



Young Consumers

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Online marketing of food products to children: the effects of national consumer policies in high-income countries

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Abstract

Purpose – *The marketing of food products to children through online media has grown rapidly in recent years, particularly in high-income countries, where children spend considerable amounts of time on computers. Most food products marketed to children online are obesity-causing, and childhood obesity has grown to epidemic proportions, with harmful effects on society. Marketers use creative methods to engage children online, entertaining them, offering rewards and promoting products through interactive activities. Online media is monitored much less than conventional media and little is known about online marketing of food to children. This study seeks to examine policies related to food marketing in three high-income countries, France, Spain, and the USA, and their impact on the methods marketers use to engage children.*

Design/methodology/approach – *The paper presents a conceptual framework linking several aspects of the policies and the socio-cultural environments in these countries with the design of the food companies' web sites. Six hypotheses are advanced based on this framework and tested using content analysis.*

Findings – *The findings of this study indicate that there are significant differences in online marketing of food products to children in the three countries studied in the authors' research, France, Spain, and the USA, and these differences are largely attributable to these countries' policies. The web sites of French food companies placed greater emphasis on nutrition-related and interactions-related features compared to the web sites of US and Spanish food companies. On the other hand, the web sites of US and Spanish food companies placed greater emphasis on games-related, rewards-related, attributes-related, and brand-related features compared to the web sites of French food companies. These differences in the web sites were conceptualized to result from the differences in the socio-cultural and policy/regulatory environments of the three countries.*

Originality/value – *The study provides several useful insights related to understanding of consumer behavior, consumer policy, and design of food companies' web sites in the three countries. The design of food companies' web sites in terms of their emphasis on different categories of features reflects the companies' understanding of consumers in the respective country and government policy and enforcement of online communications. The article provides a conceptual framework that identifies six factors hypothesized to influence the design of food companies' web sites, three related to the socio-cultural environment, namely attitudes toward health and nutrition, food and nutrition communication, and brand building, and three related to the policy/regulatory environment, namely, government regulatory agencies, self-regulation by companies, and enforcement and compliance.*

Keywords *Marketing to children, Online marketing, Web site design, National public policy, Young consumers, Marketing, Internet, Food, United States of America, Spain*

Paper type *Research paper*

Introduction

As online media is rapidly growing in popularity with children, especially in high-income countries, marketing to them through this medium is becoming a growing concern, as it receives much less scrutiny than the long-established, conventional media. This article examines cross-national differences in consumer policies regarding online marketing of food to children; specifically, it evaluates the impact of national consumer policies and

regulatory enforcement on the online advertising of food products to children in three high-income countries – France, Spain, and the US.

These high-income countries were selected for the analysis rationalizing that computers are pervasive in countries where consumers can afford them, and that food companies are more likely to target children online in these markets, rather than in low- or middle-income countries. The high-income category, as defined by the World Bank, is a country classification based on gross national income (GNI) per capita; high-income countries, in 2011, had a GNI per capita of \$12,476 or more (World Bank, 2012). Among high-income countries, France and Spain also share certain sociocultural similarities as Latin countries and it is possible that advertisers might tailor messages similarly for their consumers, compared to the US. Yet France and Spain also appear to have different levels of government involvement in advertising communications: in France, broadcast messages for food products are followed by a conspicuous recital of healthy consumption guidelines, whereas in Spain, this is not the case. Furthermore, there are substantial differences between the legal environment in Europe, where there are strict regulatory restrictions, compared to that of the US, where regulations are more permissive. In the US, for example, branded direct-to-consumer advertising of prescription pharmaceuticals has been allowed for many years, whereas, in the European Union, such advertising is prohibited (Pharmaceutical Field, 2012).

Income to needs ratio has been established as a predictor of children's use of online media: high-income countries families can afford access to new media, such as the latest video and computer games, which, in turn, affects children's choice of media during leisure time (Bickham *et al.*, 2003; Lee *et al.* 2009). Corporate-sponsored web sites in these countries offer endless opportunities for viewers to spend unlimited time interacting with their brands (Education and Health, 2006). The methods marketers use to engage children online differ, reflecting differences in the socio-cultural and the regulatory environments of the three countries. The purpose of this research study is to examine how differences in the socio-cultural and policy/regulatory environment of the three countries influence the content of the web sites of food companies marketing to children. Our paper is divided into six sections. In the next section, we review literature on online marketing of food products to children in the three countries discussing both the socio-cultural and policy/regulatory environments. The third section presents a conceptual framework linking different aspects of socio-cultural and policy/regulatory environments with design of web sites' content. Six hypotheses comparing different categories of features included in the web sites of food companies in the three countries are developed in this section. The fourth section presents details of the web sites sampled and the research instrument used for data collection. The fifth section reports data analysis and results. We discuss the findings in the final, namely, conclusions section, which also identifies directions for future research.

Literature review

In this section we review research on several aspects of the socio-cultural and policy/regulatory environments in the three countries that have impact on the online marketing of food products to children.

The effects of marketing of food on children

There are many studies on food advertising aimed at children, but most focus on television ads. Television is the most important medium for promoting food to children. In the US, for instance, children and adolescents average over 21 hours of television viewing per week, with preschool children watching between two and 2.5 hours and primary school children watching between two and 4.5 hours of television per day (Roberts *et al.*, 1999; Vandewater *et al.*, 2007; Lee *et al.*, 2009).

Dibb (1996) found that food and beverages were the most highly advertised products on television to children, and confectionery, presugared breakfast cereals and fast-food restaurants accounted for over half of food advertisements. Another study (Kelly *et al.*, 2010)

examined 68,462 television ads in 11 countries and found that food was the second most frequently advertised product, accounting for 23 percent of all advertisements aimed at children. The most frequently advertised foods worldwide are fast-food restaurant meals, followed by chocolate and confectionery, dairy, and high-fat, high-sugar, or high-salt spreads and sauces (Kelly *et al.*, 2010; World Health Organization (WHO), 2010).

Companies target children with broadcast, print, and internet advertisements; product packaging and labeling; point-of-purchase displays; transmissions to personal digital devices; giveaway items; sponsorship of entertainment events, sports teams, and athletes; product placements; character licensing, toy co-branding, and cross-promotions; viral marketing; and in-school marketing (Federal Trade Commission (FTC), 2008). Almost 60 percent of the total expenditure on marketing to children is for obesogenic (obesity causing) food: carbonated beverages, fast food, candy, frozen desserts, and baked goods, products high in calories, sugar, and saturated fat, with 53 percent of youth marketing spending allocated to television, print, and radio (Mello, 2010).

There is ample evidence that advertising influences children's food preferences, purchase requests, and consumption (Kelly *et al.*, 2010; World Health Organization (WHO), 2010). Children themselves, depending on their age group and stage of socialization, are not aware of the persuasive intent of food marketing – after all, they are entertained! Children can already distinguish television advertisements from television programs by about five years of age (Moondore *et al.*, 2009). A study found that British children as young as seven years of age enjoyed television alcohol advertisements, and, in general, understood advertising in complex ways that are difficult to assess and control (Nash *et al.*, 2009). Children under 8 accept advertising as truthful, accurate, and unbiased, while older children, although they understand the persuasive purpose of advertising, may be unable to evaluate messages critically (Kunkel *et al.*, 2004; Kelly *et al.*, 2010). Children react to advertising differently from adults, evaluating it affectively, focusing on its execution, music, and special effects – with brand characters and branding used to create this affective link (de la Ville, 2007).

