

WHO'S FEEDING THE KIDS ONLINE?

Digital Food Marketing and Children in Ireland



WHO'S FEEDING THE KIDS ONLINE?

Digital Food Marketing and Children in Ireland

Dr. Mimi Tatlow-Golden Ph.D.

With Lynne Tracey BA, FIAP and Dr. Louise Dolphin Ph.D.



Report prepared for the Irish Heart Foundation – 2016

Table of Contents

Summary	4
Recommendations	6
1. The web of influence: Marketing food to children goes online	7
1.1 Food marketing and children’s rights	8
1.2 The limits of current regulation	9
1.3 Digital media, children and marketing	10
1.4 Understanding the effects of digital marketing and children’s ability to resist it	11
1.5 Identifying digital food marketing seen by children: An imbalance of access and power	12
1.6 Who’s responsible? An issue of choice, or of children’s rights?	13
2. On the homepage: Websites of top food and drink retail brands	15
2.2 Advergames and apps	18
2.3 Appealing to families	19
2.4 Food and drink website features appealing to teens	20
2.5 Competitions	22
2.6 Summary	24
3. On Facebook: Food brand Pages popular among young teens	25
3.1 Brands with the greatest ‘reach’ in Facebook among users aged 13 and 14 years in Ireland	27
3.3 Analysing brand Pages: Brand Page ‘likes’ and brand post ‘likes’ and shares	28
3.4 Analysing brand Pages: Coding the brand posts for marketing techniques	30
3.7 Postscript: What do children actually see in their Facebook News Feeds?	38
4. Who’s feeding the kids online: What do parents know?	39
4.1 Exploring parents’ views	40
4.2 Participating parents	41
4.3 Food decisions at home and eating with friends	41
4.4 Parents’ awareness of and views about advertising	42
4.5 Talking with their teen about advertising and food ads	42
4.6 Parents’ responses to online food marketing	43
4.7 After viewing the ads	47
4.8 Summary	48
5. Digital food marketing to children and young people: The way forward	49
6. Recommendations	53
References	56
Endnotes	59
Glossary	61
Appendix	62

Reproduction of this Report is not authorised. Save as specifically provided otherwise, title of the material (text, graphs, screen shots etc) is © The Irish Heart Foundation, 2016 – all rights reserved.

For reproduction or use of this Report, permission must be sought directly from the copyright holder.

The information and views set out in this Report are those of the author(s) and do not necessarily reflect the official opinion of the Irish Heart Foundation. Responsibility for the information and views expressed herein lies entirely with the author(s). Neither the Irish Heart Foundation nor its directors, officers or employees nor any person acting on their behalf may be held responsible for the use which may be made of the information contained in this Report.

The Irish Heart Foundation is the national charity fighting heart disease and stroke. We support, educate and train people to save lives, campaign for patients, promote positive health strategies, support research and provide vital public information. We need your support – through donations, as a volunteer or on our training courses.

www.irishheart.ie

Summary

Obesity in children and young people is a global health challenge. The widespread marketing of unhealthy foods (food and non-alcoholic drinks high in fat, sugar and salt, or HFSS) plays a causal role in unhealthy eating and obesity. Food and eating is typically presented as an issue of 'choice'. However, this disregards the fact that current obesogenic environments use many tactics to promote unhealthy foods, interfering with people's ability to make good choices.

Ireland restricts HFSS broadcast advertising to under-18s on TV and radio, but has not yet tackled regulation of digital marketing. Children in Ireland are increasingly active on digital media, with most 9 to 16 year olds now going online via a smartphone. Digital media have fundamentally changed marketing, and evidence from marketers and digital platforms indicates that online methods increase the impact of marketing, including for unhealthy foods. Digital marketing can target children using sophisticated analytics, as opposed to broadcast TV advertising which can only rely on a scattergun effect.

Whereas anyone can inspect ads that are shown on TV, the targeted nature of digital marketing means that parents and policymakers are unaware of who is feeding our kids online.

This study examined:

1. Content appealing to children and young people on websites of top food and drink retail brands in Ireland
2. Marketing techniques on Facebook Pages of food brands that have the highest reach among young teens, the first such study of which we are aware
3. Parents' awareness of digital food marketing to their children in an online, two-stage survey with digital marketing examples and open-ended response options.

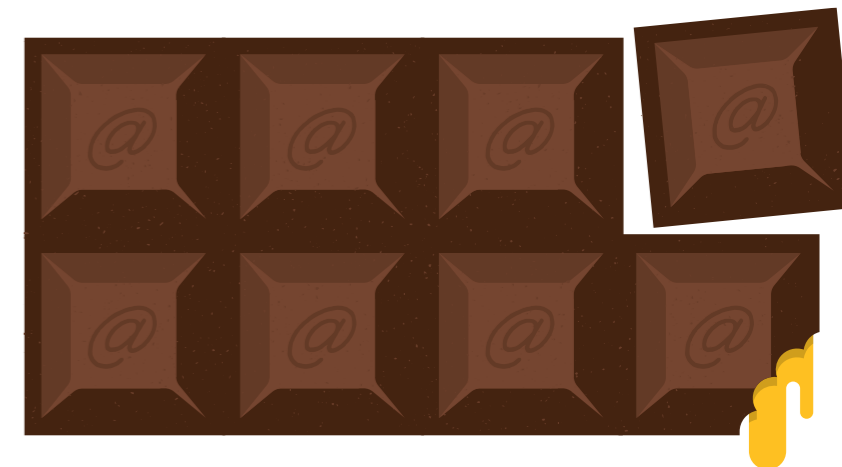


Although little marketing directed at young children on food brand websites was found, there was a strong focus on teen-appealing content on websites and on social media, using powerful engagement-, emotion-, and entertainment-based tactics. Parents of young teens in Ireland are largely unaware of this. There are clearly challenges presented by national regulation of global media, yet any site where young people enter their age to register could switch off HFSS advertising to under-18s immediately.

Here, brief synopses of each section of the study are presented, followed by the recommendations.

Websites of top retail food brands in Ireland: 1 in 5 very appealing to teens

Other jurisdictions report widespread engaging and immersive children's sections, but on 73 websites of the top retail food brands in Ireland, just 1 in 10 had some child-directed content, much of it at most mildly engaging. In informal discussions, digital marketers in Ireland reported that in Ireland's HFSS regulatory context, directing food marketing specifically at young children is now considered unethical, and that therefore they target parents of young children instead. Notably, however, one in five websites, almost all for items high in fat, salt or sugar (HFSS), had content directed at or appealing to older children or teens, focusing on teen activities, entertainment and sporting celebrities, and competitions with entertainment-, media- and sport-based prizes. Not included in this analysis, and requiring systematic examination, were video games, apps in app stores, fast food websites, and websites for international products of appeal to children in Ireland.



Facebook Food brand Pages popular with 13-14 year olds: Engagement, emotion, entertainment

In Facebook, all the food/drink brand Pages with the greatest reach among users aged 13-14 in Ireland are for brands that feature HFSS products. They included major international brands (e.g., Coca-Cola) and local Irish ones (e.g., Tayto). Some brands posted updates on their Pages infrequently, less than once a week, but others posted more than once daily. Brands actively sought user engagement, seeking 'likes', tags, comments, and photos, and providing many links and hashtags (#). In addition to bold graphics and strong visuals, they featured competitions, had a strong emphasis on humour, invoked fun and 'special days', and linked to entertainment and events (current movies, music, TV, festivals). Over a quarter of the 354 brand posts analysed did not show food, packaging or a brand logo, indicating a shift to more subtle promotional strategies that are less easily identified as advertising.

Parents are unaware of digital food marketing and its engagement techniques. They consider many of them misleading and exploitative

Parents of 13-14 year olds were selected from a large online panel to reflect a range of demographics in Ireland and 33 took part in an online interactive interview. They had generally positive attitudes to advertising, and though two-thirds felt teens should not view HFSS food advertising, they were largely unaware of and indifferent to the issue of digital food marketing, and almost none knew how brand content reaches Facebook users' News Feeds. They conceived of ads online as requiring *opening*, or *clicking to skip*. However, once parents had viewed examples of food marketing from digital media, their attitudes shifted. They said they had been unaware of how *subtle* digital food marketing is and felt that *great maturity* would be needed to resist. They voiced particularly strong concerns about celebrities and sporting heroes engaging in what they considered *misleading* advertising for unhealthy foods. When shown prompts from ads to 'tag' friends in Facebook, two-thirds of parents used terms such as *immoral*, *dishonest*, *exploitative*, or *should be banned*. After viewing the marketing examples, three-quarters of parents were strongly against teens receiving digital HFSS marketing.

Recommendations

1. Recognise children's rights to participation - but also to health and protection

Children have the same rights online as they do offline. These include rights to participate in social life and to have their voices heard, but also rights to health and to have their best interests considered. Therefore, ways need to be devised to ensure that under-18s can participate safely online – without being subject to targeted marketing for products that have been demonstrated to have a negative effect on their health and well-being, and without having their data harvested and resold online.

2. Extend existing regulation for broadcast media to all digital media

Statutory regulation in Ireland has established the principle of no HFSS broadcast advertising to under-18s. The same should apply to social media and all other digital platforms.

3. Identify international options for ending HFSS food promotion

Obesity has become a global health challenge, and tackling obesogenic environments – of which HFSS marketing is a part – must become a global priority, particularly HFSS marketing to which children and young people are exposed.

4. Close loopholes in current regulations

As in other jurisdictions, Ireland's statutory regulation lacks effectiveness, as it is limited to children's programming on pre-6pm TV, and is governed by one of the most lax Nutrient Profiling models by international standards (UK Nutrient Profiling; UK NP). Regulatory loopholes should be closed, and UK NP replaced with a simpler, stricter system such as the WHO European Region 2015 Nutrient Profiling (WHO Euro-NP) which has rapidly gained acceptance across WHO Regions worldwide.

5. Disrupt the language of 'choice' and 'responsibility'

Obesogenic environments push unhealthy choices through food promotion, pricing and availability. Framing families' and children's eating as purely a matter of 'choice' disregards the impact of obesogenic environments on children, young people and parents – and also disregards the choices made by food companies to promote such items to children, parents of young children, and teens.

6. Prohibit 'heroes of the young' from marketing HFSS products

To protect children and young people, 'heroes or heroines of the young' – celebrities in entertainment, sport and other domains – are prohibited from marketing any alcohol advertising in Ireland (ASAI, 2015). This exclusion should be extended to all HFSS marketing.

7. Inform young people, parents and policy makers about digital food marketing.

The 'Internet safety' issue tends to push marketing into the background when children's digital participation is discussed, but individually targeted marketing is a well-being issue of itself – and is linked to privacy concerns through the collection of personal data. Young people, parents and policymakers need information on privacy issues and how children's data is used to target them, their friends and their families. They also need to be informed about the effectiveness of emotional marketing approaches that function through implicit 'stealth' persuasion.

8. Consider the potential of 'social marketing' for healthier habits

Social marketing seeks to change a group's perceptions of what is normative behaviour. It is often recommended to prompt healthy eating. However, any such approach

must be grounded in careful, child-centred research, as eating unhealthy foods currently often forms part of children's identity as separate from the adult world in Ireland and across Europe, so general 'healthy eating' messages from adults may even encourage less healthy practices. Children have also been found to attend less to marketing for healthier items, although this may depend on the nature of the ads. For example, what would the effect be if the 'heroes of the young' (such as YouTube vloggers, and sporting stars), who currently promote unhealthy foods, were instead to turn to promoting healthy items? Finally, it is important to note that social marketing for healthier eating alone is not the answer. It cannot replace the need for regulation, as public health cannot match the marketing budgets of major food companies.

9. Equalise access to information about digital HFSS marketing

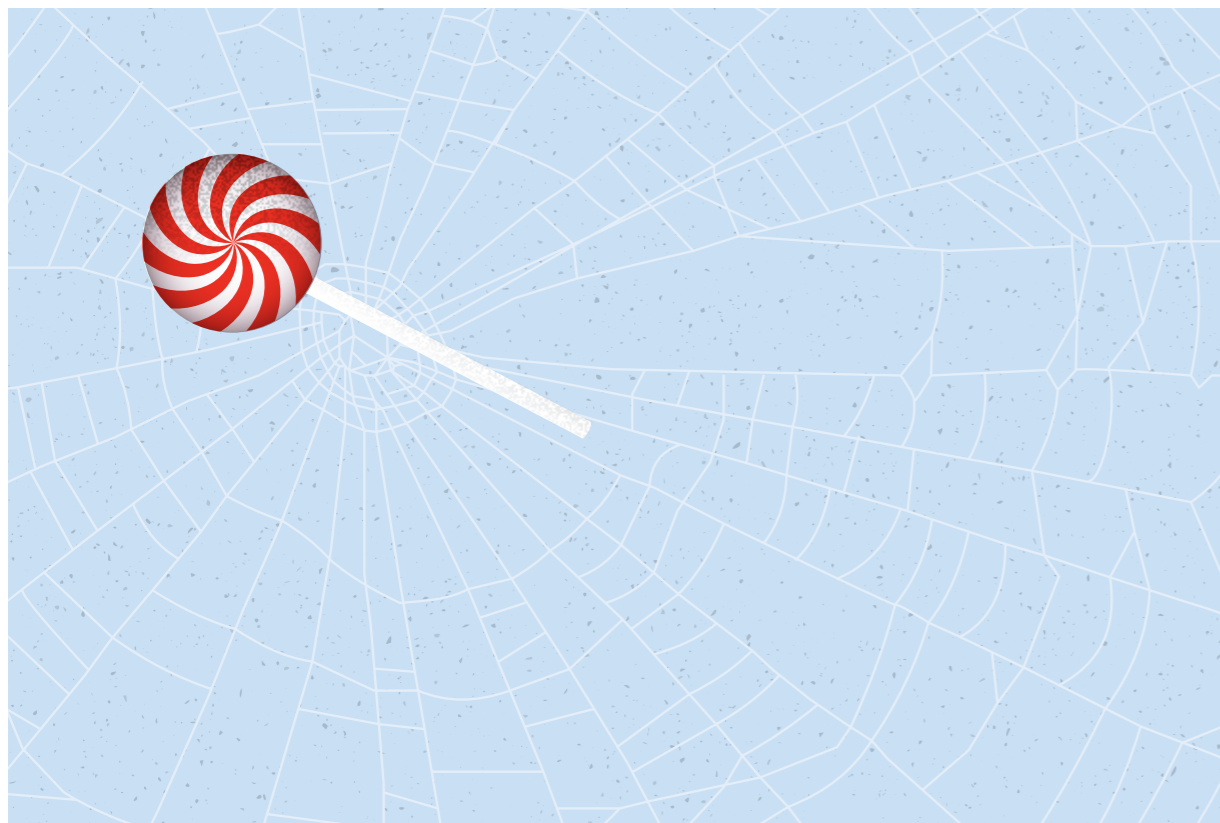
Media platforms, marketers and food brands have extensive access to data about children, and they engage in extensive research on them without independent research ethics governance. In contrast, those concerned with public health cannot access these data. Yet – in an era of targeted and personalised marketing – it is essential that researchers concerned with children's well-being find ways to systematically examine children's engagement with digital food marketing in Facebook and beyond (e.g., Instagram, Snapchat, video games that deliver in-game ads, branded food and drink apps appealing to children and more). Which children are more likely to engage? In what way do they do so? What effect does this have? Answering these questions is essential. In the interests of children's rights to health, protection and participation online as well as offline, this imbalance of access needs to be equalised.

1. The web of influence: Marketing food to children goes online



1. The web of influence: Marketing food to children goes online

In Ireland, one in four children is overweight or obese. Current World Health Organisation (WHO) predictions are that in 2025, over 80% of adults in Ireland will be overweight or obese, the highest proportion in the WHO 54-country European Region (UK Health Forum/WHO 2015). Tackling the underlying causes of obesity in Ireland is a critical issue for children's rights, health and well-being.



1.1 Food marketing and children's rights

Although eating habits and the causes of obesity are complex and are affected by many factors, systematic reviews of research have consistently found that food marketing plays an independent causal role (Cairns, 2013; Cairns et al., 2009; 2013; Galbraith-Emami & Lobstein, 2013; WHO, 2016). For this reason, the WHO has repeatedly called for reductions in children's exposure to food marketing for unhealthy foods, most recently in the Report of a Commission on Ending Childhood Obesity,

which consulted with over 100 WHO Member States (WHO, 2016). Recently, the UN Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health has also done so (UN, 2014). Increasingly, it is recognised that this is an issue of children's rights. The United Nations Convention on the Rights of the Child (UN, 1990) enshrines children's rights to the highest attainable standard of health, protection from harm, and requires States to recognise the

primacy of the child's best interests. This leads to the understanding, as the WHO Commission noted, that States have a 'moral responsibility' to act in this regard (WHO, 2016). The need to act to reduce food marketing has also recently been addressed by Better Outcomes, Brighter Futures, Ireland's whole-of-government national policy framework for children and young people 2014-2020 (Department of Children and Youth Affairs, 2014).

1.2 The limits of current regulation

Some governments have responded to calls for marketing restrictions, implementing regulations of varying impact to limit children's exposure to marketing for unhealthy foods in Europe, Asia, South America and the Middle East (see World Cancer Research Fund [no date]). In 2013, Ireland established the important principle that items high in fat, salt or sugar (HFSS) should not be advertised to under-18s on broadcast media (TV and radio), when the Children's Commercial Communications Code update prohibited advertising HFSS products around 'children's programming' (Broadcasting Authority of Ireland [BAI], 2013).

Ireland's broadcast ban, however, despite being a strong statement about protecting children and young people, has only been partially successful at reducing exposure to HFSS marketing. The ban applies to 'children's programming', when under-18s form 50% or more of the audience, and up to 6 pm – yet most of the TV programming children and young people view does not meet these criteria. As a result, even very young children in Ireland are likely to see over 1,000 unhealthy food ads on television a year under current regulations (Tatlow-Golden et al., 2016), and older children who watch more TV later in the day probably view substantially more.

Similar regulation gaps have been identified in the US and the UK, and in the UK HFSS advertising has shifted to general-view programmes viewed by many children (Boyland et al., 2011; Galbraith-Emami & Lobstein, 2013; Harris et al., 2013). There are further factors limiting the effectiveness of current regulation. Brands that sell primarily unhealthy foods can evade the ban by advertising with healthier items (e.g., McDonald's advertising Happy Meals



with carrot sticks). The definition of HFSS currently applied in Ireland, the UK Nutrient Profiling model (UK NP; UK Department of Health, 2011) has been identified as lax compared to other international systems (Scarborough et al., 2013). It permits marketing to children of foods with more than 10g sugar per 100g, or drinks with artificial sweeteners, which do not pass recommendations for marketing to children under the WHO Europe Nutrient Profile model (WHO, 2015).

A final, major factor limiting the effectiveness of current regulation in Ireland, and the one that has provided the impetus for this report, is that existing statutory regulations only apply to broadcast media – they do not encompass the Internet. As use of digital media increases among children and young people in Ireland, this is becoming more of a concern. Not only do digital media provide new and engaging ways for brands to seek to engage children and young people, but these new

forms of digital marketing, rather than displacing effects of traditional media such as television, instead *magnify* them, as described in section 1.3.

Currently digital marketing of food to children in Ireland is subject to voluntary regulation by the advertising industry's Code (Advertising Standards Authority for Ireland; ASA, 2015). Although the Code defines children as those under 18, and states that marketing should not 'encourage an unhealthy lifestyle or unhealthy eating or drinking habits' (Rule 8.16), this is open to interpretation as no definition of unhealthy eating or drinking habits is given and no Nutrient Profiling system is applied to define items that should not be advertised to children. In general, voluntary schemes are weaker and less well implemented and monitored than statutory regulation (Galbraith-Emami & Lobstein, 2013).

