³⁰ They note that *Sorrell* underscores the importance of protecting privacy, clearly validating “coherent” policies with a “purpose or design” aimed at safeguarding individual privacy interests. And *Brown* confirms that “existing categories of unprotected speech”—which include inherently deceptive commercial speech—remain outside the haven of the First Amendment. So rules against deceptive marketing are still very much in force.

Many of the marketing practices we highlight in this report have been purposely designed to tap into the developmental needs and behavioral practices of young people.³¹ Yet most consumers—including youth—may not be fully aware of how digital marketing actually works. Even so-called digital natives, who are growing up as enthusiastic participants of the new media culture, may not understand the powerful forces and underlying operations that are shaping contemporary marketing not only online, but increasingly across all media. Because there is still considerable experimentation and innovation in the digital marketing arena, we have a unique opportunity for a national dialogue that could help forge a consensus on a set of principles and best practices for marketing to youth in the digital era.

In conducting the research for this report, we have relied on several different sources, including: 1) ongoing analysis of trends and contemporary practices in the digital marketing industry, including reports, trade publications, academic articles, and other materials, with a particular focus on the food and beverage sector; 2) in-depth investigation of marketing campaigns by several major corporations in the food and beverage industry; and 3) review of relevant scientific literature regarding marketing impact, child and adolescent development, racial and ethnic minorities, and health.³² While our research has been informed by some key legal concepts, it is not a formal legal analysis.³³ Rather, it is an examination of contemporary practices that should assist a variety of stakeholders in developing effective regulatory and self-regulatory intervention strategies.

Digital Marketing Practices

In this section of the report, we present five broad categories of digital marketing practices that are used routinely by fast food, snack food, and soft drink companies to target children and adolescents:

- *Augmented reality, online gaming, virtual environments, and other immersive techniques* that can induce “flow,” reduce conscious attention to marketing techniques, and foster impulsive behaviors
- *Social media techniques* that include surveillance of users’ online behaviors without notification, as well as viral brand promotion
- *Data collection and behavioral profiling* designed to deliver personalized marketing to individuals without sufficient user knowledge or control
- *Location targeting and mobile marketing*, which follow young peoples’ movements and are able to link point of influence to point of purchase
- *Neuromarketing*, which employs neuroscience methods to develop digital marketing techniques designed to trigger subconscious, emotional arousal

Within each of these categories, we identify techniques that are particularly problematic when used to target young people.

Immersive Techniques

Through the use of state-of-the-art animation, high-definition video, and augmented reality, marketing campaigns can create a three-dimensional experience, surrounding and engrossing a person with powerful, realistic images and sounds and fostering a subjective feeling of being inside the action, a mental state that is frequently accompanied by “intense focus, loss of self, distorted time sense, effortless action.”³⁴

Interactive video games and other immersive environments can also induce a state of “flow,” causing individuals to lose any sense of the passage of time.³⁵ Augmented reality deliberately blurs the lines between the real world and the virtual world, making the experience even more compelling, intense, and realistic. It also can be personalized for individual users.³⁶

Immersive marketing techniques routinely integrate advertising and “content” in such a way as to make the two indistinguishable.³⁷ Marketers can seamlessly incorporate brands into the flow of the immersive experience, using a highly sophisticated, finely tuned strategy that combines product placement, behavioral targeting, and viral marketing to foster deep, ongoing relationships between brands and individuals. Digital marketers have perfected software for tracking consumer behavior in video games and other interactive platforms.³⁸ These techniques enable marketers to create particularly intense experiences, plunging users into the center of the action through the use of avatars or “first-person shooter” devices that induce a strong sense of

subjectivity and heighten the emotional arousal. Increasingly, immersive marketing campaigns are incorporating social media, which is appealing to teens, who seek peer relationships and are more easily influenced by their peers. The combination of all of these elements creates an experience that is designed to extend the engagement with the game—and the brand—over long periods of time. Such marketing techniques may be particularly challenging for young people to resist.

The industry is carefully monitoring the impact of immersive environments on receptivity to marketing. As one report explained, advertising in the popular gaming format, Xbox LIVE, is able to use such immersive gaming environments to produce significant results in consumer behavior: “The context—(a deeply immersive, HD entertainment experience)—and the behavior (a desire to engage and interact with the content that is being delivered through that immersive experience, usually gaming but increasingly advertiser-sponsored content) can combine to create a double-whammy of sorts. That’s why we consistently see double-digit brand lifts and industry-leading CTRs [click-through-rates].”³⁹

Microsoft conducted research on the impact of Doritos and other products in games, finding that “video game ad campaigns evoke stronger emotional connections with consumers and more positive emotional association from the brands.”⁴⁰ Another study concluded that “the more immersive an environment is, the more likely a player is to have intent to buy a product they see.” Virtual worlds are particularly effective at inducing a state of flow, because they “create opportunities for participants to lose track of time in enjoyable brand-related activities.” This mental state “contributes to a participant’s attitude about a brand. Ultimately, this strongly influences the participant’s intention to purchase a product from that brand.”⁴¹

Marketing through immersive environments is often purposely aimed at circumventing conscious processing of product attributes and eliciting emotional responses. Digital marketing routinely relies on *implicit persuasion*, involving mental processes that “are activated automatically and effortlessly, without intention or awareness, and are thus difficult to control.”⁴² As behavioral researchers have noted, the implicit-persuasion model may explain why adolescents, even with their greater cognitive capacities and skepticism, may not be any better able to resist some advertising appeals than younger children and, indeed, may be even more vulnerable to some types of digital marketing. “Given what we know about implicit persuasion in adults,” explains Agnes Nairn, author of the book *Consumer Kids*, “it is highly likely that the engaging nature of contemporary interactive marketing which is hard to consciously identify, associated with rewarding stimuli and frequently repeated, will automatically elicit implicit persuasion and discourage the deployment of cognitive resource.”⁴³

If brands are “embedded” in an entertainment context, as with in-game advertising or other immersive environments, they can still be influential without being consciously recognized or recalled.⁴⁴ Moreover, the integration of advertising and

Augmented reality deliberately blurs the lines between the real world and the virtual world.

content, which has become a dominant feature of digital marketing, means that young people's attention "may be largely engaged with the interactive experience," as scholar Louis Moses explains. As a consequence, their ability to attend consciously to the marketing techniques "may be processed only peripherally, and thereby less deeply."⁴⁵

When online immersive environments are used to promote unhealthy food and beverages to young people, their impact on health behaviors may be even more powerful. Snack foods and other products with high fats, sugars, and salts are often inserted seamlessly into immersive virtual environments and interactive games.⁴⁶ These environments may act as contextual cues that could trigger food cravings. To the extent that these experiences are habitual, as they often are with interactive games and virtual worlds, their impact could be further intensified through repeated interactions.

These so-called rewarding foods—those that are high in sugar, fat, and salt—"are altering the biological circuitry of our brains," explains Dr. David Kessler, former Food and Drug Administration Commissioner, in his book, *The End of Overeating: Taking Control of the Insatiable American Appetite*. "Sugar and fat are reinforcing, and cues, quantity, concentration, and variety all increase that reinforcement value."⁴⁷ Food and beverage manufacturers continually research and perfect these combinations of flavors and tastes in order to maximize their appeal to consumers.⁴⁸ Cues may include emotional memories of a particular kind of food or other kinds of positive associations. Over time, such responses become habitual.⁴⁹ These ingredients, as well as other food additives, may also trigger an addictive process in the brain in ways that are similar to how drugs of abuse work.⁵⁰

Digital marketing routinely relies on "implicit persuasion," involving mental processes that are activated automatically.

Social Media Techniques

Online social networks are among the most popular digital media platforms for teens, with more than three-fourths of U.S. online youth ages 12 to 17 participating in them.⁵¹ Facebook is reported to have a global user base of more than 750 million active users.⁵² Social media resonate strongly with many of the fundamental developmental tasks of adolescence, such as identity exploration, social interaction, and autonomy.⁵³ They provide an accessible, user-friendly template for creating and expressing one's public and private persona in cyberspace.⁵⁴ Many teens rely on social networks to seek help for their personal problems, to explore their own sexual identities, to find support groups for handling emotional crises in their lives, and sometimes to talk about things they do not feel comfortable or safe discussing with their own parents.

Marketers have developed strategies to take advantage of this special relationship between young people and social networks. Social media platforms provide digital marketers with a palette of new interactive techniques that were not possible in the past. An entire infrastructure has emerged—from specialty ad agencies to tracking and measurement services to "third-party developers"—to facilitate what is now called social media marketing. Food and beverage companies such as Coca-Cola, PepsiCo, Burger King, and McDonald's are among the pioneers of this new marketing strategy.

Social networks offer “brand-building opportunities far beyond what’s available through traditional advertising.”⁵⁵ Among the many social media marketing practices are two that raise questions about unfairness, deception, and invasion of privacy:

- 1) surveillance of social interactions and relationships without users’ knowledge; and
- 2) brand endorsement through viral marketing without clear disclosure to consumers.

While both practices are becoming widespread across the digital marketing arena, their use in social media is particularly troubling.

Social Media Surveillance

Social networking platforms give marketers access to the relationships among individuals and communities in ways that were never before possible. Marketers routinely monitor and tap into what is known as the “social graph,” the complex web of relationships among individuals facilitated and tracked online.⁵⁶ Using a host of new techniques and measurement tools, social media marketers can know the breadth and depth of these online social relationships, as well as how these relationships function, understanding who influences whom, and how the process of influence works. Social media marketers can now—on an almost second-by-second basis—track and analyze the online behaviors and expressions of consumers, including the individuals or sources of greatest peer influence. Among the many social media surveillance practices are the following:

- **Conversation mining**, by which marketers can track and analyze “activity, sentiment, author demographics, and emerging conversational themes,” generating “statistics for each topic being analyzed, across activity [number of conversations], sentiment [positive, negative, neutral], conversational themes, and the source of conversations” and advanced analytics (which “automatically identifies key influencers by topic, analyzes specific mentions and interactions with brands, campaigns, media, and provides micro-blog context”)⁵⁷
- **Conversation targeting**, whereby marketers purposely insert themselves into online social interactions, seeking to “join and influence the conversation,” “interact with socially active brand advocates” and “invite, communicate and influence the influencers in a respectful and engaging way to drive purchase behavior”⁵⁸
- **Word-of mouth analytics**, which enable marketers “to dig down into individual messages for insights,” and to provide “a thorough set of data points to represent how content flows through a community... [revealing] [t]he actual paths that the message spreads across [and] [e]xactly who is getting the message and who is spreading it”⁵⁹
- **Buzz monitoring**, which involves the analysis of messages and opinions expressed across platforms and websites, including, message boards, online communities, video sharing sites, and social networks; such conversations can be analyzed by “volume, emotion, favorability, specific issue and penetration among influential consumers”⁶⁰

Social media marketers can now—on an almost second-by-second basis—track and analyze consumers’ online behaviors.

These forms of surveillance should be troubling for all consumers who are interacting with others on social networks. However, the practices raise serious concerns when used to target children and teens, many of whom are living their lives in these new online spaces, unaware of how their interactions with friends are being closely monitored by marketers.

While Facebook and other social media companies have recently instituted privacy controls in response to public and consumer group pressure, these platforms fail to inform users of the nature and extent of surveillance by marketers. Nor do they explain the massive amount of data collection and individual targeting that takes place, often by third parties, on social networking platforms. (See discussion below of data collection and behavioral profiling.) For example, Facebook works with more than 2.5 million app developers, with 20 million applications being installed each day.⁶¹ These apps can have access to a wide range of user profile information, including “your and your friends’ names, profile pictures, gender, user IDs, connections, and any content shared using the Everyone privacy setting”—as well as age and location.⁶²

Viral Marketing

By its very nature, social media marketing is designed to facilitate, accelerate, and in many ways automate the process of brand or product endorsement among young people whose lives and social interactions are linked and monitored online. Viral marketing is a core principle of social media advertising. By tapping into the online social graph, marketers can orchestrate elaborate, instantaneous viral marketing campaigns, identifying the individuals who are most likely to create their own user-generated marketing messages among their wide circle of social relationships and providing incentives to encourage brand promotion.

Some of the largest snack food and soft drink brands, including Doritos and Mountain Dew, have designed sophisticated campaigns to promote user-generated advertising, which can be promoted virally within social networks. (See detailed case studies of both campaigns later in this report.) Social media marketers employ a variety of incentives, such as contests, prizes, and free products, to encourage individuals to create and promote ads that are distributed among friends and acquaintances online. The practice is expanding to an array of new platforms—including blogs, mobile phones, online video, and games.

These marketing practices call for particularly close scrutiny by regulators, especially when used to target adolescents, for whom peer relationships are powerful and influential and may contribute to impulsive and unhealthy behaviors.⁶³ Moreover, user-generated marketing messages—whether in the form of word-of-mouth mentions, blog entries, or online videos—are rarely, if ever, identified as sponsored promotions, even in cases where the creators of those ads were compensated through products or other incentives by the companies developing the campaigns. The Federal Trade Commission has had rules governing endorsement for many years,

and the agency recently updated its guidelines to make them more applicable to digital media, with particular focus on user-generated media. The new rules also strengthen requirements for disclosures.⁶⁴ Food company viral marketing and user-generated campaigns that target young people need to be analyzed to determine whether they are in compliance with these regulations.

Data Collection and Behavioral Targeting

Data collection is at the core of contemporary digital marketing, as individual consumers are tagged with unique identifiers when they engage with online services, and then tracked, profiled, and targeted for personalized marketing and advertising as they navigate the Web.⁶⁵ Advertisers and marketers have developed an array of sophisticated and ever-evolving data collection and profiling applications, honed from the latest developments in such fields as semantics, artificial intelligence, auction theory, social network analysis, data mining, and statistical modeling. Powerful analytical software mines data from Internet, Web, and social media applications, identifying patterns of user behavior to help craft and refine marketing strategies.

In the last several years, online data collection and targeting have entered a new era.⁶⁶ Growing investments in online marketing and data collection companies are expanding the field's capacity to deliver advertising based on the harvesting of an individual user's online data.⁶⁷ New forms of "micro-segmentation" and "predictive modeling" are used to track and target a user and other prospects. An entire generation of companies has emerged, specializing in data collection and sales, including demand-side platforms, data exchanges, and data-optimization services.

Vast amounts of user data are now regularly mined and stored in behavioral targeting warehouses and other databases—and used in an instant to update online targeting profiles. "Data has become one of the most valuable commodities in the real-time bidding system," explains a recent industry report. "There is a fundamental shift in media buying from buying placements to buying audiences."⁶⁸ This means that individual consumers are now being bought and sold via online ad exchanges and other services so they can be targeted with interactive advertising.⁶⁹ A complex array of data is collected and used for consumer profiling, tracking, and targeting on these "exchange" and "demand-side" platforms.⁷⁰ Mobile, video, and social media are increasingly being integrated into the data collection and targeting real-time bidding apparatus.⁷¹ A new report on the "Mechanics of Real-Time Bidding" illustrates the extensive system of online tracking and targeting that permits an ad to be "delivered to the user within milliseconds" after an auction of that person is conducted online. Such real-time buying and selling of users was expected to account for \$823 million in ad sales in 2011, with leading ad agencies and digital marketing companies embracing these new services.⁷²

Vast amounts of user data are regularly mined and stored in behavioral targeting databases.

While existing regulations, particularly the Children's Online Privacy Protection Act (COPPA), provide some safeguards for younger children in the digital marketing environment, consumers 13 and older are primarily treated as if they were adults

Consumers 13 and older are primarily treated as if they were adults online, fair game for all manner of targeting, data collection, and interactive marketing applications.

online, fair game for all manner of targeting, data collection, and interactive marketing applications.⁷³ Consequently, adolescents confront an ever-expanding system that is able to continually track, profile, target, and sell access to individual users. (In September 2011, the FTC proposed to extend COPPA's privacy protections to better address contemporary online marketing practices. Under the proposed new rules, children could not be tracked and profiled through the use of behavioral targeting and other techniques now regularly used to stealthily collect information on Internet and mobile phone users.)⁷⁴

Major online ad companies, including Yahoo, Microsoft, and AOL, target teens for advertising, including for food and beverage products. Fast food company websites, such as Denny's, Chuck E Cheese, Dominos, and Jack in the Box, as well as gaming sites that display fast food ads, use data collection and behavioral targeting.⁷⁵ Youth can be lured to any site for ad targeting using video, music, or other applications.⁷⁶ AOL Advertising tells clients they can "find households with teens that have the greatest propensity to purchase specific products or brands....Find your ideal teenage audiences on the sites they are most likely to visit....Find people who are searching for information about music or fashion....Find AOL members who have engaged in AIM's online communities through personalized and animated self expressions.... Explicitly target households with teenagers present." Eighty-three percent of teens are reached by AOL and can be targeted when they visit the "AOL Youth Super Channel" and its gaming sites or when they "chat and listen to music."⁷⁷

Data are collected online from youth through a variety of techniques. For example, contests, sweepstakes, "free" offers, and "point" schemes can deliver detailed information on a particular user (name, address, email, cell phone number, etc.). Immersive interactive applications, such as games, online video, and so-called rich media, are often designed to engage in "data capture"—including personal details and user-response metrics. "Passive" data collection through the use of cookies, IP addresses, and other data that the industry considers "non-personally identifiable" enables marketers to effectively track and target individual users.

Ad networks are interactive marketing companies that assemble a network of websites in order to target users, usually based on specific interests (e.g., music listeners or electronics shoppers). These networks make it possible for a buyer to target users across the Web by making a single ad purchase, similar to the way network television ad sales are made. As explained by one trade publication, an ad network "could be a collection of sites owned by the same publisher...or it could be an affiliation of sites sharing a rep firm."⁷⁸

Online ad networks employ a variety of techniques and tools to target teens. For example, Tribal Fusion works with the behavioral data targeting warehouse company Bluekai (a "data exchange"), which provides it with an "unprecedented level of granularity," including "intent data" connected to a "user profile."⁷⁹ "Intent signals" are bits of data gathered as a consumer goes on sites to browse and shop, which are

then used to help deliver online ads. Identifying a user “in-market for fast food” is now part of the data collection and targeting environment. For example, data optimizer RocketFuel helped a quick-service restaurant identify such “in-market” users, as well as “frequent buyers of fast food and delivery services.” The campaign was able to increase sales and “drive online orders” through the website.⁸⁰

Targeting young people based on their behaviors, online and off, enables food and beverage marketers to identify which individuals are most likely to consume unhealthy products. Marketers purposely design their campaigns to foster brand loyalty and brand identity among such specific groups of consumers. This strategy creates a cycle of interaction that fosters increased and regular consumption of such foods and beverages among the very individuals who may be most vulnerable to their health impacts. For example, the My Coke campaign (described later as one of the case studies in this report) is designed to create just this kind of brand identity and to encourage increased consumption by rewarding consumers for the amount of the product they purchase (and consume). These strategies are also designed to maximize data collection.

Marketers argue that the data they collect are not “personally identifiable.” However, there is considerable evidence that the distinctions between personal and so-called non-personal information in the digital realm are quickly disappearing. A 2010 forum at the Federal Trade Commission brought together experts from industry, education, and consumer groups to discuss the issue of personally identifiable information in digital media. There was a strong consensus that marketers do not need to know the name, address, or email of a user in order to identify and target that particular individual.⁸¹ The FTC staff proposals on privacy further clarify that there is no longer a meaningful distinction between such “non-personal” information as cookies, IP addresses, Web beacons, and the like, and the collection of one’s actual email address and name.⁸² To the extent that unhealthy foods and beverages are marketed increasingly to individual adolescents based on their online behaviors, safeguards will be necessary to protect them from practices that may be harmful to their health.

The distinctions between personal and so-called non-personal information in the digital realm are quickly disappearing.

The data collection and targeting system that underlies so much online marketing, including marketing that promotes unhealthy foods, is not transparent to the public or to consumers. Since the early 1990s, there has been a tradition in the online market for websites to post privacy policies to inform consumers of the nature and extent of data collection to visitors of the sites.⁸³ This practice of “notice and choice,” however, has increasingly been called into question. Far too often such policies, written by lawyers in purposefully obtuse and arcane language, are an ineffective method for conveying an understanding to adults of how data are collected and used.⁸⁴ As consumer and child advocates have argued, privacy policies are even less effective for informing adolescents of the data collection practices online. The prevailing formula embraced by industry and endorsed by regulators is based on the assumption that consumers will read the privacy policies that online companies post

on their websites, and if they do not like the terms, they will “opt out.” But most privacy policies offer no real choice; instead, the policies are presented as a “take-it-or-leave-it” proposition. Surveys have shown that most adults don’t read, nor can they readily understand, the often confusing, technical legalese that characterizes these policies.⁸⁵ For underage youth, these challenges are further complicated. As the children’s coalition FTC filing points out, teenagers, who “have less education and are less likely to make the effort to read privacy policies,” are “more willing to forgo learning about or protecting against behavioral advertising practices...in order to more quickly and freely access websites and socially interact.”⁸⁶

Increasingly, data collection and targeting are not restricted to individual websites, but are able to follow individuals across the Web and on mobile phones. In many cases, behavioral and other information that have become part of a person’s profile can be sold to third parties without the individual’s knowledge or consent. These practices were recently documented in a series of articles by the *Wall Street Journal*.⁸⁷ The potential use of racial and ethnic data as part of an adolescent targeting profile should raise questions about unfair and discriminatory marketing. Companies can ascertain race/ethnicity through various means, including the use of identifiers triggered by a visit to a multicultural-oriented website, for example (such as McDonald’s 365Black or MeEncanta sites).⁸⁸

Mobile and location marketing are quickly reshaping the entire advertising landscape.

Location Targeting/Mobile Marketing

The public generally, and young people especially, rely on mobile devices for a growing number of services—telephone, Web and social network access, maps and directions, email, entertainment, and more. “Smartphones” that provide for ready Internet access and deliver multimedia services account for 40 percent of mobile phone subscriptions in the United States and are predicted to become the dominant type of cell phone by the end of 2011.⁸⁹

Many lower-income consumers use their mobile phones instead of traditional landlines, and many of these phones have some form of Internet access.⁹⁰ Teens from lower-income households, particularly African-Americans, are much more likely than other teens to access the Internet with a cell phone.⁹¹ Forty-four percent of African-American teens and 35 percent of Hispanic teens use their mobile phones to go online, compared with 21 percent of White teens.⁹² Mobile phones could become the primary device for Internet access for millions of consumers in the United States by 2013, as they are in many countries.⁹³

Teens remain quintessential early adopters in their use of mobile phones, avidly embracing a variety of Web applications and communication tools. Nielsen reports that teens ages 13 to 17 watch more video via their phones than any other group (some seven hours and 13 minutes a month each, on average, compared with the next highest group—18- to 24-year-olds—who averaged four hours and 20 minutes per month during the second quarter of 2010).⁹⁴ Text messaging has grown dramatically among teens, who on average are sending or receiving 3,339 texts a month, according

to the Nielsen Company. “No one texts more than teens (ages 13 to 17),” explains Nielsen, with teen females and males averaging 753 minutes and 535 minutes a month, respectively.⁹⁵

Mobile marketing and location targeting are quickly reshaping the entire advertising landscape. A confluence of new technologies, commercial opportunities, and social behaviors is creating a very powerful hyper-local user-targeting system. Mobile devices are nearly ubiquitous; smartphones enable access to a rich array of Internet applications, including those taking advantage of GPS; local advertisers have new, inexpensive tools to deliver ads on mobile phones and in stores; and social networks are expanding their enterprises into the mobile arena, through ventures such as Foursquare, Gowalla, and Facebook’s own location-based services.⁹⁶ Mobile video provides marketers with the ability to target advertising formatted for the device and user with increasing precision, and offers a variety of formats to promote brands, collect data, and drive viral messaging.⁹⁷ There has also been significant consolidation in the location-advertising market, with both Google and Apple acquiring leading mobile ad networks.⁹⁸

Mobile marketing techniques have been designed to harness the rich interactivity available on a small screen, incorporating a range of different direct-response actions and taking advantage of impulsivity, social connectivity, communications, and location. This approach also reflects and supports emerging styles of consumption behaviors, such as “collaborative consumption.” For example, applications have been created that enable a mobile user to connect seamlessly to the brand message, through a number of special “brand units” that allow one to engage in “click to call,” “click to video,” “click to SMS,” and the like.⁹⁹ These new interactive “call-to-action” formats foster instantaneous results, such as the delivery of a mobile coupon through text messaging, scanning a barcode, or clicking on a banner ad. Mobile “landing pages”—a website designed specifically for mobile Internet use—can be designed (via testing) to facilitate the desired brand responses. An array of methods to measure how a user interacts with mobile campaigns is now used to assess their effectiveness.¹⁰⁰

Mobile advertisers and location-application providers envision a growing revenue stream by working together to drive product sales. A key advantage for this new approach to mobile marketing is its ability to capture user information—including shopping behavior and location. Data on how a consumer uses a mobile coupon might be shared, in turn, with multiple parties, including a retail store or franchise, corporate headquarters, and a specialized “coupon settlement processor.”¹⁰¹

Food and beverage companies are playing a leading role in both the mobile and location-marketing arenas. Coca-Cola, PepsiCo, McDonald’s, Kellogg’s, Burger King, and many others have been pioneers in this market.¹⁰² The location-based game MyTown, which gives points for checking in at stores, reported that quick-service restaurant chains (including Subway, McDonald’s, Burger King, Taco Bell, Pizza Hut, Domino’s, and Wendy’s) made up eight of the top ten places favored by its users.¹⁰³

Mobile marketing techniques take advantage of impulsivity, social connectivity, communications, and location.

McDonald's also reported a 33 percent jump in traffic last spring and generated additional press when it piloted an event using Foursquare.¹⁰⁴

The growth of localized digital marketing provides new avenues for fast food companies and grocery stores to use search engines, online video channels, and other techniques to drive neighborhood-oriented sales.¹⁰⁵ New forms of loyalty-based programs relying on mobile use, such as Foursquare, reward consumers as they “check in” at a restaurant or retail store. Many of these applications tie together one's friends through forms of social media applications.