Since much of the advertising is for products low in nutritional value, such as carbonated beverages, fast food, candy, frozen desserts, and baked goods, products high in calories, sugar, and saturated fat, it can be readily concluded that it is likely to contribute to the childhood obesity epidemic. In the US, obesity rates for preschool children (ages two to five) have doubled since 1980, whereas, for children ages six to 11, rates have tripled (Moore and Rideout, 2007). Obese children often face serious psychosocial burdens and health risks due to their weight. And research suggests that food choices established in childhood are maintained into adulthood (Mikkila *et al.*, 2005). In the UK, as early as 1992, a major study of children's diets by the National Food Survey found that fat and sugar intakes were well above recommended levels, with advertised products playing an important role in children's nutrition, accounting for 39 percent of total requests and 51 percent of added sugar product requests (Donkin *et al.*, 1992).

Obesity costs in children are already high, but, as children become obese adults, society is likely to incur additional enormous economic costs. This cause for concern has spurred public health groups and national governments to advocate policies aimed at promoting healthy eating and increased physical activity for children (Dority and McGarvey, 2006). It has also spurred more government oversight of food marketing communications aimed at children.

Public service announcements attempt to attenuate the impact of such advertising by promoting healthy behaviors and the consumption of healthy food. Moreover, generic advertising, financed by associations of food manufacturers and designed to enhance category beliefs for the products without influencing the market share of any one producer (Chakravarti and Janiszewski, 2004), is also responsible for increasing differentiation across categories (Forker and Ward, 1993; Williams, 1999). Generic advertisements tend to stress the consumption of healthy food, as organizations representing food manufacturers are very conscientious of the health and nutrition concerns of consumers when they promote their products (Boetel and Liu, 2003). Generic advertising, as opposed to brand advertising, is

also likely increase the differentiation among competing brands and influence brand choice (Chakravarti and Janiszewski, 2004). Since generic advertisements are more likely to stress healthy foods, it is likely that generic advertising is going to attenuate the brand messages promoting products with lower nutritional value.

Moreover, the effect of advertising on consumer demand is low. Individuals' responses to advertising are typically measured in terms of advertising elasticity, the percentage increase in sales or market share of a brand for a one percent increase in advertising (Sethuraman *et al.*, 2011). A large seminal meta-analysis study of advertising elasticities involving 751 short-term and 402 long-term direct-to-consumer brand advertising elasticities in a large cross section of brands, product-markets, time periods, and countries, found that the average advertising elasticity is .12, which is relatively low (Sethuraman *et al.*, 2011). Thus, advertisements of products low in nutritional value will not necessarily create a spike in demand for those products.

However, when it comes to online media, the aggregate effects on demand have not yet been evaluated and their long-term impact might be more difficult to assess. And, while advertising is more closely monitored, or it is at least acknowledged in country and supranational regulations for pushing unhealthy foods on children, online media receives less scrutiny.

Online marketing to children vs marketing using traditional media

Television advertising to children is complemented by communications that focus on branding and on building relationships with consumers. These include sponsorship, product placement, sales promotion, cross-promotions, using celebrities, brand mascots or characters, web sites, packaging, labeling and point-of-purchase displays, e-mails and text messages, philanthropic activities tied to branding, and communication through viral marketing and by word-of-mouth (World Health Organization (WHO), 2010, p. 7). Marketing food to children is a phenomenon of global proportions, one that is pluralistic and integrated, using multiple messages in multiple channels (Kelly *et al.*, 2010; World Health Organization (WHO), 2010); and online communications in particular have achieved a close, interactive, and long-term relationship with young consumers.

Online marketing is different from traditional media: children actively seek out content and may interact for several minutes with web sites rather than just engaging in passive advertising exposure (Moore and Rideout, 2007). This interaction is of concern to policy makers. While there is a large body of literature on children's recognition and understanding of television advertising, there is much less information regarding their recognition and understanding of online advertising. The information we currently have regarding children and television advertising needs to be fully reevaluated for online media. For example, while children may more easily identify television advertising as a sponsored persuasive communication, since advertising stands out from regular programming in different ways (pitch, speed, time of broadcasting, depending on the country where it is broadcast), online advertisements are not as readily distinguishable from other online content. Research has found that only children ten or older were likely, most of the time, to recognize advertisements as a sponsored communication intended to persuade them to buy (Moondore *et al.*, 2009).

Another online media concern is "advergaming" – advertiser-sponsored video games with integrated brand messages – allowing children to pursue adventures in a fictitious world (Montgomery, 2001; Moore, 2004). The internet is thus used to establish a creative relationship with children, with a scope beyond sales; moreover, it is possible that games may contribute to the child's perception of food as playful and fun (de la Ville *et al.*, 2010), which is a problem when the respective food is unhealthy. A long exposure may also create hunger: more than two thirds of children report that food in advertisements made them hungry (Marshall *et al.*, 2007, p. 175).

Online advertising is likely to affect both children's diet and their physical activity negatively. As children are exposed to food advertising on their computer screens, they are likely to

snack more on snacks that they now perceive as playful and fun. Moreover, exposure to the web sites, and, in particular, engaging in advergames promotes sedentary behavior in children, who are tied to the screen as they play the different food-brand-related games. Undoubtedly, mobile and internet technologies, such as social networking sites, blogs, online gaming, advergames, and Web 2.0, are creating a never-before-encountered dialogue between young consumers and companies (Marshall, 2010, p. 7).

The next section examines country-specific consumer policies and regulatory concerns related to the online advertising of food to children.

Laws, directives, and guidelines related to online advertising of food to children

Industry has made important inroads in regulating marketing to children, and national and supranational government bodies are quick to follow along. The European Union (EU) directives on advertising to children are governed by the Audiovisual Media Services Directive of 2007, which preserves existing European rules for television and adapts them to new media (European Commission – Information Society and Media, 2008). The Directive requires that advertising be clearly separated from children's programming before and after they are broadcast, using screens easily recognizable visually and acoustically. Advertisers must abstain from using surreptitious and subliminal techniques, and ensure that children are not harmed. Advertisers must not encourage children to purchase by taking advantage of their credulity and inexperience, persuade parents to purchase the product, or undermine children's trust in parents or educators. Media must comply with the rules of the provider's country and member states should enforce them (European Commission – Information Society and Media, 2008).

The EU Directive receives support from industry self-regulation, in the form of the EU Pledge, a voluntary initiative launched in 2007 by leading food companies – among signatories are Burger King, Coca-Cola, Danone, Ferrero, General Mills, Kellogg, Kraft Foods, Mars, Nestlé, PepsiCo, Unilever, Intersnack, Lorenz Snack-World, Procter & Gamble, Unichips, and Zweifel Pomy-Chip, which pledge to refrain from advertising products to children under 12 unless they fulfill specific nutrition criteria in line with national guidelines, and from advertising products in primary school – and auditing results found an almost 100 percent for audited countries for both television and print media – including web sites (www.eu-pledge.eu, 2011).