1.3 Digital media, children and marketing

The media landscape has been changed profoundly by digitisation, as have marketing activities (Mulhern, 2009), and marketers report that digital marketing has a powerful capacity to *amplify* advertising effects. In France and the US, market research reports that direct return on investment for online Coca-Cola and Cadbury campaigns was about 4 times greater than for TV: Kantar calculated that for a Coca-Cola campaign in France, Facebook accounted for 2% of marketing cost but 27% of incremental sales (Peterson, 2014). In addition to direct returns on investment, online marketing creates further, synergistic effects. Facebook reports that its ads increase target audience reach, ad memorability, brand linkage and likeability, compared to television alone (Facebook, 2015), and Facebook ads across 14 campaigns generated nearly triple the ad recall compared to control groups (Gibs & Bruich, 2010). Econometric analysis of fast-moving consumer goods brand marketing (including food and drinks) in Europe found that online marketing magnifies returns on other media investment, e.g., a 70% increase for TV and 71% for cinema (Microsoft, 2013).

Digital HFSS marketing is a concern as rates of children's Internet use are rising in Ireland. Three-quarters of 9-16 year olds access the Internet daily; nearly 20% go online for more than 3 hours daily at the weekends and 40% are online for more than an hour daily during the week (O'Neill & Dinh, 2015). With a smartphone, children in Ireland feel more connected to their friends; three-quarters feel they must always be available for contact; nearly half often feel a strong need to check their phone; and four in ten display two or more such indicators of



dependence or overdependence on smartphones (O'Neill & Dinh, 2015).

One of the most pronounced changes in marketing in the new digital landscape is the shift from *broadcast* to *targeted* advertising that is crafted for individual users' demographics and their online behaviours (Online Behavioural Advertising, or OBA). To deliver OBA, technical and personal information about Internet users is collected from websites, social media and apps, using site or competition registration forms and many digital identifiers and trackers. 'Cookies' (a small piece of data sent from a website and stored in the user's web browser), which are quite easily deleted, have been augmented by a host of more persistent tracking methods such as flash and zombie cookies and device fingerprinting; these can follow users' journeys and activities online in detail, even following them from one device to another, mapping every device they use, every web location they explore and what they do there, and all the links in their social networks (Office of the Privacy Commissioner, 2015).

Geolocation in smartphones also allows marketers to identify exactly where a child or young person is.

This host of tracking activities gives marketers the powerful ability to specify *what* children and young people look at online, *who* they are connected to, and even *where* they are. This certainly raises privacy concerns. However, a less frequently discussed matter of concern is that marketers use this information to target individuals, including children, more perfectly. The US Children's Online Privacy Protection Act (COPPA), which requires 'verifiable parental consent' before collecting information from children under-13 years (coppa.org), discourages OBA directed at under-13s, as does Ireland's ASAI Code (ASAI, 2015). However, the 2015 Global Privacy Enforcement Network Sweep of apps and sites targeting children, or popular with them, found that two-thirds of sites and apps (67%) across the world collect identifying information from children (Data Protection Commissioner, 2015), and apps / websites tested for Ireland collected technical data such as cookies (61%), UID (unique identifier of a computer; 50%), IP address (28%), and Geolocation (28%). In addition, once children are 13 years old, or earlier if they signed up for a social network with a false date of birth, marketers, brands, digital platforms may target them freely.

Marketers take advantage of these rich digital data to create 'unprecedented intimacies' between them and children (Montgomery et al., 2012). Furthermore, such targeting methods are shutting out researchers and policy makers who wish to measure digital marketing to children and its effects. We return to this below in section 1.5, before first considering children's susceptibility to digital marketing.

1.4 Understanding the effects of digital marketing and children's ability to resist it

A long-held assumption is that the ability to resist advertising effects is governed by conscious awareness and understanding about ads. Most research on children and advertising has addressed the question of the age at which children can *recognise* ads, and when they can *understand* that advertisers wish to persuade people to buy things. Discussions about advertising typically draw on this body of research to conclude that once children can recognise ads, they will be able to resist them (Harris et al., 2009), and developmental research has generally concluded that by the age of 12, children have adult-level recognition of advertising and can therefore resist it.

And yet there are problems with this conclusion. Even if marketing is recognised, and understood, in order to resist it one must also *activate* resistance and have the *motivation* to do so (Rozendaal et al., 2011). Yet from early childhood, children often describe enjoying advertising and wishing to engage

with it (Lawlor, 2009), suggesting that they are not motivated to resist its effects. In social media, studies of teens in the US and UK indicate that about half to two-thirds like advertising and engage with it (Logicalis, 2016; Nielsen, 2009). Furthermore, the impact of ads on children's *emotions* is frequently not addressed. Psychological and neuroscientific evidence indicates that emotional ads are processed with little conscious awareness and result in 'implicit persuasion' (Nairn & Fine, 2008), and an audit of nearly 900 ad campaigns found emotional ads (with little or no rational content) were most effective (Binet & Field, 2009). Therefore, when ads focus on emotions rather than information as their route to persuasion, questions of when children can recognise an ad and resist it do not apply.

In this context, digital marketing adds a number of challenges. First, children find digital marketing harder to identify than television advertising, as it is typically presented without clear ad

'breaks' or identification of ads or branded content (Ali et al., 2009). Second, resistance may be harder to activate for digital marketing such as promotional 'advergames' (brand-created interactive games incorporating branded visuals). These are exciting and immersive, so even when children understand that they intend to persuade, playing them establishes positive brand associations (Rozendaal et al., 2011). Third, considerable HFSS food marketing is delivered in the exciting, peer-saturated environment of social media such as Instagram and Facebook, where children in Ireland have accounts from the age of about 9 years on and where participation increases steeply from 13 years (O'Neill & Dinh, 2015).

Even though social media participation is intended to be limited to those aged 13 years and up, when children typically recognise and understand the purpose of advertising, the presence of HFSS marketing in social media is a concern. Research demonstrates that teens are more susceptible to marketing than adults, due to factors such as reduced inhibition and gratification delay; greater responsiveness to peer influence; and the developmental need to establish their own identity (Harris et al., 2009; Harris et al., 2014; Pechmann et al., 2005). A substantial part of teens' 'identity work' – a key task of adolescent development – now takes place in social media (boyd, 2014b), including through consumer practices, representation and transfer of symbolic meaning from brands, which function as psychological symbols of personal attributes and social goals (Levy, 1969, in Leiss et al, 2013; McCreanor et al., 2005). In relation to food in particular, neuroimaging research of food advertising has found



teens to be particularly responsive (Gearhardt et al., 2014) and research across Europe from Ireland to Cyprus has found that teens use unhealthy food as a peer activity and a feature of their generational, 'teen' identity (Fitzgerald et al., 2010, 2013; Ionnanou, 2009; Stead et al., 2011; Trew et al., 2005).

In Ireland, adolescents are influenced in HFSS choices by peers; enjoy eating such foods with friends; use their increased autonomy within restricted budgets to buy HFSS foods; and strongly prefer HFSS foods despite understanding healthy eating principles (Fitzgerald et al., 2010).

In sum, therefore, although teens have adult-level understanding of the purpose of advertising, this does not protect them from emotion-based marketing. Many are particularly susceptible to food marketing – yet the teen years are largely neglected where food marketing policy and research are concerned.

1.5 Identifying digital food marketing seen by children: An imbalance of access and power

Despite the many factors described above indicating that children and young people are likely to be susceptible to digital food marketing, identifying their *exposure* to marketing of HFSS food and drink is extremely challenging (Cairns, 2013). One might imagine, in a relentlessly data-driven age, that information on children's and young people's media practices, and on the 'reach' of digital marketing to children, would be easy to come by. Yet this is not the case. While researching this report, we made contact with digital marketers, digital marketing researchers, and digital data and Big Data specialists in Ireland; with UK digital marketers who specialise in marketing to children; and with international researchers monitoring food marketing to children and young people. No-one could direct us to good quality information on the extent and nature of digital marketing to children and young people in Ireland that was available to individuals outside industry at a reasonable cost.

On TV, advertising is broadcast in single blocks to large numbers of people. As long as one knows which channels and times have high child viewership, it is relatively easy to measure children's advertising exposure. Online, however, media and children's uses of it are highly fragmented. Children see marketing in some online settings, but not others, and the marketing they

see is targeted or personalised to varying degrees. The platforms, sites and channels they view online are fragmented, by age, gender and country, and over time. As an example, UK research with over 400 children aged 7 to 12 years (drawn from a panel of 25,000+ children run by digital marketers SuperAwesome; December 2013) reported YouTube as the most popular site among boys and girls aged 7-12 – but YouTube houses millions of channels, so this doesn't clarify which channels children are viewing. Gender differences were also evident with girls favouring Facebook, Movie Star Planet and CBBC whereas boys preferred Friv, Minecraft and Facebook.

Furthermore, children's and young people's digital media preferences may change rapidly, although media storms about the 'death' of certain online locations should be treated with caution, as these are often based on anecdotal reports of single individuals or small groups, or misinterpretations of evidence (boyd, 2015; Cellan-Jones, 2013; Magid, 2015; see also Mascheroni & Ólafsson, 2014, p.35 note 9). Finally, it should be borne in mind that not all online locations popular with children and young people feature advertising, although it can be expected that wherever it is absent, sites will eventually seek to 'monetise' their offerings. For example, Instagram was ad-free until advertising began late in 2015 (Delzio, 2015).

The atomisation of children's media practices presents challenges to researchers seeking to understand digital food advertising to children, but the greatest challenge of all is presented by online behavioural advertising (OBA).

As noted above, in the process of delivering OBA, brands, media and marketing platforms gather vast amounts of information on young people's marketing exposure and engagement, and conduct extensive and sophisticated analyses of their behaviours. However, researchers cannot simply 'go online' to identify the advertising children see, as researchers have different platform, browser and device histories to children and young people and are therefore unlikely to be delivered the same ads. Researchers also cannot access proprietary industry data because it is rarely made available to outsiders. On the rare occasions that limited analyses are available, the cost is prohibitive (e.g., we were quoted over €60,000 for some rudimentary information). Some companies (such as comScore, Alexa and others) do sell some data on children's digital activity and marketing exposure, but not for under-15s in Ireland, and drawing inferences from other countries is problematic, as inter-country differences in children's digital media use can be pronounced (O'Neill & Dinh, 2015). In fact, seeking data on children's digital practices in a small country is a particular challenge.

'Competitive intelligence analysis' of digital marketing (analyses of data carried out by analysts external to a company), which can identify some demographics of users' online behaviour, is less accurate in small countries such as Ireland due to small samples (Kaushik, 2015). And researchers who analyse large-scale social media datasets ('Big Data') told us they could not reliably segment users by age, a crucial requirement for those interested in children's HFSS marketing exposure online.

Therefore, as researchers do not have access to the carefully-guarded marketing analytics on children available to social media platforms and food brands, it is impossible to specify how much digital advertising children and young people actually see, particularly in smaller countries such as Ireland. This is a research area that is certain to develop rapidly in the coming months and years. It is also a topic for ethical discussion, as ever-greater imbalances of power are being

generated by the role that digital platforms now play in public life and the communications landscape (Pasquale, 2015; Sandvig et al., 2014; Tufekci, 2015).

While researchers work on developing methods and gaining access to data, it remains critical to understand the HFSS digital marketing techniques that children and young people are exposed to, as digital marketing, rather than simply replacing traditional advertising, amplifies its effects.

1.6 Who's responsible? An issue of choice, or of children's rights?



Finally, it is important to highlight that, when food marketing to children is being debated, discussions are usually framed around twin rhetorics of 'choice' and 'parental responsibility'. Food companies state their belief that from the teens onward, individuals can make rational choices about their snacking and eating – see for example Mars' marketing code (Mars [no date]) – and parents are assigned primary responsibility for their children's eating (Handsley et al., 2014). However, such positions ignore the strong evidence for the impact of present-day 'obesogenic' food environments, of which

food marketing is an integral part (Swinburn et al., 2011). Obesogenic environments prompt frequent consumption of unhealthy foods, interfering with individuals' ability to act in their own long-term interest. Food companies promote availability and affordability of unhealthy foods (Greenfield, 2011; Swinburn et al., 2011), and spend vast budgets on building emotional associations with them – one estimate found that food companies' spend on promoting unhealthy foods is approximately 500 times the amount that the WHO spends on promoting healthier practices (Lang & Millstone, 2002).

As the use of the language of 'choice' places all the responsibility on individuals, and none on food companies, marketers and governments, understanding parents' views of digital food marketing is important. Do they believe the issue of food, eating and food marketing is primarily a matter of choice for themselves and for young people? Or do they agree with the WHO (2016) and the United Nations Special Rapporteur (UN, 2014) that society has a moral responsibility to protect children's right to health and restrict children's and young people's exposure to food marketing?

1.7 Aims of this study

In conclusion, basic knowledge is missing about the digital food marketing that children and teens are exposed to in Ireland, and about parents' knowledge and attitudes on this topic. Although data available to non-industry researchers on digital marketing are currently extremely limited, this study aimed to make essential first steps in identifying

the digital food and drink marketing appealing to, or directed at, children and young people in Ireland. It studied (1) **websites of top Ireland food and drink retail brands** – as reports from other countries indicate these have much content directed at young children – and (2) **Facebook brand Pages** – as Facebook is a single platform, most popular with children

and young people in Ireland, and is a location where advertisers are also very active. Finally, to indicate what information families need, and whether there is a public appetite for regulation of digital food marketing to children, the report also explored (3) **parent awareness and views in Ireland of digital food marketing.**



2. On the homepage:

Websites of top food and drink retail brands

2. On the homepage: Websites of top food and drink retail brands

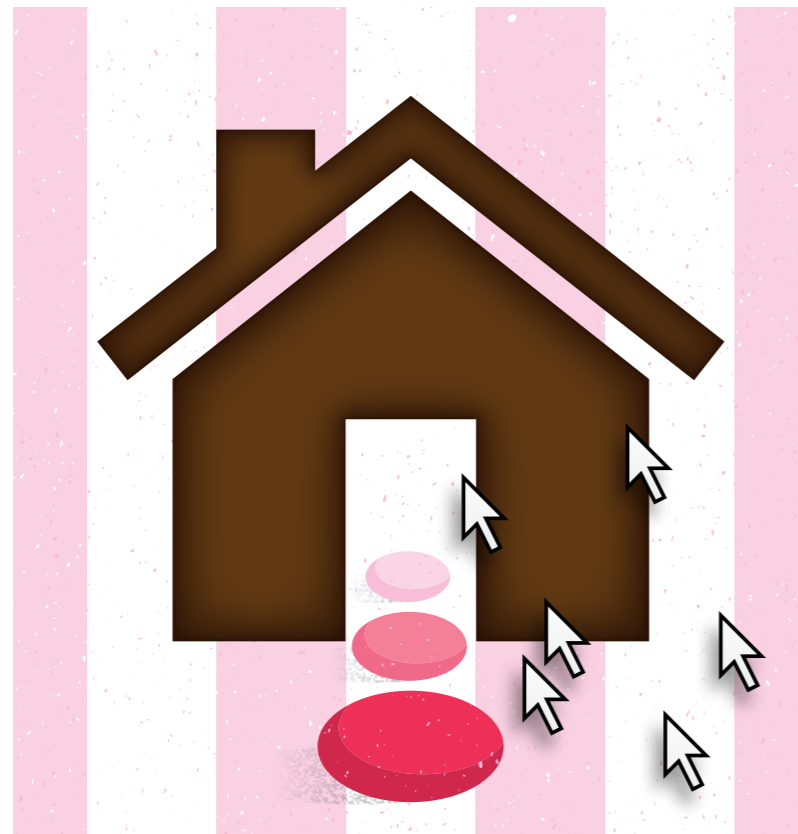
In Australia, the US, Canada, and the UK, studies report that 3 to 8 out of 10 websites of food and soft drink brands, primarily for HFSS products, have features designed for children, such as children's areas, advergames, brand spokescharacters, videos, 'webisodes', branded education and interactive features, all designed to engage children in lengthy brand-related exposure and build positive associations with the products and brands (Henry & Story, 2009; Cheyne et al., 2013; Kelly et al., 2008; Potvin Kent et al., 2013). As far as we know, there has never been a systematic examination of websites for food and drink products in Ireland, to identify techniques appealing to children.

As data are not available on the food and drink brands that are of greatest appeal to children in Ireland, we identified 83 of Ireland's top food and drink retail brands from a listing of Ireland's 100 top retail grocery brands (Checkout, 2014; based on Nielsen ranking of over 6,500 brands in over 200 product categories of 'fast moving consumer goods'). Google searches were conducted to locate brand sites with .ie (Ireland) domain addresses. If none could be located, the .co.uk (UK) site was examined; where neither was found, .com (international, usually US sites) websites were explored, some of which redirected to Irish sites or content.

2.1 Kids' and fun areas on food and drink websites

Websites were found for 82 of the 83 brands (73 individual sites; see Appendix). Some, e.g., Cadbury, Denny, Avonmore, host multiple products; other brands have more than one site, e.g., Tayto crisps has a tab that leads to the Tayto Park site. A full 'sweep' of the 73 websites was conducted between 28 September and 10 October 2015, to identify designated children's areas and content appealing to children and young people.

In contrast to reports from other countries, it was encouraging to find



that no site had a section named *kids* or *children*, and overtly designated children's areas were almost entirely absent. Of the 73 sites, 8 had a tab or image on the homepage named *Fun*, a child-oriented *Corner*, or content for children to engage with (the *Pepsico.ie* site was then excluded as it was an adult-directed, corporate site, and the *Fun* tab stated that *Life can't be all about work*). Seven sites (10%) had some (often minimal) child/fun-oriented content. Three

were parent-oriented (Flora, John West, and Avonmore) and three were somewhat child-oriented (Miwadi, Tayto crisps, and the Tayto Park site). Finally, the PomBear site (a KP Snacks brand) was the only site identified that was strongly child-oriented with substantial child-related content and bright colours and the PomBear brand character throughout. These are shown in the table.

Examples of websites with child-directed content – from 73 websites of the 100 top retail brands in Ireland


Website	Tab	Child-directed content
www.pom-bear.co.uk/home ¹ (KP snacks) 	Family Fun	<ul style="list-style-type: none"> Homepage (see image) had bright colours, cartoon images, large bold graphics Family fun tab had craft ideas, e.g., create PomBear-decorated Christmas lanterns, cups A 10 question nutrition quiz implied that eating PomBear snacks (potatoes) and ketchup (tomatoes) is good for health When Googling 'PomBear games' we were linked to www.pom-bear.co.uk/games/world-builder/login.html
www.taytocrisps.ie ² Led to www.taytopark.ie 	Fun Stuff & Colouring Pages	<p>Tayto Crisps homepage (see image): Bright colours, story-book style cartoon-like illustrations and featured Mr Tayto.</p> <ul style="list-style-type: none"> Fun Stuff tab led to a 'Mastermind' quiz about Tayto. Colouring Pages: Pdfs (Mr Tayto/ bag of Tayto crisps) Tayto Park linked to www.taytopark.ie Children, teens on theme park attractions. Zoo: introductions to animal galleries. dedicated animal pages Early October: Hallowe'en, Santa visits featured
www.avonmore.ie ³ 	Bó Corner	<ul style="list-style-type: none"> Parent-directed site with Bó Corner tab (Bó page – see image) Bó Chase game (only the page itself was branded; see image). A cow herds unbranded glasses of milk onto a milk float; Heard [sic] the glasses of milk onto the Avonmore milk float as fast as you can without spilling any. Careful now!). Pdfs of colouring sheets.
www.john-west.ie ⁴ 	Trawler Fun	<p>More parent-directed:</p> <ul style="list-style-type: none"> Entertainment for Tiddlers and Old Sea Dogs Downloads of colouring sheets Link to YouTube video
Not Shown:		
www.miwadi.ie	Fun	<p>A 'Fun' tab led to a set of options:</p> <ul style="list-style-type: none"> A simple game, similar to the Avonmore game (only the page itself was branded, not the game): Catch fruit as it falls in a truck Screensaver (bottle of Miwadi, glasses slowly filling up) may be appealing to children Downloadable wallpaper (oranges growing on a tree) less so
www.flora.com	Family Fun	<ul style="list-style-type: none"> For parents to do with children Recipes, baking suggestions, and other activities

However, it should be noted that our focus on .ie sites for top retail brands in Ireland meant that other websites that may seek to engage young children in Ireland were not examined in this study. Sites from other countries, sites for fast food restaurants, and sites for products particularly designed for children

should be included in further analyses of this topic. For example, the McDonald's Happy Meal site (www.happymeal.com) is extremely child-oriented and engaging, with loud music on launch and many games, videos, sounds, music, ebooks and other activities that could keep a young child occupied

for long periods. Its disclaimer on the home page ('Hey kids, this is advertising') on the very top left is in exceptionally small type, and is visually swamped by the engaging fonts and visuals of the other site content.