The following are only a few snapshots of the myriad ways that food and beverage companies are using mobile techniques to influence consumer behavior:

- Pepsi, which has been working with Foursquare, is also using Stickybits, “a geo-social system...[that] allow[s] people and brands to attach information and multimedia to printed barcodes and attach them to objects,” including soda cans.¹⁰⁶
- Today, one can order a pizza—designed by the customer—using a mobile application from Papa John's.¹⁰⁷
- One can “check in” at Carl's Jr. to win rewards, including “discounted and free menu items, branded gift cards, prizes and merchandise from partner companies.”¹⁰⁸
- McDonald's used the iPhone mobile ad system to promote its McRib sandwich via banner ads that offered “quizzes, wallpaper images and an interactive map” that identified the nearest restaurant location.¹⁰⁹ McDonald's also teamed up with credit card company Visa to give an “Easy Badge” worth \$5 to the first 500 users who “checked in” at a location.¹¹⁰
- Jack in the Box used “ultra-targeting” offered by location/social media marketing company Brightkite to target “people within two miles of restaurants in the week following the launch of smoothies in each restaurant.... The campaign offered users an SMS coupon for a free smoothie.”¹¹¹

With the phenomenal growth of mobile technologies and their rapid integration into young peoples' lives, mobile marketing has grown exponentially during a very short period of time, taking food and beverage promotion to a new level and raising serious public health concerns in the process. The ubiquity of mobile phones gives marketers unprecedented ability to follow young people throughout their daily lives, delivering highly enticing marketing offers that are designed to trigger impulsive behaviors and linking point-of-influence techniques to point-of-purchase opportunities, thus short-circuiting the possibility of reflection or deliberation about wise eating decisions. Cravings can now be easily triggered at the exact point when a teen is near a fast food restaurant, made even more irresistible through a variety of incentives such as coupons, discounts, and free offers.

Cravings can now be triggered at the exact point when a teen is near a fast-food restaurant, made more irresistible through coupons, discounts, and free offers.

These powerful and intense forms of food promotion are also completely integrated into teen social relationships and daily, minute-by-minute communications, adding the element of peer influence to what is already a powerful combination of multiple marketing appeals. Mobile marketing also has brought about a convergence of other problematic techniques: offering a steady stream of immersive environments through video and interactive games; extending Facebook and other social networks onto a new, ever-present platform; and merging sophisticated data collection and behavioral profiling techniques with location tracking and “path-to-purchase” metrics.¹¹²

Mobile marketers provide very few protections for most adult consumers, let alone for young people. For example, while mobile offers are said to require an “opt-in” from users, the process makes it difficult for consumers to understand how their data may be used in the future. Mobile coupons are targeted through so-called push and pull strategies; for the latter, all that is required to opt in to an offer is for someone to send a text message, scan a barcode, or click a banner. In addition, “mobile price promotions” can be pushed to a user and integrated into an application already running. Mobile coupon use (including redemption, offers requested, location, and even offers requested but not acted upon) can be tracked for profiling and future targeting. These practices all encourage instantaneous responses from consumers, offering users little or no opportunity to consider the implications of their actions.

Current self-regulatory guidelines in the mobile marketing and food industries do not protect some of the most vulnerable members of the youth population from the influence of these powerful new forms of promotion that are used to encourage the consumption of unhealthy products. For example, the Mobile Marketing Association’s “Mobile Couponing Guidelines” recommends in its “Best Practices” that “coupon publishers who intend to reach children should follow all the Children’s Advertising Review Unit (CARU) guidelines as well as understand and account for a child’s limited knowledge, experience, sophistication and maturity of the audience to which the coupon is directed.”¹¹³ However, CARU’s guidelines apply only to advertising and marketing directed to children under the age of 12, leaving teens completely unprotected. Moreover, a recent search of the CARU guidelines found no mention at all of mobile marketing.¹¹⁴

The next few years will witness an explosion in mobile marketing for a variety of products, including fast foods, snacks, and soft drinks. The food industry will continue to work closely with digital marketing specialists to develop new, innovative mobile campaigns that are likely to eclipse even the most powerful interactive techniques in use today. These rapid developments call for a comprehensive review by regulators to ensure that adequate safeguards are put in place to prevent new forms of aggressive mobile food and beverage marketing from making a potentially harmful contribution to the youth obesity epidemic.

Current self-regulatory guidelines do not protect some of the most vulnerable members of the youth population from these powerful new forms of promotion.

Neuromarketing

In the last five years, the advertising industry has drawn from a wide range of theories and methods traditionally used by scientists to research, diagnose, and treat physical and mental illnesses and has adapted them for marketing purposes.¹¹⁵ “Neuromarketing,” as it is called, is now a key component of the industry’s digital marketing research and development efforts, and a core strategy for fostering brand engagement. The Advertising Research Foundation’s NeuroStandards initiative is studying the use of brain-based techniques to foster emotional responses at both the conscious and subconscious levels in order to promote the goals of marketers.¹¹⁶

A host of new companies are perfecting the use of bio-sensory tools—including functional magnetic resonance imaging (fMRI), electroencephalography (EEG), and eye-tracking technologies—to aid advertisers in designing marketing campaigns and measuring consumer response to marketing messages and techniques.¹¹⁷ For example, the EmSense Corporation offers marketers “the first ever scalable, non-invasive physiological and brainwave measurement technology—made specifically for market research.”¹¹⁸ One of these devices is a thin plastic headband that reads brainwaves and monitors the breathing, heart rate, blinking, and skin temperatures of consumers who preview ads to measure their emotional and cognitive responses.¹¹⁹

While some neuromarketing techniques are used to measure conscious processes, much of the emphasis in the field is on the subconscious levels of brain activity. As a representative from NeuroCompass recently explained, “fMRI technology allows us to see activity in the limbic brain. Traditional market research methodologies focus almost exclusively on the rational brain, even though decision-making is often a ‘discussion’ between the limbic and rational brain. Therefore, the rational brain, or cortex, may not always be aware of decision-making in the moment those decisions are made, but may create rationalizations for them later.”¹²⁰

One of the most prominent neuromarketing companies is NeuroFocus, which is now owned by Nielsen. In his new book, *The Buying Brain: Secrets for Selling to the Subconscious Mind*, NeuroFocus President and CEO Dr. A. K. Pradeep writes about “a wellspring of new knowledge that has been pouring out of the neurosciences over the last few decades, especially the last five years...[providing] actionable insights for businesspeople and marketers” that can be “applied directly to the global industry of persuasion.”¹²¹

NeuroFocus has developed a set of “NeuroMetrics” to create marketing campaigns involving “deep subconscious responses.”¹²² For example, the “Memory NeuroMetric” can “identify markers of Memory activity as a person watches a message or engages in a consumer experience.” Consumer responses to marketing stimuli can be monitored on a “second-by-second” or even “300 millisecond” basis, with the data measuring levels of attention, emotion, and memory. Referring to the “well-documented phenomenon called implicit memory,” Pradeep explains how “measuring

the likelihood that a persistent Memory has been formed at the moment of encoding is often the only way to determine whether that memory might have a later effect.”¹²³ The company boasts that its metrics are based on clinical methods for diagnosing mental illness and learning disabilities: measurement for “attention level” is “based on the science behind ADD/ADHD clinical diagnosis,” “emotion” is “based on the science behind mania & phobia clinical diagnosis,” and “memory retention” measures are “based on the science behind Alzheimer’s clinical diagnosis.”¹²⁴ “These deep diagnostics into which of the core elements of the ad are contributing or lacking,” Pradeep explains, “are very useful in improving the content and implementing best practices.”¹²⁵

Increasingly, neuromarketing provides the strategic underpinning and measurement technologies for marketing campaigns across a variety of digital platforms—from online to mobile to video games. The effectiveness of mobile ads, for example, can be enhanced through the use of “neurological compression software [that] automatically picks out the most neurologically salient seconds of an ad.” The resulting “algorithms produce an 8- to 10-second version of a 30-second spot...for “alternative video platforms.”¹²⁶ Neuromarketing is playing a role in in-game advertising as well. Microsoft Advertising worked with EmSense to examine “the emotional reactions consumers have toward advertising campaigns in and around videogames.”¹²⁷

A growing number of food and beverage marketers have embraced neuromarketing as a key strategy in developing their digital marketing campaigns, including Kraft, Pepsi/Frito-Lay, McDonald’s, General Mills, and Post Foods. Sensory Logic, one of the companies currently being reviewed by the Advertising Research Foundation’s latest neuromarketing study, works to “measure and manage emotions” for a variety of clients, including General Mills, Kellogg’s, Kraft, Sara Lee, and 7-11.¹²⁸

Neuromarketing is also playing a role in how food and beverage packages are designed, and how they are displayed in grocery shelves to help “quantify shoppers’ emotional and cognitive responses to new products and ad campaigns.”¹²⁹ NeuroFocus reports it helped a “Fortune 100 non-alcoholic beverage client” redesign its packaging and other marketing.¹³⁰ Some of these efforts are focused not only on measuring brain response to advertising, but also on testing brain activity during actual consumption of the food products themselves.¹³¹

Of all the techniques described in this paper, neuromarketing is the most directly associated with the goal of circumventing rational decision making in the marketplace. While advertisers have a long tradition of strategies and practices designed to tap into unconscious processes, neuromarketing constitutes a significant leap into disturbing new territory. Its use in digital marketing makes it potentially much more powerful and insidious than previous techniques. By harnessing the tools of neuroscience to test individuals’ interactions with digital marketing, marketers can fine-tune their strategies to trigger instantaneous responses at a subconscious level, creating more likelihood that consumers, especially young people, will engage in impulsive behaviors.

While advertisers have a long tradition of strategies and practices designed to tap into unconscious processes, neuromarketing constitutes a significant leap into disturbing new territory.

This is particularly troubling when these practices are used to market unhealthy foods. Neuromarketing is still relatively new, but it is being adopted with such enthusiasm by fast food, snack, and soft drink brands that it is likely to grow in influence in the near future. It warrants especially close scrutiny by public health professionals, advocates, and policymakers.

* * * * *

We have described each of these broad categories of digital marketing practices separately, but they need to be understood as a coherent system in which the techniques are intertwined into a seamless experience that is increasingly woven into the daily experiences, social interactions, and personal behaviors of young people.¹³² Nor are these techniques confined to the digital media; rather, they have become part of an expanding spectrum of strategies and practices that now encompass *all media*, including television. Their influences on young peoples' food behaviors are thus potentially more significant than earlier, more traditional forms of advertising. To provide a more holistic presentation of how digital marketing functions as a system in the promotion of food and beverages, the next section presents detailed descriptions of four major campaigns.

Emblematic Campaigns: Case Studies

The campaigns described in this section—Doritos Hotel/Asylum 626, McDonald’s Avatar, Mountain Dew’s DEWmocracy, and My Coke Rewards—draw from a growing arsenal of new media techniques that are at the heart of contemporary digital marketing, combining many of the problematic practices described earlier.

Unlike television commercials—which are visible not only to the child audiences, but also to parents—these digital marketing efforts are conducted with little or no public awareness, reaching and engaging young people across multiple digital platforms, from social media networks to mobile phones to gaming. Several have been hailed within advertising and online business circles, spawning similar efforts amid the flurry of experimentation and innovation of today’s contemporary marketing industry. However, most have received minimal exposure in the mainstream press and have been covered primarily in trade publications.

While each campaign is unique, they all share common features. They are either directly targeted at, or are particularly appealing to, teens and youth and, in some cases, younger children. They all promote products that are, at best, less than healthy and, at worst, unhealthy—including sugared soft drinks, fatty fast foods, and salty, calorie-laden snacks. They are carrying out the industry’s goal of fostering brand loyalty, to ensure that young people will develop strong emotional relationships with these brands that will follow them into their adult lives. They are relatively inexpensive to conduct, especially compared with traditional advertising. Finally, from all available indicators, the campaigns appear to work, driving up sales and consumption of these products.

Doritos Hotel 626 and Asylum 626

Within the last several years, Frito-Lay's Doritos brand has experimented with a range of digital strategies for promoting its corn chips products, including the highly compelling, interactive branded entertainment site, Snack Strong Productions, which was designed as an innovative online enterprise to "connect with teenagers."¹³³

In its award-winning Hotel 626 and Asylum 626 campaigns, Doritos has moved into even more imaginative and troubling territory, creating elaborate, immersive online games designed to trigger highly emotional experiences among teens. Both games have proven to be highly effective marketing vehicles disguised as entertainment, which have successfully expanded Doritos' product line and increased sales among the target audience. Though both campaigns have officially ended, the websites are still accessible online. More important, they serve as influential models for similar online campaigns by the food and beverage industry.

Hotel 626 was launched in 2008 as part of a Halloween promotion for two intense flavors that Doritos was "bringing back from the dead." Working with ad firm Goodby, Silverstein & Partners, Doritos developed a "haunted Web site designed to give users the feeling of being trapped in a horror film." Created as an online game—since gamers are an especially important market targeted by Doritos—Hotel 626 included ten levels of play, "each of which involves its own creepy, unique task or puzzle." When the campaign was first launched, the site was deliberately hidden online and promoted via Internet word-of-mouth and social media as a "truly terrifying online experience." This strategy helped create "a stir that led to even greater levels of participation." Hotel 626 was set up so that it was "open" only from 6 p.m. until 6 a.m., thus enhancing its hidden and shadowy nature, and making it especially alluring to teenagers. Any savvy teen, however, could figure out how to adjust her computer clock to enable easy 24/7 access.¹³⁴

The Hotel 626 website used a number of highly sophisticated techniques to personalize the online experience and to blur the boundaries between the virtual and real worlds. According to the ad agency, it was designed to make young people feel as if they were "living in a nightmare." Special technology was developed to enhance the subjectivity of the user, creating a full-motion 3-D world similar to first-person shooter games. The interactive music and sound design were created by DinahMoe, employing such elements as 3-D audio and "dynamic room reverberation," in order to "raise the bar for audio on the web." This first-person experience was further amplified through the use of webcams that visually inserted the user's image into the game. "Hotel 626 uses your webcam to sneak a picture of you, and shows it to you later in a serial killer's lair," the narrator of the campaign's online promotional trailer warns. "Only by facing your darkest fears can you make it out alive."

Through live Twitter feeds, participants could share their experiences in real time, and they were encouraged to post and share photos of themselves as they

participated. The site also used a customized Facebook application so visitors could “send a scare” by “inviting a friend.” Trapped teens could only escape through a series of unpleasant challenges that required them to use their webcams, microphones, and mobile phones. “Your one salvation is a phone call on your actual cell phone that gives you directions on how to get out—and knows your every move.”¹³⁵

By the spring of 2009, more than 4 million people in 136 countries had played the Hotel 626 game, with an average stay of 13 minutes. It was claimed to be “the most visited digital content property of 2008,” with “close to zero media investment.” According to the ad agency, the “re-launched Doritos sold out,” boosting Doritos sales by 4 percent compared to the previous year. Hotel 626 was awarded the Cyber Lions at the 2009 Cannes Advertising Awards—one of the most prestigious prizes in marketing.¹³⁶ The campaign deliberately did not include mention of the products themselves.

The success of Hotel 626 spurred the creation of another, more personalized, “intense, immersive experience,” an interactive game and social media campaign called Asylum 626, released in September 2009 (and also accessible only “in the dark,” starting at 6 p.m.).¹³⁷ Asylum 626 followed the model of Hotel 626, melding online video, interactive game functionalities, social media, and mobile techniques, but in this case users were plunged into a torture-filled insane asylum.

Created by the same team that developed Hotel 626, the Asylum 626 campaign had a bigger budget, based on the success of the earlier effort.¹³⁸ The influx of funds enabled the ad agency to create even more elements both to heighten the intensity of the campaign and to integrate it further into young people’s personal and social relationships. In its 2010 entry to the Cannes Lions International Advertising Festival, Goodby, Silverstein & Partners noted that “Hotel 626 was a runaway success for Doritos last Halloween. But most sequels suck. Which left us with a frightening question. Once you’ve scared the crap out of 6 million teenagers, how do you do it again?”

Changes included additional interactive devices to make the website more immersive, increased data collection, and greater use of social media. For Asylum 626, explained the agency, “we made the scare personal. The more access a person gave us into their digital lives, the scarier the experience. By using webcam technology, Facebook Connect, Twitter and real-time video capture, we blur the line between virtual and real-world experience.”¹³⁹

A warning describing the Asylum 626 site as rated for “Mature Audiences Only: Under 18 must not view without an adult guardian” appears first. Research on media ratings has shown that these kinds of warnings often function as “forbidden fruit,” inviting, rather than discouraging, younger teens to access films or TV shows that are not appropriate for their age group.¹⁴⁰ However, while movie theaters are required to bar admission to teenagers who are too young to see certain films, there is no

such mechanism on this website. Thus, such “warnings” in the digital context are really just part of the promotion, serving as a neon sign to entice adolescents into the experience.

In order to access the full features of the site, players needed to use their webcams and microphones and log in to either Facebook or Twitter. Users could move through the game by physically manipulating their webcams. As part of the experience, Asylum 626 used videos and photos of participants taken from Facebook, which were incorporated into the interactive game. The Facebook Connect technology permitted two friends—chosen at random—to be brought into the online adventure. Users were “presented with two photos of Facebook friends and forced to choose who will live and who...probably won’t die.” Participants were also encouraged to post updates on Twitter to invite other friends to come to their rescue on Asylum 626.¹⁴¹

Like Hotel 626, Asylum 626 utilized a number of technological devices to create and enhance the subjective experience. Goodby and its creative partners decided that “by thinking of the whole piece as more of an interactive film than a game” it would generate a more compelling personal reaction. A Goodby creative director working on the project, Hunter Hindman, explained how they used technology to heighten the personal nature of Doritos’ new site:

We employed head tracking in one scene, so the player literally must move to avoid an attack. We used the webcam in new and innovative ways to actually place the player into the game play itself. We asked people to give us more access and information this year, telling them upfront that the more they gave us, the scarier the experience. We used social networking in ways that hadn’t been done before. Specifically, we bring their friends into the experience and the game play itself. All of these changes began to add up to us to a more immersive, more frightening experience.¹⁴²

While it was possible to visit the site without providing personal information, users were urged to “log in for the full treatment experience.” To encourage the use of the social media elements of the campaign, a “Fear” meter was placed on the right side of the sign-in page. As users agreed to sign in with their Facebook and Twitter accounts and to authorize the use of their webcam for video, the Fear meter reached 100 percent. Only then did the site ask for one’s date of birth. The site fostered greater participation by enabling a webcam to trigger “head-tracking technology...so that you can dodge left and right, avoiding the frenzied lunges of a chainsaw-wielding attacker. A picture is also taken of your face...and using distortion mapping, later show[s] you as a reflection in a sink of dirty water.”¹⁴³

Visitors to the site “awaken to find themselves strapped to a bed in an insane asylum, held at the mercy of a mad doctor.” One had to “dodge lobotomy tools, electroshock therapy and crazed patients” as they tried to escape.¹⁴⁴ In order to enhance the “social elements of play,” users were told to activate webcams and computer microphones so

Asylum 626 used videos and photos of participants taken from Facebook, which were incorporated into the interactive game.

they could maneuver through the asylum. The designers purposely integrated the virtual and real worlds, as a production industry article details:

In one scene the player is attacked by a chainsaw-wielding maniac while trapped in a closet. There is an option to alert friends by sending out a message asking for help. Friends who take the bait will be asked to scream into their microphones or hit as many keys on their keyboards as possible to distract the assailant. In another scenario, players are presented with two photos of Facebook friends and forced to choose who will live and who...probably won't live. "We leave it to the imagination what happens," explains Hindman. "There's some fairly gruesome sound design and some leading things to indicate that the friend you do not save is not doing so well."¹⁴⁵

The lack of "product integration" in Hotel 626 had been one of the criticisms leveled by some industry professionals, and was thus addressed in the sequel. One of the most significant additions to the newer campaign was the incorporation of interactive packaging, which effectively inserted the product itself into the immersive online experience.¹⁴⁶

To access the climactic final scene, viewers had to use a special code, or marker, imprinted on bags of Doritos Black Pepper Jack or Smoking Cheddar BBQ (the two flavors the brand "brought back from the dead"). The "augmented reality" marker, when held up before a webcam, triggered a 3-D "key" required to escape the asylum. Augmented reality (AR) can incorporate 3-D elements with video, mixing "real and virtual worlds together in real time."¹⁴⁷ This strategy required that the teens must first purchase—and therefore, most likely, consume—the product in order to complete the storyline and fully experience the site, thus combining the process of eating a "rewarding food" with the online immersive experience.

These two Doritos campaigns demonstrate the elaborate and multidimensional nature of digital food marketing, highlighting some of the key practices that are being used to target young people. In these campaigns, the combination of social media, immersive augmented reality environments, and interactive packaging created a compelling experience potentially far more powerful than other forms of advertising and marketing. The marketers have made it clear throughout both campaigns that they purposefully sought to blur the line between the virtual and real worlds. Their use of state-of-the-art augmented reality, 3-D, and other techniques created an immersive environment designed to circumvent critical thought processes and heighten arousal. They deliberately promoted fear and terror, enhancing the personalization and subjectivity of the events to increase their impact. The clandestine nature of these campaigns enabled them to escape public scrutiny while engaging large numbers of teenagers in an intense online gaming environment that has become part of their shared experience with peers.

The use of social media and mobile phones served not only to heighten the emotional involvement, but also to facilitate collection of personal information. This data

The use of social media and mobile phones served not only to heighten the emotional experience, but also to facilitate collection of personal information.

collection process garnered valuable information for the marketer to use to conduct behavioral profiling and to establish ongoing relationships with young people to engage in further brand promotion efforts. Given the heightened emotional state triggered by the interactive game, it is doubtful whether teens would take the time to effectively comprehend, let alone act rationally, when confronted with the site's privacy policy.

Although the site was purposefully developed to encourage participation through affiliated social media companies, Frito-Lay's privacy policy disavows any responsibility for data collection performed by those sites.¹⁴⁸ The privacy policy reads:

This site may contain links to social media platforms, and you may be given the choice of connecting to one or more social media platforms from this site and/or integrating your social media experience with a program or promotion on this site. If you choose to do so, depending on your social media privacy settings, the personal information that you post, transmit or otherwise make available on the social media platform may be viewed and/or used by others. Frito-Lay does not control and is not responsible for any use of your personal information by or through the social media platform. By linking to a social media platform, you assume the risk that the personal information you provide on that platform may be viewed and/or used by third parties for any purposes.¹⁴⁹

Though it is not known how neuromarketing may have influenced the design of these two campaigns, Frito-Lay has worked closely with NeuroFocus and other prominent players on marketing efforts for some of its other products, including its Cheetos Orange Underground campaign in 2009, which won the U.S. ad industry's highest research honors (the Grand Ogilvy).¹⁵⁰ Neuromarketing techniques were employed to "uncover the underlying thoughts and feelings about Cheetos" and to identify "significant moments of the Cheetos consumption experience."¹⁵¹ The innovative campaign resulted in an increase in Cheetos' overall market share.¹⁵² Frito-Lay is also a leading member of the Advertising Research Foundation, which is helping organize this new field of market research in order to advance the goals of engagement.

McDonald's Avatar Campaign

McDonald's cross-promotion campaign with the blockbuster movie *Avatar* is considered the “most extensive deployment” of augmented reality ever used in a marketing effort.¹⁵³ Like the Doritos campaigns described above, it used some of the most advanced techniques for linking immersive, online gaming environments to real-world products. It is also one of several recent examples of tie-ins between products and online content.

The fast food restaurant collaborated with *Avatar*'s production team to develop a “digital platform” for the delivery of “an immersive digital experience centered around Pandora, the mythical planet of *Avatar*.” McDonald's “strategic guiding principle” for the campaign was to “leverage ‘digital’ as the cornerstone to drive brand engagement.” The goal was to provide its targeted customers an experience “true to the film's vision; at the same time, to deliver an experience exclusive to McDonald's customers.”¹⁵⁴ In this case, the food product and packaging were themselves enlisted into the play experience; buying (and eating) the product grants a child entry into the fantasy world of the film. The McDonald's brand was then fully integrated into the virtual reality experience.

The case also illustrates the continued convergence of entertainment and advertising and the role that digital marketing is playing in merging these domains. Given the elaborate design and use of technology in this campaign, it is doubtful that parents had any knowledge of how it worked or what their children may have experienced when they participated.¹⁵⁵

The campaign benefited from extensive promotion of the film before its release—“one of the biggest entertainment launches of all time.” *Avatar* was heavily and successfully promoted online, through such popular venues as YouTube, Facebook (where the film had more than 700,000 “friends”), MySpace, Apple.com, Twitter, and MTV.com. The movie was praised for its innovative use of interactive technology in its online movie trailer. *Avatar* used Google's YouTube, for example, to drive awareness of the movie months before its premiere. Google's own research showed that those viewing the movie's trailer on YouTube subsequently used its search engine to learn more about the film.¹⁵⁶

To “drive mass awareness and traffic to restaurants,” McDonald's developed a tightly integrated, global approach that involved various aspects of media, television, restaurant displays, packaging, and digital and social media. The goal of all these activities was to drive “deeper engagement with the brand through access to immersive online experiences,” which ultimately led to “repeat purchases of iconic products, such as the Big Mac.” All of this was conducted, moreover, on a truly global scale: “40 countries, 45 million customers a day, 25,000 restaurants, 20 languages.”¹⁵⁷

The McDonald's campaign was marketed through in-store and point-of-sale techniques (including *Avatar* character toys with Happy Meals), TV commercials,

and online—including via “social media outreach.” A global media webcast featuring director James Cameron, film producer Jon Landau, McDonald’s Global Chief Marketing Officer Mary Dillon, and its USA Chief Marketing Officer Neil Golden formally announced the campaign on December 10, 2009. Ms. Dillon explained that the McDonald’s campaign was being marketed to all ages, from “8 to 80,” including video game fans.