Country-level guidelines complement the Directive and attempt to bridge gaps with specifics. In the UK, for example, the Advertising Standards Authority (ASA) Committee of the Advertising Practice Code (CAP Code) is responsible for writing advertising codes and providing advice on advertising. The CAP Code has stringent limits on food and soft drink advertising to children on television (Advertising Codes, 2012; Nairn, 2008), prohibiting ads that encourage children to pester, prohibiting promotional offers for food and drink targeted directly at pre-school or primary school children, or encouraging overconsumption (Advertising Codes, 2012).

In France, the Authority for the Professional Regulation of Advertising (ARPP), the primary regulatory body for marketing communications, require advertising to be clearly identified as a marketing communication and it may not undermine the authority, responsibility, and judgment of parents and educators, trivialize violence, abuse, or danger, nor give the impression that they are acceptable (ARPP: Déontologie – La Recommandation, 2009). Communication targeting children should be clear and at the children's level of understanding, and it should not mislead about product traits, value, nature, or performance, or suggest that owning the product would offer an advantage over others, or create urgency, suggesting the product might be indispensable, and it should not suggest that the family can afford it by using terms to indicate a low price (ARPP: Déontologie – La Recommandation, 2009). ARPP requires that all marketing communication conforms to food behaviors and consumption principles recommended by policies for a balanced nutrition, which stipulate restrictions on promoting repetitive and excessive consumption, advertising the product as replacing a meal or implying that consuming it will result in a superior physical, mental, or creative performance (ARPP: Déontologie – La

Recommandation, 2009). These same regulations apply to children's food advertisements aimed at parents.

A typical food television advertisement in France is followed by extensive recommendations for a healthy consumption and lifestyle: since 2007, all television ads for processed foods and foods or drinks containing added fats, sweeteners and salt must be accompanied by long health message and health-information tools and information regarding the National Institute of Health Education (NIHE) principles of dietary education (Hawkes, 2007). Health messages must either recommend the consumption of five fruits or vegetables daily, leading an active lifestyle, avoiding foods high in fat, sugar and salt, and avoiding eating between meals (Hawkes, 2007). All interactive communications require parents' permission for financial commitments and marketers cannot lure children to unknown, dangerous links, and cannot motivate children to persuade parents to purchase the product (ARPP: Déontologie – La Recommandation, 2009). However, there are no requirements imposed specifically on online marketing of food to children.

In Spain, there are number of bodies that govern advertising. The Legal Protection of Minors Act prohibits the distribution of information and images to minors when it is against their interest. It requires the protection of moral standards of equality, solidarity and respect for the community; thus, images of violence and exploitation or degrading are prohibited (Volz *et al.*, 2005). The Spanish Advertising Self-Regulation Association addresses advertising to children and hands down punishment verdicts to advertisers who break the law, as in the case of Nintendo España, for promoting violence in videogames (Volz *et al.*, 2005). Under the law, advertising may not contain statements or images that could inflict harm.

Other laws that regulate advertising to children include the General Advertising Act, which covers advertising that is harmful to human dignity or violates the Constitution, and the Code for Child Publicity, of the Spanish Association of Toy Manufacturers (Volz *et al.*, 2005). According to the Code, communication regarding toys cannot contain inaccurate information related to product traits or create misunderstanding regarding its use. The Code prevents broadcasting misleading commercials, and children are not allowed to offer any testimony regarding the toys (Volz *et al.*, 2005).

The Ministry of Health and the Food and Drink Industry Federation enacted the Spanish Self-Regulating Code for Food Advertising Aimed at Children (PAOS) to reduce the prevalence of obesity (Aranceta *et al.*, 2009). PAOS ensures that advertisements are not misleading or frightening children (Romero-Fernández *et al.*, 2010), or induce them to purchase, nor encourage them to ask an adult to purchase it; and it cannot use parents, children's heroes, or authority figures to endorse the product (Aranceta *et al.*, 2009). Food may not be advertised in conjunction with television programs aimed at children under 12, and must be clearly separated from television programs (Aranceta *et al.*, 2009; Romero-Fernández *et al.*, 2010). Any promotion used in the advertisement should be fully understood by the children targeted (Aranceta *et al.*, 2009).

Similarly to French law, products cannot present themselves as meal substitutes, and the importance of a balanced diet should not be discredited; food advertising should not promote unhealthy lifestyles that involves eating or drinking excessively, and it should not promote a sedentary lifestyle (Aranceta *et al.*, 2009). Companies that signed the Code can be fined up to €180,000 for noncompliance (Aranceta *et al.*, 2009; Romero-Fernández *et al.*, 2010).

In the US, regulations include Children's Online Privacy Protection Act on data collection practices, which requires parental permission for collection of personal information from children under 13, and the Children's Food and Beverage Advertising Initiative, aimed at improving children's dietary choices. And the advertising industry has instituted its own self-regulatory program, the Children's Advertising Review Unit (CARU) in 1974, administered by the Council of Better Business Bureaus and funded by the children's advertising industry (www.caru.org, 2011).

In 2006, the Institute of Medicine concluded that television advertising affects children's product requests and preferences and recommended that the advertising industry develop

guidelines that minimize the risk that advertising would contribute to childhood obesity (McGinnis *et al.*, 2006; Mello, 2010). It also recommended that the FTC be vested with the authority to monitor and enforce compliance with these guidelines (Koplan *et al.*, 2005; Mello, 2010), with FTC oversight necessary only if the advertising industry's voluntary approach had little or no success (Mello, 2010).

The advertising industry has instituted its own self-regulatory program, the Children's Advertising Review Unit (CARU) in 1974, administered by the Council of Better Business Bureaus and funded by the children's advertising industry (www.caru.org, 2011). CARU requires advertisers to consider the knowledge and maturity of children and their limited ability to evaluate the credibility and persuasiveness of information, to refrain from creating unreasonable expectations about the product, to substantiate claims, and to take on an positive social and educational role, advertising products and content appropriate for children, incorporating minority role models, teaching positive qualities, such as respect, or healthy behaviors, and helping build a positive relationship between children and their parents (www.caru.org, 2011).

Other regulations include Children's Online Privacy Protection Act on data collection practices, which requires parental permission for collection of personal information from children under 13, and the Children's Food and Beverage Advertising Initiative, aimed at improving children's dietary choices.

Country-level enforcement of public policy and regulatory requirements

While many of the country and supranational (EU) regulations are similar in nature, and even in their specifics related to protecting young consumers, there are vast differences in enforcement in each of the three countries. In France, violators are promptly targeted by enforcement agencies if they violate ARPP regulations and are fined large amounts – for example, violators are taxed 1.5 percent of advertising costs, with the fines used to fund nutritional information and education campaigns (Hawkes, 2007).

In Spain, enforcement is more lenient: Romero-Fernández *et al.* (2010) found that noncompliance with the PAOS Code was very high (49.3 percent), casting doubt on the Spanish oversight system. When it comes to food advertising to children in Spain, much work remains to be done to create a more efficient oversight of advertising (Volz *et al.*, 2005, p. 75). Similarly, US agency regulation of food and beverage advertising to children is limited in scope and not very effective due to many legal and political obstacles (Mello, 2010).