Example of child-oriented fast food restaurant site with engaging and immersive appeal for young children

Website	Tab	Child-directed content
<p>www.happymeal.com⁵</p> 	<p>Entire site is child-oriented</p>	<p>The site is aimed at young children. Content is extremely engaging.</p> <p>It launches with very loud, catchy music and features bright colours and animation</p> <p>Facilitates an all-round marketing experience. Store toy giveaways unlock a video game and many engaging and entertaining games.</p> <p>Tabs:</p> <ul style="list-style-type: none"> ■ Toys ■ Create ■ Games ■ Videos ■ Happy ■ eBooks <p>A tiny 'Hey, kids this is advertising' disclaimer is at the top left. A healthy eating message to 'balance your fun' with apple slices is at the bottom of the page.</p>

2.2 Advergaming and apps

The 73 food and drink retail websites were examined for any advergaming, which were also found to be rare. Two sites, Avonmore and Miwadi, each hosted an easily accessible child-oriented game, that involved collecting milk or fruit, was very simple and was aimed at young children. However, as these did not have branded visuals or offer an immersive experience, they do not fit the generally understood category of 'advergaming'. When searching for branded games through Google, one advergame was found. A PomBear games site login page appeared with links to games directed at young children; this had not appeared when navigating the website itself.

It should be noted that advergaming have not disappeared from the marketing landscape. Instead, they appear to have migrated to app and game stores to download for

free (Glazer, 2015). An example is a racing car app by Kinder Bueno on play.google.com, a simple game that would appeal to young children. A constant stream of Kinder Bueno⁶ logos features during game play. Other informational and play-based apps feature HFSS brands, such as the Haribo weather app featuring the brand's bear. Interestingly, some apps restricted their geographic availability, such as the McDonald's Minions movie tie-in Min-ball app, 'appropriate for ages 4+', which was not available in the Irish iTunes store (the site doesn't allow linking to the US store). Such practices indicate that despite the global reach of the internet, it is possible for geographic limits to be placed on marketing to children.

A full sweep of HFSS brand apps aimed at children and available from online app stores is required. This should assess the apps and

their functionality, such as their accessibility from an Irish IP address as well as the specifics of personal information collected from the user. As noted in Chapter 1, apps frequently breach US and Irish guidelines, raising concerns about further tracking and targeting of children with marketing (Data Protection Commissioner, 2015).



2.3 Appealing to families

Finally, it was notable in our analyses that websites for top food and drink retail items in Ireland frequently appealed to parents, rather than children, through 'family' games and activities; competitions; or free gifts, e.g. Kelloggs offered bowls for children and adults and seeds and growing kits, all branded with their proprietary characters. Sites also offered nutrition, eating and cooking suggestions: e.g., Hellmans' offered tips to get children eating vegetables: *They'll soon be convinced that vegetables really are delicious when mixed with their favourite mayonnaise or ketchup*. Through such approaches, it appears brands are seeking to encourage parents to involve brands in their children's lives. This chimed with informal discussions we held with digital marketers in Ireland. They said that, as marketing unhealthy foods directly to young children was now considered unethical in a climate of statutory regulation in broadcast media, marketers

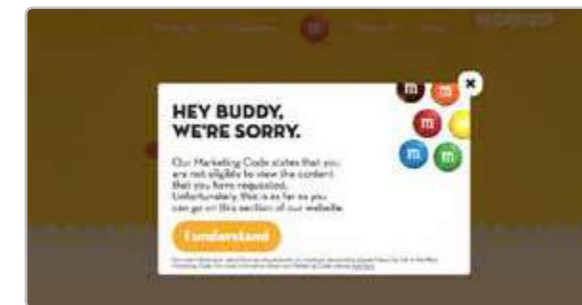
were currently targeting *parents* of young children instead. This raises the interesting possibility that a climate of regulation can change social norms about marketing to children. However it is also possible that marketers have simply made a decision – as they did in the UK when television restrictions came into force around children's programming – to direct their efforts elsewhere.

Notably, the sweep identified three websites (Mars sites Galaxy and M&Ms, and Kinder) that had 'age gates' where a date of birth needs to be entered to gain access to the site. This was in line with stated company policies not to market directly to children 12 and under. Maltesers, also a Mars brand, had a website home page with only an image of a Maltesers bag, an invitation to *visit us on Facebook* (where the official minimum age is 13 years) and explained that *'we only promote our products to people aged*

12 and over as this is the age at which we believe that people can make informed choices about sensible snack consumption'.

This – along with the content of the food brand websites viewed – raised the issue of food marketing for unhealthy items that is aimed at teens. Companies such as Mars and Coca-Cola state their belief that it is appropriate to market snacks and other foods to young people from 12 or 13 years as they can make informed choices about sensible snack consumption (Coca-Cola [no date]; Mars [no date]). Yet in Ireland, broadcast regulations do not permit advertising of HFSS products to under-18s. As noted in Chapter 1, in the teen years, young people may be particularly vulnerable to developing unhealthy eating habits, and to many marketing approaches employed online. Therefore, the 73 websites were examined again to identify features that may appeal to teens.

Examples of age 'gates' on HFSS food websites



M&Ms age 'gate'⁷



Kinder age 'gate'⁸



Maltesers home page (prominent link to Facebook)⁹

Our promise. At Mars we take our responsibility for marketing our brands appropriately very seriously. We have a Marketing Code that governs all our promotional activity and states that we only promote our products to people aged 12 and over as this is the age at which we believe that people can make informed choices about sensible snack consumption. We apply our Marketing Code to all our advertising and communications and are committed to providing you and your family with suitable and transparent information about our products. For more information about how we promote our products responsibly, please follow the link to the Mars Marketing Code.

Maltesers Marketing Code on website (Mars [no date])

2.4 Food and drink website features appealing to teens

Websites were excluded from consideration for teen-appealing content if they had

- little or no consumer-oriented content; or
- consumer-oriented content limited to product images and basic product/nutritional information; or
- content directed at general adult audiences (e.g., Batchelors, Donegal Catch Green Isle 2 Sisters Group, Charleville, Brady Family Ham, KP Snacks, Pepsico, Magnum, and Hunky Dorys).

Sites were also excluded if they had child-related content that was directed primarily at parents or teachers, e.g., lunchbox tips (Denny), tips for getting children to eat more fruit or vegetables (Hellmans, Tropicana), baking (Dr. Oetker, Flora), school-based lunch club (Brennans bread), food pyramid or nutrition-related tests or quizzes (Irish Pride), or free cereal bowls for younger children and adults (Kelloggs). Finally, sites were excluded if the main focus was on family-oriented fun or content was directed primarily at younger children (e.g.,

Avonmore, John West, PomBear or Miwadi above).

The remaining sites were evaluated for appeal to teens by three raters: two adults (a developmental psychologist, and a marketing professional who also manages marketing compliance) and a teen. To be considered to have appeal to teens, a site needed to have (i) a homepage that was visually strong and youth-appealing, and (ii) teen-appealing content. Any differences were resolved by discussion, with the casting vote given to the teen.

Examples of websites of 73 top retail food brands in Ireland assessed as having appeal to teens

Websites featuring HFSS items, not recommended for marketing to children and young people under WHO Nutrient Profiling Guidelines (WHO, 2015)

Coca-Cola

www.Coca-Cola.ie
www.happiness.Coca-Cola.com/ie/en/hom¹⁰

The Coca-Cola happiness site is strongly teen-oriented in its visuals and content throughout, with entertainment and activity-oriented downloads, competitions, creative content co-creation, sports and more.



Pringles

www.pringles.com/ie/home¹¹

The Pringles homepage features 3 separate promotions for karaoke kits, Xbox and movies, all of potential appeal to teens which require unique product codes. The Terms and Conditions (18+) are hard to find.



Tayto

www.taytocrisps.ie
www.taytocrisps.ie/park¹²

The Tayto Crisps homepage is humorous, slightly surreal (with iconic Dublin landmarks in a countryside setting) and features Mr Tayto.

It links to the Tayto Park site shown here, featuring teen-appealing theme park rides (see examples below), and at the time of the study Halloween-themed events.



Continued.

Lucozade

www.lucozadeenergy.ie
www.lucozadesport.ie/rugby-instant-win¹³

Searching for Lucozade Sport directly opened the Win Official Rugby Shirts Every 80 Minutes competition. This is 18+ but that is only made evident on the second, competition entry page.



KitKat

www.KitKat.co.uk/content¹⁴

Despite the office scene on the home page, the overall air of humour and relaxed leisure gives it teen appeal. A main tab (not a small tile icon) links to YouTube, launching a video of a 'ninja' teddy with a KitKat, by animator Patrick Boivin, and also featuring vlogger Marcus Butler with the 'Google my break' feature. Both are likely to have strong appeal for teens.



Ben & Jerry

www.benjerry.ie¹⁵

Both the product and the environmental cause are likely to have strong appeal to teens, amplified by the strong graphic identity of the home page and product.



Not shown: Club Orange

www.club.ie links to www.bestbits.ie

The Club Orange site redirected to bestbits.ie; when clicked on, this home page opened a site with social media feeds featuring competitions and a model showing substantial cleavage in an orange grove.

In total, 13 websites, 18% of the 73 food and soft drink sites, were assessed as having features appealing to teens. These are shown in the table on these pages, and as the assessment of appeal to teens was a qualitative judgment, in the digital Appendix we show examples of homepages that were considered for inclusion but agreed by raters to be less appealing to teens. The products and brands featured on the sites were evaluated to identify whether they were high in fat, salt and sugar. To do so the WHO European Region Nutrient Profiling model (WHO, 2015) was applied.

The teen-appealing content on websites fell into three broad clusters which could be characterised as evoking emotion through fun and excitement. These were **entertainment** features that appealed to teens through music, theme parks, festivals, gaming, YouTube and other media content; **celebrities** from sport and entertainment featured in multiple sites; and **competitions/promotions** which drew attention to brands through many different offers: movie downloads, karaoke kits, Xboxes, selfie sticks, power banks, festival tickets, branded emoji

downloads, World Cup rugby shirts, UEFA Champions league tickets and crates of soft drinks. There was considerable overlap across these clusters of teen-appealing features, with sites featuring multiple appeals, so on page 23 we present examples together.

Examples of websites of 73 top retail food brands in Ireland assessed as having appeal to teens

Websites featuring non-HFSS items, cleared for marketing to children and young people according to WHO Guidelines (WHO, 2015).

Volvic

www.volvic.co.uk¹⁶

After reflection (with doubts about whether teens would spend limited budgets on water) we retained the Volvic site in the section appealing to teens. This was for its music festival theme, an engaging count-down to the volcano 'explosion', and appealing infographics on the site about health benefits of water.



Glenisk

www.glenisk.com¹⁷

Although most of the Glenisk site is adult- and parent-directed, the homepage has a powerful image featuring its IRFU sponsorship and high-protein, low fat yogurts. It was therefore considered to have appeal to sport-, fitness- and diet-oriented teens. As the yogurts have less than 10g sugar per 100g, they would pass WHO guidance (2015) for marketing to children.



2.5 Competitions

Many competitions or promotions had strong teen appeal, whether explicitly aimed at children/ teens or not, and thus had the potential to build interest in HFSS products. In several cases age restrictions were not shown where the prize was advertised on the website, and terms and conditions (for example, limiting participation to over-18s) were difficult to find.

An example was the Pringles site, with strong teen appeal and featuring three separate competitions/promotions for karaoke kits, Xbox and movies (see image on p.20). Locating the terms and conditions required clicking onto the relevant promotion or competition page, scrolling past product entry codes and other appealing content, and identifying a link in very small type at the bottom of the webpage (see images on p.24). In our view this would breach the new Advertising Standards

Agency of Ireland Code's 7th Edition (ASAI, 2015), which came into force in March 2016, which requires that promotions' terms and conditions be 'prominently stated' (Rule 5.16). The teen researcher who co-reviewed the sites said of the Pringles offers, 'that's cool, but I would never click on those [Terms and Conditions]'. Somewhat clearer communication of age restriction was seen, for example, in the lucozadesport.ie *Win a Rugby Shirt every 80 Minutes* competition (see images on p.24). Although the 18+ entry requirement was not displayed on the homepage where the competition was advertised, the first click to the entry screen showed the need to enter date of birth prominently.

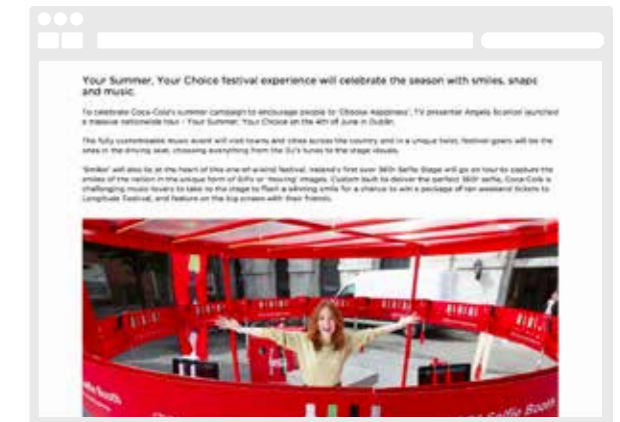
Coca-Cola's *WIN Enjoy your favourite Coke for a chance to win a Coke Selfie Stick* promotion (summer 2015) was open to those aged 13 and over (with parental permission if under 16). Its terms and conditions raise a

query about excessive consumption. In the Republic of Ireland (RoI), every entry required purchase of a 500ml promotional pack of Coca-Cola; and up to 20 entries per person, per day were permitted. For comparison, in Northern Ireland no purchase was necessary and entry was limited to one per person per day. The RoI condition could be considered to facilitate or encourage excessive consumption, against the ASAI Code 7th Edition (ASAI, 2015, 8.21b) that, in marketing to children under 16, communications featuring a promotional offer linked to a food product of interest to children should 'avoid ... encouraging the purchase of an excessive quantity for irresponsible consumption'.

Examples of features of websites for food and drink likely to appeal to teens



Entertainment: Co-creating content, downloading Coca-Cola emojis and cycling on Coca-Cola city bikes¹⁸



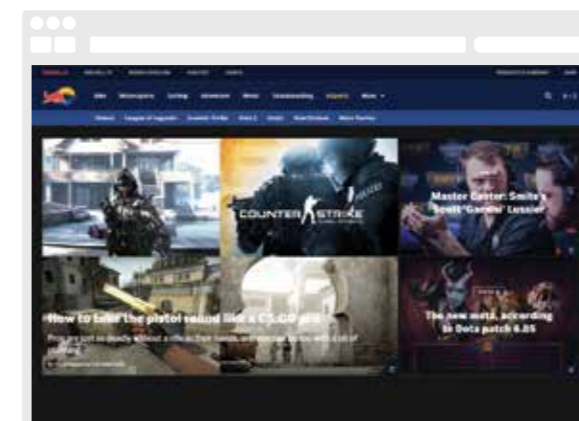
Entertainment/celebrity: Angela Scanlon (TV presenter & digital host of The Voice) launched Coke's 360 festival selfie stage¹⁹



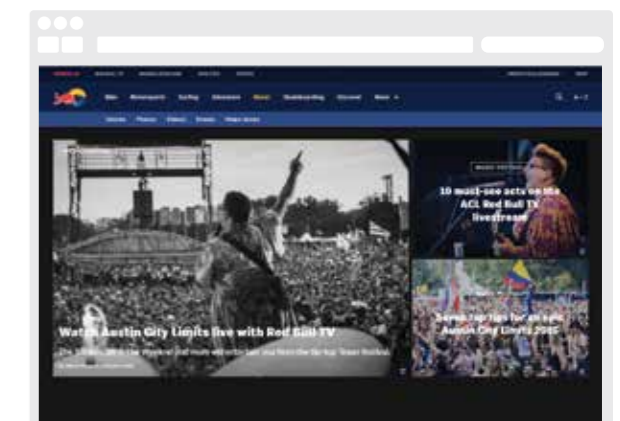
Sport/celebrities: Glenisk is the official yogurt of the IRFU and Ireland rugby stars feature²⁰



Sport/celebrities: Rugby World Cup stars feature in a Lucozade Sport competition²¹



Entertainment: Red Bull site with features on gaming and music news²²

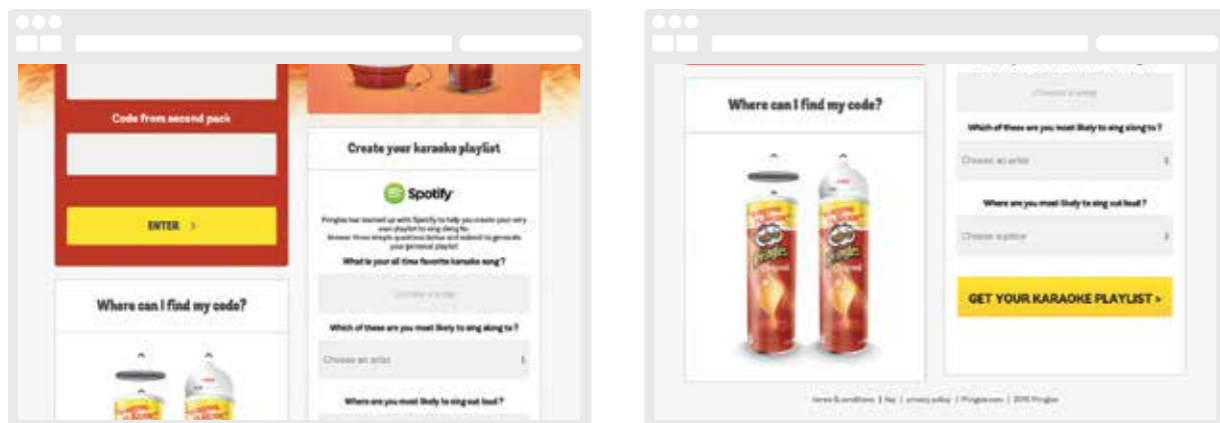


Finally, all sites had direct links to social media sites popular with teens, primarily Facebook, Twitter and YouTube, but also Flickr, Instagram, Pinterest and Snapchat. These were usually facilitated by small icons on the homepage, although sometimes (as with the

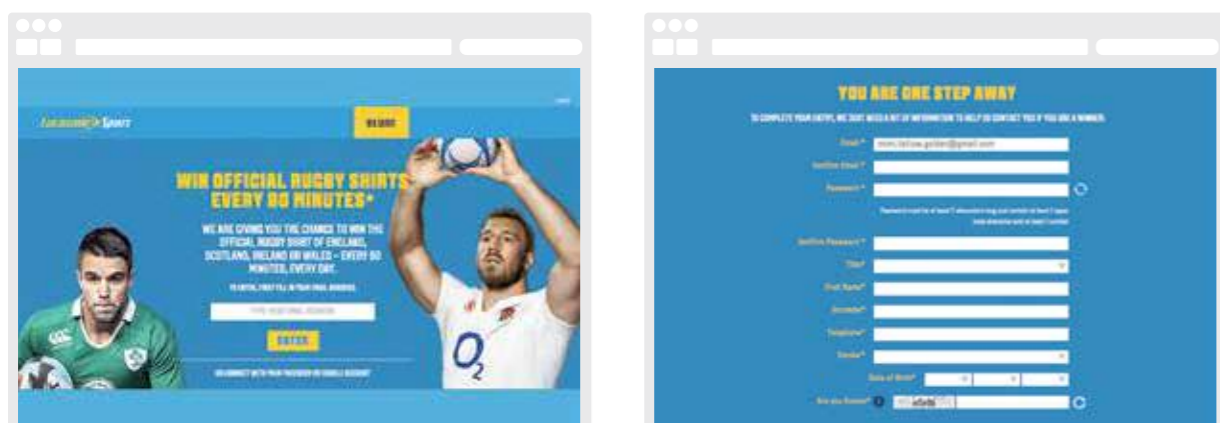
KitKat and Maltesers examples on pages 19 and 21 respectively) links to YouTube or Facebook were more prominent. The social media sites provide access to a great deal of brand-related content whether professional or user-generated, e.g., taytocrisps.ie links to Flickr, with

hundreds of images of Tayto Park theme park and zoo. Coca-Cola.ie links to seven social media sites including Facebook, Instagram, Snapchat, YouTube and others where many further visual images and promotional stories about Coca-Cola products are available.