The webcast showed video clips featuring various elements of the global campaign, and also took questions from journalists. “More than 215 outlets filed stories immediately” after the webcast, including wire services and popular online publications such as Reuters, MSN Money, and *Forbes*. A digital press kit that included videos, photos, and other materials from the campaign was distributed online.¹⁵⁸

The campaign was clearly designed to focus on children. As the company explained in a press release, “Our Happy Meal program specifically focuses on the spirit of adventure and imagination with highly innovative toys....So no matter how old you are, the McDonald’s Avatar global experience will immerse you in an extraordinary, technology-driven journey that’s sure to ‘Thrill the Senses.’”¹⁵⁹ *Variety* reported that “McDonald’s will use augmented reality to promote its Big Mac to young adults and to entice kids to request more Happy Meals through [“Pandora Quest”], a series of online games.”¹⁶⁰ In the store, Happy Meals featured Avatar toy characters—“highly innovative Happy Meal toys” that “light up via touch, sound or motion.”¹⁶¹

Buying Big Macs gave the consumer a way to access online experiences.

The campaign began in the restaurants on December 1, 2009, with hundreds of millions of McDonald’s boxes featuring the Avatar images. Food purchases for both Big Macs and Happy Meals were at the core of the Avatar effort. Buying Big Macs gave the consumer a way to access online Avatar experiences created by the company and also enabled access to higher levels of game play. Each Big Mac featured one of eight “Avatar Thrill Cards” on the package. When placed in front of a webcam or cell phone camera, the thrill card would activate McDonald’s-branded “McDVision” software, enabling users to enter the virtual Pandora-themed online worlds (which included the McDonald’s logo) and play an interactive Pandora Quest game. Codes placed in Happy Meal toys gave children access to special features on the website, an effort designed to further integrate their offline and online experiences for marketing purposes.

Like the Doritos gaming sites, the Avatar website used various technologies to create a subjective and personalized immersive experience.¹⁶² McDonald’s used Twitter to generate interest in its Avatar tie-in. For an 11-day period in December, the “#BigMacAVATAR Code Breaker Countdown for @McDonalds” enabled followers on Twitter to compete in a sweepstakes by decoding “a series of daily word scrambles that relate to McDonald’s and/or the movie.” A winner could receive a “Big Mac AVATAR Daily Prize Pack” that included two “Big Mac sandwich Extra Value Meal Be Our Guest cards” and movie tickets. The grand prize was a “private screening” of the film with the producer.¹⁶³

McDonald's digital ad agency AKQA worked with Multiverse, a provider of "interactive entertainment technology and services," to create the PandoraROVR, designed as an "interactive prequel" to the film.¹⁶⁴ As Multiverse explained in announcing its work for McDonald's, "PandorROVR enables players to drive a remote exploration vehicle (ROVR) around a virtual Pandora" and "have the opportunity to be the first to explore Pandora's beautiful but alien creatures and plants. Whenever the player wishes, they can capture a photographic-quality digital image of the ROVR's view."¹⁶⁵ These images could then be emailed to the user's friends.

The augmented reality experience enabled players to "watch the Pandoran Rainforest light up as they touch the bioluminescent Anemonids....'Navigate Across Ancient Vine Bridges,' where they can show their balancing skills by crossing the shaky vines to reach the Hallelujah Mountains....'Find Mystical Woodsprites,' [as] players explore the willow tree in search of the mystical Woodsprites, and watch them come to life."¹⁶⁶ The effect is a video game within the imagery of the movie—the closest one could come to becoming an avatar in the film itself.

The movie tie-in campaign paid off handsomely for both James Cameron and the fast food chain. Even before it was over, analysis of the early results demonstrated its global "digital reach: 3 million customers in three weeks. Overall digital engagement globally exceeded 10 minutes per customer," with a "dramatic viral effect in Europe." Significant sales were reported beyond the United States, including Brazil ("best historical December"), Singapore, and Taiwan.¹⁶⁷ *Avatar* quickly became the most financially successful film of all time, generating a huge audience in the United States and internationally: \$2.73 billion in gross receipts.¹⁶⁸ McDonald's saw an 18 percent increase in U.S. Big Mac sales as a result of its *Avatar* campaign, whose combined innovative digital elements generated "awareness, purchases, engagement [and] repeat visits."¹⁶⁹

In many ways, the *Avatar* campaign represented an extension of McDonald's long-established pattern of marketing through movie cross-promotions and toy tie-ins, a practice that has raised concerns from public health experts and advocacy groups.¹⁷⁰ However, as these campaigns have moved further into the digital realm, they have morphed into something distinctly different and potentially more harmful. For example, the *Avatar* campaign did not simply encourage children to attend a movie (presumably with their families). Instead, it extended the brand experience—both for the film and the fast food company—into an immersive online virtual environment that was its own interactive version of the movie, specially designed to engage children and teens for long periods of time and to associate the food products with the pleasure of the immersive experience. These "branded environments" are increasingly common in the digital media, further obliterating any remaining lines between advertising and entertainment. Through the use of avatars and other "branded technologies" created exclusively for the campaign, marketers could intensify the immersive nature of the experience, enhance subjectivity, and foster greater engagement and involvement. Like the Doritos campaigns, codes on the

The "360-degree strategy" has become a driving force in digital marketing, reaching young people at numerous touchpoints throughout their daily lives.

products served as a lure both to the fast food restaurants and to the associated online branded environment. And social media platforms facilitated viral distribution of the campaign among friends and acquaintances. All of these elements make this kind of marketing far more potent than earlier cross-promotional campaigns. The *Avatar* campaign also illustrated the “360-degree strategy” that has become a driving force in digital marketing. Reflecting the ubiquitous nature of contemporary marketing, the 360-degree strategy aims to reach young people across many media platforms and at numerous “touchpoints” throughout their daily lives.

Mountain Dew's DEWmocracy Campaign

Pepsi's highly successful DEWmocracy campaign for its Mountain Dew brand employs a wide range of digital marketing techniques to target tweens and teens—including social networks, games, sports, music, mobile devices, widgets, virtual reality, and online video.¹⁷¹ The campaign embodies the fundamental strategy of engagement that is now at the core of many digital marketing efforts. Promoted as a participatory form of consumer empowerment, its principal objective is to deeply integrate the operations and the future of the brand—including decisions about product development and advertising—into the daily activities of its most supportive consumers.

While Mountain Dew spends around \$100 million a year for advertising, it also relies on user-generated ads, a low-cost and increasingly popular method to take advantage of the creative talent of consumers and independent media makers. The DEWmocracy campaign employs “crowdsourcing” to expand and promote its product line, successfully mobilizing fans who collectively determine new product flavors, as well as contribute to advertising campaigns that have sold tens of millions of cases of the soft drink.

The DEWmocracy campaign has been lauded by the industry as a successful and groundbreaking illustration of new media strategies, since it employs a number of cutting-edge practices that are likely to become mainstream in the near future. It demonstrates the increasing use of Facebook, Twitter, YouTube, and other new social networking platforms to build a “passionate community” of supporters. It incorporates a variety of new user-generated content techniques to create consumer-generated brands, all of which are designed to be highly appealing to youth. It provides insight into how marketers conduct social media surveillance, including conversation targeting, to position brands into what the company calls “the cultural conversation.” The campaign monitors closely how youth are using social networks, tracking and analyzing their behaviors and relationships, and identifying those individuals with the most potential for influencing their peers. Consumers can then be “activated” to engage in behaviors that support the goals of the brand, spreading promotional messages virally among their friends, acquaintances, and social groups.

Around 2007, as it researched how to create its next flavor (which was reportedly “taking too much time in R&D”), Mountain Dew began focusing on the potential role of the Internet to reach its youthful fan base. Its marketing agency explained that “you couldn’t just shove a new flavor in front of them and expect them to embrace it.”¹⁷² So the company built an online game and social network in which consumers would create the next flavor of Mountain Dew and then conduct a user-generated viral campaign to promote it.¹⁷³ Mountain Dew had “long [been] aligned with gamers—males 12 to 36,” but it also wanted to reach a new “core customer base with a shift in generational attitude.”

The consumers Mountain Dew needed to target “wanted choice—but within the walls of a community.”¹⁷⁴ An executive for ad agency WhittmanHart Interactive explained Mountain Dew’s focus on digital rather than traditional media: “This is the first

generation of consumers who don't know what life was like before the Internet and we wanted to reach them where they are."¹⁷⁵

The result was the launch of the DEWmocracy campaign—initially as an immersive virtual world, billed as “the first-ever interactive story-based online game that will result in a consumer-generated beverage innovation.”¹⁷⁶ Game players participated in a “series of mythological experiences to virtually design a fantasy Mountain Dew drink.”¹⁷⁷ A “player’s online journey” through the game was designed to “give them the tools to develop every aspect of a new Mountain Dew drink, including the color, flavor, and label graphics.”¹⁷⁸ Pepsi promoted the “immersive” game online and off, including “wild postings in several major cities” (a guerilla marketing strategy in which posters are affixed to construction sites, building facades, and the like), as well as cable TV ads.¹⁷⁹ Gamers were asked to register at DEWmocracy.com and could then join “teams” promoting possible flavors, leading to their participation in a “campaign” for its beverage candidate.”¹⁸⁰

The game attracted “700,000 reported unique visits and 200,000 registered users,” who were targeted via email and Facebook ads to vote for their favorite flavor.¹⁸¹ According to the agency, “DEWmocracy had an enormous participation rate of 1.5 million users, with numbers increasing 5 to 10 percent every few days. The average time spent per user on DEWmocracy was an astonishing 27 minutes.”¹⁸² The campaign “made an impression on its intended targets, specifically male teens and tweens,” and Mountain Dew soon ranked “No. 1 on tweens’ list of ‘Newest Beverages’ they had tried and No. 2 among teens for that category.”¹⁸³

“This campaign,” explained Frank Cooper III, Pepsi’s senior vice president and chief consumer engagement officer, “resulted in Mountain Dew Voltage, one of the most successful product launches in PepsiCo beverage history, new consumers being brought into the DEW franchise and massive amounts of earned...media.”¹⁸⁴ To help boost Dew Voltage’s visibility and engagement among teens, the company created a “Be a Power Player” site where users could “play games, earn sweepstakes points and win free stuff—just by clicking.”¹⁸⁵ The site generated more than 500,000 interactions during a four-month period—with the majority of users coming back for more. Pepsi also created a newsletter (called the “DEWSletter”), through which subscribers could receive messages about the new drink and its marketing campaign. According to Christian Dietrich, director of the Pepsi client business at Tribal DDB, the viral campaign succeeded in “...maximizing the reach of a program towards greater participation....The consumers do the work for us.”¹⁸⁶ In 2008, Mountain Dew “significantly outperformed” its competitors.¹⁸⁷

In its research to develop a follow-up effort to DEWmocracy, Pepsi recognized that “the world has changed significantly since 2007, causing a critical evolution in our thinking and brand behavior. Thus, consumers not only expect to be involved in brand decisions, they want to lead.” The next phase of the campaign, DEWmocracy 2, was launched in July 2009 and shifted from “story-based innovation” to “consumer-led innovation.”¹⁸⁸

Consumers can be “activated” to engage in behaviors that support the brand, spreading promotional messages virally among their friends and acquaintances.

The ambitious seven-stage plan was designed to unfold over a 12-month period and take even fuller advantage of social media.¹⁸⁹ Its goal was to “engage in a direct dialogue” with consumers, tap into their “passions” for Mountain Dew, and generate a “social movement” for the brand. The company launched DEW Labs, a private social network composed of “the brand’s most loyal fans,” enabling participants to help “determine the flavor, color, packaging and names of the new products.” In addition to the dedicated social network, the campaign included a presence on Facebook and Twitter, as well as an online contest, a video social networking channel (12seconds.TV), a video streaming distribution service (USTREAM), and a branded YouTube channel.¹⁹⁰ DEW Labs soon grew to more than 4,000 members—a “monster street crew... who are charged with ‘talking up’” the product.¹⁹¹

DEW Labs is an example of how marketers are harnessing the interest of a brand’s fans or advocates to build even greater public support for and consumption of the product. While some consumers are willing on their own to participate, brands like Mountain Dew entice others with access to an “exclusive” club, requiring would-be “members” to supply personal information to increase their chances of being “invited” to join. As the DEW Labs blog explains:

Participation in Mountain Dew’s exclusive DEWlabs is invitation only. However, there are some things you can do that will help you get an invite. Participate! Follow Mountain Dew on Facebook and Twitter. Sign up for the DEWsletter, enter into contests. After all, for them to invite you they have to have your email address and know that you are active online. Sometimes, there is a place on www.mountaindew.com that you can enter in your email address if you want to be considered for DEWlabs.

Once you get the invite, you’re not necessarily in. Mountain Dew is looking for a particular type of Dew fan... an uber fan, a fan that goes the extra mile for their Mountain Dew. Brand manager Brett O’Brian has described DEWlabs members as “passionate not just in ‘I love this brand,’ but ‘I want to talk about it;’ ‘its [sic] part of who I am;’ ‘it’s a part of my everyday;’ ‘I eat, drink, sleep Mountain Dew.’ It represents who they are.”¹⁹²

This process allowed the campaign to identify the most influential social media users, who could then be tapped to help promote the viral marketing efforts.

Mountain Dew used a contest to encourage both professionals and members of the public to develop new product “extensions” of the soft drink. Three new flavors were created—“Distortion,” “White Out,” and “Typhoon”—and consumers voted to decide which flavor would become a long-term product, and also weighed in on the nature of the ad campaign to promote the new product. In the process, Mountain Dew expanded its crowdsourcing program to include consumers in deciding which marketing agency would win its “\$100 million-plus business.” Agencies, independent media makers, and fans submitted 12-second video clips outlining their ideas at the video-sharing website, 12seconds.TV, where users cast votes for the best proposal.

Based on online mobile voting, winners were “awarded an assignment for the product.” By tapping into its Dew Labs membership, Mountain Dew was able to identify which websites were most popular with its constituency, with College Humor, The Onion, Crave Online, and Funny or Die among those chosen as “Mountain Dew Media Partners.”¹⁹³

The integration of social media marketing, advertising, and in-person events was another feature of DEWmocracy 2, in an effort to trigger multiple online conversations and communications by consumers about the campaign.¹⁹⁴ By providing tools and encouragement to consumers, brands proactively work to boost their presence online—on search engines such as Google; videos, including commercials, posted on YouTube and other sites; photos posted on Flickr; and via “news feeds” offered by Facebook, Twitter, blogs, and other social media. The more information related to one’s product that’s placed online, especially through viral peer-to-peer marketing techniques, the more prominent are its search rankings and overall visibility.¹⁹⁵ To help take advantage of this 360-degree process of building offline and online “buzz,” DEWmocracy 2 developed a cross-country tour promoting each of the three final flavors.¹⁹⁶

According to the marketing company hired by Mountain Dew to oversee the tour, mobile teams of fans and agency reps distributed about 60,000 samples of the Dew flavors, made direct in-person contact with more than 100,000 consumers, and generated more than 1.5 million total impressions in person, online, and through social media.” They generated local TV coverage in Portland, Oregon, for example, through the work of “Team White Out,” which hosted a “Mountain Dew-themed wedding.” Teams also “encouraged fans to tap into their local art scenes to create events.”¹⁹⁷ Those eager to follow this effort could track the vans carrying the teams online, through the DEWmocracy website.¹⁹⁸

The Mountain Dew crowdsourcing campaign has been highly successful. The company is investing considerable resources to take advantage of—and proactively fashion—a continuous and evolving social media marketing apparatus that will evolve further as it moves forward. As PepsiCo’s head of marketing explained in a *Huffington Post* article he wrote in May 2010:

Once you engage your loyal consumers to help lead the evolution of your brand or products, those consumers communicate authentically within their real-life social networks about the meaning of your brands and the reasons others should love them too. The collaboration and innovation led by consumers will lead to word-of-mouth communications, which can influence revenue and profit. In fact, a 2009 Wetpaint/Altimeter study found that businesses widely engaged in social media surpass their peers in both revenue and profit. Similarly, we know that 90 percent of consumers trust recommendations from people they know and 70 percent trust consumer opinions posted online...While it’s still too early in DEWmocracy 2 to see the results, we are pleased with a few early accomplishments. First, our Facebook base grew from 150,000 to more than 860,000 fans, a 500 percent

increase in less than a year without any paid advertisement...[and] more than a million consumers have participated in at least one stage of the campaign. We believe that this support from consumers will lead to favorable returns in the market.¹⁹⁹

But the success of this campaign raises fundamental questions about the appropriate role of participatory and social media marketing for food and beverage products. By selecting social media users to promote Mountain Dew brands among their peers and rewarding them with such incentives as free products and trips, the company is engaging in practices that may violate the Federal Trade Commission's guidelines for endorsement.²⁰⁰ The compensation provided in exchange for product marketing in the DEWmocracy campaign is done without any form of disclosure.

The campaign may also exploit young people through its extensive use of data collection and behavioral profiling. Mountain Dew is part of an email marketing and data collection service called Pepsi World, which distributes the DEWsletter and other electronic newsletters, in order to ensure a constant stream of direct-to-consumer ads marketing a wide range of soft drink products and offering free promotional items to keep young people engaged with the brands:

About once a month, you'll receive a DEWsletter full of exciting sweepstakes, games, exclusive news about Dew events, and products, and maybe even coupons and free product samples! Occasionally, we'll include awesome Mountain Dew offers from our partners. With DEWsletter, you'll be in the know about all things Dew!

PepsiWorld also offers an "X-tras" email newsletter that promises "about twice each month you'll receive emails with exclusive messages, offers, coupons, and sweepstakes from select PepsiCo brands like Pepsi, Sierra Mist, Aquafina, SoBe Lifewater, Propel, Mountain Dew and AMP Energy."²⁰¹

A consumer can also sign up to become a "Pure Pepsi" subscriber: "As a Pure Pepsi subscriber, once or twice each month you'll get emails giving you access to news, videos, sweepstakes, coupons, games and maybe even free samples! You'll also get the insider's edge on Pepsi music, sports & more!"

In the course of signing up users for such services, PepsiCo collects a wide range of information on specific consumers, who are asked for their email and street address (and an alternative email address), phone numbers, gender, and what soft drinks they consume (including those from competitors). While the site says that "address information is optional," a user is also informed that "you will not be eligible to participate in any online Pepsi sweepstakes or contests if we do not have your name, address, city, state, zip code, and country." Among the newsletter offerings is an option to say "Yes! I'd like to receive occasional text messages with exclusive info about Pepsi, Mountain Dew and our other great brands." Users are then asked to provide both their cell phone number and service provider, advising them that such information is required to "contact you about any Pepsi sweeps prizes you might win."

Through its skillful use of social media and database marketing, PepsiCo and Mountain Dew have established a loyal following of young people who have eagerly embraced their role as "co-creators" and "brand advocates."

The sign-up page also includes a series of questions, including “Approximately how many 8oz servings of soft drinks do you consume each week? (0-99),” “How much of your soft drink consumption is of Pepsi products? (0-100%),” and, through a series of check-off boxes, “Which of the following interest you? Video Gaming, Sports, Music, Car Culture, Comedy, Coupons, Ordering Groceries Online.” In addition to collecting names and addresses, Pepsi’s privacy policy explains, the company

may use cookies to collect other information during your visit to our web sites, such as the particular site areas you visit and the activities in which you participate at our web sites.... Pepsi-Cola Company currently contracts with online partners to help manage our Internet business. We use the services of a third party to help us understand how visitors use our site. To do this, we use Action Tags and cookies provided by such third party on this site. The information we collect helps us determine both group interests and unique individual interests. This information allows us to provide optimal content both on our web sites and within our communications to consumers. We use these Action Tags in our HTML-based emails to let us know which emails have been opened by recipients. This allows us to gauge the effectiveness of certain communications and the effectiveness of our marketing campaigns.²⁰²

This campaign taps into the identity development process that is at the heart of the adolescent experience.

Pepsi says it does not collect personal information from children under 18 and that “we reserve the right to limit participation in particular programs or promotions to visitors 18 years of age or older.”²⁰³ Such statements are in stark contrast to the company’s well-documented efforts to market many of its brands to teens and tweens, and there do not appear to be any mechanisms to prevent younger youth from providing personal information on the site.

Through its skillful use of social media and database marketing, PepsiCo and Mountain Dew have been able to establish a large and loyal following of young people, many of whom have eagerly embraced their role as “co-creators” and “brand advocates.” By appealing to teens, this campaign not only fosters ongoing engagement with the brand, but also taps into the identity development process that is at the heart of the adolescent experience. Not only do many of the campaign’s practices raise fair marketing and privacy issues, but they also appear to be successful at driving up consumption of the popular sugared soft drink beverages by developing new flavors designed with and for young people. These efforts are aimed at ensuring that youth develop strong emotional attachment to Mountain Dew products, in the hope that this attachment will continue on into their adult lives.

According to studies reviewed by the Yale Rudd Center for Food Policy and Obesity, soft drink consumption is linked to higher body weight and increased risk of diabetes, as well as to lower consumption of milk, calcium, and other nutrients.²⁰⁴ Americans already consume twice as much soda today as they did in 1971.²⁰⁵ With a growing army of loyal online spokespersons promoting Mountain Dew’s increasing line of products to their peers, it is doubtful that any of these trends are likely to be curtailed in the near future.

Coca-Cola's My Coke Campaign

Coca-Cola has been at the forefront of companies harnessing the capabilities of digital media to collect data from users, creating online forms of “loyalty” and “direct-response” marketing. Its My Coke Rewards campaign, which has been running for more than five years, embodies the strategy of behavioral targeting, and has proven highly successful in promoting the company's soft drink brands to teens and youth.

Behavioral profiling has evolved since the early days of e-commerce into a highly complicated system that is conducted with a minimum level of transparency. Coca-Cola's ongoing My Coke campaign serves as a longitudinal study of the growing sophistication of this practice. It also involves the full spectrum of contemporary digital techniques, combining behavioral targeting with user-generated content, social media surveillance, search engine strategies, and mobile/location marketing.

In 2003, Coca-Cola North America executives recognized that the Internet was fundamentally changing both the distribution and the consumption of media, and the company was keenly aware that its youthful consumer base's relationship with media was undergoing a fundamental transformation as well. Thus, Coca-Cola wanted to develop an online strategy that would foster “participation—i.e., giving people access to interactive tools to create, share and discover user-generated content that was spurring the rapid growth of youth-oriented social networking websites.”

They also wanted to “build a vehicle that could effectively drive consumer mindshare and brand loyalty—and, ultimately, increased product consumption—on an ongoing basis,” according to the predictive analytics and decision management firm Fair Isaac (now FICO).²⁰⁶ Coca-Cola also wanted an online platform that “would enable all the company's brands to deliver interactive content direct to consumers via websites, email and mobile channels.”²⁰⁷ The company decided it would harness the “newly emerging potential in web technology and consumer data analytics” for a rewards program based on the “one-to-one marketing” paradigm.²⁰⁸ Such personalized marketing has been a core goal of online advertising since the early 1990s, reflecting the capability of the Internet to collect detailed information about individual users at lightning speed in order to deliver highly targeted ads.²⁰⁹

The result of Coca-Cola's strategic planning was the creation of My Coke Rewards in 2006, which quickly became “the largest program ever launched for the Coca-Cola Trademark...a multiyear, online driven, mega-rewards program that allows consumers to choose from a pool of experiences and rewards.”²¹⁰ The campaign's website has been aptly described as Coca-Cola's “relationship building network,” one that “blends brand content and transactional interactions” and incorporates advertising, including messages from such fast food company partners as McDonald's, Wendy's, and Carl's Jr.²¹¹

My Coke was launched at a time when the soda industry faced the first decline in sales in 20 years, and Coca-Cola recognized that it would have to come up with an

aggressive and innovative strategy to reverse this trend. Initially, it offered “4 billion unique redemption codes worth a cumulative \$50 million” in prizes.²¹²

The My Coke Rewards campaign launch was heavily promoted through tie-ins to both the Academy Awards and NCAA “March Madness,” using radio, print, movie theater, out-of-home, and in-store advertising. At its start, Coca-Cola offered a wide range of prizes—including a daily reward worth \$10,000, as well as “more than 90,000 NCAA related prizes.” It also enabled visitors to Coca-Cola’s primary website to enter their reward codes through mobile phones, another example of the company’s forward-thinking digital marketing strategy. Trying to reach both soft drink consumers and those who had a “passion for entertainment, sports, gaming, sweepstakes,” the campaign’s “goal was to seek these people throughout their online experience and entice them with relevant, passion-based offers to draw them to My Coke Rewards.”²¹³

The My Coke Rewards site is designed to maximize the collection of personal information, establish ongoing relationships with consumers, foster engagement, and build brand loyalty.

The My Coke Rewards site is designed to maximize the collection of personal information, establish ongoing relationships with consumers, foster engagement, and build brand loyalty. The site accepts registration from anyone 13 years or older and is available in English and Spanish. It incorporates a myriad of marketing and advertising techniques and also runs behavioral and geo-targeted ads for third parties. In order to register, one must provide the site with date of birth, country of residence, name, gender, and street and email address, and must also create a password. Registrants are asked to provide their mobile number—“use your mobile device to enter codes and get Mobile News Flashes”—and to sign up for these communications: “Would you like to get the My Coke Rewards email newsletter, plus info about Rewards, Sweepstakes, Bonus Points and even Extras and Exclusives?”²¹⁴

Coca-Cola chose behavioral advertising pioneer Tacoda to carry out the campaign online and also worked with ad agency Mediavest to map out a behavioral targeting plan in order to reach people who were likely to have an interest in My Coke Rewards. Tacoda’s Spectrum product was used for precision targeting of users based on a wide range of different “click” behaviors and content viewing habits. Online ads were designed to “excite our specific behavioral segments,” highlighting “specific rewards, sweepstakes and ‘free points’ that spoke to the passions” of their targeted consumers.²¹⁵ Tacoda “auto-optimized the ad delivery to focus more impressions” (i.e., deliver more targeted behavioral ads based on an analysis of the behavioral targeting impact on consumers) for those users deemed to be the “highest-qualified participants” of My Coke Rewards.

