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**Virtual Junk Food Playgrounds in Europe:
*Advergames in the UK and Hungary***

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Abstract

Unhealthy foods and drinks are among the top products advertised to young children. Considering the growing childhood obesity epidemic and the soaring number of children accessing the Internet, even online junk food advertising has come under increasing scrutiny. Many countries are in the process of expanding and revising existing regulation to account for the realities of the digital age and to respond to health and other social concerns. This paper focuses on two European countries in particular to examine and compare these processes through the lens of junk food advergames aimed at children. Our questions are: 1) Given the differences in the media landscapes of the UK and Hungary, what types of junk food advergames target children?; and 2) In light of the growing childhood obesity problem faced by both nations, how have government bodies, advocacy groups, and advertisers approached junk food advertising targeting children in general and online advertising including advergames in particular? The United Kingdom represents a country with the highest Internet usage by children and the most developed online advertising market in Europe, while Hungary, a post-communist country, represents an emerging media market where young people have less access to the Internet and buying power but constitute a crucial “entry point” for food advertisers.

Keywords: Advergames, junk food advertising, promotion to children, advertising regulations, Internet, United Kingdom, Hungary, childhood obesity

Virtual Junk Food Playgrounds in Europe:

Advergames in the UK and Hungary

"Globesity," a new term on the global obesity epidemic, aptly expresses the worldwide population explosion of overweight and obese adults and children facing diet-related health consequences (World Health Organization [WHO], 2006a). According to the WHO (2010), more than 1 billion adults worldwide are overweight, thus posing a serious global health problem (WHO, 2004). Many countries are holding the media—especially television and the Internet—accountable for the rise of childhood obesity since they assume a central presence in the lives of children. Mass-produced, unhealthy foods and beverages have consistently been among the top products advertised to children. The "big five" product groups promoted include pre-sugared breakfast cereals, soft drinks, confectionary and savory snacks, and fast-food outlets (e.g. Hastings et al., 2006, p. 2). Coca-Cola, McDonald's, and other leading manufacturers of unhealthy food, soft drinks, and sweets spent almost \$13 billion on advertising worldwide in 2006 (Consumers International [CI], 2008a), excluding undisclosed expenditures on cartoon characters, celebrity tie-ins, and new forms of marketing often targeting young people in particular. The advertised diet contrasts sharply with nutritional recommendations by public health advisers (Hastings et al., 2006, p. 1). For every \$1 the World Health Organization allocates for nutrition education, the fast food industry spends \$500 (CI, 2008b).

As the number of young Internet users grows and traditional forms of advertising are increasingly under scrutiny, food advertisers and manufacturers have diverted a growing percentage of their promotional budget from television to nontraditional media employing creative new forms of marketing communication via the Internet that represents a less strictly regulated and potentially more interactive environment (Hastings et al., 2006; Hawkes, 2002; Lee, Choi, Quillam, & Cole, 2009; Moore, 2006). Advergames are part of dynamic, multifaceted, and entertainment-branded Web zones offered by all the leading manufacturers of unhealthy food and drink products. Advergames represent a form of "branded entertainment" and of "immersive advertising" that feature "advertising messages, logos, and trade characters in a game format" and "can be tailored to the needs and capabilities of different target markets" and age groups (Mallinckrodt & Mizerski 2007, pp. 87-88). These free games vary from short and simple games, such as puzzles, to longer and more complex games that can be played in a number of languages with multiple players. All of them are

presented as entertainment and by "evoking feelings of telepresence, a perception of being present in the gaming environment," children and young people are likely to form positive attitudes toward these brands (Lee et al., 2009, p. 134). In many countries, electronic games have become an integrated part of children's recreational lives, and advergames can simultaneously provide "a playful activity as well as a branding experience" (Yuon & Lee, 2005, p. 322).

According to the International Obesity Taskforce, junk food promotion, whether in the form of television commercials or advergames, will "inevitably undermine the efforts of parents and governments to promote healthy eating" and runs contrary to the objectives of the WHO's "Global Strategy on Diet, Physical Activity and Health" (2004) endorsed by 192 countries (International Obesity Taskforce, 2007). The conceptualization of the child as uniquely vulnerable to media exploitation has traditionally justified some level of regulation of advertising in many parts of the world, ranging from the restriction or prohibition of tobacco and alcohol advertising to unhealthy food products, especially on television.

Government bodies, self-regulatory regimes, consumer advocacy groups, and health organizations are in the process of expanding and revising existing regulation to account for the realities of the digital age and to respond to health and other social concerns. This paper will focus on two European countries in particular to examine and compare these processes through the lens of junk food advergames aimed at children. The United Kingdom was selected to represent a Western European country, which recently passed strict regulations of junk food advertising, and has the highest obesity rates among children in Europe. The UK also has the most developed traditional and online advertising market with one of the highest Internet usages by children in Europe, with almost all 5- to 16-year-old UK children having a personal computer or laptop at home and more than 50% owning their own computer (Childwise, 2009). Post-communist Hungary represents a nation with a media landscape in transition (Curran & Park, 2000), where media advertising targeting children is less regulated and Internet use among young children is less prominent. While less data are available on the extent and nature of food promotion in developing countries and emerging economies, such as Hungary, studies show that children are effectively targeted and in similar fashion to those in developed countries. Importantly, children are often regarded as a "key entry point" for food advertisers because they are more flexible and responsive than adults, and associate "Western" brands with "desirable attributes of life" (WHO, 2006b). Our research focuses on two main issues: 1) Given the differences in the media landscapes of the UK and Hungary, what types of junk food advergames target children in these two

countries?; and 2) In light of the growing childhood obesity problem faced by both nations, how have government bodies, advocacy groups, and advertisers approached junk food advertising targeting children in general and online advertising including advergames in particular?