Competitions – examples of websites with age restrictions on participation and where this information was found



Pringles competition with Spotify karaoke list (18+). The age restriction is listed within Ts&Cs, the link for which is very hard to locate.²³



Lucozade competition (18+). On clicking ENTER, the entry screen requires a date of birth. Although the age bar is not shown on the advertisement, it becomes clear quickly that the competition is for over 18s.²⁴

2.6 Summary

On 73 websites of the top retail food brands in Ireland, just 1 in 10 had some child-directed content, much of it at most mildly engaging, in contrast to other jurisdictions where engaging and immersive children's sections are widespread. In informal discussions, digital marketers reported normative

expectations in the industry in Ireland of not targeting young children but directing marketing at their parents instead. Games and apps in app stores, fast food sites, and sites for international products of appeal to children in Ireland were not included in this analysis and require systematic examination.

Notably, however, nearly one in five websites, almost all for HFSS items, had content directed at or appealing to young people, focusing on teen activities, entertainment, sporting celebrities and competitions with entertainment-, media- and sport-based prizes.

3. On Facebook:

Food brand Pages popular among young teens

SHARE
ME

LIKE
ME

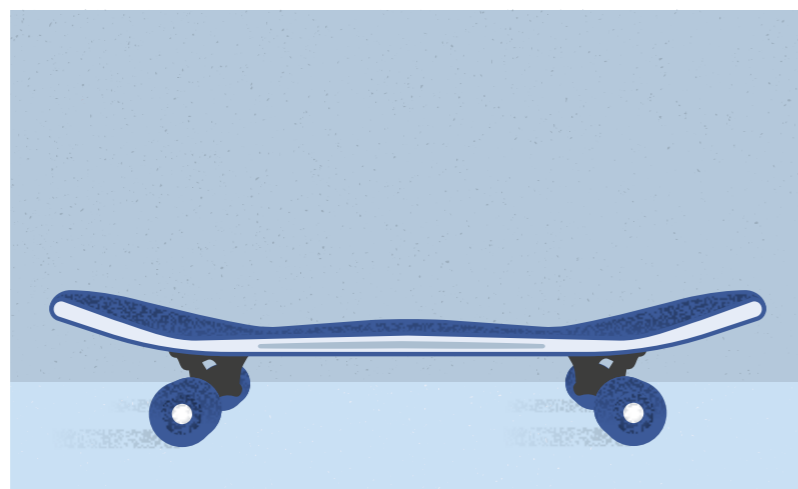
3. On Facebook: Food brand Pages popular among young teens

The next part of this study examined the Facebook pages of the food brands in Ireland with the highest Facebook 'reach' among young teens.

Facebook remains one of the most popular online locations for older children and teens in many countries including Ireland, despite the recent rise of Instagram and Snapchat among younger teens (O'Neill & Dinh, 2015; Pew Research Center, 2015). Approximately 70% 13-14 year olds in Ireland have a Facebook account, rising to nearly 90% among 15-16 year olds, substantially more than for other social media. Indeed, despite being under-age for use of social networking sites, even 14% 9-10 year olds and 39% 11-12 year olds have a profile on a networking site, where Facebook also dominates (O'Neill & Dinh, 2015).

Not only is Facebook popular among teens, but it is currently also the primary location for social media marketing (Stelzner, 2015), including in Ireland (Edelmann Digital & The Marketing Institute, 2014) and has been described as 'most valuable billboard on earth' (Luckerson, 2015); industry analysts characterise all online advertising other than Facebook and Google as niche (Thielmann, 2015). Facebook's ad revenue approached US\$4 billion for one quarter of 2015 alone, and it reported a 25% increase in advertising between February and September 2015 (Facebook, 2015; Thielmann, 2015). Therefore, despite the fragmentation of children's digital media use, Facebook is a useful place to initiate investigations of social media marketing of HFSS foods to children and young people in Ireland.

Facebook weaves marketing content into users' News Feeds and thus into their social lives. It encourages brands to build a 'closer relationship' with customers²⁵ by creating a Brand Page and posting on it. Facebook may deliver these posts to users' News Feeds (the stream of stories and advertising delivered to each individual user) targeted to interests, age, gender, location, and their online behaviour.



Brands, public figures, and Facebook friends are all constantly competing for space in every user's News Feed. If a Facebook user 'likes' a brand's Facebook Page, they have effectively given it the status of a Facebook friend, and may receive its posts as updates in their News Feed (similar to seeing their friends' updates). This is called 'organic reach'. If a Facebook friend engages with a brand, e.g., liking or commenting on a post, tagging or sharing the post with another user, that user may then receive updates from a brand. This is called 'viral reach', which can alter friends' News Feeds substantially (Honan, 2014). Finally, with 'paid reach', brands can boost their posts in users' Facebook Newsfeeds and target specified users by

demographics and interests. For example, brands can specify that their posts should reach 13-14 year olds who like fast food. Since late 2013, organic reach has declined on Facebook, and companies are more likely to need to pay to have their posts seen (Ernault, 2014). However, Facebook says that posts which are less overtly promotional will fare better in its updated algorithm since January 2015 (Facebook for Business, 2014). The effect of this will be require companies to engage in more 'stealth', emotion and entertainment-based marketing techniques.

Facebook brand pages for HFSS products garner many 'likes' from teens in other countries. In Australia

and New Zealand, Freeman et al., (2014) identified five most 'liked' brands among 13 to 17 year olds: Domino's Pizza, McDonald's, Subway, Coca-Cola, and Slurpee. They found that brand Pages most 'liked' by 13 to 24 year olds engaged in extensive, interactive marketing techniques including links to media, apps, videos and webpages; requests for 'likes', 'shares', 'comments' and user-generated content; conversations and posts by others; competitions, prizes and giveaways; celebrities, sportspeople, and children's characters; quizzes or

polls; sponsorships and corporate social responsibility or philanthropy (Freeman et al., 2014).

For this analysis we sought to identify which food brands are most 'liked' on Facebook by young teens, the first such systematic analysis as far as we are aware. We wanted to know what proportion of favoured food brands are for HFSS products, and what strategies these brands use to appeal to Facebook users. We focused on brands with a high potential reach among 13-14 year olds, the youngest age when users are permitted to sign up for

a Facebook account. It should be noted that Facebook users recorded as '13' or '14' years of age may in fact be 12 years or younger as it is widely documented that Facebook is unable to stop the practice of younger children using Facebook by giving a false date of birth (O'Neill & Dinh, 2015; Sweney, 2013a, 2013b).

To identify marketing techniques of the HFSS brands with the greatest Facebook reach among 13-14 year olds in Ireland, we engaged in several stages of analysis that are outlined here.

3.1 Brands with the greatest 'reach' in Facebook among users aged 13 and 14 years in Ireland

We initially planned to access data on age-related Facebook brand 'likes' and reach from the social media analysis company Socialbakers, as described by Freeman et al. (2014). However, Socialbakers confirmed in May 2015 that they no longer made these data publicly available – an example of the frequent flux in data availability that compounds the many challenges of research in this field.

Instead, Socialbakers recommended that we use Facebook's *Create Adverts* feature to identify those brand 'interests' that generate the highest Facebook reach within our demographic of interest. *Create Adverts* defines a target Facebook audience for potential advertisers. When logged in to Facebook as the Page Administrator of a youth-oriented page, *Create Adverts* could be selected from the dropdown menu (May 2015). In *Create a Custom Audience*, we specified *Ireland* and *13-14 years*. The *Interests* filter then listed the size of *specific audiences by looking at their interests, activities, the Pages they have liked and closely related topics*. i.e., Facebook assesses a potential audience who have 'liked' or engaged with named Pages or similar ones. Therefore this provides a

measure of the relative popularity on Facebook of these brands.

To enter food and drink brands as *Interests*, we engaged in a three step process. First, we consulted Socialbakers' *Facebook Pages Stats in Ireland*²⁶ to identify the 30 food and soft drink brand Pages most 'liked' by general Facebook users in Ireland, by selecting *Brand* followed by (i) *Beverages/soft drinks*, (ii) *Retail Food*, and (iii) *Fast Moving Consumer Goods – Food*, and noting the 10 brands in each category with the most Facebook 'fans' (25 May 2015). Second, we entered these 30 brands, along with the 83 top retail food and drink brands assessed in Study 1, in Facebook *Interests* in turn, a total of 113 brands, encompassing HFSS and non-HFSS products. Third, we identified which of these food and drink brands Facebook defined as generating the greatest potential reach among 13-14 year olds in Ireland.

Brands generating the greatest potential reach among 13-14 year olds in Ireland were 8 restaurant or delivery brands and 11 retail food/soft drink brands: Coca-Cola, McDonald's, Tayto, Cadbury Dairy Milk, Ben & Jerry's, Domino's Pizza,

Pringles, Subway (Ireland & UK), Lucozade, Eddie Rockets Ireland, Supermac's, Apache Pizza, 7 Up, Haribo, M&Ms, Nando's, Abrakebabra and KitKat (see Table 1).

Notably, these brands feature products that the WHO Regional Office for Europe Nutrient Profile model assesses as not permitted for marketing to children (WHO, 2015). Chocolate, biscuits, ice-cream, sugar-sweetened beverages, and artificially sweetened beverages are not permitted; nor are crisps with more than 0.1g salt per 100g; or ready foods with more than 10g fat, 4g saturated fat, 10g sugar or 1g salt per 100g. The proportion of products not permitted varies by brand. Brands featuring sweets, chocolate, crisps, soft drinks, energy drinks, and ice cream are mostly or entirely not permitted for marketing to children (WHO, 2015). Pizza, sandwich and other fast food brands such as McDonald's, Domino's Pizza, Apache Pizza and Subway have some products that pass these guidelines and others that do not. For example, in the case of Subway, many of their savoury products pass the guidelines but sweet products do not; and for Apache Pizza, many pizzas do not pass the WHO NP guidelines (WHO, 2015).

3.2 Analysing brand Pages: Frequency of brand marketing activity

Each brand Page was searched for, while logged into Facebook. The Irish Page was analysed wherever possible (Page urls are listed in the Appendix). All Pages appeared to be professionally moderated. On most Facebook brand Page Timelines, posts remain viewable for extended periods of time. Wherever possible, the previous 20 posts for each brand were analysed, however far back these extended. Brand Page Timelines were analysed in June/ July 2015. For 16 of the 19 brands, the 20 most recent unique posts in the Timeline could be viewed. For

Haribo, only 18 unique posts for 2015 could be viewed. For Coca-Cola, a redirect to the US Facebook page was recorded on the day of data collection. On inspection, this content was very US-oriented. To ensure comparability of content, Coca-Cola's Facebook Page was accessed again in October when 16 unique posts for May-October 2015 could be viewed in the Ireland Brand Page's Timeline or Photos. As there was almost no activity on the Fanta page in the previous 6 months (only profile picture changes), it was excluded from analysis.

Some brands repeated posts, particularly for competitions. As we wished to capture the greatest variety of Facebook marketing techniques, all posts were counted, but repeat posts were not included in the thematic analysis of marketing techniques which was restricted to 'unique' posts. In total, 354 unique posts were recorded and coded.

3.3 Analysing brand Pages: Brand Page 'likes' and brand post 'likes' and shares

To give an indication of the overall popularity of a brand on Facebook, the number of 'fans' (people who have 'liked' its Page) was noted (May-October 2015; Table 1). As these 'likes' are either Ireland-based or international, not all are directly comparable. As can be seen, Coca-Cola had the greatest number of international Facebook fans (over 93 million), followed by McDonald's and KitKat. Tayto has a particularly high number of Ireland Page 'likes' (over a quarter of a million), followed by Lucozade and Eddie Rockets. Subway, as an Ireland/UK page, falls somewhere in between.

As the number of 'fans' of a Page does not necessarily reflect active engagement with Page content, the number of 'likes' was recorded for all posts (including repeats), and divided by the total number of posts analysed for each brand, to arrive at an average number of 'likes' per post for each brand (Table 2). The figures give an indication of the level of brand activity and user engagement on Facebook. It should be noted that we cannot assess whether this actually reflects engagement from children and young people as we do

Table 1: Food/drink Interests in Facebook, Facebook-estimated relative Potential Reach, and brand Page 'likes' *

Food/drink Interest entered to estimate potential reach of a youth page in Ireland (13-14y)	Potential reach (ranked)	Number of Ireland 'likes' (rounded)	Number of international 'likes' (rounded)
Coca-Cola	1	--	93.4 million
McDonald's	2	--	59.4 million
Tayto	3	270,000	--
Cadbury Dairy Milk	4	--	12.5 million
Ben & Jerry's	5	--	8 million
Domino's Pizza	= 6	59,000	--
Pringles	= 6	--	25.1 million
Subway (Ireland & UK)	8	424,000	--
Lucozade	9	131,000	--
Eddie Rockets Ireland	10	113,000	--
Supermac's	11	63,000	--
Apache Pizza	= 12	42,000	---
7Up	= 12	--	5.2 million
Haribo	= 12	29,000	--
M&M's	= 12	48,000	--
Nando's	= 16	--	3.5 million
Abrakebabra	= 16	31,000	--
KitKat	18	--	25 million

*Likes' for brand Pages as of October 2015.

not have access to analytics about who 'likes' brand posts (this is only available to Facebook or the brand Page). Note also that days-per-post counts are estimates, as only some brands retain all posts in their Timelines on their brand Pages.

It is evident that brands vary greatly in their level of activity on Facebook, ranging from *less than 1 post per week* (Nando's – 6.8 days per post) to more than *1 post daily* (Eddie Rocket's, Supermac's, 0.67 and 0.96 days per post, respectively; Table 2). Some brands achieved very few shares per post (5 or fewer for McDonald's, Apache Pizza, Abrakebabra, Pringles and negligible shares for Nando's and Haribo). The greatest sharing was recorded

for KitKat (UK page), Ben & Jerry's, Supermac's, Eddie Rocket's, Cadbury Dairy Milk, and Tayto (see Table 2). Note that for Coca-Cola, the days-per-post figure was not calculated as this Page was accessed later than the others, due to the redirect to a US page on the days of the sweep, when not all posts on the Ireland page were visible in the Timeline. This reflects the challenges faced by researchers where access to information on digital platforms fluctuates.

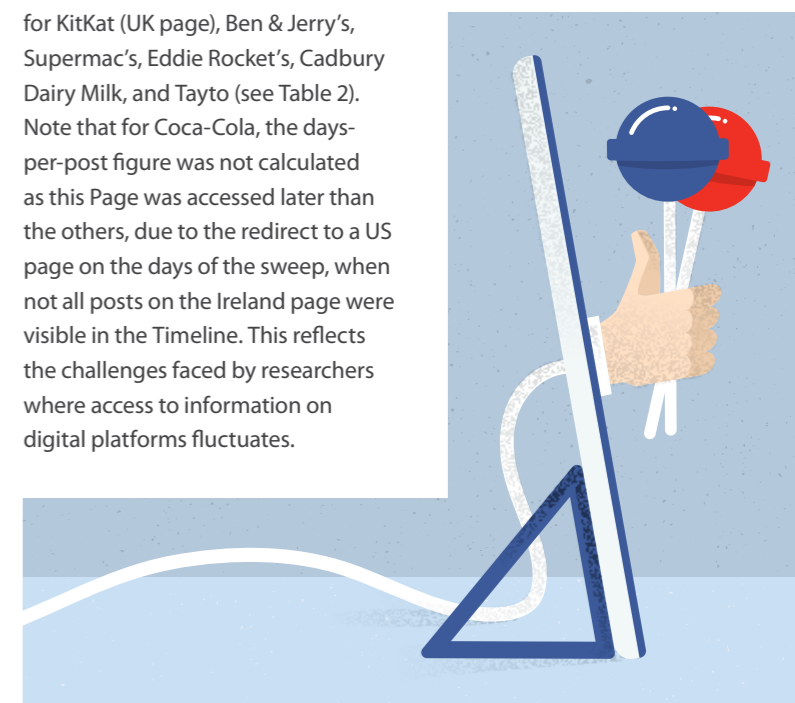


Table 2: Facebook brand posts: Posts recorded, post frequency, and 'likes' and 'shares' recorded per post

Brand	Page	Number unique posts recorded	Number days for 20 unique posts	Number posts including repeats	Frequency of posting: Number of days between posts	Total 'Likes'	Total Shares	'Likes' per post	Shares per post
McDonald's	Irl	20	41	23	1.8	1349	81	59	4
Tayto	Irl	20	66	20	3.3	5434	480	272	24
Cadbury Dairy Milk	Irl	20	12	25	0.5	2852	600	114	24
Ben & Jerry's	Irl	20	61	21	2.9	22011	1368	1048	65
Domino's Pizza	Irl	20	55	24	2.3	7510	167	313	7
Lucozade	Irl	20	35	20	1.8	5865	115	293	6
Eddie Rocket's	Irl	20	22	33	0.67	5047	935	153	28
Supermac's	Irl	20	22	23	0.96	1447	998	63	43
Apache Pizza	Irl	20	34	21	1.6	279	107	13	5
7Up	Irl	20	50	24	2.1	2150	157	90	7
Haribo	Irl	18	88	24	3.7	1348	1	56	0.04
M&M's	Irl	20	33	20	1.7	816	139	41	7
Nando's	Irl	20	143	21	6.8	1118	5	53	0.24
Abrakebabra	Irl	20	70	22	3.2	3522	37	160	2
Subway	Irl/UK	20	52	31	1.7	1605	397	52	13
Pringles	UK	20	42	21	2	4392	82	209	4
KitKat	UK	20	115	20	5.8	58371	8600	2919	430
Coca-Cola*	Irl	16	--	20	--	--	--	--	--

*note: Coca-Cola is excluded from some analyses as its Page was viewed at a later date than the others



3.4 Analysing brand Pages: Coding the brand posts for marketing techniques

To code the Facebook brand posts, a sequence of six steps was involved. First, initial codes were drawn from previous online sweeps and food advertising studies (Consumers International, 2011; Freeman et al., 2014; Henry & Story, 2009; and Kelly et al., 2008). Second, inductive coding of the brand posts, including extensive discussion and review between two adults and a teen researcher, resulted in a final set of codes. Third, all 354 unique posts were coded by two researchers, after which the teen researcher analysed a random sample of posts to which 62 codes had earlier been assigned. Inter-rater agreement, calculated as percentage agreement with the codes, was 83%, a high rate of agreement.