Coca-Cola’s use of interactive data collection and targeting techniques increased click-to-conversion rates by more than 250 percent.²¹⁶ (“Click-to-conversion” means that consumers have engaged in some desired action for the marketer.) Its use of behavioral targeting, explained Coca-Cola’s Interactive Brand Manager Karna Crawford, “successfully acquired millions of consumers into the My Coke Rewards program.”²¹⁷

Prospects were also generated through a “multifaceted, direct response online advertising campaign” that used “low-cost broad-based tactics”—including search engine marketing (SEM) and ads placed by online advertising networks.²¹⁸ Coca-Cola and other beverage and consumer package goods (CPG) companies had begun using search marketing in earnest in 2007. As *Brandweek* explains, “Thanks to proven return on investment and a desire to dominate search terms related to their brands, Coke, Con Agra, Kellogg and other major CPG companies are now actively embracing search marketing.”²¹⁹ Search marketing has been called the “database of intentions,” since it provides a powerful window into the personal and collective interests about an issue, product, or trend. SEM enables companies to increase the visibility of their brand’s presence in search engine results pages. Online marketers deploy two basic strategies to achieve results—various forms of paid search, which involves bidding for the use of keywords that will trigger an ad when a user conducts a search for that term, and search engine optimization (SEO), which involves organizing the content of one’s website and using keywords that will help boost its ranking results during a search.

Coca-Cola turned to search engine marketing to boost My Coke Rewards in 2008, a year after the campaign was launched. Coca-Cola’s goal was to double registrations on the site. Working with SearchRev, it acquired the rights to keywords that would trigger connections to the My Coke Rewards site. A SearchRev executive explained that “My CokeRewards.com” was considered too long for optimizing the search marketing process—so they acquired “Coke” and “Rewards,” which would trigger the connection.²²⁰ A consumer searching for Coke, Diet Coke, Sprite, or any other soft drink marketed by Coca-Cola would find “My Coke Rewards” appearing prominently in the list of results.

Among the keywords Coca-Cola acquired in 2008 for My Coke Rewards were “NASCAR,” “fantasy baseball,” “sweepstakes,” and “ring tone,” which helped double the traffic on My Coke Rewards and contributed to the company’s decision to place even greater emphasis on search marketing.²²¹ Coca-Cola asked its digital agency AKQA “to expand” the list of search terms for the My Coke Rewards campaign, and soon “tens of thousands” of terms were acquired.

“By buying those keywords and linking them to the campaign landing page,” an online trade publication reports, “SearchRev was able to improve the results of the TV ads, the movie ads and the banners.” With search, the company noted, “we were not generating new customers. We were capturing them.”²²² Paid search campaigns were conducted on Google, Yahoo, and MSN; banner ads were developed and revised based on testing that revealed “which messages and offers had the strongest click-through and conversion rates.” Coca-Cola also deployed a range of “advanced ad targeting” strategies, including geographic and time-of-day and -week approaches.²²³

By 2008, research documenting the impact of My Coke Rewards showed “positive changes” in both “purchase behavior” and “brand advocacy,” with “one third of

My Coke Rewards members” telling “others about the program—about three or four other people, on average,” and an additional 40 percent planned to do so.²²⁴ According to *Promo Magazine*, “Registrations jumped five-fold, conversion rates three-fold and Coca-Cola’s cost per registration dropped by 26 percent.”²²⁵

The Coca-Cola executive responsible for developing My Coke Rewards explained the company’s targeting strategy in the following manner:

We’re especially targeting a teen or young adult audience. They’re always on their mobile phones and they spend an inordinate amount of time on the Internet. It’s compelling because of the dialogue you can have. Frequently, it’s triggered by the consumer, who has clicked on your rich media ad, entered your search term or participated with your brand over a cell phone....We did some online consumer studies with Yahoo! and Nielsen that determined [that] yes, indeed, an online ad unit can make an emotional connection and encourage consumers to buy more of our products.²²⁶

Coca-Cola also tied purchase of the product to participation in the campaign. Consumers could use PIN codes printed on bottle caps and cartons to redeem contest prizes and rewards online. This would entice consumers to “to create an online account” at MyCokeRewards.com and “supply demographic and psychographic details with each visit to the site.” Through its use of database technologies, Coca-Cola would then have a “very robust, multidimensional profile” of individuals, including their behaviors online.²²⁷ The company used the FICO Precision Marketing Manager, a “powerful platform...which aggregates consumer information into a single database and applies predictive analytic models for segmenting and profiling consumer behavior.”²²⁸ The system is

built upon a business rules management solution. The platform automates the decisioning process in terms of which consumers see what content—and when. A dynamic survey engine captures relevant pieces of information at various iterations and through multiple touch points. At the same time, an analytics application rates consumers on their different passions, from sports gaming to the great outdoors, assigning scores to segment them into the most appropriate buckets.

This detailed behavioral profiling enabled the creation of individually tailored, “dynamic” ads targeted at specific individuals, based on “their product preferences, their consumption behavior, their geographic location, their demographic characteristics, and a vast array of other considerations derived from various sources of data input.”²²⁹ Using such a system, Coca-Cola can analyze “mountains of data to determine the next best action to take with any individual...[and] personalize the look and messaging of a particular web page, email or mobile content, or send an exclusive offer.” The system will “learn from a consumer’s actions, as well as their stated preferences.”²³⁰

All of this data collection and analysis enables My Coke Rewards to offer a vast number of personalized versions of the site, and Coca-Cola has worked to improve

the user interface to help consumers navigate the site more easily, with “personalized home pages based on consumers’ preferences (e.g., preferred brands, activities, etc.).” By 2009, there were

13 million members in the three-year-old program, and the company sends targeted e-mails on a monthly basis, using hundreds of iterations of the e-mail based on a person’s interest. “We take all the information that people have shared to customize them. Three hundred to 1,500 versions go out based on customer preferences,” [Michael La Kier, director of My Coke Rewards for Coca-Cola North America] says. That means a customer who prefers Sprite and is an avid cook might receive an e-mail with Sprite coupons and recipes, while another member who drinks Diet Coke and enjoys movies might receive a Blockbuster free rental coupon. My Coke Rewards uses a proprietary database to handle the real-time decisioning engine to target them. It is also applying that targeted approach to promote local events to loyalty club members in a specific geography.²³¹

Coca-Cola’s online marketing efforts also include its YouTube channel, Facebook pages, iPhone applications, and an array of campaigns, such as the Happiness Factory.²³² Coca-Cola has continued to develop its search marketing strategies.²³³ It also continues to closely track the social media online environment, using such tools as Sysomos and Scout Labs, which allow Coca-Cola to monitor the online “buzz” surrounding its brands.²³⁴

By 2009, around 285,000 users per day were entering “an average of seven codes per second” on My Coke Rewards, with traffic that placed it as “the No. 2 consumer and packaged goods” site online.²³⁵ Coca-Cola was also focused on the growth of social and mobile media, which provides a new opening to tap into a rich vein of detailed personal information on consumers and their networks of relationships.

In 2007, Coca-Cola was one of the original advertisers working with the new Facebook Ads program. By 2010, Coca-Cola had more than 10 million “fans” on Facebook, adding 671,000 “friends” during a single week in August 2010.²³⁶ My Coke Rewards had 15 million registered members, with more than 1 billion PIN codes entered by consumers by August 2010.²³⁷ My Coke Rewards users were “two times more likely to participate in a sweepstakes” than nonmembers, and “the members who most frequently log on are 10 times more likely to enter sweeps.” Coca-Cola’s research also revealed that My Coke Rewards had helped the company tap into a powerful base of brand advocates—“one third of all members told an average 3.7 people about the company’s brands and the My Coke Rewards program.”²³⁸

Coca-Cola uses its relationships with other food and beverage companies to tap into their consumer base in order to build connections for My Coke Rewards. It conducted a test campaign with Denny’s in 2007 (where codes were placed on coasters).²³⁹ In 2008–09, My Coke Rewards wanted to expand beyond its base of more than 12 million members. According to Coca-Cola’s agency, The Marketing

Store, there was a 24 percent overlap between McDonald's Monopoly players and My Coke Rewards. (Monopoly was a popular online and in-store marketing campaign for McDonald's.) Forging an alliance in order to "recruit new My Coke members," Coca-Cola "offered rewards points as a McDonald's Monopoly prize." Consumers could also use their My Coke Rewards points to purchase a McDonald's "Arch Card" gift certificate.²⁴⁰

Mobile marketing also plays an important role for Coca-Cola. As Michael La Kier, director of My Coke Rewards, told *eMarketer*:

We offered mobile from day one—it is a big component of My Coke Rewards. People drink our brands on the go and don't want to carry a bottle cap all day long. They can enter a code via mobile phone and SMS texting. Mobile has always been a pretty big part of our program from a participation standpoint and from a mobile messaging and marketing perspective. We also have a desktop widget so people can enter codes directly from their desktop computer.

We have a variety of ways for people to participate in the program—via SMS, the site and the widget. When they become members, we can look at what brands they're drinking, which packs they're buying, promotions they've participated in and rewards they've redeemed. We look at how people want to interact with us, what information do we want to know, how do we provide value and get value. We invite them to take surveys. We have a lot of information about what consumers are doing and their passions so that we can serve up rewards, offers and sweepstakes based on that information.²⁴¹

My Coke Rewards has become "one of the most popular consumer packaged goods sites in mobile marketing," according to a 2009 study.²⁴² For those consumers who opt in to receiving text (SMS) messages via their cell phones, "Coke sends out text messages to that database regularly, which reinforces consumers' brand loyalty."²⁴³

Coca-Cola sees mobile as key to reaching teens and young adults ages 13 to 24 for its Sprite brand, for example. Coca-Cola asked its mobile ad agency to "drive to acquire significant new opt-ins to the mobile profiles membership to the mobile side of the loyalty program." The agency's work is focused on "new member acquisition, engagement of new members and longer term engagements around mobile to drive retention."²⁴⁴ According to the agency, the fact that mobile opt-ins to My Coke Rewards have increased by 5 to 10 percent per month is "a sign that more and more consumers want to communicate with Coke via the mobile channel."²⁴⁵

Coca-Cola spent \$412 million on domestic advertising for all its brands in 2009, and continues to expand its online presence.²⁴⁶ Discussing the company's major online effort—"Expedition 206"—Adam Brown, a Coca-Cola social media marketing executive, explained, "We're realizing the importance of fishing where the fish are. We're realizing the importance of putting content in the places where our fans already are. We're lucky to have about 3.7 million fans on Facebook. That's where

Sophisticated data collection and behavioral profiling practices illustrate how inadequate current industry self-regulatory regimes are in protecting consumer privacy.

our fans are. We have up about 110,000 videos on YouTube right now that are about Coke and Coca-Cola.”²⁴⁷ By January 2011, Coca-Cola reported it had amassed more than 22 million fans—more than double the 10.4 million fans they had in August 2010.²⁴⁸

The My Coke campaign has enabled the company to reach and engage a growing number of consumers across an array of digital platforms and to target each of them personally. While the campaign serves a broad range of ages, it appears to be particularly appealing to adolescents, who are eager to take advantage of various incentives offered through the program and who are surrendering a growing amount of personal data in the process. The campaign’s sophisticated data collection and behavioral profiling practices serve as an illustration of how inadequate current industry self-regulatory regimes are in protecting consumer privacy. Like many other digital marketers, the My Coke Rewards website has a privacy policy. It runs to more than 3,000 words and has to be scrolled down to read (and thus can’t be printed out to review in its entirety without several steps). Only after careful examination of the legal text can one learn that the policy allows the company to merge online data it collects with other sources.²⁴⁹ Critically, given the site’s connection to other marketers, Coca-Cola’s privacy policy says that it does not “govern the collection of information by third parties.”²⁵⁰

Creating a Fair Marketing Framework

These cases provide only a tiny window into the vast digital media and marketing landscape that has transformed the ways major brands interact with young people. The strategies and practices used to market food and soft drinks are quickly becoming standard operating procedure for promoting a wide range of products and services to children and teens—from cell phones to sneakers to toys and video games. They are also at the heart of most contemporary campaigns aimed at adults—for financial services, prescription drugs, and even political candidates. While online advertising spending still constitutes a relatively small portion of overall U.S. advertising expenditures (approximately \$31 billion in online spending is predicted for 2011, compared with \$154 billion overall), the numbers are growing steadily.²⁵¹

Last year, according to comScore, “U.S. Internet users received a total of 4.9 trillion display ads,” an increase of more than 23 percent from the previous year.²⁵² Several key developments are accelerating this growth, including the following:

- Technological innovations such as super-fast computers that can track and direct a precise interactive ad at an individual within milliseconds
- The rapid expansion of the “mobile Web,” with leading online marketers Google and Apple recently acquiring major mobile ad networks
- The integration of media platforms for programming, marketing, and shopping enabling users to be targeted throughout the entire “path-to-purchase” cycle
- The influx of funds coming into the online marketing industry, with investors spending hundreds of millions to support a variety of new digital ventures

Food and beverage companies continue to play a leadership role in the digital marketing arena, investing in new media companies and participating in major research and development initiatives.²⁵³ The industry has significantly increased its spending for online display advertising, exhibiting double and in some cases triple-digit growth. For example, Coca-Cola’s spending was up 163 percent in 2009 from 2008; Dr. Pepper witnessed 427.9 percent growth; Kellogg’s was up 225.3 percent; PepsiCo, 68.6 percent; Wendy’s, 355.7 percent; General Mills, 105.6 percent; and McDonald’s spent 47.4 percent more.²⁵⁴ These numbers are expected to grow dramatically in the coming years. Companies such as PepsiCo have become venture funders for digital media start-ups in order to position their brands within the new environment.²⁵⁵

The food industry is also increasing its digital marketing efforts aimed at African-American and Hispanic youth. Consumer package good spending overall by African-Americans, Asian-Americans, and Hispanics is predicted to grow to \$373 billion by 2020 (up from \$299 billion today). By 2050, it is expected to grow 74 percent, to \$520 billion.²⁵⁶

Food and beverage companies play a leadership role in digital marketing, investing in new media companies and participating in major research and development initiatives.

Burger King franchises in key markets used BK's "Futbol Kingdom" campaign to drive "incredible results," according to its Hispanic agency.²⁵⁷ Wendy's is also involved in a number of efforts focused on the Hispanic community, and recently hired the Bravo agency to help engage and attract the more than 45 million Hispanic consumers in the U.S.²⁵⁸ McDonald's is placing an even greater emphasis on generating new revenues through targeting multicultural consumers. It is now one of the top five companies marketing to Hispanics, spending \$100 million a year, according to Advertising Age.²⁵⁹ In the United States, Coca-Cola launched "Destapa La Felicidad," the Hispanic adaptation of its Open Happiness campaign, through multiple outlets using "mobile, digital and music components."²⁶⁰

Given such trends, we are likely to witness a flood of creative, well-funded digital marketing initiatives designed to influence the dietary choices of young people. These campaigns will become increasingly sophisticated, tapping into individual and communal behaviors on a 24/7, 360-degree basis, and taking advantage of the dramatic expansion of mobile and social networking platforms. Facebook is now one of the leading online destinations in the United States. Almost half of U.S. mobile phone subscribers (109 million users) accessed online content via their devices last year.²⁶¹ More and more marketing strategies will be focused on these highly popular platforms; young people will be encouraged through social media to "like" quick-service restaurants and products on store shelves; mobile networks will deliver highly local, personalized advertising messages, which will include special barcodes that can be read by devices in outdoor marketing, restaurants, and stores.²⁶² Through the use of a growing arsenal of measurement tools, online metrics, and proprietary behavioral studies, marketers will continue to monitor the use of all of these new digital marketing techniques, fine-tuning them for maximum impact.²⁶³

These campaigns will become increasingly sophisticated, tapping into individual and communal behaviors on a 24/7, 360-degree basis.

The marketing practices that we have documented in this report are already in widespread use. Taken together, they raise fundamental questions that policymakers, public health professionals, industry leaders, and academics need to address. Among those practices we consider particularly important to examine are the following:

- Techniques designed to circumvent rational decision making by fostering unconscious processes. These include marketing messages and products inserted into virtual reality, interactive games, and other immersive environments; stimuli intended to induce fear and other intense emotions; and the use of neuromarketing.
- Tracking individual behaviors without user knowledge or consent. This includes tracking user behaviors across multiple websites or platforms, location tracking through mobile devices, and various forms of social media surveillance and monitoring, all of which are conducted without explicit informed consent.
- Using rewards, prizes, free products, or contest participation as a way to elicit personal data.

- Location-marketing applications, including text messages and other “call-to-action” techniques, especially when designed to foster impulsive responses.
- Campaigns that require consumption of the product as a condition for participation in an entertainment experience and that encourage repeated purchase of the product for these purposes. Such techniques run counter to efforts designed to limit consumption and develop constraint when it comes to unhealthy foods.
- Offering incentives to secure participation in product endorsement, viral marketing, and user-generated-content marketing schemes; failure to disclose these various forms of compensation to the recipients of such endorsements.

While these practices may raise legal and ethical issues regardless of the products they are promoting, they are particularly disturbing when used to market unhealthy foods to children and adolescents.

The Federal Trade Commission has the authority to regulate advertising practices that are either deceptive or unfair, often acting on citizen complaints against particular companies. Advocates and other parties should be encouraged to file complaints against food and beverage companies that engage in such practices. These complaints can sometimes have an industry-wide impact beyond the enforcement actions against an individual company.²⁶⁴ However, a broader effort will be necessary to ensure adequate safeguards for children and adolescents in the rapidly expanding digital marketplace. These efforts should include new legal theories and regulatory approaches that can take into account both contemporary marketing practices and recent research on child and adolescent behavior.

There is an urgent need to revisit the cognitive defense model that has provided the theoretical underpinning for both research and policy on children’s advertising since the 1970s.²⁶⁵ Developed during a period when television was becoming the dominant vehicle for advertising directed at children, this model draws from psychologist Jean Piaget’s theories of child development and is based on the notion that cognitive abilities are the key to understanding the persuasive intent of an advertisement and defending against it.²⁶⁶ According to this approach, safeguards are necessary only for the younger segment of the youth population.²⁶⁷

In recent years, a number of scholars have begun to critique the inadequacy of this model, arguing, for example, that it oversimplifies the persuasive process and fails to take into account the way that advertising and marketing work.²⁶⁸ It seems particularly out of date in light of the strategies used by today’s digital marketers, many of which are purposefully tapping into unconscious, implicit, and social processes. By focusing primarily on cognitive elements, television advertising, and the vulnerabilities of young children, both U.S. regulatory policy and industry self-regulation have been eclipsed by the transformative impact of technological and commercial innovation in the digital marketing arena.

While industry self-regulatory programs have made some efforts to cover digital marketing, they have not addressed adequately the full spectrum of contemporary practices used to promote food and beverage products to children and adolescents. For example, according to the Children's Food and Beverage Advertising Initiative (CFBAI), its "Core Principles" apply to "Internet advertising," which includes "advertising on child-directed third-party websites and company-owned websites that are primarily directed to children under 12."²⁶⁹ However, the principles provide very little guidance on what kinds of techniques are appropriate in marketing to young consumers.

The Council of Better Business Bureau's Children's Advertising Review Unit (CARU), which has been in place since the 1970s, has guidelines that cover all advertising and marketing directed at children. Except for the provisions required by federal law pertaining to children's privacy online (see discussion that follows), they include only a handful of very minimal safeguards for digital marketing, and the guidelines have not been sufficiently updated to address the range of marketing applications routinely employed on social networks, mobile phones, and other popular digital platforms.²⁷⁰ Even the self-regulatory regimes established specifically to address online marketing, such as the Network Advertiser Initiative (NAI), have not proven to be effective.²⁷¹ Most significantly, none of the above initiatives covers adolescents.

Through a combination of policy and self-regulatory activities, it may be possible to develop safeguards to address concerns about the relationship between youth obesity and marketing. The Children's Online Privacy Protection Act (COPPA) provides a useful policy framework that may be adapted to cover some of the digital techniques used by food marketers to target young people. As the first federal law enacted to address the growing digital marketplace and its impact on children, COPPA's provisions were hammered out in a series of negotiations among advocates, policymakers, and industry representatives in 1998. Because the law took effect in the early formative period of Internet e-commerce, it established a clear set of "rules of the road" to help guide the development of the children's digital marketplace. For the past decade, COPPA has provided important protections for young consumers under the age of 13, limiting the collection of personal information, providing a mechanism for parental involvement, and placing obligations on companies for adequate disclosure and protection of data. As a result, some of the most egregious data collection practices that were becoming state of the art in the online marketing environment were curtailed.²⁷²

Although COPPA's scope is somewhat narrow—covering primarily data collection practices and limiting protections to younger children—the law could be a useful building block for creating a broader set of regulatory principles and practices. The legislation created a system whereby self-regulatory guidelines—developed and implemented by a number of entities—operate within a framework of clear government rules and enforcement authority by the FTC, creating an institutional mechanism for continued oversight. Safe-harbor entities, including CARU, have

Until recently, adolescents have been left out of public policy debates and self-regulatory industry programs for both privacy and food marketing.

developed self-regulatory guidelines to ensure that children's media and marketing companies fully understand their obligations under the law, and to provide ongoing monitoring of industry practices.²⁷³

COPPA was purposely designed to adapt to changes in both technology and business practices, with periodic reviews by the FTC to ensure its continued effectiveness.²⁷⁴ Under the commission's proposed revision to the COPPA rules, new policies could make it more difficult for advertisers to establish a "one-to-one" connection with children across a variety of new platforms, including mobile phones and interactive games, and could provide additional protections against some of the emerging data collection and marketing practices identified in this report.²⁷⁵

Until recently, adolescents have been left out of public policy debates and self-regulatory industry programs for both privacy and food marketing.²⁷⁶ But in the last year or so, advocates, academics, and public health professionals have made some important gains in raising awareness of the special needs and vulnerabilities of this age group.²⁷⁷ Many of same advocacy groups that asked the commission to strengthen its COPPA rules are also part of a coalition urging the FTC to finalize a framework for offering adolescents new privacy protections. Because adolescent needs and developmental issues are distinctly different from those of younger children, the proposal is designed to empower adolescents by giving them greater knowledge and control over how data are collected and used to market to them. The coalition also proposed that a "Do Not Track" policy be required on all teen-oriented sites, as part of the commission's recent staff proposal.²⁷⁸ Adolescents should be considered "sensitive users," with safeguards in place to ensure they are treated with special care in the online marketplace.²⁷⁹ Given the key role that data collection and behavioral targeting play in interactive food marketing, a focus on privacy regulation is a timely and potentially efficacious approach.

The goal should be to balance the ability of young people to participate fully in digital media culture with the obligation to ensure they are not subjected to unfair and deceptive marketing.

The present obesity crisis presents a window of opportunity to create a new regulatory framework for digital marketing to youth. It will need to take into account the full spectrum of advertising and marketing practices across all media and will have to apply to all children, including adolescents. Intervention strategies will need to be inclusive and multifaceted, involving a wide range of government, public health, advocacy, and industry stakeholders at both the state and federal levels.

At the core of this new framework should be a set of *fair marketing principles and practices*. They should be focused on all digital marketing targeted at young people, with special provisions to cover food and beverage promotion. The goal should be to balance the ability of young people to participate fully in the digital media culture—as producers, consumers, and citizens—with the governmental and industry obligation to ensure that youth are not subjected to unfair and deceptive marketing, particularly for unhealthy products. These principles would also be designed to ensure that young people are socialized to be responsible consumers in the growing digital marketplace and to understand their rights. The onus of responsibility should

not be placed on youth alone to protect themselves, but also on the companies that market to them. These principles could include the following:

- Digital marketing campaigns should be designed and carried out in ways that treat young people fairly, with special considerations for the unique developmental vulnerabilities and needs of both children and adolescents.
- Marketing campaigns should not be designed to undermine thoughtful and rational decision making by children and youth about their food choices.
- All marketers, including food companies, should disclose the full range of their digital marketing and data collection practices targeted at children and adolescents.
- Sites and services targeting children and adolescents should minimize data collection and, for adolescents, provide them maximum transparency and control over the data collection process.
- Food companies should not conduct any form of personal profiling—via cookies or other tracking technologies—to promote their products to children and adolescents.
- Marketers should not engage in social marketing surveillance of children and teens.
- All children and youth sites should be required to disclose their relationships with food marketers, including the complete range of data collection they or their partners conduct, through games, search results, and other methods.
- Marketers should not use incentives to manipulate children and adolescents into promoting unhealthy foods and beverages to their peers.
- Venture capitalists and other financial investors in the digital media arena should develop policies for ensuring that the companies they fund do not engage in deceptive or unfair marketing of food products to children and adolescents.

New digital marketing tactics are emerging and advancing rapidly, and it is crucial to begin establishing standards and policies to protect the health of future generations. With new techniques for data collection, monitoring, profiling, and targeting rolled out almost daily, we have an urgent responsibility—and only a brief opportunity—to intervene.