Methodology

European children born in the 21st century are often described as being part of the digital generation who use the Internet “to explore, create, learn, share, network and even subvert” (Livingstone, 2009, p. 45). By 2008, 75% of children between ages 6 and 17 growing up in the European Union (EU27) use the Internet, and the number of online users is continuously rising among preschoolers and preteens (Eurobarometer, 2008). The online opportunities include access to educational resources, games, entertainment, and social networking, while the risks are offensive and illegal content, cyber-bullying, or advertising. The increasing amount of time children spend in front of electronic screens in virtual playgrounds making fantasy Cadbury chocolates and personalizing their M&M candies has only elevated such concerns over the last decade in countries such as the United Kingdom.

Internet use among children in the UK is among the highest in Europe and growing rapidly. More than 98% of children between 9 and 19 have Internet access at home, often in their own bedrooms, on their mobile phones or somewhere, raising concerns for parents unable to exercise supervision (Livingstone & Bober, 2004). With some spending more than three hours a day online, screen time has become "pervasive" in the young people who “are now skilled managers of their free time, juggling technology to fit in on average six hours of TV, playing games and surfing the net” (Curtis, 2009, p. 8).

Similarly to other countries in Central and Eastern Europe, media consumption habits of Hungarian youth have changed dramatically due to accelerated Internet penetration during the last decade. Although Internet use still lags behind in comparison to Western European countries, in 2009, every second Hungarian household had Internet access, half of them with broadband connection (Eurostat, 2010a; 2010b). While the most popular free-time activity is watching television, more than two hours a day among the ages of 8 to 14, every fifth child under the age of 15 uses the Internet on a daily basis often to play and download games, images, films, or music (Eurostat, 2009c; 2009d). The most popular cyber destinations include informational, community-based and entertainment sites with 60% of online users playing games (Szonda Ipsos, 2008; Szabó & Bauer, 2009). Today children find computers,

video games, and the Internet just as interesting as animals, plants, nature, and sports (Szonda Ipsos, 2008).

Advergames in the UK and Hungary

A dramatic increase in Internet use and recent or future restrictions in TV advertising targeting children in Europe have led advertisers to devote a growing percentage of their budget to the Internet. In the UK, advertisers allocate close to 20% of their budgets to the Internet, the highest of any other country (Office of Communication [Ofcom], 2007). Online advertising has grown considerably in the Hungary as well, constituting close to 24% of total advertising expenditure in 2009. The Internet became the third preferred medium after television (65%) and print media (50%) (MRSZ, 2010).

Given the aims of our study, we set out to examine advergame sites created by some of the world's leading junk food producers, such as Burger King, McDonald's, Cadbury, Nestlé, Kellogg's, Coca-Cola, and Pepsi (see Tables 1 and 2) in the UK and Hungary. We wanted to find out what types of games are offered to British children who have more spending money and access to play on the Internet and to Hungarian children who constitute a much smaller and less lucrative market. We identified and played the advergames associated with key junk food brands in each nation that target children with a methodology adapted from Consumers International's study (2009) on assessing the qualities and marketing tactics of junk food advergames. We examined the content for the following criteria: accessibility for children to play the games (age and membership requirements, registration, and disclaimers on terms of use and parental permission); brand immersion and identification (logos, colors, and integration of products in games); and promotional incentives and interactive brand extensions (discounts, competitions, screensavers, and other features). The research that involved a total of 27 advergames took place between April and May 2009 and March 2010.

Unlike Internet banners or traditional ads, many advergames are part of dynamic, multifaceted, and entertainment-branded Web zones. The two major soft drink companies in the UK feature interactive "zones" with advergames. The Coke Zone showcases games, along with sports, music, entertainment, a blog, registration for free points, and links to products. Because of the graphic nature of many of the games, the limited wording easily allows multi-language versions. Coke's "Happiness Factory," (see Figure 1) is a multi-lingual advergame in 20 languages, including UK and US English, Hungarian, and other European

languages, set in a fantasy world inside a Coke vending machine as a spin-off of the brand's commercials in which the characters are factory workers, featuring Coke bottles in almost every scene where users have to grab the bottles to "refresh their lives" in five different versions of games incorporating the product. "Coca-Cola Bubble Popper" caters to younger children with a simpler advergame to pop virtual bubbles for points while dodging straws, ice cubes, and slices of lemon and lime.



Figure 1. Coke's Happiness Factory transnational advergame.

The Pepsi Max site highlights unlimited free music downloads, sports and concert ticket giveaways, and links to Pepsi-branded and non-branded games, movies, and other entertaining sites. The "Your Experience" tab showcases two games geared to audiences 16 and older, which younger children could still play without registering. A simulated cricket game called "Pepsi Max Hit" enables players to register to win real soccer tickets. "Pepsi Max Kicks" must be uploaded from a mobile phone by photographing a QR Code (quick recognition code with content that can be read by mobile phone cameras) to access games and other interactive components.