In the fourth step, similar codes were combined into themes. For example, three codes that referred to engagement (*Facebook hashtags*, *Prompt to comment or post*, and *Prompt to tag friends*) were combined for an **Engagement** theme. The codes for *Fun*, *Celebration* and *Doing something fun with product/packaging* were combined to form the **Having Fun** theme. **Entertainment** encompassed *Movies*, *TV* and *gaming*, and *Movie launches*. Links to other digital platforms (*Instagram*, *Twitter*, *Websites* and *YouTube*) were combined in a **Cross-digital links** theme. This resulted in 37 themes in total.

In the fifth step, the frequencies of these themes were analysed. Themes occurring most frequently are reported here. Finally, the themes were clustered into **three overarching themes** reflecting the broad marketing approaches taken. These were (1) **Identifying**, where brand or product logos, names or images were featured; (2) **Linking**, where users were encouraged to spread the word about a brand, event campaign or event or engage with the brand in other digital media; and (3) **Persuading**, where various marketing techniques were used to evoke emotions and build brand identity (see Table 3).

3.5 Marketing techniques of Facebook food Brand Page posts with highest reach among 13 and 14 year olds in Ireland

Of the 354 individual brand posts we analysed, most (84%; n = 298) were static images, either photographs or drawings/cartoons. Video (12%; n = 44) was less frequent and text-only posts (2%; n = 7) were rare. Nearly 90% of Facebook page posts from food brands used multiple marketing approaches; most combined between two and six approaches, as can be seen in the examples.

What was in the Brand Page posts?

The marketing approaches and their frequencies are presented in the table and charts in two ways:

- i. **Brands: How many of the 18 brands** used a particular approach, to give a sense of food and drink brands' use of certain marketing techniques. This is useful for understanding the overall marketing environment. Some brands used certain techniques frequently and other brands did not use them at all, for example, McDonald's frequently announced new products, but had no competitions, whereas for Eddie Rocket's the reverse was the case, with no new items announced, but many competitions.
- ii. **Unique Post: How often a technique was used across all the 354 individual brand posts** categorised for this study (excluding repeats of any post).

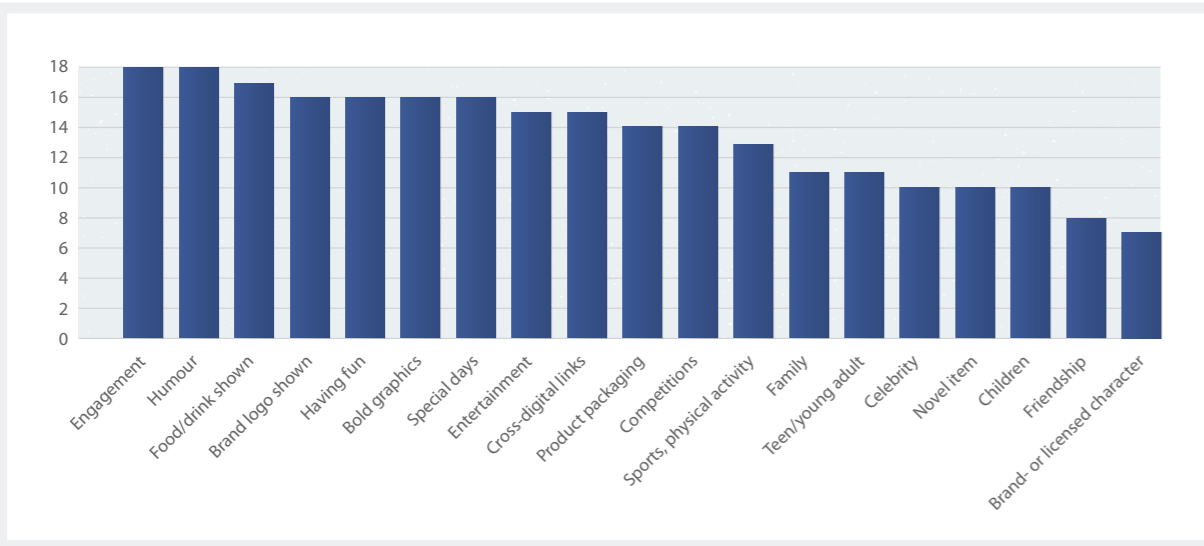


Table 3: Marketing techniques used on Facebook brand Pages

	Brands N = 18		Unique posts N = 354	
	n	% ¹	n	%
Identifying				
Advertised food/drink shown	17	94	168	47.5
Brand logo shown (within the post)	16	89	157	44.3
Product packaging shown	14	78	104	29.4
Linking				
Engagement: Facebook #, comment, tag and post prompts	18	100	190	53.7
Cross-digital links (website, app, YouTube, Instagram)	15	83	50	14.1
Persuading				
Humour (jokes, puns, witty comments)	18	100	78	22.0
Having fun ²	16	89	57	16.2
Bold graphics, animation, cartoons	16	89	74	20.9
Special days: Popular culture, #days, national days, political events ³	16	89	47	13.3
Entertainment (TV, movies, games)	15	83	62	17.5
Competitions ⁴	14	78	82	23.2
Sports, being physically active	13	72	31	8.8
Family (activities, events, value and fun)	11	61	41	11.6
Teen/Young adult shown	11	61	38	10.7
Celebrity, entertainment/sports star	10	56	21	5.9
Novel item - new menu, product or flavour	10	56	49	13.8
Children shown	10	56	15	4.2
Friendship	8	44	11	3.1
Brand or licensed characters	7	39	46	13.0

1. As these %s are of a number under 100 (18 brands), they are indicative and are rounded
 2. Includes celebration, doing something fun with product, packaging and doing exciting or enjoyable things
 3. E.g., May the 4th (Star Wars Day), St Patrick's Day, Mother's Day, Marriage referendum, #ThrowbackThursday, #Humpday (Wednesday) #chooseday (Tuesday)
 4. There were 82 distinct posts for 31 competitions and 36 repeats, 117 competition posts in all

Figure 1: Top techniques used in Facebook food and drink marketing: 18 brand Pages popular with young people in Ireland



Identifying the food and the brand

Almost all brands, 17, showed the **Food/drink** itself; 15 showed the **Brand logo** and 14 showed the **Product packaging** (Figure 1). Interestingly, almost all brands (16 of 18), and over a quarter of posts in total in this study (n = 96, 27.1%) had one or more posts that used *none* of these typical ways of identifying an advertised product or brand – the post was only identifiable by the Facebook ‘tile’ icon. This indicates that, rather than displaying their product or informing people about it, food brands on Facebook are seeking to establish interest, engagement and connect with people in less overt ways – as Facebook’s algorithm requires them to do if they are to achieve good ‘reach’.

Linking – to other users and to other digital media

All 18 food and drink brands popular with young people in Ireland examined in this analysis used **Engagement** – Facebook hashtags (#) and invitations to ‘like’, share, comment or post (Figure 1). Within the **Engagement** category, 15 of the 18 brands used a Facebook hashtag (in 37% unique posts, n = 130), and 10 brands directly prompted Facebook users to tag a friend, or to ‘like’, share, or comment on a post (n = 30 unique posts, 8.5%), activities that will increase the likelihood of their Facebook friends being shown such posts. In addition, 15 brands featured **Cross-digital links** to other platforms where links, comments and shares can take place such as Instagram, Snapchat or the brand website (n = 50, 14.2% posts in total).

Persuading with emotional and other appeals

All brands used **Humour** (Figure 1). Jokes and puns were seen in posts on all 18 brand Pages – referring to movie releases, popular days (such as Star Wars Day, May the 4th, a pun on the Star Wars phrase ‘may the force be with you’), graffiti and YouTube to link brands to youth culture using cute images, puns and jokes.

Almost all brand Pages (16) used **Bold graphics or cartoons** to draw attention to their posts. The same number of brand Pages showed various forms of **Fun**, such as going on rides in the Tayto Park theme park, doing something fun in response to a brand’s new product launch campaign (Cadbury’s Puddles), a Subway family fun day out, doing something fun with the advertised food (making a duck’s beak with Pringles crisps), or references to gaming (KitKat). The **Special Days** theme was also recorded on 16 brand Pages, using popular memes such as weekly ‘special’ days such as #ThrowbackThursday (#TBT), national events (e.g., the Marriage Referendum), entertainment (the Eurovision Song Contest) and calendar events (Mother’s Day).

Engagement - Tag a friend, comment, post a photo,

M&M’s Ireland

It’s National Best Friend Day! Who’s the Red to your Yellow? Let us know by tagging them in the comments below and the two of you could win delicious M&M’s.



Engagement (tag friend), Friendship, Brand characters, Cartoon, Brand logo

Supermac’s

WIN with Supermac’s this weekend! We have 2 vouchers to give away to TWO lucky followers - like, tag a friend and share the love 😊 Winner picked at 4pm this evening!



Engagement (tag a friend), Brand logo, Friendship, Competition

Coca-Cola

Live out loud and put your inhibitions on hold! #choosehappiness



Engagement (#), Logo shown, bold graphics

Pringles

This... this is what we like to see! How do you get creative with ‘em?!



Engagement (post a photo), Fun with product, Food shown

Apache Pizza

Tag a friend you think is addicted to pizza!!!



Food, Engagement (tag friend), Friendship

Apache Pizza

Claim your free bag of chips by downloading our new App today www.apache.ie/new-app-store-list



Engagement (download app), Food shown, Logo shown

These show how brands take the opportunity to link to current events, national days and days popular with young people.

Fifteen brands referred to many different kinds of **Entertainment** popular with teens; and 14 of the 18 brands were running **Competitions**.

In descending order of frequency, brand Pages also made reference to **Sporting and physical activity**; **Family** events or images; **Teens or**

young adults; **Celebrities** popular with young people; **Novel** food items; **Children**; **Friendship**; and used **Brand – or licensed characters**.

Most frequent marketing techniques in individual brand posts

The most frequent technique used in the 354 unique posts coded in this study was the **Linking** technique of **Engagement**, followed by the three **Identifying** techniques of showing

the **Food** itself, the **Brand logo** and the **Packaging** (see Figure 2).

After these, **Persuading** techniques followed: **Competitions**, followed by **Bold graphics**, **Humour**, links to **Entertainment** and references to **Having fun**. The remaining more frequent techniques were **Cross-digital links**, **Novel items**, **Special days**, **Brand- or licensed characters**, **Family** and showing **Teens/young adults**.







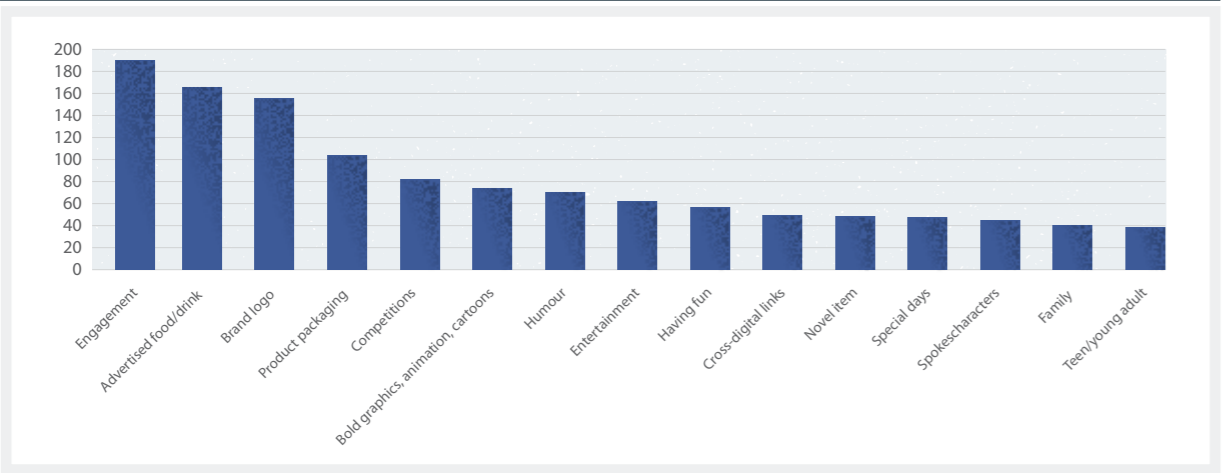






Humour	Food or drink, packaging, or brand logo shown; or none shown	
<p>Eddie Rockets Ireland</p> <p>I like BIG BUNS and I cannot lie! Tell us your favourite hamburger for a chance to win a €3000 trip to the USA! To enter just fill in an entry form at your nearest diner!!</p>  <p>Humour, Engagement (comment, in-store), Competition, Bold graphics</p>	<p>Ben & Jerry's</p> <p>Remote control, check. Spoon, check. Chocolate Fudge Brownie, check. And relaaaaaaax!</p>  <p>Food shown, Packaging shown</p>	<p>KitKat</p> <p>Retro or real-life, beat your high-score gaming break with KitKat.</p>  <p>No food, brand logo or packaging shown in the post; Fun</p>
<p>Lucozade Energy Ireland</p> <p>Get yourself over the midweek hump with a Grafruitti 😊</p>  <p>Humour, Packaging, Brand logo</p>	<p>Subway UK & Ireland</p> <p>#chooseday you know what to do! Chicken Pizziola vs Big Beef & Chorizo Melt you decide!</p>  <p>Food shown, Bold graphics, Engagement (#)</p>	<p>Cadbury Dairy Milk</p> <p>Looks delicious right? All you have to do is upload a pic of your favourite #PuddlesRainDance move and we'll send you one!</p>  <p>Food shown, Engagement (# & send picture)</p>

Figure 2: Top tactics used in Facebook food and drink brand Page posts (n = 354) of brands most popular with young people in Ireland



Having fun	Special Days	
<p>Coca-Cola</p> <p>The Coca-Cola 'Your Summer, Your Choice' tour visits Dundrum Town Centre this Saturday June 20th from 12-6pm and we want to see you there! Take the perfect summer pic on Ireland's first-ever 360° selfie stage, win tickets to Longitude music festival & bring a smile to our special Coca-Cola vending machines!</p>  <p>Fun; Entertainment (music festival) [In video: packaging and logo shown; Cross-digital (Snapchat) Engagement (post prompt)]</p>	<p>Subway UK & Ireland</p> <p>May the 4th Be With You #StarWarsDay</p>  <p>Special days, Engagement (#)</p>	<p>Cadbury Dairy Milk</p> <p>It's #Eurovision night! Play Herovision bingo and 'nul points' could earn you a handful of Heroes. Get your bingo cards at heroivision.co.uk #FreeTheJoy</p>  <p>Special days, Packaging, Brand logo Engagement (#), Cross-digital (website), Fun</p>
<p>Cadbury Dairy Milk</p> <p>Ireland's got moves! We love seeing your #PuddlesRainDance pics, keep them coming! Join us as we make history with the world's first online Rain Dance! http://woobox.com/qq7rzi</p>  <p>Fun; Teen/young adult; Engagement (#; send pictures)</p>	<p>Mr. Tayto</p> <p>Get out there and vote! This spud has! Mr. Tayto x</p>  <p>Special Days (Marriage Referendum); Brand character; Humour</p>	<p>Domino's Pizza Ireland</p> <p>Share your best worst Cheesy Dad Jokes for your chance to win the old man a flavoursome Father's Day pizzahaha.</p>  <p>Special days, Food, Brand logo, Engagement (share jokes)</p>

3.6 Summary

On Facebook, the food/drink Pages that would generate the greatest reach among users aged 13-14 in Ireland exclusively feature, or include, HFSS not recommended for marketing to children under WHO guidelines (WHO, 2015). These included major international brands such as Coca-Cola and local Irish

ones such as Tayto. Brands posted updates on their Timelines from less than once a week to more than once daily. They actively sought young people's engagement by prompting them to 'like' their posts, tag friends, write comments, upload photos and also by providing many links to events and online content of

interest to young people. They used competitions, bold graphics and strong visuals, humour, having fun, links to 'special days', and references to entertainment (current movies, music, TV, festivals), and sometimes even created these entertainment events themselves.

This analysis of food and soft drink brands' Facebook marketing techniques therefore yields strong evidence that brands direct immersive, engaging persuasion at teen Facebook users in Ireland, based on novelty, competition, fun, humour, entertainment and peer approaches. Interestingly, over a

quarter of brand posts analysed did not show food, packaging or a brand logo, indicating a shift to more subtle promotional strategies that are less easily identified as advertising. Furthermore, emotional strategies in these posts were pervasive. Taken together, these indicate that social media posts for

HFSS foods popular with young people in Ireland deploy strategies that will activate children's interest, spread their marketing virally through their social networks, and evade children's ability to process consciously that posts are marketing that seek to sell.

Competitions

Cadbury Dairy Milk

Fancy jetting off to Barcelona? The final #FlyFriday draw takes place this week! Experience the tastiest way to travel with Cadbury Air! For your chance to win a seat on the Cadbury jet visit www.flycadburyair.com



Competition, Engagement (#), Cross-digital (website), Brand logo

Eddie Rockets Ireland

Have you entered yet? Here's your last chance! We're giving away a Family Special Voucher!! Just correctly Name the Family to be in with a chance to win!



Competition, Engagement (enter comment), Bold graphics, Family

Lucozade Energy Ireland

Don't forget to enter our Lucozade Dan Caption Competition where you could win all these goodies AND a €150 holiday voucher! on.fb.me/1J9WeKu



Competition, Fun, Bold graphics, Packaging shown, Cross-digital links

Sports and Celebrities

Supermac's

Supermac's would like to wish the Galway Team the very best of luck in the Leinster GAA Senior Hurling Championship Final today! Ádh mór oraibh!



Sports; Special days; Celebrities; Brand logo

KitKat with Marcus Butler

Attention all breakers! Join Marcus Butler as he has a break to enjoy the KITKAT and YouTube #mybreak playlist



Celebrity; Cross-digital (YouTube); Engagement (#)



3.7 Postscript: What do children actually see in their Facebook News Feeds?

Having identified the marketing techniques used by brands featuring HFSS products in Facebook, the next step is to identify how much of this promotional content *actually appears* in children's Facebook News Feeds. However, here lies a major challenge. As noted in Chapter 1, researchers cannot access data held by the major food, marketing and social media companies on children and HFSS marketing. This is all the more frustrating as 21st century data analytics allow for sophisticated analyses of children's responses to unhealthy food marketing – but not by those interested in public health or children's rights.

Researchers cannot identify how much marketing content actually reaches young people in Facebook as all users' News Feeds are heavily edited, showing only about 1 in 5 updates actually received. The average user receives about 1500 updates daily to their News Feed, so Facebook 'curates' these with a constantly updated algorithm to select about 300 updates it considers most relevant (Backstrom, 2013). Facebook's selections, and hence a brand's 'reach', depend on activities and interests of individual Facebook users and their friends; brands' marketing techniques; and ad buying algorithms that deliver ads to targeted people using automated 'real-time' auctions (Ernault, 2014; see also urls in the digital Appendix from Facebook Ads pages for details on how Facebook Ads are selected).

Is examining teens' Facebook News Feeds the solution? Unfortunately, this is not an option for researchers bound by most academic and professional ethical research guidelines. This is because viewing a young person's News Feed means

viewing content from their entire network, and their network's networks – and gaining informed consent from all these people to view their personal data is impossible. It should be noted that social media platforms themselves constantly carry out research on users' data, typically without ethical overview (boyd, 2014c).