- ¹ "Doritos Hotel 626," The Inspiration Room, 22 June 2009, <http://theinspirationroom.com/daily/2009/doritos-hotel-626/>; "Hotel626.com," www.cyberentries.com/hotel626/ (both viewed 11 Apr. 2010).
- ² Ann-Christine Diaz, "Goodby and B-Reel Enter the Asylum for the Sequel to Doritos Hotel 626," Creativity Online, 23 Sept. 2009, <http://creativity-online.com/news/goodby-and-breel-step-into-the-asylum-for-the-sequel-to-doritos-hotel-626/139224> (viewed 11 Apr. 2010).
- ³ Jeff Chester and Kathryn Montgomery, "Interactive Food & Beverage Marketing: Targeting Children and Youth in the Digital Age," May 2007, www.digitalads.org/documents/digiMarketingFull.pdf (viewed 15 Oct. 2008). See also Advertising Research Foundation Youth Council, "The Youth Market and Content Across Platforms," 17 Aug. 2010, www.thearf.org/assets/youth-council (viewed 13 Sept. 2011).
- ⁴ For example, Microsoft Advertising and Carat presented research involving quick-service restaurants (QSRs) and the influence of the Internet. "Digital is core to the journey: mobile is especially influential," they explained. Microsoft Advertising and Carat, "The New Shopper: Today's Purchase Path and the Media That Influences It," n.d., <http://advertising.microsoft.com/wwdocs/user/en-us/researchlibrary/researchreport/US-Online-Consumer-Retail-Research-Carat-Microsoft-Advertising.pdf> (viewed 24 Feb. 2011).
- ⁵ Advertising Research Foundation, "MI4 Engagement Validation Research Agenda," Council on Experiential Marketing, 18 May 2006, www.thearf.org/downloads/councils/experiential/2006-05-18_ARF_EXP_diforio.pdf (viewed 27 Mar. 2007); R. Heath, "How Do We Predict Advertising Attention and Engagement?" University of Bath School of Management Working Paper Series, Sept. 2007, <https://www.bath.ac.uk/opus/bitstream/10247/286/1/2007-09.pdf>; Advertising Research Foundation, "Defining Engagement Initiative," www.thearf.org/assets/research-arf-initiatives-defining-engagement (both viewed 2 Oct. 2008); Advertising Research Foundation, "Engagement: Definitions and Anatomy," Mar. 2006, http://my.thearf.org/source/Orders/index.cfm?section=unknown&task=3&CATEGORY=PUB&PRODUCT_TYPE=SALES&SKU=PUB_ENGDA_E&DESCRIPTION=Publications&FindSpec=&CFTOKEN=73112952&continue=1&SEARCH_TYPE=find&StartRow=1&PageNum=1 (purchase required).
- ⁶ For a full discussion of the conceptual framework for digital food marketing, see Kathryn Montgomery, Sonya Grier, Jeff Chester, and Lori Dorfman, "Food Marketing in the Digital Age: A Conceptual Framework and Agenda for Research," 1 Apr. 2011, www.centerfordigitaldemocracy.org/sites/default/files/Digital_Food_Mktg_Conceptual_Model%20Report.pdf (viewed 12 Sept. 2011). See also Jeff Chester, Andrew Cheyne, and Lori Dorfman, "Peeking Behind the Curtain: Food and Marketing Industry Research Supporting Digital Media Marketing to Children and Adolescents," May 2011, http://digitalads.org/documents/CDD_BMSG_Industry_Research.pdf (viewed 13 Sept. 2011).
- ⁷ Wendy L. Johnson-Askew et al., "Decision Making in Eating Behavior: State of the Science and Recommendations for Future Research," *Annals of Behavioral Medicine* 38, Suppl. (2009).
- ⁸ The National Academies, "Food Marketing Aimed at Kids Influences Poor Nutritional Choices, IOM Study Finds; Broad Effort Needed to Promote Healthier Products and Diets," press release, 6 Dec. 2005, www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=11514 (viewed 26 Mar. 2007). J. M. McGinnis, J. A. Gootman, and V. I. Kraak, eds., *Food Marketing to Children and Youth: Threat or Opportunity?* (Washington, DC: Institute of Medicine, 2005).
- ⁹ U.S. Better Business Bureau, "Children's Food and Beverage Advertising Initiative," www.bbb.org/us/children-food-beverage-advertising-initiative/; U.S. Better Business Bureau, "BBB Children's Food and Beverage Advertising Initiative: Food and Beverage Products that Meet Participants' Approved Nutrition Standards," Sept. 2011, www.bbb.org/us/storage/0/Shared%20Documents/September%202011.pdf (both viewed 11 Sept. 2011).
- ¹⁰ World Health Organization, "Obesity and Overweight," n.d., www.who.int/dietphysicalactivity/publications/facts/obesity/en (viewed 22 Sept. 2008); World Health Organization, "Marketing of Food and Non-alcoholic Beverages to Children. Report of a WHO Forum and Technical Meeting. Oslo, Norway, 2-5 May 2006," www.who.int/dietphysicalactivity/publications/Oslo%20meeting%20layout%2027%20NOVEMBER.pdf (viewed 29 August 2009); McGinnis, Gootman, and Kraak, eds., *Food Marketing to Children and Youth: Threat or Opportunity?*; Sonya Grier, "African American & Hispanic Youth Vulnerability to Target Marketing: Implications for Understanding the Effects of Digital Marketing," memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, 29-30 June 2009, <http://digitalads.org/documents/Grier%20NPLAN%20BMSG%20memo.pdf> (viewed 26 Aug. 2010).
- ¹¹ Kelly D. Brownell, Marlene B. Schwartz, Rebecca M. Puhl, Kathryn E. Henderson, and Jennifer L. Harris, "The Need for Bold Action to Prevent Adolescent Obesity," *Journal of Adolescent Health* 45, n. 3, Supplement (September 2009): S8-S17; M. Story, J. Sallis, and T. Orleans, "Adolescent Obesity: Towards Evidence-Based Policy and Environmental Solutions," *Journal of Adolescent Health* 45, n. 3, Supplement (September 2009): S1-S5.
- ¹² Lauren A. Matecki, "Update: COPPA Is Ineffective Legislation! Next Steps for Protecting Youth Privacy Rights in the Social Networking Era," *Northwestern Journal of Law and Social Policy* 5, n. 2 (Fall 2010): 369-402, www.law.northwestern.edu/journals/njls/v5/n2/7/7Matecki.pdf (viewed 24 Feb. 2011).
- ¹³ C. Pechmann, L. Levine, and S. Loughlin, et al., "Impulsive and Self-conscious: Adolescents' Vulnerability to Advertising and Promotion," *Journal of Public Policy & Marketing* 24, n. 2 (2005): 202-221; Frances M. Leslie, Linda J. Levine, Sandra E. Loughlin, and Cornelia Pechmann, "Adolescents' Psychological & Neurobiological Development: Implications for Digital Marketing," Memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, 29-30 June 2009, http://digitalads.org/documents/Leslie_et_al_NPLAN_BMSG_memo.pdf (viewed 26 Aug. 2010).
- ¹⁴ J. N. Giedd, "The Teen Brain: Insights from Neuroimaging," *Journal of Adolescent Health* 42, n. 4 (2008): 335-343; E. R. McAnarney, "Adolescent Brain Development: Forging New Links?" *Journal of Adolescent Health* 42, n. 4 (2008): 321-323; L. Steinberg, "Risk Taking in Adolescence: New Perspectives from Brain and Behavioral Science," *Current Directions in Psychological Science* 16, n. 2 (2007): 55-59; L. Steinberg, "A Social Neuroscience Perspective on Adolescent Risk-taking," *Developmental Review* 28, n. 1 (2008): 78-106.
- ¹⁵ T. McCreanor, H. M. Barnes, and M. Gregory, et al., "Consuming Identities: Alcohol Marketing and the Commodification of Youth Experience," *Addiction Research & Theory* 13, n. 6 (2005): 579-590; R. L. Collins, P. L. Ellickson, and D. McCaffrey, et al., "Early Adolescent Exposure to Alcohol Advertising and its Relationship to Underage Drinking," *Journal of Adolescent Health* 40, n. 6 (2007): 527-534.
- ¹⁶ Pechmann et al., "Impulsive and Self-conscious: Adolescents' Vulnerability to Advertising and Promotion."
- ¹⁷ Kathryn Montgomery and Jeff Chester, "Interactive Food & Beverage Marketing: Targeting Adolescents in the Digital Age," *Journal of Adolescent Health* 45, n. 3, Suppl. (Sept. 2009): S18-S29.
- ¹⁸ Leslie et al., "Adolescents' Psychological & Neurobiological Development: Implications for Digital Marketing."
- ¹⁹ Sonya Grier, "African American & Hispanic Youth Vulnerability to Target Marketing: Implications for Understanding the Effects of Digital Marketing," memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, 29-30 June 2009; S. A. Grier and S. K. Kumanyika, "The Context for Choice: Health Implications of Targeted Food and Beverage Marketing to African Americans," *American Journal of Public Health* 98, n. 9 (2008): 1616-29; Kristen Harrison, "Fast and Sweet: Nutritional Attributes of Television Food Advertisements with and without Black Characters," *Howard Journal of Communications* 17, n. 4 (2006): 16; and Corliss Wilson Outley and Abdissa Taddese, "A Content Analysis of Health and Physical Activity Messages Marketed to African American Children During After-School Television Programming," *Archives of Pediatrics & Adolescent Medicine* 160, n. 4 (2006): 4.

- ²⁰ Latinum Network, "U.S. Hispanics Propel Real Growth in Food, Beverage and Restaurant Sectors, According to Latinum Network," 8 Apr. 2010, www.latinumnetwork.com/release4.php (viewed 18 Aug. 2010).
- ²¹ Grier and Kumanyika, "The Context for Choice: Health Implications of Targeted Food and Beverage Marketing to African Americans"; S. A. Grier and J. Mensinger, et al., "Fast Food Marketing and Children's Fast Food Consumption: Exploring Parental Influences in an Ethnically Diverse Sample," *Journal of Public Policy & Marketing* 26, n. 2 (2007): 221–235.
- ²² Alan J. Bush, Rachel Smith, and Craig Martin, "The Influence of Consumer Socialization Variables on Attitude toward Advertising: A Comparison of African-Americans and Caucasians," *Journal of Advertising* 28, n. 3 (1999): 13–24; Felipe Korzenny, Betty Ann Korzenny, Holly McGavock, and Maria Gracia Inglessis, "The Multicultural Marketing Equation: Media, Attitudes, Brands, and Spending," Center for Hispanic Marketing Communication, Florida State University, 2006; George P. Moschis, *Consumer Socialization: A Life-Cycle Perspective* (Lexington, MA: Lexington Books, 1987); Nitish Singh, Ik-Whan Kwon, and Arun Pereira, "Cross-Cultural Consumer Socialization: An Exploratory Study of Socialization Influences across Three Ethnic Groups," *Psychology & Marketing* 20, n. 10 (2003): 15; Carolyn A. Stroman, "Television's Role in the Socialization of African American Children and Adolescents," *The Journal of Negro Education* 60, n. 3 (1991): 314–327; Gail Baker Woods, *Advertising and Marketing to the New Majority* (Belmont, CA: Wadsworth Publishing Company, 1995).
- ²³ Radio One, "Black America Today: The Future, The Past, The Present," June 2008, <http://blackamericastudy.com/summary/AA-Presentation-Public-Deck-3.pdf>; Aaron Smith, "Who's on What: Social Media Trends Among Communities of Color," 25 Jan. 2011, www.pewinternet.org/Presentations/2011/Jan/Social-Media-Trends-Among-Communities-of-Color.aspx (viewed 27 Feb. 2011); Jose Villa, "2011: The Year of Creative Destruction," Engage: Hispanics, 6 Jan. 2011, www.mediapost.com/publications/index.cfm?fa=Articles.showArticle&art_aid=142461 (viewed 27 Feb. 2011); Mark Hugo Lopez and Gretchen Livingston, "How Young Latinos Communicate with Friends in the Digital Age," Pew Hispanic Center, 28 July 2010, <http://pewhispanic.org/files/reports/124.pdf>; Lori George Billingsley, "Social Media is the New Avenue to Reach Multicultural Audiences," *PRWeek*, 27 Apr. 2009, www.prweekus.com/pages/Login.aspx?retUrl=/Social-media-is-the-new-avenue-to-reach-multicultural-audiences/article/131349/&PageTypeId=28&ArticleId=131349&accessLevel=2 (subscription required); "U.S. Hispanics Lead in Technology Purchases," *Ad Age*, 23 Dec. 2010, <http://adage.com/article/global-news/digital-u-s-hispanics-lead-technology-purchases/147884/> (all viewed 27 Feb. 2011).
- ²⁴ Omnibus Appropriations Act, 2009 (H.R. 1105), Financial Services and General Government, Explanatory Statement, Title V, Independent Agencies, 983–984.
- ²⁵ Federal Trade Commission, "Interagency Working Group, Preliminary Proposed Nutrition Principles to Guide Industry Self-Regulatory Efforts, Request for Comments," www.ftc.gov/os/2011/04/110428foodmarketproposedguide.pdf (viewed 16 Sept. 2011).
- ²⁶ Federal Trade Commission, "Interagency Working Group Seeks Input on Proposed Voluntary Principles for Marketing Food to Children," 28 Apr. 2011, www.ftc.gov/opa/2011/04/foodmarket.shtm; Center for Science in the Public Interest, "Proposed Federal Standards for Foods Marketed to Children Praised," 28 Apr. 2011, www.cspinet.org/new/201104281.html; ANA, "Dan Jaffe Statement at the Interagency Working Group on Food Marketed to Children Public Forum," 24 May 2011, www.ana.net/content/show/id/21505; Lyndsey Layton and Dan Eggen, "Industries Lobby Against Voluntary Nutrition Guidelines for Food Marketed to Kids," *Washington Post*, 9 July 2011, www.washingtonpost.com/politics/industries-lobby-against-voluntary-nutrition-guidelines-for-food-marketed-to-kids/2011/07/08/gIQAZSu5H_story.html (all viewed 11 Sept. 2011).
- ²⁷ Kathleen M. Sullivan, "The Interagency Working Group's Preliminary Proposed Nutrition Principles to Guide Industry Self-Regulatory Efforts: Constitutional Issues," <http://sensiblefoodpolicy.org/learn-more> (viewed 16 Sept. 2011).
- ²⁸ Gary Allison et al., "Open Letter on the First Amendment and the Interagency Working Group Principles," 6 Sept. 2011, www.phlpnet.org/php/news/IWG-proposal-doesnt-violate-1st-amendment (viewed 16 Sept. 2011).
- ²⁹ *Sorrell v. IMS Health Inc.*, 2011, www.supremecourt.gov/opinions/10pdf/10-779.pdf; *Brown v. Entertainment Merchants Association*, 2011, www.supremecourt.gov/opinions/10pdf/08-1448.pdf (both viewed 12 Sept. 2011). ANA, "Marketing Community Wins Major Victory in U.S. Supreme Court Decision," n.d., www.ana.net/content/show/id/21647; ANA, "Marketing Community Wins Second Major Victory in U.S. Supreme Court," n.d., www.ana.net/content/show/id/21664 (both viewed 11 Sept. 2011).
- ³⁰ National Policy & Legal Analysis Network to Prevent Childhood Obesity, "Memo to Food Marketing Workgroup," 12 Aug. 2011, www.nplan.org/sites/phlpnet.org/files/SorrellBrownSummaryMemo_SG_20110815.pdf (viewed 22 Sept. 2011).
- ³¹ Kathryn C. Montgomery, *Generation Digital: Politics, Commerce, and Childhood in the Age of the Internet* (Cambridge, MA: MIT Press, 2007): 11–34, 107–139.
- ³² The Healthy Eating Research (HER) Initiative supported some of the research for this project, including our work with colleagues Sonya Grier (American University) and Lori Dorfman (Berkeley Media Studies Group) to develop a conceptual framework for understanding the digital marketplace, as well as data collection for the case studies. We also thank Andrew Cheyne at the Berkeley Media Studies Group, who participated in the HER research.
- ³³ We would like to thank Angela Campbell at Georgetown University's Institute for Public Representation for helping us with research and legal analysis for this report, as well as her staff and students: Guilherme Roschke, Kate Aishton, and Todd Hales.
- ³⁴ Allen Vamey, "Immersion Unexplained," *The Escapist*, 8 Aug. 2006, www.escapistmagazine.com/articles/view/issues/issue_57/341-Immersion-Unexplained (viewed 26 Aug. 2010).
- ³⁵ Ben Cowley, Darryl Charles, Michaela Black, and Ray Hickey, "Toward an Understanding of Flow in Video Games," *Computers in Entertainment* 6, n. 2 (April/June 2008).
- ³⁶ Brian Barrett, "Gaming's Augmented Reality Future Is One Terrifying Trip," *Gizmodo*, 11 Feb. 2010, <http://gizmodo.com/5469796/gamings-augmented-reality-future-is-one-terrifying-trip> (viewed 26 Aug. 2010).
- ³⁷ Donna L. Hoffman and Thomas P. Novak, "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations," *The Journal of Marketing* 60, n. 3 (July 1996): 50–68. See also Dave Dickson, "New Research Study: Advertising Engagement in Digital Magazines," Adobe Digital Publishing, 24 Jan. 2011, <http://blogs.adobe.com/digitalpublishing/2011/01/ad-engagement.html>; and Alex Wang, "Digital Ad Engagement: Perceived Interactivity as a Driver of Advertising Effectiveness," 2010, http://blogs.adobe.com/digitalpublishing/files/2011/01/digital_magazine_ad_engagement.pdf (viewed 13 Sept. 2011).
- ³⁸ Dart Motif, "Sites—Overview," www.dartmotif.com/sites/sites.asp (viewed 30 Mar. 2007). See also Havas Digital, "MC Insight: Advertising and Video Games," July 2008, www.mediacontacts.com/2008/07/advertising-and-video-games/ (viewed 13 Sept. 2011). For the myriad of ways a consumer is tracked online today, see "Ad Networks + Exchanges Guide," *Advertising Age*, <http://brandedcontent.adage.com/adnetworkguide10/>; and Microsoft Advertising, "Audience Targeting," <http://advertising.microsoft.com/asia/advertise/audience/targeting> (both viewed 13 Sept. 2011).
- ³⁹ Mark Kroese, "Is It What You Watch...or Who You Are?—IAB Mixx 2010," Microsoft Advertising Blog, 10 Sept. 2010, <http://community.microsoftadvertising.com/blogs/advertising/archive/2010/09/10/is-it-what-you-watch-or-who-you-are.aspx> (viewed 22 Feb. 2011). See also Microsoft Advertising, Xbox, <http://advertising.microsoft.com/gaming/xbox-advertising> (viewed 13 Sept. 2011).
- ⁴⁰ Microsoft, "Games Advertising Strikes An Emotional Chord With Consumers," 15 June 2009, www.emsense.com/press/game-advertising.php (viewed 11 Apr. 2010). See also Microsoft Advertising, "Doritos Xbox Live Arcade Game Smashes Records," 21 June 2011, <http://advertising.microsoft.com/europe/doritos-xbox-live-arcade-game> (viewed 13 Sept. 2011).

- ⁴¹ “Researchers Find Link Between Immersion and Virtual Buying Habits,” IGN, 1 July 2010, <http://games.ign.com/articles/110/1103374p1.html> (viewed 26 Aug. 2010).
- ⁴² A. Nairn and C. Fine, “Who’s Messing with My Mind? The Implications of Dual-Process Models for the Ethics of Advertising to Children,” *International Journal of Advertising* 27, n. 3 (2008): 447–470.
- ⁴³ Agnes Nairn, “Changing the Rules of the Game: Implicit Persuasion and Interactive Children’s Marketing,” memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, 29–30 June 2009, www.digitalads.org/documents/Nairn_NPLAN_BMSG_memo.pdf (viewed 26 Aug. 2010).
- ⁴⁴ Jennifer L. Harris, Kelly D. Brownell, and John A. Bargh, “The Food Marketing Defense Model: Integrating Psychological Research to Protect Youth and Inform Public Policy,” *Social Issues and Policy Review* 3, n. 1 (2009): 211–271; Sharmistha Law and Kathryn A. Braun, “I’ll Have What She’s Having: Gauging the Impact of Product Placements on Viewers,” *Psychology and Marketing* 17, n. 12 (Dec. 2000): 1059–1075; S. Auty and C. Lewis “The ‘Delicious Paradox’: Preconscious Processing of Product Placements by Children,” in L. J. Shrum, ed., *The Psychology of Entertainment Media: Blurring the Lines Between Entertainment and Persuasion* (London: Psychology Press, 2003): 117–133.
- ⁴⁵ Louis J. Moses, “Research on Child Development: Implications for How Children Understand and Cope with Digital Media,” memo prepared for the Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community, Berkeley, CA, 29–30 June 2009, www.digitalads.org/documents/Moses_NPLAN_BMSG_memo.pdf (viewed 26 Aug. 2010).
- ⁴⁶ Chester and Montgomery, “Interactive Food & Beverage Marketing: Targeting Children and Youth in the Digital Age.”
- ⁴⁷ David A. Kessler, *The End of Overeating: Taking Control of the Insatiable American Appetite* (New York: Rodale, 2009): 34. See also Adam Drewnowski, “Energy Intake and Sensory Properties of Food,” *American Journal of Clinical Nutrition* 62, no. 5 Suppl. (1995): 1081S–1085S.
- ⁴⁸ *Ibid.*, 34.
- ⁴⁹ *Ibid.*, 61–64.
- ⁵⁰ Ashley N. Gearhardt, William R. Corbin, Kelly D. Brownell, “Preliminary Validation of the Yale Food Addiction Scale,” *Appetite* 52 (2009): 430–436, www.yaleruddcenter.org/resources/upload/docs/what/addiction/FoodAddictionScaleArticle09.pdf (viewed 14 Sept. 2010).
- ⁵¹ Jeremiah Owyang, “A Collection of Social Network Stats for 2010,” Web Strategy, 19 Jan. 2010, www.web-strategist.com/blog/2010/01/19/a-collection-of-social-network-stats-for-2010/ (viewed 13 Mar. 2010). See also Amanda Lenhart, Kristen Purcell, Aaron Smith, Kathryn Zickuhr, “Social Media and Young Adults,” Pew Internet & American Life Project, 3 Feb. 2010, <http://pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx> (viewed 13 Sept. 2011).
- ⁵² Facebook, “Statistics,” www.facebook.com/press/info.php?statistics (viewed 13 Sept. 2011).
- ⁵³ See, for example, David Buckingham, ed., *Youth, Identity, and Digital Media*, MacArthur Foundation Series on Digital Learning (Cambridge, MA: MIT Press, 2007).
- ⁵⁴ H. Marcus and P. Nurius, “Possible Selves,” *American Psychologist* 41, n. 9 (1986): 954–969. S. Stern, “Producing Sites: Exploring Identities: Youth Online Authorship,” in D. Buckingham, ed. *Youth, Identity, and Digital Media*, 99–117.
- ⁵⁵ Interactive Advertising Bureau, “IAB Platform Status Report: User Generated Content, Social Media, and Advertising—An Overview,” Apr. 2008, www.iab.net/media/file/2008_ugc_platform.pdf (viewed 12 Sept. 2010). See also IAB, “Social Media Buyer’s Guide,” Feb. 2010, www.iab.net/media/file/IAB_SocialMedia_Booklet.pdf; and IAB, “Social Media Metrics Definitions,” May 2009, www.slideshare.net/womarketing/iab-social-media-metrics-definitions (both viewed 13 Sept. 2011).
- ⁵⁶ A. Iskold, “Social Graph: Concepts and Issues,” ReadWriteWeb, 12 Sept. 2007, www.readwriteweb.com/archives/social_graph_concepts_and_issues.php (viewed 2 Oct. 2008).
- ⁵⁷ Collective Intellect, “Our Technology: CI-Listen | Social Media Monitoring,” www.collectiveintellect.com/products/listen#page=listen (viewed 24 Feb. 2011).
- ⁵⁸ Acxiom, “Direct Social Media Marketing,” www.acxiom.com/PRODUCTS_AND_SERVICES/TARGETEDENGAGEMENT/DIRECTSOCIALMEDIAMARKETING/Pages/DirectSocialMediaMarketing.aspx (viewed 22 Feb. 2011).
- ⁵⁹ Ripple6, “Ripple Analytics,” www.ripple6.com/platform/analytics.aspx (viewed 22 Oct. 2009). See also Andiamosystems, “Features & Benefits,” www.andiamosystems.com/features.html; Web Liquid, “Social: Media,” www.webliquidgroup.com/services/social-media-analytics.html; and Google, “Word of Mouth and the Internet,” June 2011, www.google.com/think/insights/studies?cn=ad_type&cv=social (all viewed 13 Sept. 2011).
- ⁶⁰ Nielsen Company, “Hundreds of U.S. Consumers to Actively Participate from the HeyNielsen.com Social Network,” 28 Jan. 2008, http://ir.nielsen.com/phoenix.zhtml?c=211455&p=irol-newsArticle_print&ID=1461295&highlight= (viewed 22 Feb. 2011). See also Aliya Zaidi, “Online Reputation and Buzz Monitoring Buyer’s Guide,” Econsultancy, Apr. 2010, <http://econsultancy.com/us/reports/online-reputation-and-buzz-monitoring-buyer-s-guide> (purchase required); Cymfony, “Cymfony Echo Video,” www.cymfony.com/solutions/cymfony-echo-video (viewed 13 Sept. 2011).
- ⁶¹ According to Facebook, “250 million active users currently accessing Facebook through their mobile devices.” Facebook, “Statistics,” 2011, <https://www.facebook.com/press/info.php?statistics> (viewed 22 Feb. 2011).
- ⁶² Facebook, “Facebook’s Privacy Policy,” 22 Dec. 2010, www.facebook.com/policy.php; “Comments of the Center for Digital Democracy, et al., in the Matter of a Preliminary FTC Staff Report on Protecting Consumer Privacy in an Era of Rapid Change: Proposed Framework for Business and Policymakers,” 18 Feb. 2011, www.democraticmedia.org/files/2011-02-18-teen-privacy.pdf. Recently, Facebook announced that applications will be permitted to access telephone numbers and street addresses. Jeff Bowen, “Platform Updates: New User Object fields, Edge.remove Event and More,” Facebook Developer Blog, 14 Jan. 2011, <http://developers.facebook.com/blog/post/446>. *The Wall Street Journal* has reported that popular applications were transmitting certain identifying information to advertisers. Emily Steel and Geoffrey A. Fowler, “Facebook in Privacy Breach,” *Wall Street Journal*, 18 Oct. 2010, <http://online.wsj.com/article/SB10001424052702304772804575558484075236968.html?mod=djemalerTECH> (all viewed 22 Feb. 2011). Facebook continues to make changes to its privacy policy, responding to increasing pressure from regulators. Jacob Schulman, “Facebook Makes Sweeping Changes in Privacy, Sharing Controls,” *Washington Post*, 24 Aug. 2011, www.washingtonpost.com/business/economy/facebook-makes-sweeping-changes-in-privacy-sharing-controls/2011/08/24/GIQA8DC8aJ_story.html (viewed 13 Sept. 2011).
- ⁶³ Leslie, Levine, Loughlin, and Pechmann, “Adolescents’ Psychological & Neurobiological Development: Implications for Digital Marketing.”
- ⁶⁴ An endorsement is (1) any advertising message (2) that consumers are likely to believe reflects the opinions, beliefs, or experiences of a party other than the sponsoring marketer. See Federal Trade Commission, “Guides Concerning the Use of Endorsements and Testimonials in Advertising,” 16 CFR Part 255 (rev. 2009), www.ftc.gov/os/2009/10/091005revisedendorsementguides.pdf (viewed 11 Jan. 2011). See also Rebecca Tushnet, “Attention Must Be Paid: Commercial Speech, User-Generated Ads, and the Challenge of Regulation,” *Buffalo Law Review* 58: 721–793.
- ⁶⁵ See the full discussion of data collection and behavioral profiling in Montgomery, Grier, Chester, and Dorfman, “Food Marketing in the Digital Age: A Conceptual Framework and Agenda for Research.”
- ⁶⁶ For a detailed description of the latest trends in online behavioral profiling and data collection, see “Comments of the Center for Digital Democracy, et al., in the Matter of a Preliminary FTC Staff Report on Protecting Consumer Privacy in an Era of Rapid Change: Proposed Framework for Business and Policymakers.”