Advergams also promote cereals, sweets, and fast food products in an environment where children are encouraged to virtually play with the products as part of the game. "The Chocolate Machine" (see Figure 2) requires players to create Cadbury candy bars in a production line within an allotted time limit by pushing buttons as fast as they can to fill and then stop the machine when the production reaches a certain number. The "Your Country Needs Goo!" game lets players win prizes by helping the missing Cadbury Creme Eggs "fulfill their gooey destination," along with other interactive enticements—iPhone "Splatplications," "Egg-mented Reality" cards (augmented reality application requiring a

webcam to see the products come to life on one's computer screen), and downloads for "The Great Eggescape" game and a mobile phone game. Nestlé's "Shreddies' Knitted by Nana" brings the commercials alive, where an army of grandmothers (nanas) knit the breakfast cereal in a series of games set in an old-fashioned, virtual Shreddies' factory. To play Nestlé's Smarties adverggame, users answer trivia questions and stack up all seven candy colors.



Figure 2. UK Cadbury's Chocolate Machine adverggame.

Hungarian corporate websites of snacks, fast food restaurants, and soft drink beverages, such as Pepsi, Nestlé, McDonald's, Douwe Egberts, and Chio, include adverggames, which range from simple puzzles to complex multi-player games. Pepsi's "Csocsó bajnokság 2008," accessible directly from the main corporate website, offered an online table football game for multiple players launched on the occasion of the 2008 European Football Cup. The adverggame promoting Nesquik cocoa powders is Quicky Rabbit's homepage (see Figure 3) where most games are embedded into stories about the bunny's adventures. Although McDonald's corporate logo is placed discreetly on the bottom of the pages, the site's name, Ronald Klub, clearly connects the games with the brand and the players win Happy Meal menu toys. The site for caffeine-free Douwe Egberts Kid coffee offers games that teach children how to prepare the "3 in 1 drink," where players have to move cups, spoons, and the product to mix them.



Figure 3. Hungarian Nesquik advergame.

The examined Hungarian sites mix promotional and interactive features as well. All sites use promotional tie-ins, at least links to main corporate sites or to other brands. Nestlé and McDonald's offer opportunities for e-newsletter subscriptions, advertisements, and other entertaining programs are downloadable from the Cheetos, Nesquik, and Douwe Egberts Web sites. Promotional campaigns are accessible through all webpages, except Pepsi's. Each brand is clearly identified through its colors, logos, and cartoon figures. Approaches to handling privacy issues differ greatly: on the Ronald Klub advergame, users are asked several times to consult their parents in order to understand the content, especially when registering for prizes. According to their disclaimers, Nestlé and McDonald's do not collect data directly from children under the age of 14. On these sites and also on the site of Douwe Egberts, some features are accessible only after registration. A feedback opportunity is only provided on the Douwe Egberts' site and on the "parents only" section of the *cheetos.hu*, where more information is published on product safety as well.

The games in both the UK and Hungary share more similarities than differences in terms of accessibility, restrictions, and brand immersion. Children of any age can play the games without registering or encountering any age restrictions or parental permission requirements (see Table 1). None of the games required membership; registration was only required to collect prizes or receive other incentives, with only a few stating age restrictions and requiring parental permission. The handling of privacy issues vary from site to site. Disclaimers are provided on most of the sites; privacy issues and in one case also "cookies" are explained or children are warned to protect their personal data. Notably however, with few exceptions, the language is geared to an adult audience with legal disclaimers on terms of

use. Of the advergames studied, only Cadbury's games contain clear links to nutritional information.

Advergame	Member -ship	Registration	Disclaimers
Burger King, SK8 (UK)	None	None	None
Cadbury Chocolate Machine (UK)	None	For prizes	Legal, nutrition
Cadbury Crème Egg: Your Country Needs Goo! (UK)	None	For prizes	Terms, privacy, nutrition
Chio/Intersnack Pombär (HU)	None	None	Personal data not collected
Coca-Cola Bubble Popper (UK)	None	"Coke Zone Points" for consumers 12 +	Terms and privacy
Coca-Cola Happiness Factory (UK, HU)	None	For some features	Terms and privacy
Douwe Egberts As the Grown Ups (Mint a nagyok) (HU)	None	With parental permission for some features and promotions	Legal
Kellogg's Wake Up to Breakfast: Brain Games (UK)	None	For competition, 16+ or parental permission	Privacy, legal, note to parents
Kellogg's Zookeeper (UK)	None	For competition	Privacy, legal, note to parents
McDonald's Endangered Animals (UK)	None	Request first name and country for "passport"	Terms, cookies, privacy
Nestlé Milkybar (UK)	None	None (language directed to parents)	Privacy
Nestlé Smarties: How Smart Are You? (UK)	None	For competition, 18+	Privacy
Nestlé Shreddies: Knitted by Nana (UK)	None	None	Terms
McDonald's Ronald Club (HU)	None	For some features	Legal
Pepsi Max Hit (UK)	None	For contest, 16+	Terms and privacy
Pepsi Pinball (UK)	None	None	Privacy

Pepsi Table football championship 2008 (HU)	None	None	Legal
Pepsi Chester Space Base (HU)	None	None	None

Table 1. Accessibility and disclaimers of examined advergames.