Alternatively, can researchers create fictional Facebook profiles approximating teens' online behaviours? Such studies are rare, most likely because Facebook's Terms and Conditions require using real names when setting up user accounts. One study in Norway reported that young people received almost no food brand advertising at all (Bugge, 2016). However it monitored News Feeds minimally, and it confounded two variables – the girl profile only liked unhealthy food Pages and the boy profile only liked healthy Pages. This is a concern as Australian research has found that teen boys are more vulnerable to ads for unhealthy foods (Cancer Council Australia, 2015), and hence may be targeted more than girls. In the US, in a more robustly designed study, researchers created a network of 12 simple Facebook profiles that 'liked' a range of HFSS brands and 'shared' brand posts with one another (Harris et al., 2016). Two 13 year old boys who 'liked' 5 HFSS food brands each received more than 7 HFSS posts a day.

At this point, therefore, there is some evidence that if children 'like' HFSS food brands on Facebook and have friends who 'like' them, they will receive a great deal of HFSS marketing daily. However, currently health- and rights-oriented researchers who wish to quantify the

extent of children's exposure are at an impasse due to the proprietary nature of digital marketing data, combined with ethical challenges of viewing children's activities online. No doubt, solutions will be developed, but they are urgently required.



4. Who's feeding the kids online: What do parents know?

4. Who's feeding the kids online: What do parents know?

This report has identified digital food marketing appealing to or directed at teens. As noted in Chapter 1, most children and young people engage with and enjoy advertising, including in social media. Food companies actively target children over 12 years, based on the argument that older children can make reasoned decisions about unhealthy foods – yet teens may be particularly vulnerable to online (particularly social media-based) marketing techniques. To develop information resources for families, and assess public attitudes to regulation, understanding parental knowledge is key. The final part of this study therefore explored parent awareness of digital HFSS food advertising aimed at children and young people.

In the US and the UK, a handful of studies indicate that parents are largely unaware of digital marketing techniques and effects. UK parents of children 12 and under had little awareness of food marketing online, and only talked about safety, not marketing, in their Internet guidance to their children (Cornish, 2014; Newman & Oates, 2014). Even parents who discussed TV food advertising, store promotion, and child-directed novelty foods with their children were unaware of digital marketing. Generally, parents believed that interactive digital marketing (e.g., branded apps, advergames) was enjoyable and did not constitute advertising. In the US, parents also had low awareness of digital food marketing practices and reacted negatively to examples shown (Ustjanauskas et al., 2010).

However, it is not known what parents of young teens in Ireland think about this topic. Are they aware of the existence and nature of digital food marketing? If so, are they concerned about it? Do they believe that responsibility lies with them and their children to make good food choices? Or do they believe that teens are vulnerable to the social dynamics and emotional appeals of digital food marketing?



4.1 Exploring parents' views

We conducted a mixed methods online study, using the Vizzata™ research tool which, in addition to standard survey and open-ended questions, allows researchers to present digital content to

participants, and to respond to participants' comments and questions about material they have viewed in a second round of questions. The stages are summarised here in the table.

Stages in the Vizzata™ interactive study of parents' views of digital food marketing to teens

Stage	Activity	Examples of questions
1	Parents respond to general questions about attitudes and awareness regarding advertising	Is advertising a useful source of information? Should teens see ads for foods high in salt, fat or sugar? Who decides what food you buy for your family? Where do you see food advertising?
2	Parents view marketing examples: Websites, Facebook brand Pages, YouTube videos and an advergame. Parents can ask questions and make comments	What do you think about this [YouTube video/Facebook post, etc.]? What do you feel they are trying to do? Is this advertising? Would it appeal to your teen? How does Facebook deliver ads to people?
3	Parents respond to follow-up questions These are based on their comments and questions regarding the marketing examples they viewed	What do you think of (i) Facebook food marketing directed at teens; (ii) regulation for health warnings or nutritional information on online food marketing; (iii) applying Ireland's ban on TV advertising unhealthy foods to under-18s to online settings

4.2 Participating parents

To achieve a reasonably representative sample of parents across Ireland, the digital research marketing company Toluna selected parents from its Ireland research panel of 16,000 members. Parents were eligible to take part if they had a child aged 13-14 years who had access to the Internet on any device (smartphone, tablet, laptop, or desktop). Parents were selected to achieve a range of education, family income and representation from urban and rural areas. They were validated by Toluna but remained anonymous to researchers, thus assuring confidentiality.

In total, 61 parents of 13-14 year olds were invited; 33 participated (54% response), 25 mothers and 8 fathers aged on average 43 years (range 30 to 53 years). Sixteen lived in rural areas, villages or small towns, 17 in large towns or cities. For their highest level of education, a third (10 parents) had completed secondary school; the others had completed further (5) or higher education (18). Two-thirds of families fell into the ABC1 sociodemographic category (22 families; 11 were C2DE) and one in five parents (7) said they had difficulties paying their bills in the last year. In terms of young

teens' devices, almost all parents (31) reported their teen had access to a smartphone; 26 had access to a tablet, 25 a laptop and 11 a desktop. Eight parents, a quarter of the group, said their young teen was not on Facebook, which reflects reported proportions of young teens using Facebook in Ireland (O'Neill & Dinh, 2015). A baseline question about their attitudes to advertising in general indicated that three-quarters were positively oriented to it, believing it to be useful; this reflects consistent public attitudes to advertising over decades (O'Donohue, 2001).

4.3 Food decisions at home and eating with friends

Parents reported that teens had an input into food-related choices in about half of families. Half of parents (17 of 33) said they 'often' or 'very often' asked teens what food they should buy and over a third (12) 'often' or 'very often' asked teens what snacks or treats should they buy. In open-ended questions, some parents explained they cooked what teens liked to eat but 'I only let them decide on non-treat foods' whereas

conversely others shared weekend 'treat' decisions, 'Decisions on takeaway are jointly made between kids and parents'. Some parents said they preferred to shop alone, as 'If any of my children are with me many "treat" products find their way into the trolley!!'.

In terms of what teens ate with friends, some parents reported healthy eating practices for school

lunches and did not mention HFSS eating, but nearly half (15) said that their teen ate less healthy options with friends, after school or at the weekends, such as 'rubbish food', 'sweets and cans of coke', 'pizza and chips', 'chocolate and pizza whenever he can', 'crisps, ice cream' and so on; one said that 'I am sure junk food is eaten as well without me knowing about it'.

Sporting celebrities

Supermac's with Sean O'Brien

Supermac's are getting behind the Irish International Rugby player Seán O'Brien as he represents Ireland in the Rugby World Cup 2015.

As an Irish Beef farmer and a true supporter of Supermac's, Séan truly enjoys the new Supermac's fresh 100% Irish Beef 5oz Burger. He's looking forward to filling the Tank again when he returns to Irish soil.
#Supermacs5oz #RWC2015

**Glenisk**

Come on boys, do us proud!
#ShouldertoShoulder #RWC2015
#COYBIG



On Facebook: Supermac's featuring Sean O'Brien (left) and Glenisk protein yogurt featuring Ireland rugby team members (above).

Entertainment celebrities

Coca-Cola

Coca-Cola is pleased to announce that ODEON Blanchardstown has been chosen to host The Hunger Games: Mockingjay Part 2 preview experience



The Hunger Games on Facebook

4.4 Parents' awareness of and views about advertising

Awareness of food advertising online: Only a quarter of parents (8 of 32) were aware of food advertising online. They were more aware of food advertising on TV (18) and supermarkets or shops (13).

Parents' attitudes to food and drink advertising in general: Despite their generally positive orientation to advertising, 8 out of 10 parents felt teens saw too much advertising. Two-thirds thought food advertising influenced teens' eating and that teens should not see ads for foods high in fat, salt and sugar.

4.5 Talking with their teen about advertising and food ads

When asked about talking with their children about advertising, most parents said they 'often' or 'very often' told their teen that 'ads are just trying to sell' (18 of 33) or 'ads don't always tell the truth' (21) (see table). They were less likely to seek to restrict their young teens' ad viewing, however, with just a quarter of parents 'often' or 'very often' saying they should not watch ads on TV (7) or online (8). A third (13) parents 'often' or 'very often' said their children should 'not click on ads' online or to 'use an ad blocker' and half (17) 'often' or 'very often' said to their children they should 'click to skip ads online'.

When asked an open-ended question about talking with their child about advertising, half (17)

parents said they talked to their children about ads, though often not about food ads or ads online. Their responses gathered into clusters as follows:

'We talk about the harmful effects': Six parents talked with their children specifically about food advertising, either occasionally, 'I have talked about it a few times, about eating too much junk, and try and ignore ads, skip over them'; or regularly: 'Yes I regularly do. I try to make them understand that some ads can be misleading and try to encourage them to eat healthy'.

'We talk about ads in general': A third of parents (11 of 33) talked to their teen about ads in general, 'Not food ads, more scams saying they've won something' and tried to support them to make their own decisions 'tell them not to be influenced by ads, have an open and independent mind'.

Parents' attitudes to advertising, food advertising and teens

	Agree/ Strongly agree Parents N = 32*	
	n	%
Overall, advertising is a useful source of information	23	72
Teens see too much advertising	26	81
Food advertising leads to bad eating habits in teens	18	56
If unhealthy foods were not advertised, my teen's eating habits would improve	15	47
The more ads my teen sees the more he/she will want the food advertised	19	61
Advertising healthy foods leads to good eating habits	19	61
Teens should not see ads for foods that are high in fat, salt or sugar	19	61
Food ads for sweets, crisps, fizzy drinks, takeaways, etc. should be banned completely	11	34

* 33 Parents took part in the survey but one did not reply to these questions

'Teens are so impressionable' – or 'they skip ads anyway': The remaining 16 parents had mixed responses: 8 said they did not talk to their teen about ads: 'I don't speak to him about this' and 8 did not state what they do.

Several parents said teens were easily influenced by advertising. One thought that this was an enjoyable part of life: 'my teen loves trying new things esp[ecially] food related'; others interpreted the influence negatively: 'Teens are so impressionable and my [teen] has a big problem with my not providing endless goodies'. Further, some parents believed that teens easily resisted advertising as they were not interested in it 'They skip ads anyway if possible'.

4.6 Parents' responses to online food marketing

Next, parents were shown a selection of typical online food marketing approaches of appeal to teens, for HFSS and non-HFSS items: YouTube video ads, Facebook brand posts, an advergame and website competitions featuring entertainment, sports, fun and games, and competitions.

Entertainment stars

In a YouTube video, **Rita Ora opened a Coca-Cola 'pop-up bar'** in Soho,

Overall, therefore, half of parents involved their young teens in decisions regarding food but only a third did so for snacks, suggesting that parents felt that their teens still needed guidance in this area. Parents were aware of food advertising on television and in-store, but largely unaware of it online. Almost all were positive about advertising in general, and only a few mentioned spontaneously that teens were very impressionable. However, nearly two-thirds felt teens saw too many ads and that they should not see HFSS ads – note that this is somewhat lower than the average for Ireland, as over 80% of the general public agree with Ireland's

government ban on HFSS broadcast advertising (Heery et al., 2014).

Just under half of parents talked with their teens about advertising in general; fewer talked with them about food ads and very few about food ads online. Parents tended to seek to develop their teens' understanding of advertising rather than limit ad viewing. Notably, in their responses about advertising, parents consistently referred to clicking on ads to skip them, suggesting they were thinking about pop-ups rather than the marketing approaches embedded in social media and website features that may appeal to teens.

Marcus Butler is a video blogger very popular with teens with over 4 million subscribers to his YouTube channel. Finally, in a Facebook post **Coca-Cola advertised the final Hunger Games movie** Ireland premiere in Dublin. The Hunger Games is a dystopian post-apocalyptic book and movie series, very popular with teens.

London to celebrate the 100th anniversary of the iconic curvy contour bottle (<https://www.youtube.com/watch?v=9HXYZMmhNBs>). Rita Ora is a singer and TV personality, who has had many UK No.1s, and is a coach on TV's The Voice UK and a judge on The X Factor. In another YouTube video, **Marcus Butler demonstrated KitKat's 'Ok Google, YouTube my Break' feature** (<https://www.youtube.com/watch?v=JYcdKU1AUjU>).

These forms of online marketing focus on *events* and *entertainment* rather than on the product and its attributes; the latter two ads did not even mention or show the product. Parents were therefore first asked the very general question 'What do you think of these 3 items? What do you feel they are they aiming to do?'. Most (30 of 33) parents demonstrated a clear understanding of the advertising goals of this digital content, saying it aimed to advertise, promote products, make products more attractive, more popular or sell more. Unprompted, nearly half of parents (14) mentioned appeal to teens 'Get kids to buy these products by making them appear cool' and using celebrities: 'Use recognised star and blogger to appeal to young people'.

'Great maturity needed not to fall for it': When asked whether these items 'would be appealing to your teen, or to other teens? Can you tell us why/why not?', 3/4 parents said they would appeal, 'All 3 would be appealing to them as the ads were all 'cool' and 'fun' and contain content that they can relate to including the celebrities'. Parents particularly referred to the use of celebrities with appeal for teens 'they would find them all appealing because of the celebrity endorsements'; 'Yes, as they look up to these people'. One parent admired the ads but said they would make teens vulnerable, as the messages came 'from people they idolise... clever but great maturity needed not to fall for it'.

Sports

Parents next viewed two Facebook brand Page posts featuring the Ireland rugby team, one for **Supermac's** featuring Sean O'Brien, the other for **Glenisk protein yogurt** featuring four Ireland Rugby team

members. These were chosen because they link their brand to sporting celebrities, and because they feature a less healthy and more healthy product. (Sweetened yogurts are permitted to be advertised to children in Ireland under current nutrient profiling regulations. The new WHO Nutrient Profiling recommendations for marketing to children (WHO, 2015) limit sugar to 10g per 100g, and would not allow many yogurts to be advertised as they typically contain 12+g of sugar per 100g. However the yogurts advertised here are lower in sugar and would be permitted even under the stricter WHO Nutrient Profiling).

When asked whether Facebook News Feed updates like these would be appealing to teens, over half of parents (19 of 33) thought these would appeal, due to the sporting link 'specially for the teens who are interested in sports' and the sportsmen's celebrity appeal 'they are inspired by these people'. Several felt the question did not apply, as their teen was not into sport or rugby, didn't like yogurt, or Facebook was not allowed in their family.

'Sean O'Brien is not going to eat that during training': Notably, there was considerable disquiet about the Supermac's 'Fuel the Tank' Facebook post. Parents said it presented an unrealistic association between an unhealthy food and an international sportsman 'can't imagine this being part of [his] diet', and that the product would impede fitness and performance, they didn't imagine a competitive sports star would eat it as part of his training regime. They expressed strong negative views about this sponsorship: 'This is not ok ... it gives the impression that you

can eat this regularly and still be a healthy sports person which is misleading'.

Questions about ads on Facebook

'I think it's ok': When asked 'What would you think about your teen receiving Facebook posts like these?', a third of parents (11 of 33) held a negative view 'I think it's wrong' of whom 3 just felt there was too much advertising on Facebook in general, 'There is an awful amount of this sort of stuff coming through'. Twelve thought it was fine for their teen to receive such posts 'I think it's ok', 3 as long as the post was for a healthy item 'If it were a healthy Facebook post then I would have no objection', and 3 saying their teen would just ignore ads. Finally, 11 didn't know or stated that this didn't apply to their family as their teen was not on Facebook.

'No idea': When asked, 'Do you know how people receive Facebook News Feed updates from brands?' 4 out of 5 parents were unaware. Only 6 of 33 mentioned one or more of the possibilities, such as liking the brand, being tagged, or the brand paying for Facebook News Feed reach.

Fun and games

The third cluster of marketing that parents viewed was a **Kinder Bueno racing car ad** and an **Apache Pizza Facebook post** asking people to 'tag' a friend 'who is addicted to pizza'.

Responding to a video clip of the **Kinder Bueno ad**, 2/3 parents (22 of 33) believed that this was advertising, in notable contrast to parents in the UK and France studies cited earlier.

'A type of advertising by stealth': Parents gave clear explanations of how this constituted advertising: 'Anything that advertises or shows a food brand is advertising; The brand is actively ingrained in the game and is flashed regularly making it easy to remember or hard to forget for the player'; 'Yes it is advertising because it now has put the product in to the mind of the person watching'. This level of understanding included parents whose children played such games: 'Yes. They do sometimes play these games. It is a type of advertising by stealth'.

When asked 'What do you think about food companies asking teens to 'tag' friends on Facebook?', two-thirds of parents (22 of 33) had very strong negative views, contrasting with their earlier more relaxed views about teens receiving Facebook posts from food and soft drink brands.

'Dishonest'... 'immoral': Parents used terms such as 'immoral', 'inappropriate', 'terrible', 'horrible', 'dishonest', 'exploitative' or 'should be banned', saying that it was tantamount to teens setting one another up to receive 'junk mail'. The rest of the group, 1/3, were either indifferent or mildly positive, 'No harm in it plus they might win something', or 'unsure'.

Competitions

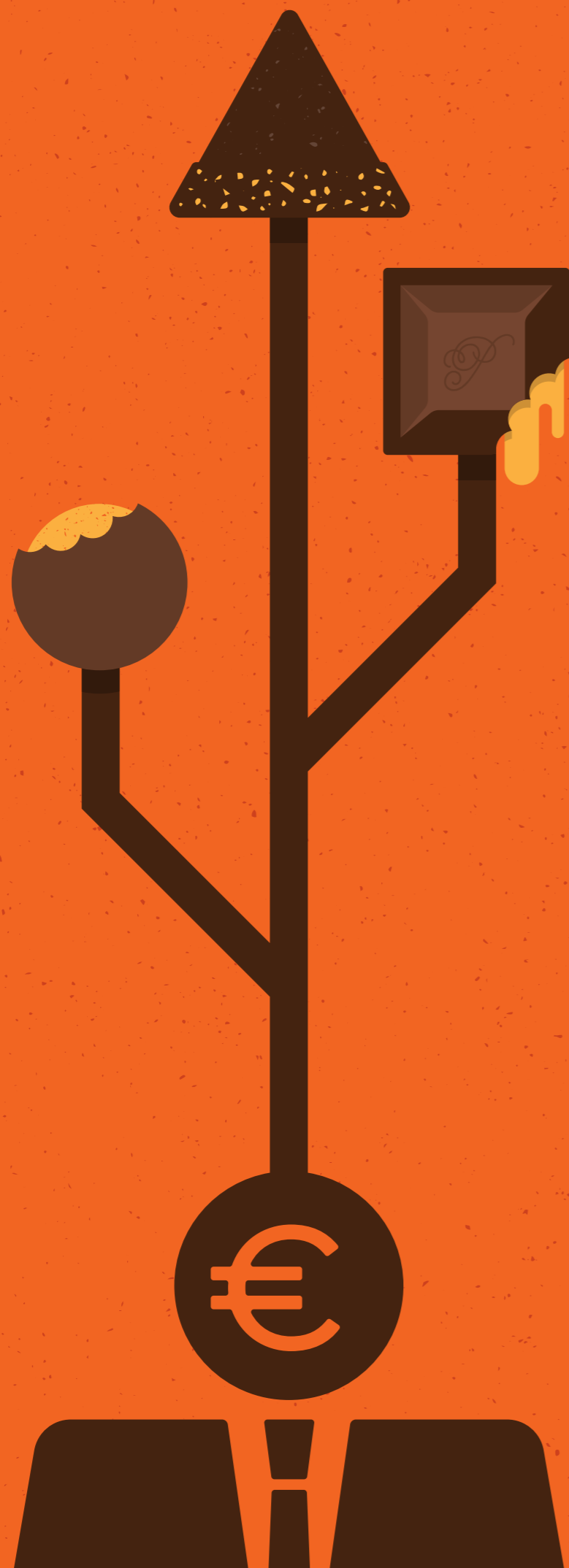
Finally, parents viewed **food website competitions**: **Lucozade** to win official team rugby shirts every 80 minutes; and **Pringles** to win karaoke kits, Xbox consoles and movies (see examples in Chapter 2; both restrict entry to 18+ but in neither case is this evident at first). They were asked 'Do you think online offers or competitions like these are advertising? Can you tell us why/why not?'; 26 of the 33 parents thought they were advertising: 'Of course they are advertising', as they involved 'buying something to win



or promoting the brand'; 'They are putting the brands there in front of you. If the competition had nothing to do with a brand name why does Pringles feature?'.