- ⁶⁷ See, for example, Devindra Hardawar, "Google Acquires Invite Media to Help Users with Ad Exchanges," *VentureBeat*, 2 June 2010, <http://venturebeat.com/2010/06/02/google-acquires-invite-media-to-help-users-with-ad-exchanges/>; David Kaplan, "VC Money Keeps Pouring In for Ad Targeters: Turn Raises \$20 Million," *paidContent.org*, 5 Jan. 2011, <http://paidcontent.org/article/419-vc-money-keeps-pouring-in-for-ad-targeters-turn-raises-20-million/> (both viewed 15 Feb. 2011).
- ⁶⁸ Econsultancy, "Demand-Side Platforms Buyer's Guide," 2011, 3, <http://econsultancy.com/us/reports/dsps-buyers-guide> (purchase required).
- ⁶⁹ Center for Digital Democracy, U.S. PIRG, and World Privacy Forum, "In the Matter of Real-Time Targeting and Auctioning, Data Profiling Optimization, and Economic Loss to Consumers and Privacy, Complaint, Request for Investigation, Injunction, and Other Relief: Google, Yahoo, PubMatic, TARGUSinfo, MediaMath, eXelate, Rubicon Project, AppNexus, Rocket Fuel, and Others Named Below," Federal Trade Commission filing, 8 Apr. 2010, www.democraticmedia.org/real-time-targeting (viewed 9 Feb. 2011).
- ⁷⁰ In the words of computational advertising company Rocket Fuel, companies can buy "individual impressions of the users that matter most—the ones...determined [to] fit [a] customized data-driven audience profile." Econsultancy, "Demand-Side Platforms Buyer's Guide," 92. Many of the data targeting companies involved in today's behavioral profiling marketplace incorporate so-called intent data from companies such as BlueKai, eXelate, and AlmondNet, along with "unique personal data" from vendors that include TARGUSinfo and Experian. Econsultancy, "Demand-Side Platforms Buyer's Guide," 44.
- ⁷¹ Econsultancy, "Demand-Side Platforms Buyer's Guide," 7.
- ⁷² Michael Barrett, "Real-Time Bidding Becomes a \$823M Market in 2011, Study Says," *Advertising Age*, 9 Feb. 2011, <http://adage.com/article/digitalnext/online-advertising-real-time-bidding-grows-823m-market/148796/> (viewed 13 Sept. 2011).
- ⁷³ Federal Trade Commission, "Children's Online Privacy Protection Act of 1998," www.ftc.gov/ogc/coppa1.htm (viewed 12 Sept. 2011).
- ⁷⁴ Federal Trade Commission, "FTC Seeks Comment on Proposed Revisions to Children's Online Privacy Protection Rule," 15 Sept. 2011, www.ftc.gov/opa/2011/09/coppa.shtm (viewed 15 Sept. 2011).
- ⁷⁵ Michael Mattis, "Reaching Your Teens," Yahoo Advertising Blog, 22 Jan. 2010, www.yadvertisingblog.com/blog/2010/01/22/reaching-your-teens/; AOL Advertising, "Teens," <http://advertising.aol.com/audiences/teens/>; Kaila Wyman, "Mobile Social Next Big Teen Trend—Mimi Ito at Imagine 2011," Microsoft Advertising Blog, 30 Mar. 2011, <http://community.microsoftadvertising.com/blogs/advertising/archive/2011/03/30/mobile-social-is-the-next-big-teen-trend-shared-by-mimi-ito-at-imagine-2011.aspx>; Brightkite, "Advertise with Us: Ultra-Targeted Advertising," http://brightkite.com/pages/bk_ad_targeting_capabilities.html (all viewed 13 Sept. 2011).
- ⁷⁶ See Yahoo's Butterfinger online video comedy channel, as an example of such targeting. "Butterfinger—Comedy Network," <http://comedy.video.yahoo.com/> (viewed 23 Feb. 2011).
- ⁷⁷ AOL Advertising, "Audiences: Teens," <http://advertising.aol.com/audiences/teens>. Companies regularly target teenagers. For example, social media-oriented online ad data targeter Lotame "routinely serves ads to teens (13+) to promote teen-oriented movies or TV programs, or other teen-specific products (such as acne medications)." Lotame, "Lotame's Statement on *The Wall Street Journal* Article Dated July 31, 2010," 1 Aug. 2010, www.lotame.com/2010/08/lotame-statement-on-the-wall-street-journal-article-dated-july-31-2010/ (both viewed 16 Jan. 2010).
- ⁷⁸ Michael Comins, "Ad Networks vs. Ad Servers," iMedia Connection, 26 May 2004, www.imediaconnection.com/content/3523.asp (viewed 23 Feb. 2011).
- ⁷⁹ "Tribal Fusion Joins BlueKai's Premier Partnership Program," 23 Sept. 2009, www.bluekai.com/newsandmedia_pressreleases_20090923.php (viewed 23 Feb. 2011).
- ⁸⁰ Rocket Fuel, "Case Study: Quick-Service Restaurant," www.rocketfuelinc.com/case_studies/casestudyQSR.html (viewed 23 Feb. 2011).
- ⁸¹ Federal Trade Commission, "Protecting Kids' Privacy Online: Reviewing the COPPA Rule," 2 June 2010, www.ftc.gov/bcp/workshops/coppa/index.shtml (viewed 12 Sept. 2011).
- ⁸² Federal Trade Commission (Bureau of Consumer Protection), "A Preliminary FTC Staff Report on Protecting Consumer Privacy in an Era of Rapid Change: A Proposed Framework for Businesses and Policymakers," 1 Dec. 2010, 35–38, www.ftc.gov/os/2010/12/101201privacyreport.pdf (viewed 23 Feb. 2011). The European Union has also weighed in on this issue, supporting the concept that behavioral targeting information is tied to individuals. Data Protection Working Party, "Opinion 2/2010 on Online Behavioural Advertising," 22 June 2010, http://ec.europa.eu/justice/policies/privacy/docs/wpdocs/2010/wp171_en.pdf (all viewed 13 Sept. 2011).
- ⁸³ Joseph Turow, "Americans and Online Privacy: The System Is Broken," A report from the Annenberg Public Policy Center of the University of Pennsylvania, June 2003, www.asc.upenn.edu/usr/jturow/internet-privacy-report/36-page-turow-version-9.pdf (viewed 23 Feb. 2011).
- ⁸⁴ "Privacy Policy Analysis," KnowPrivacy, <http://knowprivacy.org/policies.html> (viewed 23 Feb. 2011).
- ⁸⁵ Institute for Public Representation (on behalf of the American Academy of Child and Adolescent Psychiatry, the American Academy of Pediatrics, American Psychological Association, Benton Foundation, Campaign for a Commercial Free Childhood, Center for Digital Democracy), filing with the Federal Trade Commission concerning "Online Behavioral Advertising Principles," 11 Apr. 2008, 9, www.democraticmedia.org/files/Children's%20Advocacy%20Groups%20%20Behavioral%20Advertising%20Comments%20FINAL.pdf (viewed 23 Feb. 2011).
- ⁸⁶ Institute for Public Representation FTC filing, 7, 9.
- ⁸⁷ Doc Searls, "Cookies for Kiddies," Doc Searls Weblog, 18 Sept. 2010, <http://blogs.law.harvard.edu/doc/2010/09/18/cookies-for-kiddies/> (viewed 23 Feb. 2011).
- ⁸⁸ 365Black, www.365black.com/365black/index.jsp; MeEncanta.com, www.meencanta.com/. See also AOL Advertising, "African Americans," <http://advertising.aol.com/audiences/african-americans/>; Sergio Barrientos, "Master Class D: 'Reaching the Hispanic Market,'" 17–20 May 2009, www.imediadconnection.com/summits/23152.asp (all viewed 13 Sept. 2011).
- ⁸⁹ Don Kellogg, "40 Percent of U.S. Mobile Users Own Smartphones; 40 Percent Are Android," Nielsen Wire, 1 Sept. 2011, <http://blog.nielsen.com/nielsenwire/?p=28790>; "comScore Reports July 2011 U.S. Mobile Subscriber Market Share," 30 Aug. 2011, www.comscore.com/PressEvents/Press_Releases/2011/8/comScore_Reports_July_2011_U.S._Mobile_Subscriber_Market_Share (both viewed 13 Sept. 2011).
- ⁹⁰ Leah Christian, Scott Keeter, Kristen Purcell and Aaron Smith, "Assessing the Cell Phone Challenge," Pew Research Center, 20 May 2010, <http://pewresearch.org/pubs/1601/assessing-cell-phone-challenge-in-public-opinion-surveys> (viewed 23 Feb. 2011).
- ⁹¹ Amanda Lenhart, Rich Ling, Scott Campbell, Kristen Purcell, "Teens and Mobile Phones," Pew Internet & American Life Project, Apr. 2010, www.pewinternet.org/~media/Files/Reports/2010/PIP-Teens-and-Mobile-2010.pdf (viewed 25 Aug. 2010).
- ⁹² Cecilia Kang, "Going Wireless All the Way to the Web," *Washington Post*, 10 July 2010, www.pewinternet.org/Media-Mentions/2010/Going-wireless-all-the-way-to-the-Web.aspx (viewed 25 Aug. 2010).
- ⁹³ Amanda Lenhart, Rich Ling, Scott Campbell, Kristen Purcell, "Teens and Mobile Phones," Pew Internet & American Life Project, Apr. 2010, www.pewinternet.org/~media/Files/Reports/2010/PIP-Teens-and-Mobile-2010.pdf (viewed 25 Aug. 2010). See also Google, "The Time for Mobile Is Now," www.google.com/think/insights/topics/think-mobile.html (viewed 14 Sept. 2011).
- ⁹⁴ Nielsen Company, "More Americans Watching Mobile Video," Nielsen Wire, 8 Dec. 2010, http://blog.nielsen.com/nielsenwire/online_mobile/americans-watch-more-mobile-video-now-than-ever/ (viewed 31 Dec. 2010).
- ⁹⁵ Nielsen Company, "U.S. Teen Mobile Report: Calling Yesterday, Texting Today, Using Apps Tomorrow," Nielsen Wire, 14 Oct. 2010, http://blog.nielsen.com/nielsenwire/online_mobile/u-s-teen-mobile-report-calling-yesterday-texting-today-using-apps-tomorrow (viewed 3 Jan. 2011).

- ⁹⁶ John Bell, "Brands: Claim Your Facebook Place Today," The Digital Influence Mapping Project, 23 Aug. 2010, <http://johnbell.typepad.com/weblog/2010/08/brands-claim-your-facebook-place-today.html> (viewed 31 Dec. 2010).
- ⁹⁷ Eric J. Hansen, "How to Optimize Mobile Marketing Efforts with Targeting," *Mobile Marketer*, 7 Dec 2010, www.mobilemarketer.com/cms/opinion/columns/8347.html (viewed 3 Jan. 2011). See also the iVdopia website, www.ivdopia.com/?page=insights, for examples of an "iPhone Application Advertising Network & Platform."
- ⁹⁸ Giselle Tsurulnik, "Google Becomes World's Largest Mobile Ad Network: 9 Implications," *Mobile Marketer*, 24 May 2010, www.mobilemarketer.com/cms/news/ad-networks/6347.html (viewed 23 Feb. 2011); Anthony Ha, "Apple Closes Down Quattro Advertising Network," *VentureBeat*, 19 Aug. 2010, <http://venturebeat.com/2010/08/19/apple-closes-down-quattro-advertising-network/> (viewed 14 Sept. 2011).
- ⁹⁹ Mobile Marketing Association, "MMA Mobile Advertising Guidelines," ver. 5.0, 2011, www.mmaglobal.com/mobileadvertising.pdf (viewed 14 Sept. 2011).
- ¹⁰⁰ Mobile Marketing Association, "MMA Mobile Advertising Guidelines," ver. 1.2, Mar. 2011, www.mmaglobal.com/mobilecouponingguidelines.pdf; Apsalar, "ApTimizer," <http://apsalar.com/documentation/apimizer/>; Leena Rao, "Google Sites Now Allows You to Create a Mobile Landing Page," TechCrunch, 29 June 2011, <http://techcrunch.com/2011/06/29/google-sites-now-allows-you-to-create-a-mobile-landing-page/> (all viewed 14 Sept. 2011).
- ¹⁰¹ Brightkite, "Advertise with Us: Ultra-Targeted Advertising," http://brightkite.com/pages/bk_ad_targeting_capabilities.html (viewed 23 Feb. 2011).
- ¹⁰² For examples of such campaigns, see "Interactive Food & Beverage Marketing: Targeting Children and Youth in the Digital Age," www.digitalads.org/ (viewed 3 Jan. 2011).
- ¹⁰³ Kunur Patel, "Fast-Food Chains Grab Most Location-Based Check-ins," *Advertising Age*, 17 Aug. 2010, http://adage.com/digital/article?article_id=145413 (viewed 3 Jan. 2011).
- ¹⁰⁴ Meghan Keane, "Case Study: McDonald's Ups Foot Traffic 33% on Foursquare Day," Econsultancy, 15 Sept. 2010, <http://econsultancy.com/us/blog/6582-case-study-mcdonald-s-and-foursquare> (viewed 3 Jan. 2011).
- ¹⁰⁵ Gavin O'Malley, "Local Online Ads To Hit \$42 Billion By '15, Digital Dominates Future," *Online Media Daily*, 21 Mar. 2011, www.mediapost.com/publications/?fa=Articles.showArticle&art_id=147088 (viewed 14 Sept. 2011).
- ¹⁰⁶ Christopher Heine, "Olay, Gap, Pepsi Run Geo-Social Campaigns—but Not on Foursquare," ClickZ, 22 June 2010, www.clickz.com/clickz/news/1721804/olay-gap-pepsi-run-geo-social-campaigns-not-foursquare (viewed 31 Dec. 2010).
- ¹⁰⁷ "Papa John's iPhone," appSafari, www.appsafari.com/shopping/7313/papa-johns-iphone/ (viewed 23 Feb. 2011).
- ¹⁰⁸ Juan Martinez, "Carl's Jr., Hardee's Launch GPS-based Mobile App and Rewards Program," *Direct Marketing News*, 28 Dec. 2010, <http://dmnews.com/carls-jr-hardees-launch-gps-based-mobile-app-and-rewards-program/article/193401/> (viewed 23 Feb. 2011).
- ¹⁰⁹ Rimma Kats, "McDonald's Taps iAd to Support Multichannel McRib Campaign," *Mobile Marketer*, 9 Nov. 2010, www.mobilemarketer.com/cms/news/advertising/8053.html (viewed 3 Jan. 2011).
- ¹¹⁰ "Get \$5 Off* When You Check-in at McDonald's, Courtesy of Brightkite," 2 Sept. 2010, <http://blog.brightkite.com/2010/09/02/get-5-off-when-you-check-in-at-mcdonalds-courtesy-of-brightkite> (viewed 3 Jan. 2011).
- ¹¹¹ "Brightkite Launches Ultra-Targeted Advertising Solution after Successful Pilots with a Range of Brands," News Blaze, 19 Nov. 2009, <http://newsblaze.com/story/2009111906154600002.bw/topstory.html> (viewed 3 Jan. 2011).
- ¹¹² DDB, "The Mobile Path to Purchase," 20 Apr. 2011, [www.ddb.com/ddblogs/strategy/the-mobile-path-to-purchase.html](http://ddb.com/ddblogs/strategy/the-mobile-path-to-purchase.html) (viewed 14 Sept. 2011).
- ¹¹³ Mobile Marketing Association, "Mobile Couponing Guidelines (v1.0)," 6, <http://mmaglobal.com/mobilecouponingguidelines.pdf> (viewed 3 Jan. 2011).
- ¹¹⁴ Infinian, "Power of Knowledge," www.caru.org/guidelines/index.aspx; AT&T, "AT&T Mobile Barcode Services," <http://youratt.com/nextdimension/?GUID=95D51516-5A4D-4B86-8EE2-3DF4EE23D00C#> (both viewed 3 Jan. 2011).
- ¹¹⁵ As one expert in the field explained it, "Neuromarketing represents the quite recent fusion between distinct disciplines, among them: molecular biology, electrophysiology, neurophysiology, anatomy, embryology, developmental embryology and biology, cellular biology, behavioural biology, neurology, cognitive neurobiology and cognitive sciences." Cristina de Balanzo and Joan Sabaté, "Neuroscience and Advertising: The New Frontier of Persuasion," June 2007, http://web.me.com/romjosep/ep/page4/page5/page7/files/page7_1.pdf (viewed 23 Feb. 2011).
- ¹¹⁶ Innerscope Research, "Presentation to the Advertising Research Foundation," 2008, http://s3.amazonaws.com/thearf-org-aux-assets/downloads/cnc/engagement/2008-11-19_ARF_Engagement_Innerscope.pdf. The Advertising Research Foundation's Engagement Council recently launched the "Engagement 3" initiative, designed to "properly assess neuroscience as it applies to media and advertising response." "ARF Announces Groundbreaking NeuroStandards Study," 24 Sept. 2010, www.thearf.org/assets/pr-2010-09-24. General Mills is a sponsor of this and other ARF councils; Hershey's is a sponsor of the neuromarketing research initiative. See also Millward Brown, "A New Roadmap for Ad Optimization: Integrating Neuroscience with Leading Advertising Research: A Post Shredded Wheat Case Study," www.millwardbrown.com/Insights/Articles/A_New_Roadmap_for_Ad_Optimization.aspx?v=1; "NeuroFocus's Work for Frito-Lay Featured in *New York Times*," 25 Feb. 2009, <http://blog.nielsen.com/nielsenwire/consumer/neurofocus%E2%80%99s-work-for-frito-lay-featured-in-new-york-times/> (all viewed 27 Feb. 2011); Advertising Research Foundation, "NeuroStandards Collaboration," www.thearf.org/assets/neurostandards-collaboration (viewed 14 Sept. 2011).
- ¹¹⁷ Among those firms specializing in some form of neuromarketing are NeuroFocus, EmSense, Olson Zaltman, NeuroCompass, Sensory Logic, Innerscope, OnetoOne Interactive, and Mindsign.
- ¹¹⁸ EmSense, "Quantitative Biosensory Metrics: A Window into the Mind of the Consumer," www.emsense.com/?gclid=CKuWtuf-gqcCFYSK4AodoBKbeA (viewed 23 Feb. 2011).
- ¹¹⁹ "SymphonyIRI Group and EmSense Form Strategic Relationship to Offer Marketers a Window into the Mind of Consumers," 3 June 2010, <http://bx.businessweek.com/measuring-advertising-effectiveness/view?url=http%3A%2F%2Fmoreover.com%2Fclick%2Fhere.pl%3Fr2873281196%26f%3D9791> (viewed 23 Feb. 2011).
- ¹²⁰ "Global Strategic Branding Firm Siegel+Gale Uses Neural Predictors to Obtain Customer Insights That Drive Brand Effectiveness," 9 Sept. 2010, www.prnewswire.com/news-releases/global-strategic-branding-firm-siegelgale-uses-neural-predictors-to-obtain-customer-insights-that-drive-brand-effectiveness-102537994.html (viewed 23 Feb. 2011).
- ¹²¹ A. K. Pradeep, *The Buying Brain* (Hoboken, NJ: Wiley, 2010).
- ¹²² These include "Attention, Emotional Engagement, Memory, Purchase Intent/Persuasion, Novelty, Awareness/Understanding/Comprehension, and Effectiveness." Pradeep, *The Buying Brain*.
- ¹²³ Pradeep, *The Buying Brain*.
- ¹²⁴ Jack Bush and A. K. Padreep, "Maximizing Message Impact for Alcon Laboratories," presentation at the 2009 Annual National Conference of the PMRG, 8–10 Mar. 2009, www.pmr.org/Portals/0/09ANC/Mon%20430%20Alcon.pdf (viewed 14 Sept. 2011).
- ¹²⁵ Pradeep, *The Buying Brain*.
- ¹²⁶ Ibid.
- ¹²⁷ Laurie Sullivan, "In-Game Ads in the Ad Game," *Online Media Daily*, 16 June 2009, www.mediapost.com/publications/?fa=Articles.showArticle&art_id=108089. Xbox 360, Xbox Live and MSN Games were part of the study, which involved PepsiCo's Doritos. The findings "indicate that video game advertising does in fact touch a very powerful emotional chord that can significantly influence brand favorability...."