The examined advergames in both countries creatively blend brand and product values and entertainment features, offering fun, engaging virtual playgrounds for children of all ages in immersive environments, as outlined in Table 2. Even in cases when the branding is minimal, each site clearly identifies the company or its products. In many cases, the products are incorporated as prominent elements of the game. All sites use brand identities, such as colors, brand characters or cartoon figures, or logos more or less intensively, and many games incorporate product integration. Most sites contain promotional tie-ins, such as links to main corporate sites or to other product lines, and many offer opportunities for e-newsletter subscriptions and social media connections to extend the brand experience.

Advergame	Brand Immersion, Game Features	Promotions, Interactive Brand Extensions
Burger King, SK8 (UK)	Minimal brand identity, cartoon boy and girl skater unrelated to brand	No promotions (micro site)
Cadbury Chocolate Machine (UK)	Intensive branding colors, logo, product imagery, candy bars and production line worker in game	Competitions for cinema tickets and candy, recipes, party ideas, other games, social media links
Cadbury Crème Egg: Your Country Needs Goo! (UK)	Intensive corporate and product logos and colors, Crème Egg products in game	Prizes, iPhone apps, augmented reality card, facebook, mobile game
Chio/Intersnack Pombär (HU)	Brand colors and brand bear's face on all sub-pages, except on "How healthy is the Pom Bär?" page, brand figure in each game	Promotions, link to sub-site introducing Pombär product group
Coca-Cola Bubble	Intensive logo and brand colors,	Discounts, tie-ins,

Popper (UK)	soft drink bubbles in game	screensavers, rewards, links to other games
Coca-Cola Happiness Factory (UK, HU)	Intensive logo, brand colors, bottle images, five game versions of TV ads with cartoon factory workers and product interaction	Multiple downloads, music, tie-ins
Douwe Egberts As the Grown Ups (Mint a nagyok) (HU)	Subtle brand colors, tiger (main brand element), children play “making coffee”	Downloadable TV spots, promotional campaign
Kellogg’s Wake Up to Breakfast: Brain Games (UK)	Intensive logo and brand colors, breakfast-themed content with puzzles	Trip competition
Kellogg’s Zookeeper (UK)	Prominent brand logo and colors, animal videos and multiple choice questions	Downloadable certificates with product logo
McDonald's Endangered Animals (UK)	Logo discreetly placed on certificate, prominent yellow arch, lessons to earn certificates	Downloadable certificates, win "a day as an animal ranger" competition
McDonald’s Ronald Club (HU)	Discreet corporate logo, Ronald McDonald used intensively, brand figure plays several games	Promotional campaign and e-newsletter
Nestlé Milkybar (UK)	Prominent logo and brand colors, cartoon images, identification of sounds of animals	Competitions, downloads, tie-ins
Nestlé Smarties: How Smart Are You? (UK)	Subtle Nestlé logo, trivia game to collect all Smarties as prizes	Competitions, multiple tie-ins
Nestlé Shreddies: Knitted by Nana (UK)	Intensive brand logo, colors, product shots, four games with cartoon nanas of characters in TV ads and product integration	Multiple tie-ins, commercials
Pepsi Max Hit (UK)	Logo, brand colors, product image, cricket game simulation	Prize tickets for cricket tournament, link to Pepsi Max Kicks with QR code for

		games
Pepsi Pinball (UK)	Intensive logo placements, brand colors, traditional pinball game	Multiple tie-ins, downloadable game
Pepsi Table football championship 2008 (HU)	Intensive logos and brand colors, table football	Links to Pepsi products, corporate site, and other brands
Pepsi Chester Space Base (HU)	Brand name, Chester tiger, brand figure plays in a spacecraft	Promotions, endorsements, multiple downloads

Table 2. Brand immersion and extensions of examined advergames.

The most noteworthy differences were the application of newer technology, use of branded cartoon characters, and educational value. Many of the UK advergames incorporate mobile phone and iPod applications, QR codes or augmented reality innovations while the Hungarian advergames do not yet. This is not surprising since the UK is a more affluent market, with more British children owning MP3 players and smart phones than Hungarian children. The UK games also provide more educational content, brain-teaser puzzles, and social-awareness content. For example, McDonald's advergame in the UK centers on endangered species (see Figure 4), whereas the Hungarian advergame showcases the Ronald McDonald character (see Figure 5). Only the Hungarian advergames feature branded animal cartoon characters; the UK advergames may avoid branded cartoon characters due to the country's television advertising ban on the use of licensed characters to promote foods high in fat, sugar, and salt that target pre-school or primary school children (Ofcom, 2007).



Figure 4. McDonald's "Become an Animal Ranger" advergame in the UK.



Figure 5. Hungarian McDonald's advergame.

While both British and Hungarian children build castles made out of branded candies or chips in cyberspace, often unsupervised, their parents, according to a recent European-wide survey, indicated some concerns about the impact of advertising on childhood obesity. Thirteen percent of Hungarians and 21% in the UK thought that advertisements influence most of what children consume, while others stressed the influence of parents and guardians (Eurobarometer, 2006). Twenty-five percent of Hungarians preferred stricter regulation of junk food ads in comparison to 20% of the UK citizens (Eurobarometer, 2006).

The extensive academic literature available on the effects of food advertising on children has demonstrated that such promotional activity can influence children's nutritional knowledge, food preferences, diet-related behaviors, purchasing-related behavior, consumption, and diet and health status (e.g. Livingstone, 2004; Hastings et al., 2006). Survey evidence also shows that children in both developed and developing countries have extensive recall of food advertising, and enjoy watching them for entertainment (e.g. Hastings et al., 2006; CI, 2008b; WHO, 2006b). According to the comprehensive study conducted by the Institute of Medicine in 2006, "marketing strongly influences children's food preferences, requests, and consumption. The idea that some forms of marketing increase the risk of obesity, 'cannot be rejected'" (Handsley, Mehta, Coveney, & Nehmy, 2009).