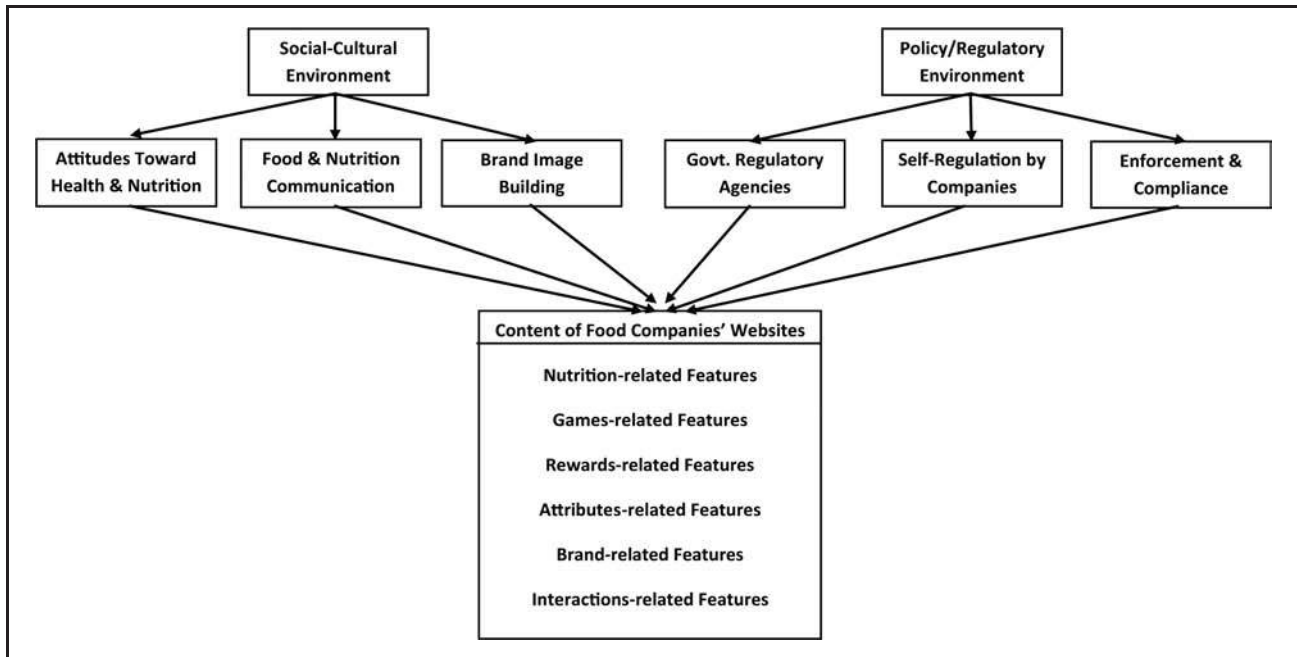
Conceptual framework and hypotheses

The previous sections addressed several aspects of the socio-cultural and the policy/regulatory environment in France, Spain, and USA, along with how these factors in turn influence online marketing of food to children. Based on the literature review, we have developed a conceptual framework – presented in Figure 1 – introducing the six influences we identified, that we hypothesize to influence the design of food companies' web sites. Three of these relate to the socio-cultural environment, namely attitudes toward health and nutrition, food and nutrition communication, and brand building. The other three influences relate to the policy/regulatory environment and include government regulatory agencies, self-regulation by companies, and enforcement and compliance. Together, these six factors are thought to influence the design of the food companies' web sites in terms of nutrition-related, games-related, rewards-related, attributes-related, brand-related and interactions-related features, as explained in the discussion following. Each of these dimensions are addressed in the following.

Nutrition-related features

Attitudes toward nutrition differ in the three countries. Spanish consumers have drifted away from a healthy Mediterranean diet to one of high-meat consumption and saturated-fat (Garcia and Albisu, 1999). Research investigating the consumption of fruit, vegetables, and fish in Mediterranean countries found that, in Spain, younger generations are giving up

Figure 1 Influence of socio-cultural and policy/regulatory environment on online marketing of food to children: a conceptual framework



traditional dietary patterns, raising the question of whether the Mediterranean diet will persist in the future without being replaced by unhealthy dietary habits (Baldini *et al.*, 2008; Tur *et al.*, 2004). US consumers, while they associate food most with health and least with pleasure (Rozin *et al.*, 1999), are fighting a losing battle with obesity, with deaths attributable to obesity estimated at 400,000 and the cost to the economy at \$122.9 billion annually (Endocrine Society, 2012).

The attitude of French consumers is surprising: they associate food with pleasure and only minimally with health (Rozin *et al.*, 1999; Brown *et al.*, 2009), and especially the youth, appear to have internalized healthy behaviors, choosing healthy foods, snacking seldom, and having breakfast regularly (Monneuse *et al.*, 1997). The French have a preoccupation with food, spending more time eating than any other country and spend more time with food as a focus than US consumers; yet their emphasis is on moderation and on food quality (Rozin *et al.*, 2011). A caveat, however, is in order here: cultures are in transition and traditional patterns of consumption in France and elsewhere in the world are in conflict with global trends. Technology, international trade and finance, global media, immigration, travel, and tourism contributed to create a process of proliferation of cultural practice (Ger, 1999; Cleveland and Laroche, 2007; Firat, 1995), of consumer behavior, and of products, such that consumers worldwide, especially youth, appear to behave similarly and have similar product preferences. Thus, even in France, fast food is very popular with young consumers. Nevertheless, in general, French consumers appear to have healthier food-related behaviors than US or Spanish consumers.

The French government has made great strides in creating these positive food behaviors by educating the public and by regulating and closely monitoring food-related communication, with the ARPP requiring marketing communications to conform to food behaviors and consumption principles recommended by policies for a balanced nutrition (ARPP: Déontologie – La Recommandation, 2009). Communication to children cannot incite them to consume large amounts or repetitively, and cannot suggest that the product can replace a meal, or that consuming the product will result in superior performance. All advertising for processed foods and foods containing added fats,

sweeteners and salt must be accompanied by health messages and health-information tools and contain information regarding the principles of dietary education approved by NIHE (Hawkes, 2007). Advertisers must recommend either consuming at least five fruit or vegetables daily, practicing a physical activity regularly, avoiding eating food high in fat, too sweet, or too salty, or avoiding eating between meals; alternatively, they will be penalized, with the tax used to fund nutritional information and education campaigns (Hawkes, 2007).

Compared to France, in Spain and the US, monitoring of food marketing messages and enforcement appear to be more lenient. In Spain, the PAOS Code regulations are similar to those of French ARPP; however, noncompliance is high, at 49.3 percent, with high noncompliance in ads that are long, for dairy products, and those of French and US multinationals, thus casting doubt on the Spanish oversight system (Romero-Fernández *et al.*, 2010; Volz *et al.*, 2005). In the US, legal and political barriers prevent an aggressive and effective agency regulation of advertising to children (Mello, 2010), with regulations restrictions only on data collection for children in Children's Online Privacy Protection Act, and industry initiatives, such as the Children's Food and Beverage Advertising Initiative.