'The prizes are things they can identify with and want': More than 8 out of 10 parents (27 of 33) believed these competitions would appeal to teens, because of the prizes, 'They all would because prize relates to them'; the products, 'loves Lucozade sport'; 'Sadly one of mine would love the Pringles as she is somewhat addicted'; or the chance to win something, 'because they offer you a chance to win something' and none mentioned age restrictions.

When asked 'If your teen asked you if they could enter, what would you say?', 14 parents said they would enquire about the suitability of the prize and whether purchase was required (in which case several said they would refuse); 8 said they would refuse permission. A third (11) said it would be fine. Interestingly, only 1 of the 33 parents raised the question of age of entry '[They're] not old enough to enter competitions'. Where Terms and Conditions are not easy to find, this could encourage people to buy products although they are not eligible. The new Advertising Standards Agency of Ireland (ASAI) Code (ASAI, 2015) requires online promotions' terms and conditions to be 'prominently stated' (Rule 5.16).



4.7 After viewing the ads

Within a week of having viewed the online ads, 30 of the 33 parents answered a final four questions that were based on the questions and comments they had made.

Changed views?

When asked 'Did taking part in the study change your views about food and drink marketing online to children and teens?', two-thirds of parents (20 of 30) said it had, 'I think it made me more aware', with a further 5 saying taking part had left an existing negative view unchanged, or reinforced it

'They're much more subtle than first thought': For some parents, seeing the ads affected their view of the **nature** of this form of advertising, noting that 'They're much more subtle than first thought'. Others said it raised questions about the **extent** of their teen's exposure: 'Made me think how many times a day they see advertisements'; as 'I was unaware of some of the things my children were seeing online when playing games or even when looking up things for homework'. Some wondered what the **effects** of such ads might be: 'Made me think how he may be affected by these ads'.

'I asked my children if they see much online advertising and they said yes, they did': Several parents reported conversations with their teens from which they had learned about their children's **online ad exposure and engagement**: 'Since taking part in the last part of the survey, I asked my children if they see much online advertising and they said yes, they did. They also said that if an advertisement whetted their

interest that they would check out that product's website'. Some reported new **interactions with their teens about advertising** 'I am now making them aware of gimmicks used by companies'. Finally, one parent was concerned that the celebrity nature of online marketing might **reduce a child's defences** as 'they may know the person or people or company who are promoting their product, they may believe its ok to buy this product'.

Targeting teens with Facebook brand posts

Next, parents were asked 'What is your view of food companies sending brand posts to teens on Facebook?'. Nearly three-quarters (22 of 30) were against. One thought it was ok if a teen 'liked' the brand personally, but that viral communication was not; two were not sure; and four felt it was fine.

'Taking advantage of a young and impressionable market and seems immoral': Here, a few parents expressed concern mildly: 'I would have preferred that they do not' but most had very strong feelings, contrasting with the group's earlier views on the subject. These views were so strong that many are reported here: 'They should be stopped or penalised'; 'abusing [teens] vulnerability'; 'irresponsible'; 'teens should be off limits by pushy companies'; 'should be banned'; 'taking advantage of a young and impressionable market and seems immoral'; 'excessive'; 'feel very strongly that it is not appropriate'; 'it can have more of an effect on teenagers'; 'I don't like it at all and it would stop me from buying their products'; 'I am completely against

this'; 'I feel that this really is not on'; 'It would turn me away from the company'; 'they are directly approaching these vulnerable and naive teenagers'.

Labelling with health warnings or nutritional information

Parents were asked about warnings or labelling on HFSS online marketing: 'Do you think online ads (including Facebook posts) for unhealthy food and drink should carry (1) general health warnings, OR (2) fat/sugar labelling? Or (3) BOTH? or (4) NEITHER? Please tell us about reasons for your answer'. Almost all, 27 of 30, were in favour of labelling, most favouring both kinds.

'[They] should carry both warnings': Some parents felt quite strongly about this: '100% they should', or 'they should carry both in BOLD... small print on these items should not be allowed'. However, one in four who were in favour queried the effectiveness of labelling where teens were concerned, believing that 'most teenagers wouldn't read them'.

Applying Ireland's HFSS broadcast regulations online

Finally, parents were asked, 'Do you think Ireland's ban on TV advertising unhealthy foods to under-18s should apply online?'. Three-quarters of parents (25) were in favour, many saying 'definitely' or 'absolutely', as new media were more likely to absorb their young teens' attention: 'Online is more prevalent in their lives'; and 'Online is more relevant to under 18s than what is on TV'. Of the 25 parents who were in favour of online regulation, however, four queried the practicality of implementation.

4.8 Summary

Who's feeding the kids online: What do parents know?

The 33 parents of 13-14 year olds in Ireland who took part in this online study reflected a range of demographics and closely reflected typical attitudes to advertising in the general population. Three-quarters had positive attitudes to advertising in general and two-thirds had negative views of HFSS food advertising to teens, compared to over 80% of the general public who agree with the government broadcast regulations (Heery et al., 2014).

They were largely unaware of digital food advertising and effects it may have and initially were largely indifferent to the issue of digital

food marketing. Very few were aware of how brand content reaches Facebook users' News Feeds. They conceived of ads online as requiring *opening*, or *clicking to skip*. Those who did engage with their children about food advertising relied on an 'informational' approach, talking about it with their children to encourage them to resist its effects.

However, once parents had viewed examples of food ads from digital media, their attitudes shifted. They said they had been unaware of how *subtle* digital food advertising is and felt that *great maturity* would be needed to resist. They voiced particular strong concerns about celebrities (including sporting heroes) promoting unhealthy

foods – a marketing tactic that experimental research has found affects children's unhealthy food consumption (Boyland et al., 2013; Dixon et al., 2014) – parents viewed this as false advertising for unhealthy foods, describing it as *misleading*. They also held very negative views of children being encouraged to 'tag' friends by ads for unhealthy foods. Regarding prompts to tag friends, two-thirds of parents appeared shocked, using terms such as *immoral*, *dishonest*, *exploitative*, or *should be banned*. After viewing examples, three-quarters of parents were strongly against teens receiving digital HFSS advertising.

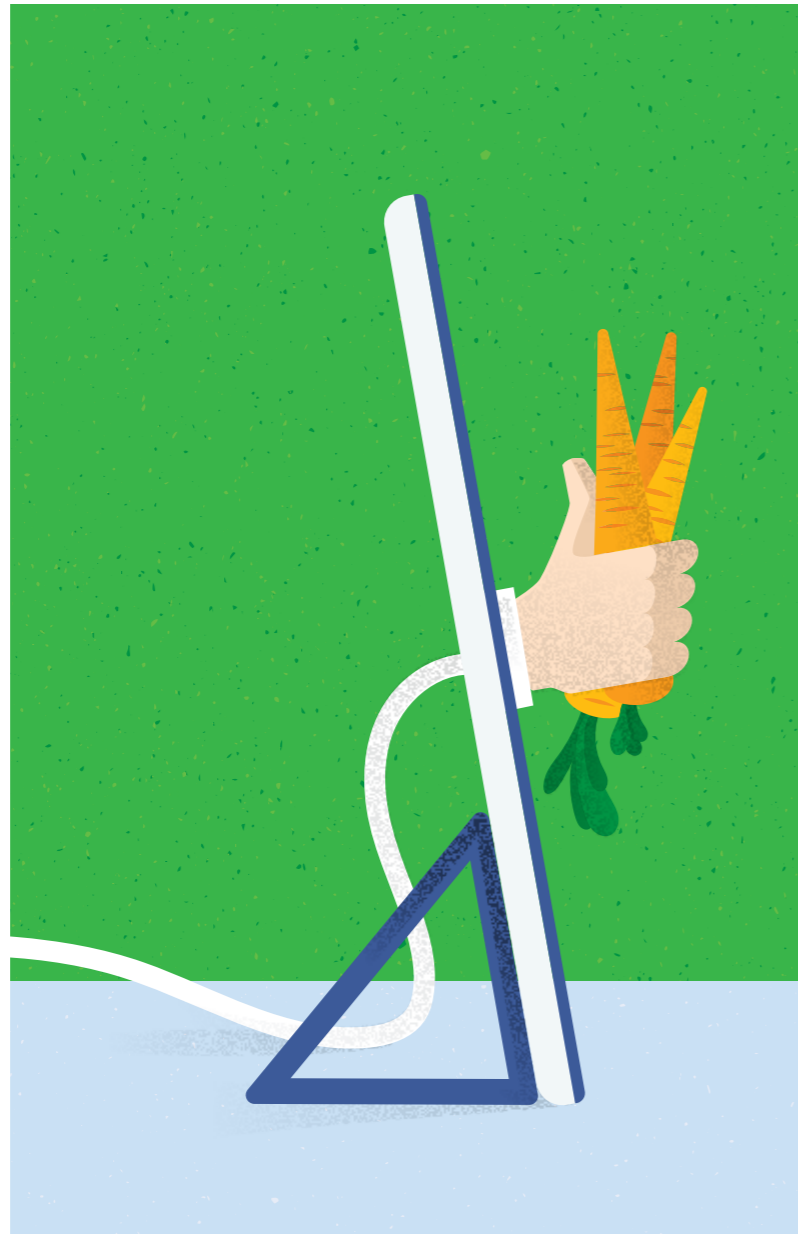
5. Digital food marketing to children and young people: The way forward



5. Digital food marketing to children and young people: The way forward

With ongoing concerns about child overweight and obesity, and in the context of the shift from broadcast to digital media, this report has sketched a first map of digital food marketing of appeal to children in Ireland. A team of four people – a marketing and standards compliance expert, two developmental psychologists, and a teen – assessed digital marketing on food brand websites and on Facebook. In addition, parents' awareness of digital food marketing and views regarding regulation were ascertained. In sum, it was found that although there is little marketing directed at young children on food brand websites, there is a strong focus on teens on websites and Facebook, using powerful engagement and entertainment-based tactics. Parents of young teens in Ireland are largely unaware of this marketing directed at their children in digital media.

Food brand websites for the most popular retail brands in Ireland were found to have activities directed at, or appealing to, teens and parents (although app store games and apps, fast food sites, and sites for international products of appeal to younger children in Ireland were not included in this analysis and still require systematic examination). One in five **websites**, almost all featuring HFSS items, had content directed at or appealing to older children or teens, focusing on entertainment, sporting celebrities and competitions with appealing entertainment-, media- and sport-based prizes. On **Facebook**, the food and drink brands most likely to reach 13 and 14 year old children in Ireland all feature HFSS products (e.g., Coca-Cola, McDonald's, Tayto, Cadbury), or featured highly processed or fast food items that are not recommended for marketing to children by the WHO (WHO, 2015). These brands employ engaging and emotionally persuasive marketing techniques by linking to entertainment, events, novelty, competitions, fun and humour, and using celebrities popular with young people to promote their products, likely aiming to become enmeshed in young people's Facebook News Feeds and hence in their social



lives. Parents in Ireland were largely unaware of this form of marketing to children, and still thought of online advertising as banners or pop-ups. When shown examples of Facebook, YouTube and other digital food marketing, most expressed strong (unprompted) views about 'subtle', 'misleading' and even 'immoral' techniques employed in digital food marketing. Compared with their earlier indifference, the strength of parents' responses was notable.

This study was a first foray into a new field of research and much remains to be explored. For the website sweep, top retail brands in Ireland were explored; identifying child-directed content on fast food websites and international sites such as happymeal.com is another necessary and achievable task. However, where data is not shared by media and food marketing companies, the challenges are greater. For example, researchers need age-specific data on downloads and exposure to advergames in app stores, as well as marketing seen on Instagram, Snapchat and YouTube, in addition to Facebook. According to YouTube analytics, the two top YouTube channels for 2015 were for young children, 'unboxing' site *FunToys Collector* and animated songs and nursery rhymes site *Little Baby Bum* (which had over 380 million views in one month); vlogger and music channels popular with older children were also in the top ten (Dredge, 2015). Instagram and Snapchat are becoming more popular with younger teens and require investigation; for example, beverage brands post an average of 30 posts weekly on Snapchat worldwide (emarketer, 2016), a process that builds brand equity and hence sales (Rosen, 2016).

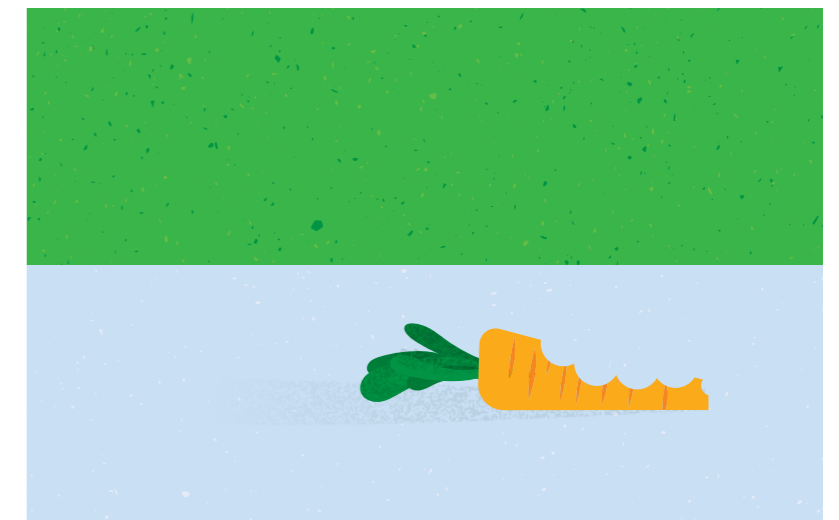
The marketing found in this study was not informational but rather connected with children through engagement, entertainment and

emotion – invoking celebrities, sport, humour, competitions, fun, linking with friends and linking with current fun events and special days. As noted in Chapter 1, advertising using emotional techniques is most effective – and it is processed with little conscious awareness, resulting in 'implicit persuasion' (Binet & Field, 2009; Nairn & Fine, 2008). This raises questions about the ethics of such advertising to children and young people. This question is magnified by the fact that parents are unaware of such techniques and their effects. Overall, the findings from the qualitative parents' study indicate that public education for parents, policy makers and young people is required, and that parents were strongly in favour of nutrient labelling on advertising and regulation of digital food marketing. As this was exploratory research with a small sample, it should be validated on a larger scale.

Teen perspectives were reflected in this study by a teen co-researcher who participated in analyses. However, more research with (and by) children about advertising on websites, Facebook, Instagram, Snapchat and elsewhere is essential. Studies have long noted that children engage with advertising in accepting and appreciative ways but also playfully, ironically, and critically. For example, teens may

use Facebook 'likes' subversively – in the US 'liking' Coca-Cola on Facebook may indicate (jokingly or otherwise) a liking for cocaine (boyd, 2014a, 2014b). And yet, as emotional content is processed implicitly, not consciously, being ironic or playful about ads may in fact not reduce their effects (Nairn & Fine, 2008). Therefore, experiments are also needed, to assess the impact of marketing in social media. Furthermore, the effects on teens of receiving food ads on mobile (e.g., in Facebook, Instagram and Snapchat) is not known. Nearly a decade ago, teens were reported to find receiving ads as texts to their mobile phones irritating and invasive, and advertisers were recommended to work to facilitate teen friendships instead (Grant & O'Donohue, 2007). Now that advertising in social media has moved to do exactly this, is the 'brand in the hand' effect more positive when teens receive updates in the News Feed on their phones? Surveys of teens in the UK and US certainly indicate that they appreciate and engage with mobile digital advertising (Logicalis, 2016, Nielsen, 2009).

Another issue that remains to be clarified is the role played by digital brand advertising for unhealthy foods in teens' identity creation and peer relationships, particularly in social media, where a substantial



part of teens' identity work now takes place (boyd, 2014b). As noted in Chapter 1, young people co-create their identities through processes of representation and consumption, and unhealthy food plays an important role in their 'teen' identity for some young people. However, we do not know how many young people this applies to, and anecdotal evidence of other youth subcultures (such as body image oriented teen boys, for example, who are focused on nutrition to aid muscle development) suggests that there are many different ways of using food to create identities.

Furthermore, the findings of this study raise the question of whether it is possible to harness digital media and particularly social media for positive health benefits. This may be challenging, as children appear to recognise healthy brands less than unhealthy ones, even when these are advertised similarly (Tatlow-Golden et al., 2014), and playing advergames even for healthy foods such as fruit may increase consumption of unhealthy foods (Folkvord et al., 2013). However, social norms marketing, which aims to change social norms within groups of people, has been shown to be effective in changing norms about alcohol consumption among young people in the US (Perkins et al., 2011). Its implementation is quite cheap compared to other approaches to community dissemination, but must be carefully designed and grounded in good research, and tailored to each local situation. It would be interesting to explore whether such approaches – perhaps with the participation of the

very role models and celebrities who currently market less healthy foods – would build positive associations for healthier foods among young people.

In conclusion, some broader points should be noted. First, ethical issues regarding targeting children and young people with digital food marketing, and about the effects of online behavioural advertising, merge with privacy concerns about the wholesale collection of personal data currently carried out by brands, marketers and digital media platforms. At the heart of this lies the influence in contemporary life of the proprietary algorithms created and owned by Google, Facebook, and other private corporations, which currently control the flow of news, entertainment and commercial information we see online, filtering it in undisclosed ways (Tufekci, 2015). In Facebook and other social media, users cannot control how information is extracted from them, nor can they identify how friends', brands' and others' content is selected. In addition, access to data is denied to researchers except those working for or with digital platforms (Bechmann & Vahlstrup, 2015). Researchers and academics are therefore calling for external 'algorithm audit studies' to be conducted, i.e., testing algorithms on the public's behalf, to identify discrimination and other deleterious practices (Eslami et al., 2015; Sandvig et al., 2014; Tufekci, 2015). They are also calling for examination of the effects of the extensive social media data mining practices engaged in by those who have access to our data (Kennedy & Moss, 2015).

To these calls must be added the need for understanding of how much children are being targeted by commercial interests and what they are able to infer from the data they are constantly harvesting.

Finally, the findings of this study have identified powerful engagement-, emotion-, and entertainment-based tactics in digital marketing of HFSS-oriented food brands that have high reach in social media among young teens in Ireland. They also found that parents of young teens in Ireland are largely unaware of this marketing directed at their children. In the context of statutory regulation of broadcast HFSS advertising to under-18s in Ireland, it is difficult to understand how such marketing strategies can be justified. There are clearly challenges presented by national regulation of global media, yet any site where young people enter their age to register could stop HFSS advertising to under-18s immediately.

Given the many risks to health posed by obesity, and children's right to health as well as the protection of their best interests as afforded by the United Nations Convention on the Rights of the Child (UN, 1990), current obesogenic environments must be dismantled. As part of this process, food brands should no longer be permitted to interfere with parents' choices and children's eating by marketing highly-processed, energy-dense, nutrient-poor unhealthy foods and drinks to parents, children and young people – no matter where.

6. Recommendations

6. Recommendations

This report has found evidence of engaging, entertaining and emotion-focused HFSS ‘stealth’ marketing techniques that appeal to, or are directed at, children and young people on digital media in Ireland. There is consistent evidence that HFSS marketing on TV affects children’s food attitudes and eating; evidence from marketers that digital marketing further amplifies the impact of other existing channels; and evidence that voluntary schemes to restrict food marketing are weaker and less effective than statutory regulation. It is therefore recommended that Ireland’s existing statutory restriction of HFSS broadcast marketing to under-18s be extended to digital media.