Regulatory Environment and NGO Actions

To respond to public and academic pressure in Europe, the UK's Office of Communication (Ofcom), the independent regulator and competition authority in broadcasting, telecommunications, and wireless communications industries (Ofcom, 2007), introduced progressive advertising restrictions from 2007 to 2009 on food and non-alcoholic drinks containing high fat, salt, or sugar (HFSS), based on the nutrient-profiling scheme defined by the Food Standards Agency. According to the Department for Culture, Media and Sport, the UK's current media restrictions "are amongst the toughest in the world" and "just one part of a broader set of actions government is taking to support the public health agenda" (BBC, 2008).

The immediate future of the recent television advertising bans and debate on new non-broadcast restrictions of junk food marketing to children in the UK is closely watched by other European countries, including Hungary, where the promotion of unhealthy food to children is currently an unregulated terrain. Advertisements are only prohibited if they can damage children's physical or mental development, build on their inexperience and gullibility, or urge children to incite adults to buy products or services (2008 XLVIII). Advertising restrictions of certain product categories pertain only to alcoholic and tobacco products. The same regulation prohibits advertising in institutions that provide basic and specialized child-protection services, kindergartens, elementary schools, and dormitories housing elementary school children. Fast food or beverage companies can, however, enter these educational institutions if their messages are related to health, environmental protection, or to culture (see Nestlé's Nutrikid program discussed below).

The current main self-regulatory document, "The Code for Advertisement Ethics," approved by the two main industrial alliances, the Hungarian Advertising Self Regulatory Board and the Hungarian Advertising Association, advocates not to use cartoon characters that are strongly tied to children's emotions or imagination for promotional purposes that may blur the line between commercial and editorial content. Our data show that this recommendation is disregarded by many Hungarian advergames, as many of the sites use cartoon figures, and more importantly they initiate "virtual friendships" with their audience. The Code also states that while stimulating the imagination of children is acceptable, advertisers should avoid using misleading information on the nutritional value of the products promoted (MRSZ, 2009).

Due to the lack of statutory restrictions and weak self-regulations, Hungarian non-government organizations (NGO), inspired by the initiatives of the British Heart Foundation, have called for stricter advertising regulations during the last five years. The Hungarian

National Heart Foundation along with seven other NGOs, including the Network for Healthy Kindergartens, the National Association for Consumer Protection in Hungary, the National Diabetes Foundation, and the National Institute for the Child, launched a campaign in 2006 to ban junk food advertisements on television between 6 a.m. and 9 p.m. (MNSZA, 2006). Their proposal was supported neither by advertisers nor media regulators.

For the UK, however, the latest battlefield is cyberspace, including advergames, which by some have been described as branded toxic cyber-playgrounds. As the chief executive of the UK government's "new super-watchdog," Consumer Focus, stated: "The idea that marketing should be free from rules simply because it takes place on the Internet is well past its sell-by date" (Wallop, 2008). In the UK, Internet advertising regulation is overseen by the non-broadcast division of the Committee of Advertising Practice (CAP, 2009), comprising primarily advertising companies and advertising industry groups. A loophole in the code of conduct classifies editorial content as exempt, which applies to branded Web sites and their games and promotions (Taylor, 2008). The public and government debate will likely intensify in non-broadcast marketing. "It is ridiculous that U.K. law protects children up to the age of 16 from junk food advertising during children's television programmes, yet marketers have a free-for-all when it comes to other media, such as the Internet and text messaging," summarized the Children's Food Campaign coordinator of the current situation (Charles, 2009). Concurrently, the discussion about applying restrictions to content on branded Web sites also raises "fears about censorship and freedom of speech" of editorial content (Benaday, 2007).

In Hungary, after failed attempts to regulate junk food advertising on television, national consumer and environmental NGOs for sustainable consumption (including the Association of Conscious Consumers, the Hungarian Environmental Partnership Foundation, and Waste Prevention Alliance) set up a national taskforce in 2007. They launched a series of meetings with the participation of policy makers, broadcasters, representatives of the advertising industry, and health and consumer NGOs. The taskforce prepared the policy background material with psychological arguments and legislative case studies from other countries and proposed a limit on *all* commercial promotion to children under age 12 that would include the Internet and thus advergames as well (TVE 2008; personal communication, TVE, 2009). While their proposal is currently being debated, another proposal put forward to the Hungarian Advertising Self Regulatory Board and the Hungarian Advertising Association that called for public contribution to the revision of the "The Code

for Advertisement Ethics" was rejected (MNSZA, 2010 and personal communication, TVE, 2010).

Especially in the case of the Internet, self-regulation has been preferred to statutory regulation by many of the parties involved in the debates. Some argue that self-regulation offers "a number of advantages that are difficult to reproduce at the government level, foremost of which is the ability to draw on the expertise of the very industries that are most directly involved in the production of hybridized media forms (such as advergimes)" (Grimes, 2008, p. 177). Both European governments included in our research seem "increasingly reluctant" to regulate the media, particularly new media (Buckingham, 2007, p. 21). Projects, however, that focus on "consumer literacy" have been supported by government agencies as well as industry players in both Hungary and the UK. The idea behind consumer literacy programs is to turn children into "competent consumers who are perfectly capable of making up their own minds about what they should buy" (Buckingham, 2007, p. 21). Thus rather than regulating junk food advergimes, digital natives should learn skills to understand them.