In view of the previous discussion, comparing France, Spain, and the US, we conclude that French consumers are better informed about health and nutrition, and have better internalized healthy food-related behaviors compared to American and Spanish consumers. Also, the monitoring of nutritional information and the scope and enforcement of regulatory requirements are more strict in France compared to USA and Spain. We thus hypothesize the following:

- H1.* Nutrition-related features will be present to a greater extent in the web sites of French food companies than in the web sites of American and Spanish food companies.

Games-related features

Luring children into any links in order to participate in a game in France is illegal, according to the ARPP: Déontologie – La Recommandation (2009). For this reason, companies engaging children in advergames are heavily scrutinized and are thus less likely to devote significant financial resources to games and game-related features. For example, McDonald's recently launched an interactive platform offering children games, videos, and applications (Advermind, 2010). In the US, children can choose from many games, play with the virtual Happy Meal box, sing, dance, or make faces, whereas, in France, the platform is much smaller, offering very few games (Advermind, 2010). And comments on French blogs discussing the "Mac Do" games are negative, suggesting stringent scrutiny of the company and its relationship to children.

In Spain, a lax enforcement of the PAOS Code and a passion for internet games has created a captivating environment for children. Spanish consumers often use mobile phone games, with monthly game downloads in the millions (La Factoria, 2010). Until recently, advergaming was used only by Coca Cola, Nike, BMW, and McDonald's; today, many small and medium-size companies are offering advergames (La Factoria, 2010).

In the US, games are omnipresent on children's web sites, luring them to interact with the brand at length (Federal Trade Commission (FTC), 2008). Children's advergames sponsored by Pepsi, Burger King, 7-Up, M&M, and others are commonplace. And brands are prominent: the Amazing Crispy M&M game and the Froot Loop Toss embed the brands and brand logos into the game, creating a game that centers on the brand (Federal Trade Commission (FTC), 2008).

The previous discussion suggests that the extent to which games and related activities are present in the web sites of food companies in France, USA and Spain is primarily a function of their policy/regulatory environment. Considering that France has both, namely, more elaborate restrictions on advertising as well as stricter enforcement of the rules, it is hypothesized that:

- H2. Games-related features will be present to a greater extent in the web sites of American and Spanish food companies than in the web sites of French food companies.

Rewards-related features

In France, children are required to obtain parents' permission for any commitment in interactive sites, including on rewards (ARPP: Déontologie – La Recommandation, 2009). Children cannot be lured to links to obtain gifts, and marketing communications cannot motivate children to persuade parents to purchase the product – any attempt to circumvent this law is met with stringent penalties (ARPP: Déontologie – La Recommandation, 2009). Thus, when it comes to reward-related features on the web site, sponsors must ensure that, once the reward feature is set, there is no likelihood that it might be interpreted as infringing on the previous regulations.

In Spain, the PAOS Code similarly does not permit advertising to induce children to purchase a product, nor encourage them to ask an adult to purchase it (Aranceta *et al.*, 2009), and web site rewards-related features might be perceived as creating an inducement. However, enforcement of the PAOS Code is lax, with high noncompliance (Romero-Fernández *et al.*, 2010). Consequently, it is likely that more rewards-related features will be present in Spanish web sites than in French web sites. In the US, luring young consumers with giveaway items and sponsorships to persuade them to buy products is commonplace (Federal Trade Commission (FTC), 2008).

The policy/regulatory environment differences across the three countries are likely to result in differences in the presence of rewards-related features in the food companies' web sites in the three countries. Spain has a regulatory structure in place, but enforcement is lax. The US policy/regulatory environment is liberal with regard to rewards. In comparison, France has both greater restrictions on rewards and stricter enforcement of the rules. We thus hypothesize that:

- H3. Rewards-related features will be present to a greater extent in the web sites of American and Spanish food companies than in the web sites of French food companies.

Attributes-related features

Web sites for nondurables, such as food, adapt more to local communication; thus, in Spain and France, which are high-context – that is, where most information is in the physical context rather than in the message itself – and polychronic – that is, where things are handled simultaneously (Hall and Hall, 1990; Hofstede, 2004; Hermeking, 2005), – web sites tend to include more attributes than in low-context, monochronic cultures, such as that of the US, which involve a more linear thinking and where things are handled in sequence (Hermeking, 2005). While this may suggest that in France and Spain online communication has more attribute-related features, the regulatory environment in France is such that advertisers will likely limit their product depictions. Children make decisions primarily based on their perception of the product (Achenreiner and Roedder-John, 2003); however, in virtual circumstances, such perceptions can be manipulated, and the French ARPP has taken a strong stance against inaccurate product depictions. In French web sites targeting children, product information must avoid misunderstandings, and companies must make sure children understand the product's nature, and not induce them to believe that it offers an advantage over others, or that there is an urgency to buy it, and it should not suggest that the family can afford it (ARPP: Déontologie – La Recommandation, 2009). Companies that do not comply pay a high penalty, and this might deter French companies from having many attributes-related features on the web site.

In Spain, similar regulations exist, but penalties for noncompliance are rarely enforced (Romero-Fernández *et al.*, 2010), allowing sponsors to present more product attributes to appeal to children. Based on the premise that web sites in polychronic, high-context cultures are likely to include more attributes-related features (Hermeking, 2005), it is likely that Spanish web sites would offer more attributes-related features than French web sites. A

caveat is in order here: an intimate and intuitive understanding of the French and Spanish cultures readily yields support for web sites that feature a high density of attributes. That factor alone, however, does not provide support that is sufficient for the hypotheses to stand scrutiny; reaching out to the cross-cultural research on cultural differences provided a resolution of this dilemma.

In the US, food and beverage companies have wide latitude in their approach to children and few restrictions, as legal and political barriers prevent an aggressive and effective agency regulation of food advertising to children (Mello, 2010). The advertising industry is merely asked to engage in self policing (Koplan *et al.*, 2005; Mello, 2010). It is thus likely that US food web sites will offer a larger number of attributes-related features in an effort to create persuasive communications for children, compared to French web sites.

The previous discussion suggests that type of regulatory system and enforcement of rules determines the extent to which the attributes-related features will be present in the web sites of food companies. France, with elaborate regulations and strict enforcement, is likely to have a lower number of attributes-related features than Spain, which has a formal government regulatory system but not a strict enforcement of rules, and the US, where regulations are limited. It is thus hypothesized that:

- H4.* Attributes-related features will be present to a greater extent in the web sites of American and Spanish food companies than in the web sites of French food companies.

Brand-related features

Research in child development suggests that children think about brands conceptually by age eight (Achenreiner and Roedder-John, 2003). While children under eight accept advertising as truthful, accurate, and unbiased (Kunkel *et al.*, 2004; Kelly *et al.*, 2010), they cannot distinguish the persuasive motivations of the advertiser from the information needs of the consumer (de la Ville and Tartas, 2010; Roedder-John, 1999). For web pages that include advertisements, children in the UK and Indonesia six years of age were found to recognize a quarter of the advertisements as such, and those eight years of age recognized half of the advertisements as such, and only children ten or older were likely, most of the time, to recognize advertisements as a sponsored communication intended to persuade them to buy (Moondore *et al.*, 2009). Also starting in their teenage years, children are more likely to categorize which features belong to which brands and identify a message as a sponsorship and thus as a biased communication. It is thus appropriate that branding efforts aimed at preteens or younger children should be accordingly monitored.