- Results showed there was more time spent, greater recall and higher levels of emotional and cognitive response in association with the interactive Xbox LIVE campaigns than with traditional 30 and 60 second spots." Microsoft used neuromarketing in its 2010 research for Xbox, focused on gaming fans ages 12 to 34. Microsoft Advertising enables advertisers to use the Xbox platform to create a Branded Destination Experience (BDE) directly into the platform, offering state-of-the-art animation, downloads, high-definition video ads, music—all of which can be highly branded. "Old Spice Wins with Xbox LIVE Campaign," 6 Oct. 2010, <http://advertising.microsoft.com/xbox-live-old-spice-case-study>; Microsoft Advertising, "Gaming Channels and In-game Advertising," <http://advertising.microsoft.com/europe/xbox-live-advertising>; Ginny Musante, "Cracking the Code on Cross Media Engagement: Five Things Every Marketer Should Measure," 9 Dec. 2009, http://advertising.microsoft.com/WWDocs/User/en-us/ForAdvertisers/Cracking_the_Code_on_Cross_Media_Engagement.pdf (all viewed 23 Feb. 2011).
- ¹²⁸ Sensory Logic, "Sensory Logic's Engagement Research," www.slideboom.com/presentations/285844/Sensory-Logic (viewed 23 Feb. 2011).
- ¹²⁹ "Neuro Measure Added to BehaviorScan," 4 June 2010, www.mrweb.com/drno/news11790.htm (viewed 23 Feb. 2011).
- ¹³⁰ NeuroFocus, "Case Study Executive Brief: Total Consumer Experience," 2010, www.neurofocus.com/pdfs/NeuroFocusExecutiveBrief_BeverageTCE.pdf (viewed 23 Feb. 2011).
- ¹³¹ See, for example, "NeuroFocus Launches NGame; New Suite of Neuromarketing Products and Services for the Videogame Industry Elite," 26 Mar. 2009, www.reuters.com/article/pressRelease/idUS194952+26-Mar-2009+PRN20090326; Steve McClellan, "Coca-Cola Use: Mind Over Matter: New Tools Put Brands in Touch with Feelings," *Adweek*, 18 Feb. 2008, www.adweek.com/aw/content_display/news/media/e3i975331243c08d74c5b66f857ff12cfd5?pn=1 (both viewed 7 June 2009).
- ¹³² For a full discussion of the conceptual framework underlying this digital marketing ecosystem, see Montgomery, Grier, Chester, and Dorfman, "Food Marketing in the Digital Age: A Conceptual Framework and Agenda for Research."
- ¹³³ Effie Awards, "2008 Gold Effie Winner: 'Snack Strong Productions,'" http://s3.amazonaws.com/effie_assets/2008/2772/2008_2772_pdf_1.pdf (viewed 29 July 2010). See also Chester and Montgomery, "Interactive Food & Beverage Marketing: Targeting Children and Youth in the Digital Age," 46.
- ¹³⁴ B-Reel, "Hotel 626," The FWA, www.thefwa.com/site/hotel-626/c=SOTYPCA; "What Happens after 6PM at Hotel 626," Hyper Island, 28 Jan. 2009, <http://hyperisland.blogspot.com/2009/01/what-happens-after-6pm-at-hotel-626.html> (viewed 29 July 2010).
- ¹³⁵ "About," DinahMoe, 18 June 2009, www.dinahmoe.com/?page_id=2; "Launch: Hotel 626," DinahMoe, 30 Sept. 2008, www.dinahmoe.com/?p=114; "Goodby and B-Reel Enter the Asylum for the Sequel to Doritos Hotel 626," Fresh Blog, 24 Sept. 2009, <http://blog.2fresh.com/2009/09/goodby-and-b-reel-enter-asylum-for.html> (all viewed 29 July 2010).
- ¹³⁶ "Doritos Hotel 626," The Inspiration Room, 22 June 2009, <http://theinspirationroom.com/daily/2009/doritos-hotel-626/>; "Hotel626.com," www.cyberentries.com/hotel626/; "What Is Hotel 626?" Answers.com, http://wiki.answers.com/Q/What_is_hotel_626; Danielle Long, "AKQA and Fiat Win Cannes Cyber Grand Prix," *New Media Age*, 24 June 2009, www.nma.co.uk/akqa-and-fiat-win-cannes-cyber-grand-prix/3001773. article (all viewed 11 Apr. 2010).
- ¹³⁷ Diaz, "Goodby and B-Reel Enter the Asylum for the sequel to Doritos Hotel 626."
- ¹³⁸ Ibid.
- ¹³⁹ Cannes Lions International Advertising Festival, "Asylum 626," www.canneslions.com/work/cyber/entry.cfm?entryid=5435&award=99 (viewed 29 July 2010).
- ¹⁴⁰ See J. Cantor and K. S. Harrison, "Ratings and Advisories for Television Programming," in Margaret Seawell, ed., *National Television Violence Study*, vol. 1 (Thousand Oaks, CA: Sage Publications, 1996): 361–410.
- ¹⁴¹ "Asylum626.com," www.myawardshows.com/2010/OneShowEntertainment/asylum626/ (viewed 29 July 2010).
- ¹⁴² Diaz, "Goodby and B-Reel Enter the Asylum for the Sequel to Doritos Hotel 626."
- ¹⁴³ "Doritos/Asylum 626," *Contagious Magazine*, 29 Sept. 2009, www.contagiousmagazine.com/2009/09/doritos_5.php (viewed 11 Apr. 2010).
- ¹⁴⁴ "Doritos/Asylum 626."
- ¹⁴⁵ Kevin Ritchie, "Doritos Continues Interactive Horror Franchise with Asylum 626," *Boards*, 22 Sept. 2009, www.boardsmag.com/articles/online/20090922/asylum626.html (viewed 24 Feb. 2011). Doritos also employed the strategy of interactive packaging for its online music site, Doritoslatenight.com, where users had to point their webcams to a special symbol printed on the bags of Tacos at Midnight and Last Call Jalapeno Pepper in order to view a concert in 3-D featuring the groups blink-182 and Big Boi. Aden Hepburn, "Doritos Late Night Chips: Digital Reality in a Bag!" Digital Buzz Blog, 11 July 2009, www.digitalbuzzblog.com/doritos-late-night-chips-augmented-reality-with-blink-182-in-a-bag/ (viewed 11 Apr. 2010).
- ¹⁴⁶ As Goodby's creative director explained, "We had the ability to affect the packaging and actually have the bag be a key to a deeper experience. So we made sure to make each bag of the re-released flavors part of the experience itself. We decided to place an AR code on the back of every bag, and a call to action to visit the site. Any player could experience about 85% of the site without the bag, but anyone with a bag with a code on it could unlock the finale and close the loop on the story. The experience up to that point was a nine. Unlock the finale, and we twisted the dial to eleven." Diaz, "Goodby and B-Reel Enter the Asylum for the Sequel to Doritos Hotel 626."
- ¹⁴⁷ Ritchie, "Doritos Continues Interactive Horror Franchise with Asylum 626"; Total Immersion, "What We Do?" www.t-immersion.com/en/what-do-we-do,8.html%5D/; "Doritos/Asylum 626." For a 2010 example of Doritos' use of augmented reality (AR), see Siobhan O'Flynn, "Doritos Lovers—Augmented Reality," *Narrative Now*, 4 Mar. 2010, <http://narrativenow.blogspot.com/2010/03/doritos-lovers-augmented-reality.html> (all viewed 29 July 2010).
- ¹⁴⁸ Frito-Lay, "Privacy Policy," www.fritolay.com/privacy-policy.html. The Hotel 626 site also has a link to a "terms and conditions" page, to which users must agree before they are granted access to the site. "Hotel 626 Site Terms," www.hotel626.com/terms.html (both viewed 29 July 2010).
- ¹⁴⁹ Frito-Lay, "Privacy Policy."
- ¹⁵⁰ "NeuroFocus Receives Grand Ogilvy Award from the Advertising Research Foundation," 1 Apr. 2009, <http://blog.taragana.com/pr/NeuroFocus-receives-grand-ogilvy-award-from-the-advertising-research-foundation-877/> (viewed 11 Apr. 2010).
- ¹⁵¹ "The Orange Underground," Cheetos Case Study, Ogilvy Awards, www.thearf.org/assets/ogilvy-09 (viewed 7 June 2009).
- ¹⁵² "The Orange Underground."
- ¹⁵³ "McDonald's Orders Up Augmented Reality from Total Immersion, in Global Promotion for Fox's 'Avatar,'" *Serious Games Market*, 17 Dec. 2009, <http://seriousgamesmarket.blogspot.com/2009/12/serious-games-as-ar-extensive.html> (viewed 10 Apr. 2010).
- ¹⁵⁴ Promotion Marketing Association, "2010 REGGIE Awards: McDonald's Avatar Program," www.omnicontests3.com/pma_reggie_awards/omnigallery/entry/gallery_item_info.cfm?child=1&client_id=1&entry_id=312&competition_id=1&entrant_id=97&gallery_item_id=135 (viewed 5 Aug. 2010).
- ¹⁵⁵ McDonald's has increasingly focused on interactive online platforms to target its youth consumers and more effectively personalize the branding experience. In 2006, AKQA became the company's global digital agency. "McDonald's Taps AKQA as Global Digital Agency," *Marketing VOX*, 2 Nov. 2006, www.marketingvox.com/mcdonalds_taps_akqa_as_global_digital_agency-022973/. Working with AKQA and others, the fast food chain has been using interactive avatar-based technology since 2007, when it launched a viral campaign called "Take Back Snack Time." Speaking avatars from technology specialist Oddcast and a "viral e-mail campaign" were incorporated into its promotion of a Chipotle BBQ Snack Wrap. Dianna Dilworth, "McDonald's Kicks Off 'Snack Time' with Viral Effort," *DMNews*, 7 Aug. 2007, www.dmnews.com/mcdonalds-kicks-off-snack-time-with-viral-effort/article/98106/ (both viewed 4 Aug. 2010).

- ¹⁵⁶ Samuel Axon, "How Social Media and the Web Helped Avatar Make \$1 Billion," Mashable, n.d., <http://mashable.com/2010/01/08/avatar-social-media-web/>; Rosie Rankin, "Avatar: YouTube Case Study," Google Barometer Blog, 10 Feb. 2010, http://groups.google.com/group/barometerblog/browse_thread/thread/11542bdf33aae18d (both viewed 4 Aug. 2010).
- ¹⁵⁷ Promotion Marketing Association, "2010 REGGIE Awards: McDonald's Avatar Program."
- ¹⁵⁸ "McDonald's Brings Customers to Another Planet in Partnership with James Cameron's Movie Masterpiece 'Avatar'"; McDonald's Avatar Webcast, 10 Dec. 2009, <http://video.webcasts.com/events/mcd001/33168/eFrame.jsp?mei=33168&cf=mcd001&tp=> (viewed 4 Aug. 2010).
- ¹⁵⁹ McDonald's, "Avatar at McDonald's: Experience the Thrill!" www.aboutmcdonalds.com/mcd/stories/our_business/mcd_avatar.html (viewed 4 Aug. 2010).
- ¹⁶⁰ Marc Graser, "'Avatar' Toys with Augmented Reality," *Variety*, 19 Nov. 2009, www.variety.com/article/VR1118011632?refCatId=13 (viewed 24 Feb. 2011).
- ¹⁶¹ "McDonald's Brings Customers to Another Planet in Partnership With James Cameron's Movie Masterpiece 'Avatar'"; Total Immersion, "Behind the Augmented Reality Magic: McDonald's, Avatar & Total Immersion"; McDonald's, "Competition FAQs," www.mcdonalds-avatar.com/faqs.aspx (viewed 4 Aug. 2010).
- ¹⁶² McDonald's turned to Oddcast—"a viral marketing company specializing in online technologies"—for another interactive tie-in. Working with The Marketing Store (a global marketing company that also works with Coca-Cola), Oddcast developed "Avatarize Yourself, a unique application allowing users to become part of the *Avatar* phenomenon. Utilizing cutting-edge 3-D photo-morphing technology, 'Avatarize Yourself' invited viewers to upload a head shot—or select one from Facebook—in order to instantly transform it into a believable rendition of a personalized Na'vi [the inhabitants of Pandora]. Users could choose their gender and their background, and add a message." Oddcast, "McDonald's Avatarize Yourself," www.oddcast.com/clients/mcdonalds/ (viewed 4 Aug. 2010). This effort also took advantage of social media marketing, triggering a highly successful peer-to-peer response. "Virality was instant and overwhelming with almost every direct visitor," explained Oddcast, "generating an earned user by sharing the application. The campaign inspired a number of user-run blogs and Facebook Fan Pages. Social networks were flooded with images of Avatarized users and celebrities. Despite minimal branding, the word 'McDonald's' was one of the most commonly used in social media posts about 'Avatarize Yourself.'" Oddcast, "Avatarize Yourself." The campaign reported 7.8 million users in two months, with a "6:42 minutes average engagement time," and with more than a third of the traffic generated by users sharing the application with others. Oddcast, "McDonald's Avatarize Yourself."
- ¹⁶³ "McDonald's Big Mac Joins Fox's 'AVATAR' to Thrill Fans Nationwide," 7 Dec. 2009, www.prnewswire.com/news-releases/mcdonalds-big-macr-joins-foxs-avatar-to-thrill-fans-nationwide-78680402.html (viewed 4 Aug. 2010).
- ¹⁶⁴ Coca-Cola, the other major food and beverage company that had an *Avatar* tie-in, also worked with Multiverse. Based on "classic 1980's style arcade games," Coca-Cola Zero's AVTR Advanced Team on Facebook "challenges players to lead a squad of their friends through the Pandoran rainforest in search of unobtainium ore deposits. While searching for ore, players face deadly creatures and plants, which become increasingly difficult to survive as each level is completed." Multiverse explained that for the Coca-Cola game (which was created in one month), its "technology dynamically creates each new level in seconds; no two levels are the same." "Multiverse Unveils Remix, Revolutionizes Promotional Games Based on Movies with New Level of Immersion and Fidelity," 17 Dec. 2009, www.multiverse.net/press/pr20091217.jsp?cid=6&scid=9. See also "McDonald's PandoraROVR," *Contagious Magazine*, 4 Jan. 2010, www.contagiousmagazine.com/2010/01/mcdonalds_8.php (both viewed 4 Aug. 2010).
- ¹⁶⁵ "Multiverse Unveils Remix, Revolutionizes Promotional Games Based on Movies with New Level of Immersion and Fidelity." See also "McDonald's 'PANDORAROV' (Case Study)," *Boards*, 25 Feb. 2010, www.boardsmag.com/screeningroom/digital/8839; Dean Takahashi, "Multiverse's Remix Makes it Easy to Create Avatar Spinoff Games," *GamesBeat*, 17 Dec. 2009, <http://games.venturebeat.com/2009/12/17/multiverses-remix-makes-it-easy-to-create-avatar-spinoff-games/>; Multiverse, "Image Gallery," www.multiverse.net/games/gallery.jsp?cid=2&scid=2 (all viewed 4 Aug. 2010).
- ¹⁶⁶ "McDonald's Orders Up Augmented Reality from Total Immersion for Avatar Promotion."
- ¹⁶⁷ Promotion Marketing Association, "2010 REGGIE Awards: McDonald's Avatar Program."
- ¹⁶⁸ "All Time Box Office Worldwide Grosses," Box Office Mojo, www.boxoffice Mojo.com/alltime/world/?PHPSESSID=96b084c584e60a76b87a86c597e0fffb (viewed 3 Aug. 2010).
- ¹⁶⁹ Promotion Marketing Association, "2010 REGGIE Awards: McDonald's Avatar Program."
- ¹⁷⁰ Center for Science in the Public Interest, "Class Action Lawsuit Targets McDonald's Use of Toys to Market to Children," 15 Dec. 2010, www.cspinet.org/new/201012151.html (viewed 24 Feb. 2011).
- ¹⁷¹ "Commentary: DEWMocracy and Mountain Dew's Online Marketing," *BevReview.com*, 27 Feb. 2008, www.bevreview.com/2008/02/27/commentary-dewmocracy-and-mountain-dews-online-marketing/. See also Mickey Alam Khan, "PepsiCo Launches Branded Mobile Widget for Mountain Dew," *Mobile Marketer*, 15 May 2008, www.mobilemarketer.com/cms/news/gaming/996.html. For an overview of Mountain Dew and its various promotional campaigns and flavors over the years, see "Mountain Dew," *Wikipedia*, http://en.wikipedia.org/wiki/Mountain_Dew (all viewed 10 Apr. 2010).
- ¹⁷² Steve Bava, "Driving Retail Sales with Social Media," *WHiBlog*, 19 Oct. 2009, <http://whiblog.com/driving-retail-sales-with-social-media> (viewed 7 Aug. 2010).
- ¹⁷³ Bava, "Driving Retail Sales with Social Media."
- ¹⁷⁴ Nina Lentini, "Cross-Media Case Study: Plugged in to the Electorate," *OMMA Magazine*, 1 Apr. 2009, www.mediapost.com/publications/?fa=Articles.showArticle&art_id=102488 (viewed 7 Aug. 2010).
- ¹⁷⁵ Dianna Dilworth, "Mountain Dew Launches Next Dewmocracy Phase," *DMNews*, 4 Feb. 2008, www.dmnews.com/mountain-dew-launches-next-dewmocracy-phase/article/104815/ (viewed 7 Aug. 2010).
- ¹⁷⁶ "Promotion Parade," *Beverage Spectrum*, Nov.–Dec. 2007, www.bevspectrum.com/article/novdecpromo/print (viewed 10 Apr. 2010).
- ¹⁷⁷ Dilworth, "Mountain Dew Launches Next Dewmocracy Phase."
- ¹⁷⁸ "Commentary: DEWMocracy and Mountain Dew's Online Marketing."
- ¹⁷⁹ Lentini, "Cross-Media Case Study: Plugged in to the Electorate."
- ¹⁸⁰ "Promotion Parade."
- ¹⁸¹ Lentini, "Cross-Media Case Study: Plugged in to the Electorate."
- ¹⁸² Bava, "Driving Retail Sales with Social Media."
- ¹⁸³ Lentini, "Cross-Media Case Study: Plugged in to the Electorate."
- ¹⁸⁴ Frank Cooper III, "Harnessing Fan Support to Impact Your Bottom Line," *The Huffington Post*, 24 May 2010, www.huffingtonpost.com/frank-cooper-iii/harnessing-fan-support-to_b_587769.html (viewed 7 Aug. 2010).
- ¹⁸⁵ OMMA Awards, "Finalists," 21 Sept. 2009, www.mediapost.com/events/?/showID/OMMAAwards.09.NewYorkCity/fa/e.awardVoting/itemID/809/voting.html (viewed 7 Aug. 2010).
- ¹⁸⁶ Quoted in Enid Burns, "Mountain Dew Plugs Into Online Campaign for New Drink," *ClickZ*, 22 Jan. 2009, www.clickz.com/3632466 (viewed 10 Apr. 2010).
- ¹⁸⁷ Lentini, "Cross-Media Case Study: Plugged in to the Electorate."
- ¹⁸⁸ Cooper III, "Harnessing Fan Support to Impact Your Bottom Line."
- ¹⁸⁹ Jennifer Cirillo, "DEWMocracy 2 Continues to Buzz," *Beverage World*, 11 Mar. 2010, www.beverageworld.com/index.php?option=com_content&view=article&id=37525&catid=34 (viewed 10 Apr. 2010).
- ¹⁹⁰ Cirillo, "DEWMocracy 2 Continues to Buzz."

- ¹⁹¹ Matthew Yeomans, "Mountain Dew's Ongoing Dewmocracy—Ripping Up the Book on Campaigns," SMI, 29 Jan. 2010, <http://socialmediainfluence.com/2010/01/29/mountain-dews-ongoing-dewmocracy-ripping-up-the-book-on-campaigns/> (viewed 7 Aug. 2010).
- ¹⁹² "How To: Get Into DEWlabs," DEW Labs, 17 Apr. 2010, <http://dewlabs.blogspot.com/2010/04/how-to-get-into-dewlabs.html> (viewed 7 Aug. 2010).
- ¹⁹³ "The Mountain Dew DEWmocracy 2 Campaign Empowers Brand Loyalists Nationwide to Create and Launch the Next New DEW," 20 Apr. 2010, www.pepsico.com/PressRelease/The-Mountain-Dew-DEWmocracy-2-Campaign-Empowers-Brand-Loyalists-Nationwide-to-Cr04202010.html. See also Marta Strickland, "DEWmocracy Teaches Us All About Consumer-Led Innovation," *Three Minds*, 20 May 2010, http://threeminds.organic.com/2010/05/dewmocracy_teaches_us_all_abou.html (both viewed 7 Aug. 2010).
- ¹⁹⁴ The first DEWmocracy also used live events, including one in Los Angeles, organized by Mountain Dew's marketing company, where consumers voted for their favorite flavor by "shooting a coloured paintball" at a particular billboard. The ad company reported that "over 5.2 million consumers were exposed to this single billboard and over 300,000 visited DEWmocracy.com to vote. DEWmocracy represented the largest 12-week limited-time offer product in Pepsi history with 17 million 8-oz. cases sold. And because of the 'Paintball' events, Los Angeles—a traditionally low performing Mountain Dew market—saw sales increases of +17% in Grocery and +13% in Convenience/Gas channels." "Paintball Interactive Event/Pepsi/Mountain Dew," <http://digitalads.org/detail.php?id=1203>; www.traction3d.com/# (viewed 9 Aug. 2010).
- ¹⁹⁵ For an example of how online marketers, including Pepsi, configure their products to be more visible in search engines, see OneUpWeb, "Seeing Search Go Social: An Eye Tracking Analysis on Social Networking Sites," 2009, <http://whitepapers.searchenginewatch.com/whitepaper8676> (registration required).
- ¹⁹⁶ *A Marketing Daily* account described the campaign's "basic concept":
Three mobile teams comprising agency/marketer reps and hardcore Dew fans—each team "campaigning" for its own Dew flavor (White Out, Typhoon or Distortion)—were sent on cross-country tours to engage people in the flavor competition/voting through live events over four weeks, starting May 1 [2010].
The teams got the ball rolling by using online and social media to let people know about the tour and doing some initial organization of campaigning theme challenges that would involve activities like skateboarding competitions, art exhibits, and sampling opportunities at concerts/sporting events. But fans were told they would be calling the shots on which cities were visited and the specifics of activities to take place in their areas, including input on venues.
...[M]any event decisions were made on the fly, based on consumers' input via Twitter and a dedicated microsite. Fans also were urged to rally friends and families to participate in the events, post photos and video content online, and vote for their favorite flavor.
Karlene Lukovitz, "Mountain Dew Lets Fans Plan Tour, Events," *MediaPost Marketing Daily*, 28 June 2010, www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=130980 (viewed 8 Aug. 2010).
- ¹⁹⁷ Lukovitz, "Mountain Dew Lets Fans Plan Tour, Events."
- ¹⁹⁸ For examples of the campaign's use of social media, see "Mtn Dew White Out," Twitter, <http://twitter.com/MtnDewWhiteOut>; "Mtn Dew DEWmocracy White Out Ad (Credit to MountainDew Youtube)," Motion Feeds, 9 June 2010, www.motionfeeds.com/11837/mtn-dew-dewmocracy-white-out-ad-credit-to-mountaindew-youtube.html; "Exclusive Dewmocracy Day Footage (by Dewmaster)," YouTube, 23 Feb. 2010, www.youtube.com/watch?v=B42NL51ZIIw&feature=related (all viewed 8 Aug. 2010).
- ¹⁹⁹ Cooper III, "Harnessing Fan Support to Impact Your Bottom Line."
- ²⁰⁰ See Federal Trade Commission, "Guides Concerning the Use of Endorsements and Testimonials in Advertising," 16 CFR Part 255 (rev. 2009), www.ftc.gov/os/2009/10/091005revisedendorsementguides.pdf (viewed 11 Jan. 2011). See also Rebecca Tushnet, "Attention Must Be Paid: Commercial Speech, User-Generated Ads, and the Challenge of Regulation," *Buffalo Law Review* 58, 721–793.
- ²⁰¹ Mountain Dew, "Join Dew," <http://mountaindew.com/?or=pxtras#/join/joindew.php> (viewed 8 Aug. 2010); Pepsi World—The Official Global Site, www.pepsiworld.com/ (viewed 15 Sept. 2011).
- ²⁰² Pepsi-Cola Company, "Privacy Policy," www.pepsiusa.com/privacypolicy.php (viewed 9 Aug. 2010).
- ²⁰³ The Pepsi World sign-up page includes the TRUSTe logo, suggesting to users that it engages in responsible data collection practices.
- ²⁰⁴ Yale Rudd Center for Food Policy and Obesity, "Studies," www.yaleruddcenter.org/what_we_do.aspx?id=275 (viewed 15 Sept. 2011).
- ²⁰⁵ Michael F. Jacobson, "Liquid Candy: How Soft Drinks Are Harming Americans' Health," http://suewidemark.freesevers.com/liquid_candy.htm (viewed 24 Feb. 2011).
- ²⁰⁶ Jeff Zabin, "Coke's New Marketing Platform Bubbles to the Surface," *Viewpoints* 30, n. 3 (Fall 2006/Winter 2007), www.edmblog.com/weblog/files/MyCokeRewards.pdf. Fair Issac is now known as FICO, www.fico.com/en/Pages/default.aspx (both viewed 12 Aug. 2010).
- ²⁰⁷ FICO, "Boosting Sales and Site Traffic, Coca-Cola Breaks Ground in Customer Loyalty," 2009, www.fico.com/en/Search/Pages/Results.aspx?k=coca%20cola (viewed 12 Aug. 2010).
- ²⁰⁸ Zabin, "Coke's New Marketing Platform Bubbles to the Surface."
- ²⁰⁹ Don Rogers and Martha Peppers, *The One to One Future: Building Relationships One Customer at a Time* (New York: Doubleday Business, 1993).
- ²¹⁰ Carol Kruse, Coca-Cola vice president for global interactive marketing, speaker profile, eMarketing Association Executive Conference, 2008, www.emarketingassociation.com/2008/SF/speaker_bios.htm (viewed 12 Aug. 2010).
- ²¹¹ Mark Henneges, Michael La Kier, and Masha Geller, "How Coca-Cola is Blurring the Lines Between Online Advertiser and Publisher," presentation to the iMedia Agency Summit, 17–20 May 2009, www.imediaconnection.com/summits/23153.asp (viewed 12 Aug. 2010).
- ²¹² Patricia Odel, "Coca-Cola Bows Largest Reward Program in its History," *Promo Magazine*, 2 Mar. 2006, http://promomagazine.com/news/coca-cola_rewardprgm_030206/; Andrew Scott, "Live from the PMA: Coke Eyes Its Rewards Program for Expansion," *Promo Magazine*, 10 Mar. 2006, http://promomagazine.com/news/pma_coke_prgexpansion_031006/index.html (both viewed 12 Aug. 2010).
- ²¹³ Karna Crawford, "Coke's Loyalty Program," iMedia Connection, 22 Aug. 2007, www.imediaconnection.com/content/16346.asp (viewed 24 Feb. 2011).
- ²¹⁴ My Coke Rewards registration page, <https://secure.mycokerewards.com/register1.do> (viewed 16 Aug. 2010).
- ²¹⁵ Karna Crawford, "How Coke Was Rewarded for Its BT Plan," iMedia Connection, 22 August 2007. www.imediaconnection.com/content/16348.imc (viewed 18 Aug. 2010).
- ²¹⁶ Ibid.
- ²¹⁷ Ibid.
- ²¹⁸ Coca-Cola also worked with digital agency AKQA. Zachary Rodgers, "Coke Funnel Online Duties to AKQA," ClickZ, 24 Oct. 2005, www.clickz.com/clickz/news/1708341/coke-funnels-online-duties-akqa (viewed 16 Aug. 2010).
- ²¹⁹ Elaine Wong, "Coke, ConAgra, Kellogg Cozy Up with Search Buys," *Brandweek*, 12 Oct. 2008, www.brandweek.com/bw/content_display/news-and-features/digital/e3ib51a5e93dda16ab7f3a8e4e09f1c789f (viewed 16 Aug. 2010).
- ²²⁰ "Finding Coke Drinkers," *Promo Magazine*, 1 May 2008, http://promomagazine.com/awards/iaawards/cocacola_finding_drinkers/ (viewed 16 Aug. 2010).
- ²²¹ "Finding Coke Drinkers."