The Europe-wide non-profit "Media Smart" program, in which both the UK and Hungary participate, is designed with the goal to "teach children to think critically about advertising in the context of their daily lives" and to use "modern media, including advertising content constructively" (Media Smart, 2008; Mediatudor, 2008). Consumer literacy projects, as Buckingham (2007) and others (e.g. Kline, 2009) argue, can "effectively make[s] individuals responsible for things that are not necessarily within their control—and which in practice they may not be willing or able to take responsibility for" (p. 22). While the Media Smart program, supported by national governments and the European Union, might teach children about junk food advergimes, its funding comes from advertisers that could present a conflict of interest.

An even more controversial project is Hungary's national Nutrikid program launched in 2002 by Nestlé to introduce the principles of healthy eating in elementary schools across the nation. Since Nestlé sponsors the campaign and its logo appears on all the educational materials, it successfully circumvents the ban on advertising in schools (Nutrikid, 2009).

NGOs can play a significant role in bringing attention to the consequences of health issues impacting children and educating families about advertising tactics utilizing the Internet. A study by the British Heart Foundation revealed that 73% of children "were unaware that a shortened life was the worst consequence of eating badly" (BHF, 2008). The results prompted the BHF to launch a Food4Thought campaign that showcases an online

game for children, Yoobot (<http://www.yoobot.co.uk>; see Figure 6), using a similar creative strategy employed by food manufacturers with advergames. Children design their own Yoobot, an avatar, to learn about the consequences for health by making decisions about its food consumption, exercise, and lifestyle. A sharp contrast to our experiences with corporate advergames, we discovered that this was the only game that required parental permission in order to play. Educational games for children created by NGOs are hoped to counterbalance the commercial games by junk food manufacturers.



Figure 6. Yoobot, British Heart Foundation's online game.

Conclusion

As the Internet, social media, and smart phones continue to evolve, advertisers will remain committed to communicating with children in cost-effective, engaging digital playgrounds. Children's bedrooms in the UK are becoming private "multi-media centers," equipped with a laptop with Internet access, mobile phone, television and other electronic devices, such as MP3 player and digital camera. Children, ages 8 to 11, average four media devices in their bedrooms, and those ages 12 to 15 own six (Ofcom, 2008). While Hungarian teen bedrooms do not resemble those in the UK, an increasing number of young people access the Internet and devote a growing amount of their free time to playing games. As our case studies indicated, when it comes to junk food advergames, Hungarian youth are approached by advertisers in rather similar fashion to those in the UK. While Hungarian

children do not have the same buying power or access to junk food advergames, they constitute a crucial “entry point” for food advertisers and manufacturers because they are more curious, flexible, and receptive than adults, and associate the “Western” brands such as McDonald’s, Nestlé, or Coca Cola with “desirable attributes of life” (WHO, 2006b).

In the UK, a £372-million cross-government strategy, published in January 2008, supports the promotion of healthier food choices, including pressure on Ofcom to report on the impact of its current restrictions and for the advertising industry to address advertiser-owned Web sites, including advergames (Department of Health, 2008). The influence of British NGOs and government health organizations can serve as exportable factors to Hungary, where obesity prevention has not been among the priorities of the government. While several national campaigns were launched between 1995 and 2007, most of them targeted adults (EUM, 2008). While the Hungarian government recognizes the importance of health communication in realizing its programs, its health communication is mainly targeted towards professionals (dietitians for example) or to a small target group. Most of the health-related communication campaigns promote screening and early recognition of cardiovascular diseases, breast cancer, or cervical cancer. Over the past few years, communication activities have not addressed a healthy lifestyle to curb the obesity problem and to reach a wider audience (Szöke, 2009).

Children are at the epicenter of the new digital marketing place, a highly lucrative target market of digital natives. The blurring of boundaries between commercial and non-commercial content raises significant challenges for children, parents, and educators. In today’s increasingly commercial and deregulated multi-media environment, one of the most contested issues in relation to children and the media still centers on young people’s susceptibility to potentially harmful media influences (e.g. Livingstone, 2007; 2009).

A major challenge is the transnational quality of the Internet. The Internet has no borders, even if advergames are banned in one country, children can access them from another, particularly from the US where a large proportion of Internet content originates from. The World Health Organization, Consumers International, and the International Obesity Taskforce have been advocating for a global initiative to address the promotion of junk food products to children. The Trans Atlantic Consumer Dialogue also has been seeking proactive cooperation between the EU and US governments to achieve better cooperation and harmonization of regulatory practices and codes.