In France, advertising for obesogenic foods must be accompanied by extensive health messages and health-information tools (Hawkes, 2007). With much additional information, French web sites will likely have less space for brand information than Spanish or US web sites. Spanish and US web sites do not have similar requirements: US targeting of young consumers includes a heavy brand character presence and toy co-branding (Federal Trade Commission (FTC), 2008) – with 49 percent of food advertising containing brand characters (Kelly *et al.*, 2010). Thus, in France, with web site content dominated by nutrition information, there will be less emphasis on other aspects of web site design such as brand-related features. We thus hypothesize that:

- H5.* Brand-related features will be present to a greater extent in the web sites of American and Spanish food companies than in the web sites of French food companies.

Interactions-related features

As mentioned, web sites for nondurables, such as food, adapt more to cultural communication preferences. Thus, for French and Spanish polychronic and high-context cultures (Hall and Hall, 1990; Hermeking, 2005), web sites are likely to include more entertaining visuals, animated illustrations, other multi-media elements (Hermeking, 2005), and interactions-related features than in monochronic, low-context cultures such as that of

the US To communicate with children in polychronic, high-context cultures, marketers are likely to develop extensive interactive features, especially if the target market is large enough to warrant the investment. Of the two high-context, polychronic cultures examined in this study, France and Spain, France, with an estimated 87 percent of over 6 million children spending time online (Livingstone *et al.*, 2010), will be more attractive to marketers, who will more likely take on the costs of developing extensive interactive features, whereas, in the case of Spain, where 80 percent of only 3,400,000 children have online access (Livingstone *et al.*, 2010), marketers may be less inclined to develop and maintain interactions-related features.

Thus, the cultural context of communication (high versus low) and time orientation (monochronic versus polychronic), in conjunction with the size of the target markets and internet usage rates, can explain differences in the emphasis placed on interactions-related features in the web sites of US, French, and Spanish food companies. It is thus hypothesized that:

- H6.* Interactions-related features will be present to a greater extent in the web sites of French food companies than in the web sites of American and Spanish food companies.

Method

Sample

This research study was conducted in three countries: US, France, and Spain. The sampling was done as a two-step process. First, we identified food categories heavily advertised to children. Second, we selected web sites such that no single food category dominated the samples, but all were more or less represented in the same proportion in each country. Six categories of food products identified as being heavily advertised across the three countries were: cereals, candy and gum, snacks-cookies, salty snacks etc. restaurants and fast foods, beverages-fruit juices, carbonated soft-drinks, etc. and desserts and ice creams.

While the web sites change continuously over time, a closer examination suggests that there may be certain country-specific traits. For example, the US McDonald's web site has as a primary focus the Monopoly game, a promotion aimed at using McDonald's products as game pieces in an effort to win an automobile, or a trip to an exotic destination, or just hard cash. During the same period, a more varied and attribute-rich Spanish McDonald's web site offers a Sponge-Bob video where a pink Sponge-Bob and another character teases a hammerhead shark; the video ends with the recommendation to collect all the toys in the McDonald's Sponge-Bob series. The French web site, on the other hand, shows McDonald's hamburgers in the company of lettuce and cherry tomatoes, and has a diverse focus on restaurant design, mobile applications, and low prices (1.95€) for select menu items. The McDonald's web sites already suggest an attribute rich environment for the Spanish and French web sites, and a primary focus on adver gaming for the US web site. The analysis that follows will further document whether or not these are, in fact, country-specific web site trends.

The aggregate sample consisted of 161 web sites consisting of 58 for USA, 40 for France, and 63 for Spain. The list of web sites analyzed for the three countries is given in the Appendix (see Table AI).

Research instrument

A coding instrument was developed identifying 42 different web site features related to the six categories of information as detailed in Table I. These six categories, developed after an exhaustive examination of all the web sites, included nutrition-related features (six items), games-related features (nine items), rewards-related features (seven items), attributes-related features (five items), brand-related features (seven items), and interactions-related features (eight items). Two judges in each country independently coded the web sites for the presence or absence of the previous 42 features in the web sites.

Table I List of web site features

<i>Nutrition-related features</i>	<i>Attributes-related features</i>
Nutrition facts (nutrition label information)	Packaging
Other nutrition information	Taste
Calorie information	Appearance
Presence of benefit claims	Aroma
Fitting within a balanced diet	New packaging
Compliance with an act	
<i>Games-related features</i>	<i>Brand-related features</i>
Link to specific games	Corporate logo
Recommendation for other games	Image of the food
Play again option	Brand appearance
Presence of games	Educational ties
Return web site visits	Pictures of logos
Advertisements on game page	Brand character conveying content
Personal challenge	Brand ingredient history
Online privacy protection	
Parent section	<i>Interactions-related features</i>
<i>Rewards-related features</i>	Viral marketing
Product as the end prize	E-greetings
Link to promotions	Information to be collected from children
Rewards to members	Use of cookies or not
Premium offers	Mechanism to contact the firm
Sweepstakes offers	Webisodes
Direct inducement to purchase	Brand wallpapers
Premiums and merchandise discounts	Screen savers

Presence (Yes) was coded as 1 and Absence (No) was coded as 0. The evaluations of the two judges were compared by the researchers proficient in the three languages. When the coding of the two judges was different, the primary researcher decided which coding to accept. The inter-judge reliability was high, between 82 percent and 100 percent, with an average of 86 percent.

Data analysis and results

Content analysis – means of six feature categories by country

For each of the countries, mean scores were computed for each of the six categories of features, namely, nutrition-related, games-related, rewards-related, attributes-related, brand-related, and interactions-related features. These mean values along with standard deviations are given in Table II. The mean scores given in Table II capture the “Content Design” of the web sites of companies in a country in terms of the “Number of Different Characteristics” included in each of the six categories. This information provides insights on how the sociocultural and policy/regulatory environments of the three countries influence the methods used by food companies in the three countries or the relative emphasis placed by them on the six categories of features.

ANOVA results

In order to have an overall assessment of the differences across the three countries in each of the six categories, a one-way ANOVA on the six categories of features by country was performed. The results are summarized in Table III.