- ²²² Matthew G. Nelson, "Search and Offline Marketing Converge at SES San Jose," ClickZ, 27 Aug. 2007, www.clickz.com/clickz/news/1695259/search-offline-marketing-converge-ses-san-jose (viewed 16 Aug. 2010).
- ²²³ "Finding Coke Drinkers."
- ²²⁴ Ginger Conlon, "Making Coke Rewarding," Think Customers: The 1to1 Blog, 4 Apr. 2008, www.1to1media.com/weblog/2008/04/making-coke-rewarding.html (viewed 16 Aug. 2010).
- ²²⁵ "Finding Coke Drinkers."
- ²²⁶ Coca-Cola's Carol Kruse did say that despite online media's measurability, "it's very hard to track the influence of any of our marketing efforts on a purchase decision." She also illustrated how Coca-Cola understood that in the online world, a brand had to be present simultaneously on multiple platforms: "Take Sprite. We have the Sprite.com Web site. We have the Sprite Yard, which is a mobile program. Sprite is part of MyCokeRewards.com. And we have a Facebook page with an app, Sprite Sips. It doesn't matter whether the experience happens on the Sprite Web site, on Facebook or on a cell phone." Brian Quinton, "Coke's Kruse Control," *Promo Magazine*, 1 Feb. 2008, http://promomagazine.com/interactivemarketing/cokes_kruse_control_coca-cola_interactive_0201/index.html (viewed 16 Aug. 2010).
- ²²⁷ Fair Isaac, "The Case for Customer Centricity," www.cxo.eu.com/article/The-Case-for-Customer-Centricity/ (viewed 12 Aug. 2010).
- ²²⁸ FICO, "Boosting Sales and Site Traffic, Coca-Cola Breaks Ground in Customer Loyalty."
- ²²⁹ Jeff Zabin, "Cracking the Code on Next-Generation Code Promotions," *ChiefMarketer*, 15 Sept. 2006, http://chiefmarketer.com/disciplines/promotions/code_promotions_09152006/ (viewed 12 Aug. 2010).
- ²³⁰ FICO, "Boosting Sales and Site Traffic, Coca-Cola Breaks Ground in Customer Loyalty." The Precision Marketing Manager also "references a database with over 1600 third party sources to match disparate and inconsistent consumer data from multiple locations to create a single data warehouse of identifiable consumers. The result is an accurate 360° view of each customer." FICO, "Precision Marketing Manager Product Sheet," www.fico.com/en/Products/DMAApps/Pages/FICO-Precision-Marketing-Manager.aspx (viewed 12 Aug. 2010).
- ²³¹ Carol Krol, "Personal Touch for Loyalty," *DMNews*, 28 Sept. 2009, www.dmnews.com/personal-touch-for-loyalty/article/149787/ (viewed 11 Aug. 2010).
- ²³² Brian Morrissey, "Coke Dabbles in iPhone Apps," *Adweek*, 4 Feb. 2009, www.adweek.com/aw/content_display/news/digital/e312e2fd2bc31136679bc3101796b8b9235; Microsoft Advertising, "Coca-Cola Happiness Factory Plays Brand Love Game," 15 Mar. 2010, <http://advertising.microsoft.com/europe/Coca-cola-happiness-factory> (both viewed 16 Aug. 2010).
- ²³³ Quoted in "Search and Social Media: Informing Strategy," Internet Advertising Bureau, www.iabuk.net/en/1/searchandsocialmediainformingstrategy.html (viewed 16 Aug. 2010).
- ²³⁴ Sean Hargrave, "Social Media Research," *New Media Age*, 5 Aug. 2010, www.nma.co.uk/features/social-media-research/3016672.article (subscription required); Sysomos, "About Us: Careers," www.sysomos.com/company/careers/#amg; "Lithium Technologies Acquires Social Media Monitoring and Analytics Leader Scout Labs," 11 May 2010, www.lithium.com/who-we-are/events/press-releases/2010/lithium-technologies-acquires-social-media-monitoring-and-analytics-leader-scout-labs (both viewed 15 Sept. 2011).
- ²³⁵ FICO, "Boosting Sales and Site Traffic, Coca-Cola Breaks Ground in Customer Loyalty."
- ²³⁶ Adam Brown, "Coca-Cola: The Creation of Expedition 206," presentation at Blog Well, 29 Apr. 2009, <http://vimeo.com/8124736>; Adam Brown, "Coca-Cola: Sharing What Matters," 29 Apr. 2009, www.slideshare.net/GasPedal/cocacola-1491747; "Coca-Cola Builds New Social Media Model," *Warc*, 1 June 2010, www.warc.com/News/TopNews.asp?ID=26773&Origin=WARCNewsEmail; Charlotte McElenny, "Coke Cuts Websites to Focus on Contact via Social Networks," *New Media Age*, 10 June 2010, www.nma.co.uk/news/coke-cuts-websites-to-focus-on-contact-via-social-networks/3014347.article; "Facebook Unveils Facebook Ads," 6 Nov. 2007, www.facebook.com/press/releases.php?p=9176 (all viewed 16 Aug. 2010).
- ²³⁷ "A Million Ways to Say Thanks: My Coke Rewards Gives Away One Million Points in 60 Days," 4 Aug. 2010, www.thecoca-colacompany.com/presscenter/nr_20100804_mcr.html (viewed 16 Aug. 2010).
- ²³⁸ By 2008, nearly 6 million rewards had been redeemed by its 9 million members. Patricia Odell, "Rewarding Redemption," *Promo Magazine*, 1 May 2008, http://promomagazine.com/incentives/cocacola_redemption/ (viewed 25 Feb. 2011). Coca-Cola has also experienced some problems with the site, including the points needed for rewards. Patricia Odell, "My Coke Rewards Tackles Complaints," *Promo Magazine*, 19 July 2006, http://promomagazine.com/incentives/mycokerewards_complaints_071906/index.html (viewed 16 Aug. 2010).
- ²³⁹ Amy Johannes, "Denny's Teams with My Coke Rewards," *Promo Magazine*, 5 Sept. 2007, http://promomagazine.com/incentives/dennys_my_coke_rewards_090507/index.html (viewed 16 Aug. 2010).
- ²⁴⁰ Among the techniques used by both companies to generate growth for My Coke Rewards were both ads online and on McDonald's products that "offered a code usable for a free dice roll in online Monopoly." My Coke Rewards featured a "Monopoly game experience," while "McDonald's e-newsletter featured a free Monopoly dice roll for MyCokeRewards members." "More than 4.4 million 'instant-win' MyCoke points were awarded to McDonald's customers playing Monopoly online," which attracted "340,000 new members during the month of October, and the number of active members on MyCokeRewards.com increased to an all-time high—17% higher than any previous month. Unique visitors to MyCokeRewards.com surpassed the 5 million mark for the first time." "2009 PRO Awards: My Coke Rewards," *Promo Magazine*, 4 Aug. 2009, http://promomagazine.com/pro_awards/my-coke-rewards/index.html (viewed 16 Aug. 2010).
- ²⁴¹ Clark Fredricksen, "My Coke Rewards: Combining Mobile and Social Media to Drive Brand Loyalty," *eMarketer*, 25 Nov. 2009, www.emarketer.com/blog/index.php/my-coke-rewards-combining-mobile-social-media-brand-loyalty/ (viewed 25 Feb. 2011).
- ²⁴² Dan Butcher, "Coca-Cola Exec: Think Beyond a Single Mobile Campaign," *Mobile Marketer*, 10 June 2010, www.mobilemarketer.com/cms/news/database-crm/6511.html (viewed 16 Aug. 2010).
- ²⁴³ Dan Butcher, "Coca-Cola's SMS Opt-ins Increasing 5-10 Percent Monthly: Study," *Mobile Marketer*, 14 Sept. 2009, www.mobilemarketer.com/cms/news/database-crm/4158.html (viewed 16 Aug. 2010).
- ²⁴⁴ 5th Finger, "Clients: Coca-Cola," www.5thfinger.com/clients/my-coke-rewards/ (viewed 16 Aug. 2010).
- ²⁴⁵ Butcher, "Coca-Cola's SMS Opt-ins Increasing 5-10 Percent Monthly: Study." "Coca-Cola is taking advantage of the constant connectivity users have with their mobile devices to further its MyCoke data collection goals. For example, with its recent 'Twist, TXT, Win' initiative for 20-ounce products, 'consumers who text in the alphanumeric code under the cap get an immediate response via SMS telling them whether or not they have won a prize.' Butcher, "Coca-Cola Exec: Think Beyond a Single Mobile Campaign." Coca-Cola is also making points redeemable for wireless minutes from a number of cell phone service providers. As one mobile marketer explained, "Coca-Cola is using the phone in the same way as retailers use a plastic loyalty card....No need for rebate or coupon clearing houses, time delays or intermediaries between the brand and the shopper." Mickey Alam Khan, "How Coca-Cola's Mobile Credit Campaign May Change Shopper Marketing," *Mobile Commerce Daily*, 2 Aug. 2010, www.mobilecommercedaily.com/how-coca-cola-s-mobile-credit-campaign-may-change-shopper-marketing/. Coca-Cola is also using the mobile platform to target Hispanic consumers, with "an innovative mobile phone points collection platform that allows consumers to accumulate points by texting their My Coke Rewards product codes. Upon registering, consumers will receive 100 free My Coke Rewards points towards their first *Inglés sin Barreras* ['English without Borders,' a video-based English learning program] volume. Each time consumers amass 700 My Coke Rewards points, they will have the opportunity to redeem their points for one of the 12 volumes in the *Inglés sin Barreras* collection. This year-long promotion will be supported with television, radio and newspaper advertising." "Coca-Cola Enhances 'Destapa La Felicidad' and Reaches out to Multicultural Teens," 11 Sept. 2009, www.businesswire.com/portal/site/home/permalink/?ndmViewId=news_view&newsId=20090911005982&newsLang=en (both viewed 16 Aug. 2010).

- ²⁴⁶ Elena Malykhina, "Coca-Cola Names N.A. CMO," *Brandweek*, 14 Apr. 2010, www.adweek.com/aw/content_display/news/client/e312bf7a2a5a7ec6db244b508cb92c4e108 (viewed 16 Aug. 2010).
- ²⁴⁷ Brown, "Coca-Cola: The Creation of Expedition 206."
- ²⁴⁸ Marissa McNaughton, "How Coca-Cola Doubled its Facebook Fans in 6 Months," TWTRCON, 2 Feb. 2011, <http://twtrcon.com/2011/02/02/how-coca-cola-doubled-its-facebook-fans-in-6-months/> (viewed 24 Feb. 2011).
- ²⁴⁹ As the privacy policy reads, "Personally Identifiable Information: your name, screen name, address, telephone numbers, email address, account and credit card numbers when you set up an account, redeem an award, sign up for newsletters, contact customer service, or otherwise interact with this Site. Further, we may operate sweepstakes, contests and other promotions (collectively, 'Promotions') through the Site, and may conduct surveys or polls through the Site or ask for your responses to questionnaires that we make available through the Site (these surveys, polls and questionnaires, collectively, 'Surveys'). We typically ask you for certain PII [personally identifiable information] when you enter and, if applicable, win a Promotion, and when you participate in a Survey. The PII you provide to this Site may be combined with information you provide to The Coca-Cola Company on other U.S. sites, with demographic and other information that is publicly available, or with other information about you that The Coca-Cola Company may otherwise obtain online or offline." Coca-Cola, "Privacy Statement," 25 Feb. 2010, www.mycokerewards.com/help.do?helpID=4 (viewed 16 Aug. 2010).
- ²⁵⁰ Coca-Cola, "Privacy Statement."
- ²⁵¹ "Online Advertising Market Poised to Grow 20% in 2011," *eMarketer*, 8 June 2011, www.emarketer.com/PressRelease.aspx?R=1008432 (viewed 16 Sept. 2011); Nicole Perrin, "US Major Media Ad Spending Forecast," *eMarketer*, Apr. 2011, www.emarketer.com/Reports/All/Emarketer_2000810.aspx?utm_source=IABInsights&utm_medium=TextReport_USMajorMediaAdSpend&utm_campaign=IAB0508&aff=IABInsights (purchase required).
- ²⁵² "Total U.S. e-commerce spending reached \$227.6 billion in 2010, up 9 percent versus the previous year," comScore, "comScore Releases 'The 2010 U.S. Digital Year in Review': Report Highlights 2010 Digital Marketing Trends and Implications for 2011," 8 Feb. 2011, www.comscore.com/Press_Events/Press_Releases/2011/2/comScore_Releases_The_2010_U.S._Digital_Year_in_Review (viewed 26 Feb. 2011).
- ²⁵³ See, for example, Advertising Research Foundation, "NeuroStandards Collaboration," www.thearf.org/assets/neurostandards-collaboration (viewed 26 Feb. 2011).
- ²⁵⁴ "Explore Ad Age's Databases," *Advertising Age*, <http://adage.com/datacenter/> (registration required). In 2010 for Internet display advertising, Coca Cola spent \$17.7 million; Dr. Pepper, \$12.9 million; Kellogg's, \$42 million; Pepsi, \$35.2 million; Wendy's/Arby Group, \$21.5 million; General Mills, \$56.8 million; Mars, \$66.5 million; and McDonald's, \$27.5 million. "Database of 100 Leading National Advertisers," *Advertising Age*, June 2011, <http://adage.com/datacenter/marketertrees2011/#74> (subscription required).
- ²⁵⁵ "PepsiCo Names 10 Tech Start-Ups for Pilot Digital Marketing Programs," 9 Sept. 2010, www.pepsico.com/PressRelease/PepsiCo-Names-10-Tech-Start-Ups-for-Pilot-Digital-Marketing-Programs09092010.html (viewed 26 Feb. 2011).
- ²⁵⁶ Frank Piotrowski and Michelle Zweig, "Multicultural Merchandising Opportunities within CPG," Mar. 2010, http://thearf-org-aux-assets.s3.amazonaws.com/downloads/rethink-10/mon/kif/4/2010_Rethink_DI_WS_Piotrowski-Zweig_v03.pdf. See also Advertising Research Foundation, "Multicultural Super Council: Upcoming Meetings," www.thearf.org/assets/multicultural-council?fbid=74_3rDHM9Vb (both viewed 20 Aug. 2010).
- ²⁵⁷ Macias Advertising, Facebook, www.facebook.com/group.php?gid=44583321445 (viewed 20 Aug. 2010); Macias Advertising, "Portfolio," www.maciasadvertising.com/portfolio.html (viewed 16 Sept. 2011).
- ²⁵⁸ David Gianatasio, "Wendy's Taps Bravo for Hispanic Creative Chores," *Adweek*, 10 Aug. 2010, www.adweek.com/aw/content_display/news/account-activity/e314b7c0879c181d50b996eee30090115a7 (viewed 20 Aug. 2010).
- ²⁵⁹ McDonald's has made a major effort to become "the country's leading partner with the Hispanic community," including in areas related to "education, marketing, vendors/suppliers and employment." The company claims to have "one of the highest percentages of Hispanics in top management positions at 12%," and "Hispanic crews at many of the country's 14,000 restaurants receive free English-language and other career development courses.... The McDonald's Hispanic Owner/Operators Association (MHOA) is the country's largest organization of Hispanic franchisees with 269 members who operate 900 restaurants in 35 states with revenues of almost \$2 billion. In addition, MacDonald's utilizes more Hispanic suppliers than any other corporation." Hispanic Public Relations Society of America, "Premio Awards: Corporation of the Year: McDonald's Corporation," 2009, www.hpra-usa.org/awards.html (viewed 20 Aug. 2010). See also "Alma DDB: Engaging Brands and Consumers," *Adweek*, 27 Apr. 2011, www.adweek.com/sa-article/alma-ddb-131095; dexposito & Partners, "Work: McDonald's Angus Heist," www.dexpositoandpartners.com/mainMovie.swf (both viewed 16 Sept. 2011).
- ²⁶⁰ Coca-Cola Company, "Destapa La Felicidad and Enjoy Life with Coca-Cola," 26 Mar. 2009, www.thecoca-colacompany.com/dynamic/press_center/2009/03/destapa-la-felicidad-and-enjoy-life-with-coca-cola.html (viewed 16 Sept. 2011).
- ²⁶¹ "Mobile Year in Review 2010," comScore, www.comscore.com/content/download/7487/128871/version/3/file/comScore+2010+Mobile+Year+in+Review.pdf (viewed 26 Feb. 2011).
- ²⁶² Google, "Favorite Places: What's That Bar Code?" www.google.com/help/maps/favoriteplaces/business/barcode.html (viewed 26 Feb. 2011); PSFK, "PSFK's Future of Mobile Tagging," www.psfk.com/future-of-mobile-tagging (viewed 16 Sept. 2011).
- ²⁶³ Food and beverage companies are also engaged in digital marketing throughout the world, including in China and South America, for example. Digital marketing firms and major brands are benefiting from the research and results related to campaigns on food marketing in such places as China, Brazil, and in the EU. See, for example, "Coca-Cola Focuses on Digital," World Advertising Research Center, 23 July 2009, <http://digitalads.org/detail.php?id=1186>; "PepsiCo Exec: Majority of Social Interaction Will Happen via Mobile," *Mobile Marketer*, 14 Feb. 2011, <http://digitalads.org/detail.php?id=1834> (both viewed 16 Sept. 2011).
- ²⁶⁴ See Angela Campbell's memo, "Identifying and Reporting Misleading Ads," www.phpnet.org/childhood-obesity/products/food_marketing_FTC. The authors of this report led the campaign to pass COPPA. For a detailed case study of the campaign, see Chapter 4, "Web of Deception," in Kathryn C. Montgomery, *Generation Digital: Politics, Commerce, and Childhood in the Age of the Internet* (Cambridge, MA: MIT Press, 2007).
- ²⁶⁵ L. M. Alvy and S. L. Calvert, "Food Marketing on Popular Children's Web Sites: A Content Analysis," *Journal of the American Dietetic Association* 108, n. 4 (2008): 710-713; S. L. Calvert, A. B. Jordan, R. R. Cocking, eds., *Children in the Digital Age: Influences of Electronic Media on Development* (Westport, CT: Praeger, 2002): 57-70; S. L. Calvert, "Children as Consumers: Advertising and Marketing," *The Future of Children* 18, n. 1 (2008): 205-234; D. Kunkel, B. L. Wilcox, J. Cantor, et al., "Report of the APA Task Force on Advertising and Children," 20 Feb. 2004, www.apa.org/releases/childrenads.pdf; Kaiser Family Foundation, "The Role of Media in Childhood Obesity," Feb. 2004, www.kff.org/entmedia/upload/The-Role-Of-Media-in-Childhood-Obesity.pdf (viewed 2 Oct. 2008); American Academy of Pediatrics Committee on Communications, "Policy Statement: Children, Adolescents, and Advertising," *Pediatrics* 118, n. 6 (Dec. 2006): 2563-2569, <http://pediatrics.aappublications.org/cgi/content/full/118/6/2563> (viewed 4 Oct. 2008); P. M. Valkenburg, "Media and Youth Consumerism," *Journal of Adolescent Health* 27 (S 2000): 52-56.
- ²⁶⁶ Based on this model, the age of 7 or 8 is considered the critical stage when children develop the cognitive ability to recognize the persuasive intent behind a television advertisement. By age 12, children are able to articulate a more critical comprehension of advertising intent and become more skeptical. Kunkel, Wilcox, Cantor, et al., "Report of the APA Task Force on Advertising and Children"; D. Roedder-John, "Consumer Socialization of Children: A Retrospective Look at Twenty-five Years of Research," *Journal of Consumer Research* 26, n. 3

- (1999): 183–213. S. Livingstone and E. J. Helsper, “Does Advertising Literacy Mediate the Effects of Advertising on Children? A Critical Examination of Two Linked Research Literatures in Relation to Obesity and Food Choice,” *Journal of Communication* 56, n. 3 (2006): 560–584.
- ²⁶⁷ Dale Kunkel, “Children and Television Advertising,” in D. G. Singer and J. L. Singer, eds., *Handbook of Children and the Media* (Thousand Oaks, CA: Sage Publications., 2001): 375–393; Dale Kunkel, “Kids Media Policy Goes Digital: Current Developments in Children’s Television Regulation,” in J. A. Bryant & J. Bryant, eds., *The Children’s Television Community: Institutional, Critical, Social Systems, and Network Analyses* (Mahwah, NJ: Lawrence Erlbaum Associates, 2006): 203–228; Montgomery, *Generation Digital: Politics, Commerce, and Childhood in the Age of the Internet*; Nairn and Fine, “Who’s Messing with My Mind? The Implications of Dual-Process Models for the Ethics of Advertising to Children”; Nairn, “Changing the Rules of the Game: Implicit Persuasion and Interactive Children’s Marketing.”
- ²⁶⁸ For example, Harris et al. examined a large body of research on what is known about how children and adolescents respond to marketing, concluding that the psychological models traditionally applied to food marketing research do not explain many of the demonstrated effects of such marketing. Harris, Brownell, and Bargh, “The Food Marketing Defense Model: Integrating Psychological Research to Protect Youth and Inform Public Policy.” Wright and his colleagues argue that the emphasis on cognitive understanding of intent has oversimplified the ways in which advertising works. By focusing on only one aspect of the persuasive process, the model fails to take into account “the multiple psychological effects that are instrumental in persuasion.” Peter Wright, Marian Friestad, and David M. Boush, “The Development of Marketplace Persuasion Knowledge in Children, Adolescents, and Young Adults,” *Journal of Public Policy & Marketing* 24, n. 2 (2005): 222–33. See also Montgomery, Grier, Chester, and Dorfman, “Food Marketing in the Digital Age: A Conceptual Framework and Agenda for Research”; Harris and Graff, “Protecting Young People From Junk Food Advertising: First Amendment Law Should Reflect Psychological Research,” *American Journal of Public Health* (In press 2011).
- ²⁶⁹ Children’s Food and Beverage Advertising Initiative (CFBAI), “Comments to the Interagency Working Group on Food Marketed to Children,” July 2011, www.bbb.org/us/children-food-beverage-advertising-initiative/info/#fact%20sheets (viewed 19 Sept. 2011).
- ²⁷⁰ For example, the guidelines for “websites directed to children” include the following: “if an advertiser integrates an advertisement into the content of a game or activity, then the advertiser should make clear, in a manner that will be easily understood by the intended audience, that it is an advertisement.” Children’s Advertising Review Unit, “Self-Regulatory Program for Children’s Advertising,” 2009, 9, www.caru.org/guidelines/guidelines.pdf. See also Ben Kelley, “Industry Controls over Food Marketing to Children: Are They Effective?” Public Health Advocacy Institute, 2005, [www.aeforum.org/aeforum.nsf/88e10e9813be5a4780256c5100355eb1/75633673317e30f28025704300350d77/\\$FILE/PHAI.caru.analysis.pdf](http://www.aeforum.org/aeforum.nsf/88e10e9813be5a4780256c5100355eb1/75633673317e30f28025704300350d77/$FILE/PHAI.caru.analysis.pdf) (both viewed 26 Feb. 2011).
- ²⁷¹ The initiative was created in 1999 as a response to the growing call from advocates and policymakers to regulate the online profiling of consumers for marketing purposes. But more than a decade later, its self-regulatory system is seen as ineffective. Pam Dixon, “The Network Advertising Initiative: Failing at Consumer Protection and at Self-Regulation,” World Privacy Forum, 2 Nov. 2007, www.worldprivacyforum.org/behavioral_advertising.html (viewed 17 Feb. 2011). The failure of the NAI to deflect the growing call for privacy regulation led to the development of an additional self-regulatory program by the IAB and other online ad groups in 2009. “Key Trade Groups Release Comprehensive Privacy Principles for Use and Collection of Behavioral Data in Online Advertising,” 2 July 2009, www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/pr-070209 (viewed 27 Feb. 2011).
- ²⁷² A study in the *Journal of Consumer Affairs* found that more than 95 percent of the top 100 children’s websites in the United States post privacy policies complying with COPPA’s requirements for information collection and use. Anthony D. Miyazaki, Andrea J. S. Stanaland, and May O. Lwin, “Self-Regulatory Safeguards and the Online Privacy of Preteen Children,” *Journal of Advertising* 38, n. 4 (Winter 2009): 79, 83;
- Andrea J. S. Stanaland, May O. Lwin, and Susanna Leong, “Providing Parents with Online Privacy Information: Approaches in the US and the UK,” *Journal of Consumer Affairs* 42 n. 3 (Fall 2009): 474, 484–485.
- ²⁷³ Children’s Advertising Review Unit, “About the Children’s Advertising Review Unit (CARU),” www.caru.org/about/index.aspx (viewed 26 Feb. 2011). Note: The authors were responsible for the campaign that led to passage of COPPA. For a full discussion of COPPA’s history, see Montgomery, *Generation Digital*, 67–106.
- ²⁷⁴ Federal Trade Commission, “FTC Extends Public Comment Period for COPPA Rule Review until July 12, 2010,” 2 July 2010, www.ftc.gov/opa/2010/07/coppa.shtm (viewed 26 Feb. 2011).
- ²⁷⁵ www.ftc.gov/opa/2011/09/coppa.shtm.
- ²⁷⁶ McGinnis, Gootman, and Kraak, eds., *Food Marketing to Children and Youth: Threat or Opportunity*; Montgomery and Chester, “Interactive Food & Beverage Marketing: Targeting Adolescents in the Digital Age.”
- ²⁷⁷ A coalition of child advocacy and health groups had been calling for privacy protections covering teens in previous FTC proceedings and through congressional testimony. As explained in an April 2008 filing with the FTC, “although adolescents are more sophisticated consumers than young children are, they face their own age-related vulnerabilities regarding privacy.” Institute for Public Representation, filing with the Federal Trade Commission concerning “Online Behavioral Advertising Principles.” See also the testimony of Kathryn C. Montgomery, PhD “Before the Subcommittee on Consumer Protection, Product Safety, and Insurance. Committee on Commerce, Science, and Transportation. United States Senate. Hearing: An Examination of Children’s Privacy: New Technologies and the Children’s Online Privacy Protection Act. April 29, 2010,” www.centerfordigitaldemocracy.org/testimony-kathryn-montgomery-childrens-privacy-us-senate-commerce-committee (viewed 26 Feb. 2011).
- ²⁷⁸ “Comments of the Center for Digital Democracy, et al., in the Matter of a Preliminary FTC Staff Report on Protecting Consumer Privacy in an Era of Rapid Change: Proposed Framework for Business and Policymakers.”
- ²⁷⁹ Ibid.



ChangeLab Solutions
Law & policy innovation for the common good.

changelabsolutions.org

nplan

NATIONAL POLICY & LEGAL ANALYSIS NETWORK
TO PREVENT CHILDHOOD OBESITY

nplan.org