Acknowledgements

Bibliography

2008. évi XLVIII. tv. A gazdasági reklámtevékenység alapvető feltételeiről és egyes korlátairól. *Magyar Közlöny* 95, 5813-5822.
- BBC (2008, January 21). *Online junk food adverts ban call*. Retrieved March 15, 2010 from <http://news.bbc.co.uk/2/hi/health/7199236.stm>.
- Benaday, D. (2007, December 6). Analysis: Junk food brand owners prepare for body blow from new bill. *Marketing Week* (London), 6.
- British Heart Foundation (2008, November 26). 'Looks before health' say Britain's junk food generation; BHF launches the Yoobot to tackle childhood obesity. Retrieved September 1, 2010 from <http://www.bhf.org.uk/default.aspx?page=9381>.
- Buckingham, D. (2007). Selling childhood? Children and consumer culture. *Journal of Children and the Media*, 1(1), 15-24. doi:10.1080/17482790601005017.
- Charles, G. (2009, June). Children's groups call on CAP to protect kids from 'junk food' advertising. *Marketing Magazine*. Retrieved March 15, 2009 from <http://www.marketingmagazine.co.uk/news/915318/Childrens-groups-call-CAP-protect-kids-junk-food-advertising/>.
- Childwise (2009). Childwise monitor report 2009/2010/. Retrieved March 28, 2010 from <http://www.childwise.co.uk/childwise-published-research-detail.asp?PUBLISH=53>.
- Committee of Advertising Practice (2009, July 22). *About us*. Retrieved April 2, 2010 from <http://bcap.org.uk/About-Us.aspx>.
- Committee of Advertising Practice (2009, July 22). *About us*. Retrieved April 2, 2010 from <http://bcap.org.uk/About-Us.aspx>.
- Consumers International (2008a, February 22). *Statistics: The marketing scale*. Retrieved March 15, 2010 from <http://www.consumersinternational.org/Templates/Internal.asp?NodeID=97058>.
- Consumers International (2008b, September). *The junk food trap: marketing unhealthy food to children in Asia Pacific*. Retrieved March 15, 2010 from <http://www.consumersinternational.org/files/98027/FileName/TheJunkFoodTrapwebversion.pdf>.
- Consumers International (2009, March). *New media, same old tricks: A survey of the marketing to children on food company websites*. Retrieved March 15, 2010 from http://www.junkfoodgeneration.org/documents/New_media_same_old_tricks.pdf.
- Curran, J. & Park, M. (2000). *De-westernizing media studies*. Routledge: London.

- Curtis, P. (2009, January 19). Internet generation leaves parents behind. *Guardian*. Retrieved March 28, 2010 from <http://www.guardian.co.uk/media/2009/jan/19/internet-generation-parents>>.
- Department of Health & the Department for Children, Schools and Families (2008, January). *Healthy weight, healthy lives: A cross-government strategy for England*. Retrieved March 15, 2010 from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378.
- EUM (2008). Szakmai koncepció a TÁMOP 6.1.2. „Egészségre nevelő és szemléletformáló életmódprogramok” című konstrukcióhoz. Egészségügyi Minisztérium Egészségpolitikai Főosztály Fejlesztéspolitikai és Stratégiai-Elemzési Főosztály az Országos Tisztiorvosi Hivatal és az Országos Egészségfejlesztési Intézet bevonásával. Retrieved May 31, 2009 from <http://www.eum.hu/eu-egeszsegugy/uj-magyarország/pdf-080825>.
- Eurobarometer (2006). *Health and food. Special Eurobarometer 246/Wave 64.3*. European Commission.
- Eurobarometer (2008). *Towards a safer use of Internet for children in the EU: A parents' perspective*. Luxembourg: European Commission.
- Eurostat (2009a). *Households–Level of Internet access of households*. Eurostat online query. Retrieved May 31, 2009 from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
- Eurostat (2009b). *Broadband penetration rate (%)*. Eurostat online query. Retrieved June 8, 2009 from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
- Eurostat (2009c). *Individuals–Frequency of Internet use*. Eurostat online query. Retrieved May 31, 2009 from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
- Eurostat (2009d). *Internet activities–Individuals*. Eurostat online query. Retrieved May 31, 2009 from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
- Eurostat (2010a). *Households–Level of Internet access*. Eurostat online query. Retrieved March 30, 2010 from http://nui.epp.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_ci_in_h&lang=en.
- Eurostat (2010b). *Households–Type of connection to the Internet*. Retrieved March 30, 2010 from http://nui.epp.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_ci_it_h&lang=en.

- Grimes, S. (2008). Kids' ad play: Regulating children's advergames in the converging media content. *International Journal of Communications Law & Policy*, 12, 161-178.
- Handsley, E., Mehta, K., Coveney, J., & Nehmy, C. (2009). Regulatory axes on food advertising to children on television. *Australia and New Zealand Health Policy*, (6)1,. doi:10.1186/1743-8462-6-1
- Hastings, G., Stead, M., McDermott, L., Forsyth, A., Mackintosh, A. M., Rayner, M., Godfrey, C., Caraher, M., & Angus, K. (2003, September 23). *Review of research on the effects of food promotion to children: Final report prepared for the Food Standards Agency*. Glasgow, UK: Centre for Social Marketing, University of Strathclyde.
- Hastings, G., McDermott, L., Angus, K., Stead, M., & Thomson, S. (2006, July). *The extent, nature and effects of food promotion to children: A review of the evidence. Technical paper prepared for the World Health Organization*. Retrieved March 15, 2010 from WHO Web site: http://www.who.int/dietphysicalactivity/publications/Hastings_paper_marketing.pdf.
- Hawkes, C. (2002). Marketing activities of global soft drink and fast food companies in emerging markets: a review. *Globalization, diets and noncommunicable diseases*. Retrieved March 15, 2010 from WHO Web site: <http://whqlibdoc.who.int/publications/9241590416.pdf>.
- International Obesity Taskforce (2007). *The Sydney principles*. Retrieved March 15, 2010 from <http://www.iotf.org/sydneyprinciples/index.asp>.
- Kline, S. (2009). Countering children's sedentary lifestyles. *Childhood*, 12(2), 239-258.
- Lee, M., Choi, Y., Quillam, E. T., & Cole, R. T. (2009). Playing with food: Content analysis of food advergames. *The Journal of Consumer Affairs*, 43(1), 129-154. doi: 10.1111/j.1745-6606.2008.01130.x
- Livingstone, S. (2004, February). A commentary on the research evidence regarding the effects of food promotion on children. *In childhood obesity - Food advertising in context*, Office of Communication, ed. London: London School of Economics.
- Livingstone, S. (2007). Do the media harm children? *Journal of Children and the Media*, 1(1), 5-14. doi:10.1080/17482790601005009
- Livingstone, S. (2009). *Children and the Internet. Polity*. Cambridge: UK.
- Livingstone, S. & Bober, M. (2004). *UK children go online: Surveying the experiences of young people and their parents*. Retrieved March 15, 2010 from London School of Economics and Political Science Web site: <http://eprints.lse.ac.uk/395/1/>