ANOVA results show that in terms of the total content, the differences between the three countries are not significant ($F = 1.69$, $DF = (2, 155)$, $p = 0.189$). Thus, overall the food companies advertising to children in three countries are more or less equally aggressive in their use of total number of characteristics in the design of their web sites. However, the relative emphasis placed by the food companies in their web sites on nutrition, games, rewards, attributes, brand, and interactions – related features varies across the three

Table II Web sites content analysis: country × features category

Country web sites	<i>n</i>	Nutrition <i>n</i> = 6	Games <i>n</i> = 9	Rewards <i>n</i> = 7	Content type Attributes <i>n</i> = 5	Brand <i>n</i> = 7	Interactions <i>n</i> = 8	Total <i>n</i> = 42
<i>USA</i>	58							
Mean		3.27	3.60	1.34	2.29	3.07	2.57	15.96
Standard deviation		2.04	2.23	1.29	1.20	1.46	1.44	4.55
Cell size		56	58	58	58	58	58	56
<i>France</i>	40							
Mean		3.80	2.80	0.73	1.26	1.05	4.38	14.03
Standard deviation		2.07	1.36	0.91	1.07	0.78	1.94	4.65
Cell size		40	40	40	39	40	40	39
<i>Spain</i>	63							
Mean		2.65	3.46	0.60	2.70	2.86	2.44	14.71
Standard deviation		2.48	2.32	0.68	1.74	1.29	1.35	6.19
Cell size		63	63	63	63	63	63	63
Total web sites	161							
Mean		3.16	3.35	0.90	2.20	2.48	2.97	14.99
Standard deviation		2.26	2.10	1.04	1.51	1.50	1.74	5.31
Cell size		159	161	161	160	161	161	158

Table III Results of one-way ANOVA analysis [web site feature categories X country – USA, France, Spain] *F*-values, degrees of freedom, significance level

<i>Dependent variables: features</i>	<i>F-value</i>	<i>Degrees of freedom</i>	<i>Significance level</i>
Nutrition-related	3.36	2,156	0.037
Games-related	1.90	2,158	0.153
Rewards-related	9.23	2,158	0.000
Attributes-related	12.77	2,157	0.000
Brand-related	35.13	2,158	0.000
Interactions-related	22.02	2,158	0.000
Total content	1.69	2,155	0.189

countries. The differences between means across countries for four out of six feature categories are significant, at $p < 0.001$, one is significant at $p < 0.05$, and one approached marginal significance. The *F*-values, Degrees of Freedom and significance levels for the six effects are as follows: Nutrition: $F = 3.36$ ($DF = 2, 156$), $p = 0.037$; Games: $F = 1.90$ ($DF = 2, 158$), $p = 0.153$; Rewards: $F = 9.23$ ($DF = 2, 158$), $p = 0.000$; Attributes: $F = 12.77$ ($DF = 2, 157$), $p = 0.000$; Brand: $F = 35.13$ ($DF = 2, 158$), $p = 0.000$; and Interactions: $F = 22.02$ ($DF = 2, 158$), $p = 0.000$.

Next, in order to test the differences predicted by *H1*, *H2*, *H3*, *H4*, *H5* and *H6*, we carried out an analysis of pairwise comparison of means.

Pairwise comparison of means

H1, *H2*, *H3*, *H4*, *H5* and *H6* were tested by several pairwise comparisons of means for six categories of web site features. These results are summarized in Table IV. *H1* predicted that nutrition-related features will be present to a greater extent in the web sites of French food companies than in the web sites of US and Spanish food companies. The mean number of nutrition-related features for French web sites, at 3.80, was higher than that of USA, at 3.27, and Spain, at 2.65. Thus, the differences were in the predicted direction. However, only one of these two comparisons, namely, France versus Spain, was significant ($F = 5.97$, $DF = (1, 101)$, $p = 0.016$). The comparison of France versus USA was not significant ($F = 1.57$, $DF = (1, 94)$, $p = 0.213$). Thus, *H1* was partially supported.

H2 predicted that games-related features will be present to a greater extent in the web sites of American and Spanish food companies than in the web sites of French food companies. The mean of games-related features for USA, at 3.60, and Spain, at 3.46, were both higher than 2.80 for France and both of these comparisons were significant. USA versus France comparison was significant at $F = 4.12$, $DF = (1, 96)$, $p = 0.045$. Spain versus France

Table IV Pair-wise comparison of web site features

	Country pairs and (means of features)						
Web site features	USA – France		Spain – France		F-value	Degrees of freedom	Significance
Nutrition	3.27	3.80			1.57	1,94	0.213
			2.65	3.80	5.97	1,101	0.016
Games	3.60	2.80			4.12	1,96	0.045
			3.46	2.80	2.65	1,101	0.106
Rewards	1.34	0.73			6.87	1,96	0.010
			0.60	0.73	0.60	1,101	0.440
Attributes	2.29	1.26			18.98	1,95	0.000
			2.70	1.26	21.71	1,100	0.000
Brand	3.07	1.05			63.62	1,96	0.000
			2.86	1.05	63.24	1,101	0.000
Interactions	2.57	4.38			27.91	1,96	0.000
			2.44	4.38	35.30	1,101	0.000
Total	15.96	14.03			4.10	1, 93	0.046
			14.71	14.03	0.36	1, 100	0.551

comparison was marginally significant at $F = 2.65$, $DF = (1, 101)$, $p = 0.106$. These results provide support for $H2$.

$H3$ predicted that rewards-related features will be present to a greater extent in the web sites of American and Spanish food companies than in the web sites of French food companies. The mean of rewards-related features for USA, at 1.34, was higher than that for France, at 0.73, and this difference was significant ($F = 6.87$, $DF = (1, 96)$, $p = 0.010$). However, the mean of rewards-related features for Spain, at 0.60, was not higher than that for France, at 0.73, and also the difference was not statistically significant. Thus, $H3$ was partially supported.

$H4$ predicted that attributes-related features will be present to a greater extent in the web sites of US and Spanish food companies than in the web sites of French food companies. The mean of attributes-related features for USA, at 2.29, and Spain, at 2.70, were both higher than 1.26 for France and both of these comparisons were significant. USA versus France comparison was significant at $F = 18.98$, $DF = (1, 95)$, $p = 0.000$. Spain versus France comparison was significant at $F = 21.71$, $DF = (1, 100)$, $p = 0.000$. These results provide support for $H4$.

$H5$ predicted that brand-related features will be present to a greater extent in the web sites of US and Spanish food companies than in the web sites of French food companies. The mean of brand-related features for USA, at 3.07, and Spain, at 2.86, were both higher than 1.05 for France, and both of these comparisons were significant. USA versus France comparison was significant at $F = 63.62$, $DF = (1, 96)$, $p = 0.000$. Spain versus France comparison was significant at $F = 63.24$, $DF = (1, 101)$, $p = 0.000$. The results provide support for $H5$.

$H6$ predicted that interactions-related features will be present to a greater extent in the web sites of French food companies than in the web sites of US and Spanish food companies. The mean of interactions-related features for France, at 4.38, was higher than both 2.57 for USA and 2.44 for Spain, and both of these comparisons were significant. France versus USA comparison was significant at $F = 27.91$, $DF = (1, 96)$, $p = 0.000$. France versus Spain comparison was significant at $F = 35.30$, $DF = (1, 101)$, $p = 0.000$. These results provide support for $H6$.

Conclusions, limitations, and implications for consumer policy

The findings of this study indicate that there are significant differences in online marketing of food products to children in the three countries studied in our research, France, Spain, and the US, and these differences are largely attributable to these countries' policies. The web sites of French food companies placed greater emphasis on nutrition-related and interactions-related features compared to the web sites of US and Spanish food companies. On the other hand, the web sites of US and Spanish food companies placed greater emphasis on games-related, rewards-related, attributes-related, and brand-related features compared to the web sites of French food companies. These differences in the web sites were conceptualized to result from the differences in the socio-cultural and policy/regulatory environments of the three countries. Specifically, the socio-cultural environment factors discussed were attitudes toward health and nutrition, communication about food and nutrition, and brand building. The policy/regulatory environment factors included government regulatory agencies, self-regulation by companies, and enforcement and compliance.