UKCGOsurveyreport.pdf.

- Mallinckrodt, V. & Mizerski, D. (2007). The effects of playing an advergame on young children's perceptions, preferences, and requests. *Journal of Advertising*, 36(2), 87-100. doi: 10.2753/JOA0091-3367360206
- Media Smart (2008). *About Us*. Retrieved March 15, 2010 from <http://www.mediasmart.org.uk/about.php>.
- Mediatudor (2008). *Rolunk*. Retrieved June 10, 2009 from <http://www.mediatudor.hu/rolunk>.
- MNSZA (2006). *Élelmiszerreklámok korlátozása*. Retrieved June 11, 2009 from http://www.mnsza.hu/elhizas/elelmiszerreklamok_korlatozasa.php.
- Moore, E. (2006). *It's child's play: Advergaming and the online marketing of food to children. Kaiser Family Foundation Report*. Retrieved March 15, 2010 from <http://www.kff.org/entmedia/upload/7536.pdf>.
- MRSZ (2009). *Magyar reklámetikai kódex*. Magyar Reklámszövetség, Budapest, Hungary.
- MRSZ (2010). *Sajtóközlemény. Reklamkoltesi adatok 2009*. Budapest, Hungary.
- Nutrikid (2009). *Nutrikid az egészséges nemzedékért*. Retrieved June 11, 2009 from <http://www.nestle.hu/nutrikid/felnotteknekprogram.aspx>.
- Ofcom (2007, February 22). *Television advertising of food and drink products to children: Final statement*. Retrieved March 15, 2010 from http://www.ofcom.org.uk/consult/condocs/foodads_new/statement/statement.pdf.
- Ofcom (2008, December 17). *Children watching fewer TV adverts for less healthy foods, review finds*. Retrieved March 15, 2010 from http://www.ofcom.org.uk/media/news/2008/12/nr_20081217.
- Szabó, A. & Bauer, B. (2009). *Ifjúság 2008*. Gyorsjelentés. Szociálpolitikai és Munkaügyi Intézet, Budapest, Hungary.
- Szőke, K. (2009). *Állami felelősségvállalás az egészségkommunikációban*. Presentation. www.kreativ.hu/cikkek/kepek/.../Szoke_Katalin_eloadas091210SzK.ppt.
- Szonda Ipsos (2008). *Kids.comm*. Kutatási beszámoló, Szonda Ipsos Média-, Vélemény- és Piackutató Kft., Budapest, Hungary.
- Taylor, J. (2008, July 16). Online junk-food ads 'targeting children.' *The Independent* (London), p. 8.
- TVE (2008). *Tevékenységeink. Szakértői és kutatómunka*. Retrieved June 11, 2009 from http://www.tve.hu/tevekenysegeink/szolgaltatasok/szakertoj_es_kutatomunka.
- Wallop, H. (2008, October 19). Children websites should stop marketing junk food to children, says watchdog. *Telgraph.co.uk*. Retrieved March 15, 2010 from <http://>

www.telegraph.co.uk/news/newstopics/politics/health/3226827/Childrens-websites-should-stop-marketing-junk-food-to-children-says-watchdog.html.

- World Health Organization (2004, May). *Global strategy on diet, physical activity and health: Childhood overweight and obesity*. Retrieved March 15, 2010 from <http://www.who.int/dietphysicalactivity/childhood/en/> .
- World Health Organization (2006a). *Global database on body mass index*. Retrieved April 11, 2009 from <http://apps.who.int/bmi/index.jsp>.
- World Health Organization (2006b, May 2-5). *Marketing of food and non-alcoholic beverages to children*. Report presented at WHO forum and technical meeting, Oslo, Norway, May 2-5, 2006. Report retrieved March 15, 2010 from <http://www.who.int/dietphysicalactivity/publications/Oslo%20meeting%20layout%2027%20NOVEMBER.pdf>
- World Health Organization (2010). *Obesity and overweight: Facts*. Retrieved March 15, 2010 from <http://www.who.int/dietphysicalactivity/publications/facts/obesity/en/>.
- Yuen, S. and Lee, M. (2005). Advergame playing motivations and effectiveness. In *Advertising, promotion and news media*, Stafford, M. R. and Faber, R. J. (eds), Armonk, New York: M.E. Sharpe, 320-347.