While this research is cross-sectional, and thus subject to potential biases, and also somewhat adventurous in nature, its findings provide several useful insights related to understanding of consumer policy and design of food companies' web sites in the three countries. The design of food companies' web sites in terms of their emphasis on different categories of features reflects what the food companies believe that consumers want or do not want; and what the public policy restricts or allows. The French policy/regulatory system is far more elaborate and specific with regard to food marketing, and its stipulations are strictly enforced. Several specific examples of ARPP: Déontologie – La Recommandation (2009) regulations were discussed earlier – i.e. messages that must be integrated into

advertisements to avoid penalties. In comparison, the US policy/regulatory system is more liberal, comprising mostly of industry self-regulation, allowing marketers more freedom in their communications. Advertising to children in France and Spain is governed by the EU Audiovisual Media Directive, which adapts European rules for television to new media, specifying overall requirements; however, enforcement of these rules is the responsibility of the individual member states (European Commission – Information Society and Media, 2008). And enforcement is where France and Spain part ways. ARPP, France's regulatory agency, has rules similar to the EU Directive and enforces them stringently. A similar regulatory system is in place in Spain, where a code for food advertising to children (PAOS) was enacted, but its enforcement has not been effective, with nearly 50 percent noncompliance rates. Coupled with the shift in food preferences of Spanish consumers away from the healthy Mediterranean diet, this has resulted in a lower emphasis in Spain on nutrition-related features compared to France.

The previous discussion of differences in emphasis on nutrition-related features in the web sites of French, Spanish, and American food companies illustrates the relationship between consumer policy and marketing communications. Similar considerations exist in design of other web site features, namely, games-related, rewards-related, attributes-related, brand-related, and interactions-related features. Thus, the insights provided by our research related to marketing communications and consumer policy issues in the three countries have very useful managerial applications for online marketing of food products to children.

At the same time, from the policy/regulatory point-of-view, our research points that the US and Spain both lag behind France. France has both an elaborate system of regulations and a strict enforcement of rules. Spain has a fairly elaborate system in place, but lax enforcement, with 50 percent noncompliance rates. The US regulatory system is not as elaborate and is comparatively liberal and lenient. Considering the severity of obesity and its far-reaching adverse societal implications, an elaborate regulatory system with strict enforcement may offer some solutions. One possibility is to coordinate efforts worldwide to create a set of best practices and uniform legislation for online marketing. This concept is similar to antitrust legislation and enforcement in the European Union and the US, whereby the European Commission and the US Federal Trade Commission have coordinated for over two decades to uniformly address antitrust activity. It would be interesting to find out if the strict regulations and enforcement in France targeting marketing to children will have led to healthier food consumption and better health-related behaviors in the long run. As things stand, it appears that France is doing everything right, policing marketing activity directed at children. It would also be helpful to determine if the firm restraint in television advertising to children in France will similarly translate into self-restraint in online marketing in France. If yes on either or both counts, then there is a strong argument for regulatory intervention in the marketplace worldwide.

There are several avenues where future research efforts can be directed. First, there is need for building a knowledge base addressing the numerous issues related to the relationships herein proposed between consumer policy and marketing communications. Second, the framework linking socio-cultural and policy/regulatory environment factors with web site design provides a basic structure; there is need to develop it further by incorporating additional constructs, intermediary variables and processes. Third, similar studies need to be conducted in other cultures and countries to provide further cross-cultural and cross-national insights on this subject. The three directions identified previously, namely, building a knowledge base studying the relationship between marketing communications and consumer policy, further development of the conceptual framework, and other cross-cultural and cross-national studies can contribute to providing a broader scope for the framework; and, within each of these broad areas, more focused, narrower research issues can be examined. For example, it is worth examining how the design of food companies' web sites affects the children's dietary behavior. Such analysis can be done at the level of category of features (example: impact of games versus rewards on consumer behavior), at the level of individual feature (example: premium offers versus taste) or at the level of

within-feature (example: one versus ten games). There is ample scope in future research for the understanding of the relationship between consumer behavior, consumer policy, and marketing communications both at the macro and micro levels.

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Appendix

Table A1 Company web sites in the sample from USA, France, and Spain

<i>The USA (n = 58)</i>	<i>France (n = 40)</i>	<i>Spain (n = 63)</i>
Apple Jacks	Barquettees 3 Chatons	Batidos Puleva
Burger King BK Kids	Ben & Jerry's	Ben & Jerry's
Campbells Soups	Candy Up	Bimbo
Cap'n Crunch	Carambar	Bollycao
Cheerios	Champomy	Boomer
Cheetos	Chocapic	Burger King
Cheez-it	Coco Pops	Cacaolat
Chef Boyardee	Croustibats	Captain Pescanova
Chps Ahoy	Danonino	Cadbury
Corn Pops	Domino's Pizza	Cheetos
Crunch (Nestle)	Fanta	Chipicao
Dairy Queen	Ficello	Chocapic
Danimals	Flunch	Chocos
Dippin' Dots	Frosties	Chupa Chups
Dole	Haribo	Clesa
Doritos	KFC FR	Coca Cola
Easy Cheese	Kinder FR	Colacao
Easy Mac	Kiri	Conguitos
Eggo	Lion	Crecs
Frito-Lay Fritos	Malabar	Cuetara Flakes
Froot Loops	McDonalds FR	Danet
Frosted Flakes	Miel Pops	Danone
Go-Gurt	Mini Babybels	Domino's Pizza
Goldfish	Mont Blanc	Donettes
Jelly Belly	Mr. Freeze	Dulcesol
Jif	Nesquick	Filipinos
Jolly Rancher (Hershey)	Oasis	Foster's Hollywood
Juicy Juice	Pepito	Frigo
Keebler	Pepsi	Grefusa
KFC	Petit Lu	Hagen-Dazs
Kid Cusine	Petit Filous	Happy meal
Kinder Surprise	Pitch	Haribo
Long John Silvers	Prince de Lu	Helados nestle
Lucky Charms	Pringles	Kelia
Lunchables	Quick	Kinder
M&Ms	Rea	Kit-Kat
McDonalds Happy Meals	Rice Krispies FR	La Bella Easo
Nabisco	Sunny Delight	La Lbense Bornay
Oreo	Vache qui rit	LACASA
Pizza Hut	Weetabix	Lacasitos
Pop-Tarts		LaVaca Que Rie
Reese's		M&M
Rice Krispies		Matutano
Skittles		Milka
Snack pack		Mini Babybels
Snack'n Waffles		Mixer
Spaghettios		Newquick
Starbust		Nocilla
Subway Kids		Nutella
Sunny Delight		Old el Paso
Teddy Grahams		Panrico
Tootsie		Pepsi
Totinos Pizza Rolls		Phoskitos
Trix		Pirulo Bazooka
Tropicana		Pizza Hut
Twizzlers		Popitas
Wendy's		Pringles
Wonka Candies		Risi
		Roxie
		Sloppy Joe's
		Telepizza
		Tosta Rica
		Turrón de Suchard

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