1. Recognise children’s rights to participation – but also to health and protection

Children have the same rights online as they do offline. These include rights to participate in social life and to have their voices heard, but also rights to health and to have their best interests considered. Therefore, ways need to be devised to ensure that under-18s can participate safely online – without being subject to targeted marketing for products that have been demonstrated to have a negative effect on their health and well-being, and without having their data harvested and resold online.

2. Extend existing regulation for broadcast media to all digital media

Statutory regulation in Ireland has established the principle of no HFSS broadcast advertising to under-18s. The same should apply to social media and all other digital platforms.

3. Identify international options for ending HFSS food promotion

Obesity has become a global health challenge, and tackling obesogenic environments – of which HFSS marketing is a part – must become a global priority, particularly HFSS marketing to which children and young people are exposed.

4. Close loopholes in current regulations

As in other jurisdictions, Ireland’s statutory regulation lacks effectiveness, as it is limited to children’s programming on pre-6pm

TV, and is governed by one of the most lax Nutrient Profiling models by international standards (UK Nutrient Profiling; UK NP). Regulatory loopholes should be closed, and UK NP replaced with a simpler, stricter

system such as the WHO European Region 2015 Nutrient Profiling (WHO Euro-NP) which has rapidly gained acceptance across WHO Regions worldwide.



5. Disrupt the language of ‘choice’ and ‘responsibility’

Obesogenic environments push unhealthy choices through food promotion, pricing and availability. Framing families’ and children’s eating as purely a matter of ‘choice’ disregards the impact of obesogenic environments on children, young people and parents – and also disregards the choices made by food companies to promote such items to children, parents of young children, and teens.

6. Prohibit ‘heroes of the young’ from marketing HFSS products

To protect children and young people, ‘heroes or heroines of the young’ – celebrities in entertainment, sport and other domains – are prohibited from marketing any alcohol advertising in Ireland (ASAI, 2015). This exclusion should be extended to all HFSS marketing.

7. Inform young people, parents and policy makers about digital food marketing.

The ‘Internet safety’ issue tends to push marketing into the background when children’s digital participation is discussed, but individually targeted marketing is a well-being issue of itself – and is linked to privacy concerns through the collection of personal data. Young people, parents and policymakers need information on privacy issues and how children’s data is used to target them, their friends and their families. They also need to be informed about the effectiveness of emotional marketing approaches that function through implicit ‘stealth’ persuasion.

8. Consider the potential of ‘social marketing’ for healthier habits

Social marketing seeks to change a group’s perceptions of what is normative behaviour. It is often recommended to prompt healthy eating. However, any such approach must be grounded in careful, child-centred research, as eating unhealthy foods currently often forms part of children’s identity as separate from the adult world in Ireland and across Europe, so general ‘healthy eating’ messages from adults may even encourage less healthy practices. Children have also been found to attend less to marketing for healthier items, although this may depend on the nature of the ads. For example, what would the effect be if the ‘heroes of the young’ (such as YouTube vloggers, and sporting stars), who currently promote unhealthy foods, were instead to turn to promoting healthy items? Finally, it is important to note that social marketing for healthier eating alone is not the answer. It cannot replace the need for regulation, as public health cannot match the marketing budgets of major food companies.

9. Equalise access to information about digital HFSS marketing

Media platforms, marketers and food brands have extensive access to data about children, and they engage in extensive research on them without independent research ethics governance. In contrast, those concerned with public health cannot access these data. Yet – in an era of targeted and personalised marketing – it is essential that researchers concerned with children’s well-being

find ways to systematically examine children’s engagement with digital food marketing in Facebook and beyond (e.g., Instagram, Snapchat, video games that deliver in-game ads, branded food and drink apps appealing to children and more). Which children are more likely to engage? In what way do they do so? What effect does this have? Answering these questions is essential. In the interests of children’s rights to health, protection and participation online as well as offline, this imbalance of access needs to be equalised.

References

- Ali, M., Blades, M., Oates, C., et al. (2009). Young children's ability to recognize advertisements in web page designs. *British Journal of Developmental Psychology*, 27, 71–83.
- ASA (2015). ASA Advertising Code. 7th Edition. Retrieved from <http://www.asai.ie/asaicode/>
- ASA (2015, August). ASA guidance note on alcohol marketing communications Retrieved from <http://www.asai.ie/wp-content/uploads/ASA-Code-Alcohol-Section-Guidance-Note-7th-Edition.pdf>
- Backstrom, L. (2013). News Feed FYI: A Window Into News Feed. Retrieved from <https://www.facebook.com/business/news/News-Feed-FYI-A-Window-Into-News-Feed>
- Bechmann, A. & Vahlstrup, P. (2015). Studying Facebook and Instagram data: The Digital Footprints software. *First Monday*, 20(12). Retrieved from <http://firstmonday.org/ojs/index.php/fm/article/view/5968/5166>
- Binet, L. & Field, P. (2009). Empirical generalizations about advertising campaign success. *Journal of Advertising Research*, 49(2), 130-133.
- boyd, d. (2014a). The kids are all right. Interview with danah boyd. Retrieved from <http://www.pbs.org/wgbh/pages/frontline/media/generation-like/danah-boyd-the-kids-are-all-right/>
- boyd, d. (2014b). It's complicated. The social lives of networked teens. New Haven: Yale University Press. Retrieved from <http://www.danah.org/books/ItsComplicated.pdf>
- boyd, d. (2014c). What does the Facebook experiment teach us? [blog post]. Retrieved from <http://www.zephoria.org/thoughts/archives/2014/07/01/facebook-experiment.html>
- boyd, d. (2015). An Old Fogy's Analysis of a Teenager's View on Social Media. Retrieved from <https://medium.com/message/an-old-fogey-analysis-of-a-teenagers-view-on-social-media-5be16981034d#a31rvfccu>
- Boyland, E.J., Harrold, J.A., Dovey, T.M., Allison, M., Dobson, S., Jacobs, M.-C., & Halford, J.C.G. (2013). Food choice and overconsumption: effect of a premium sports celebrity endorser. *Journal of Pediatrics*, 163(2), 339-43
- Boyland, E.J., Harrold, J.A., Kirkham, T.C. & Halford, J. C. G. (2011). The extent of food advertising to children on UK television in 2008. *International Journal of Pediatric Obesity*, 6, 455–461
- Broadcasting Authority of Ireland (2013). Children's Commercial Communications Code 2013. Retrieved from http://www.bai.ie/wordpress/wp-content/uploads/201308_CCCC_English_vFinal.pdf
- Bugge, A. B. (2016). Food advertising towards children and young people in Norway. *Appetite* 98, 12-18.
- Cairns, G. (2013). Evolutions in food marketing, quantifying the impact, and policy implications. *Appetite*, 62, 194-197.
- Cairns, G., Angus, K., & Hastings, G. (2009) The extent, nature and effects of food promotion to children: A review of the evidence to December 2008. Prepared for the World Health Organization. United Kingdom: Institute for Social Marketing, University of Stirling.
- Cairns, G., Angus, K., Hastings, G. & Caraher, M. (2013). Systematic reviews of the evidence on the nature, extent and effects of food marketing to children. A retrospective summary. *Appetite*, 62, 209-215.
- Cancer Council Australia (2015, May 14). Teenage boys more vulnerable to junk food ads . Retrieved from <http://www.cancer.org.au/news/media-releases/teenage-boys-more-vulnerable-to-junk-food-ads.html>
- Cellan-Jones, R. (2013, December 30). Facebook - not dead, not buried. BBC News [website article] <http://www.bbc.com/news/technology-25547755>
- Checkout (2014). Checkout top 100 brands 2014. Checkout, 40(8), 50-88.
- Cheyne, A.D., Dorfman, L., Bukofzer, E. & Harris, J.L. (2013). Marketing sugary cereals to children in the digital age: A content analysis of 17 child-targeted websites. *Journal of Health Communication: International Perspectives*, 18(5), 563-582
- Coca-Cola (n.d.). Responsible Marketing. Retrieved from www.Coca-Cola.ie/about-us/responsible-marketing/
- Consumers International (2011). Manual for monitoring food marketing to children. London: Consumers International. Retrieved from <http://www.consumersinternational.org/our-work/food/key-projects/junk-food-generation/>
- Cornish, L.S. (2014). 'Mum, can I play on the internet?'. *International Journal of Advertising: The Review of Marketing Communications*, 33 (3) 437-473
- Data Protection Commissioner (2015). GPEN Privacy Sweep 2015. Concerns over Children's apps and websites. Retrieved from <https://www.dataprotection.ie/docs/04-09-2015-Concerns-over-childrens-apps-and-websites-/1485.htm>
- Department of Children and Youth Affairs (2014). Better Outcomes, Brighter Futures. The national policy framework for children & young people 2014 – 2020. Dublin: Department of Children and Youth Affairs.
- Delzio, S. (2015, September 3). Instagram ad rollout will make it the top media buy: New research. *Social Media Examiner* Retrieved from <http://www.socialmediaexaminer.com/instagram-ad-rollout-will-make-it-the-top-media-buy-new-research/>
- Dixon, H., Scully, M., Niven, P., Kelly, B., Chapman, K., Donovan, R., Martin, J., Baur, L. A., Crawford, D., & Wakefield, M. (2014). Effects of nutrient content claims, sports celebrity endorsements and premium offers on pre-adolescent children's food preferences: experimental research. *Pediatric Obesity*, 9, e47–e57
- Dredge, S. (2015, May 1). Four of the top five YouTube channels are for kids (and the fifth is Taylor Swift). *The Guardian*. Retrieved from <http://www.theguardian.com/technology/2015/may/01/youtube-biggest-channels-kids-funtoys-collector-little-baby-bum>
- Edelmann Digital & The Marketing Institute (2014). Social media survey #SocialOutlook15. Retrieved from <http://www.edelman.com/social-media-survey-socialoutlook15/>
- Emarketer (2016, May 9). Brands Worldwide Embrace Instagram. Emarketer [website article]. <http://www.emarketer.com/Article/Brands-Worldwide-Embrace-Instagram/1013928?ecid=NL1010>
- Ernault, E. (2014). Guide to Facebook Reach: What marketers need to know. *Social Media Examiner* [website article]. <http://www.socialmediaexaminer.com/facebook-reach-guide/>
- Eslami, M., Rickman, A., Vaccaro, K., Aleyasen, A., Vuong, A., Karahalios, K., Hamilton, K., and Sandvig, C. (2015, April). "I always assumed that I wasn't

really that close to [her]." Reasoning about invisible algorithms in the news feed. Proceedings of the 33rd Annual SIGCHI Conference on Human Factors in Computing Systems, Association for Computing Machinery (ACM), Seoul, Republic of Korea, April 18-23. Retrieved from http://www-personal.umich.edu/~csandvig/research/Eslami_Algorithms_CHI15.pdf

Facebook (2015, September 30). Introducing new ways to buy, optimise and measure ads for a mobile world. Facebook for Business. Retrieved from <https://www.facebook.com/business/news/Ad-Week-UK>

Facebook for Business (2014, November 14). An Update to News Feed: What it Means for Businesses. Retrieved from <https://www.facebook.com/business/news/update-to-facebook-news-feed>

Fitzgerald, A., Heary, C., Nixon, E. & Kelly, C. (2010). Factors influencing the food choices of Irish children and adolescents: a qualitative investigation. *Health Promotion International*, 25 (3), 289-298.

Fitzgerald, A., Heary, C., Nixon, E. & Kelly, C. & Shevlin, M. (2013). Self-efficacy for healthy eating and peer support for unhealthy eating are associated with adolescents' food intake patterns. *Appetite*, 63, 48-58.

Folkvord, F., Anshütz, D.J., Buijzen, M., & Valkenburg, P.M. (2013). The effect of playing advergames that promote energy-dense snacks or fruit on actual food intake among children. *American Journal of Clinical Nutrition*, 97 (2), 239-245

Freeman, B., Kelly, B., Baur, L., Chapman, K., Chapman, S., Gill, T., & King, L. (2014). Digital junk: Food and beverage marketing on Facebook. *American Journal of Public Health*, 104 (12), e56-e64

Galbraith-Emami, S. & Lobstein, T. (2013). The impact of initiatives to limit the advertising of food and beverage products to children: A systematic review. *Obesity Reviews*, 14(12), 960-74.

Gearhardt, A.N., Yokum, S., Stice, E., Harris, J.L. & Brownell, K.D. (2014). Relation of obesity to neural activation in response to food commercials. *Social Cognitive and Affective Neuroscience* 9(7):932-8.

Gibs, J. & Bruich, S. (2010). Advertising effectiveness: Understanding the value of a social media impression. A Nielsen/Facebook report. Retrieved from <http://www.nielsen.com/us/en/insights/news/2010/nielsenfacebook-ad-report.html>

Glazer, A. (2015, June). How companies use apps to market unhealthy food to children. Presentation at the 10th Meeting Of The WHO European Action Network On Reducing Marketing Pressure On Children, Athens, Greece, June 15–16, 2015.

Grant, I. & O'Donohoe, S. (2007). Why young consumers are not open to mobile marketing communication. *International Journal of Advertising*, 26(2), 223-46.

Greenfield, K. (2011). The myth of choice. Personal responsibility in a world of limits. New Haven: Yale University Press.

Handsely, E., Nehmy, C., Mehta, K., & Coveney, J. (2014). A children's rights perspective on food advertising to children. *International Journal of Children's Rights*, 22, 93- 134.

Harris, J.L., Brownell, K.D. & Bargh, J.A. (2009). The Food Marketing Defense Model: Integrating psychological research to protect youth and inform public policy. *Social Issues and Policy Review*, 3(1), 211-271

Harris, J.L., Heard, A. & Kunkel, D. (2016). Marketing unhealthy foods to children on Facebook. Social policy and public health concerns. In *Consumer psychology in a social media world* (pp. 239-253), eds C. V. Dimofte, C. P. Haugtvedt & R. F. Yalch. New York: Routledge

Harris, J.L., Heard, A. & Schwartz, M. B. (2014). Older but still vulnerable: All children need protection from unhealthy food marketing. Rudd Brief. Yale, New Haven: Yale Rudd Center for Food Policy & Obesity. Retrieved from http://www.uconnruddcenter.org/files/Pdfs/Protecting_Older_Children_3_14.pdf

Harris, J.L., Sarda, V., Schwartz, M.B., & Brownell, K.D. (2013). Redefining "child-directed advertising" to reduce unhealthy television food advertising. *American Journal of Preventive Medicine*, 44(4), 358-64

Heery, E., Delaney, M., Kelleher, C., Wall, P. & McCarthy, M. (2014). Attitudes of the Irish public towards policies to address obesity. Dublin: Safefood. Retrieved from <http://www.safefood.eu/Publications/Research-reports/Attitudes-of-the-public-towards-policies-to-address.aspx>

Henry, A. E., Story, M. (2009). Food and beverage brands that market to children and adolescents on the internet: a content analysis of branded web sites. *Journal of Nutrition, Education and Behavior*, 41(5), 353-9.

Highfield, T. & Leaver, T. (2015). A methodology for mapping Instagram hashtags. *First Monday*, 20(1). Retrieved from <http://firstmonday.org/ojs/index.php/fm/article/view/5563/4195>

Honan, M. (2014, November 8). I liked everything I saw on Facebook for two days. Here's what it did to me. *Wired*. Retrieved from <http://www.wired.com/2014/08/i-liked-everything-i-saw-on-facebook-for-two-days-heres-what-it-did-to-me/>

Ionannou, S. (2009). 'Eating beans ... that is a "no-no" for our times': Young Cypriots' consumer meanings of 'healthy' and 'fast' food. *Health Education Journal*, 68 (3), 186-195.

Kaushik, A. (2015, February 9). Crushing it with Competitive Intelligence Analysis: Best metrics, reports. [blog post]. Retrieved from <http://www.kaushik.net/avinash/competitive-intelligence-analysis-tools-metrics-reports-techniques/>

Kelly, B., Bochynska, K., Kornman, K., Chapman, K., (2008). Internet food marketing on popular children's websites and food product websites in Australia. *Public Health Nutrition*, (11), 1180-1187.

Kennedy, H. & Moss, G. (2015). Known or knowing publics? Social media data mining and the question of public agency. *Big Data & Society*, July–December, 1–11

Lang, T. & Millstone, E. (2002). *The Atlas of Food*. Earthscan Books, 2002

Lawlor, M.-A. (2009). Advertising connoisseurs: children's active engagement with and enjoyment of television advertising. *Irish Marketing Review*, 20 (1), 23-24.

Leiss, W., Kline, S., Jhally, S. & Botterill, J. (2013). Goods as communicators and satisfiers. In *Social communication in advertising: Consumption in the mediated marketplace 3rd ed.* (Chapter 7), pp. 225-259. New York: Routledge

Logicalis (2016). The age of digital enlightenment. Realtime generation report 2016. Retrieved from www.uk.logicalis.com/RTG

Luckerson, V. (2015, July 9). Here's How Facebook's News Feed Actually Works. *Time*. Retrieved from <http://time.com/3950525/facebook-news-feed-algorithm/>

Magid, L. (2015, April 9). Pew Survey: Reports of Facebook's demise among teens greatly exaggerated. *Connect Safely*. Retrieved from <http://www>.

connectsafely.org/pew-survey-reports-of-facebooks-demise-among-teens-greatly-exaggerated/

Mars (n.d.). Marketing our brands responsibly. Our marketing code. Retrieved from <http://www.mars.com/global/about-mars/mars-pia/our-brands/communicating-responsibly/marketing-our-brands-responsibly.aspx>

Mascheroni, G. & Ólafsson, K. (2014). Net Children go Mobile. Risks and opportunities. 2nd ed. Milano: Educatt.

McCreanor, T., Greenaway, A., Moewaka Barnes, H., Borell, S., & Gregory, A. (2005). Youth identity formation and contemporary alcohol marketing. *Critical Public Health*, 15(3), 251-262

Microsoft (2013). Exploring digital ROI for FMCG brands. Retrieved from <http://tinyurl.com/ozekqyv>

Montgomery, K. C., Chester, J., Grier, S.A., & Dorfman, L. (2012). The new threat of digital marketing. *Pediatric Clinics of North America*, 59, 659–675

Mulhern, F. (2009). Integrated marketing communications: From media channels to digital connectivity. *Journal of Marketing Communications*, 15(2–3), 85–101.

Nairn, A. & Fine, C. (2008). Who's messing with my mind? The implications of dual-process models for the ethics of advertising to children. *International Journal of Advertising*, 27(3), 447–470

Nielsen (2009). How Teens Use Media. A Nielsen report on the myths and realities of teen media trends. Retrieved from <http://www.nielsen.com/us/en/insights/news/2009/breaking-teen-myths.html>

Newman, N., & Oates, C.J. (2014) Parental mediation of food marketing communications aimed at children. *International Journal of Advertising: The Review of Marketing Communications*, 33 (3), 579-598

O'Donohue, S. (2001). Living with ambivalence: Attitudes to advertising in postmodern times. *Marketing Theory* 1; 91-108

Office of the Privacy Commissioner (2015). Policy Position on Online Behavioural Advertising (2011, modified 2015). Retrieved from https://www.priv.gc.ca/information/guide/2012/bg_ba_1206_e.asp

O'Neill, B. & Dinh, T. (2015). Net children go mobile. Full findings from Ireland. Dublin: Dublin Institute of Technology.

Pasquale, F. (2015). *The Black Box Society. The Secret Algorithms That Control Money and Information*. Cambridge, MA: Harvard University Press.

Pechmann, C., Levine, L., Loughlin, S. & Leslie, F. (2005). Impulsive and self-conscious: Adolescents' vulnerability to advertising and promotion. *Journal of Public Policy and Marketing*, 24(2), 202-221.

Perkins, H. W., Linkenbach, J. W., Lewis, L. A., & Neighbors, C. (2011). Effectiveness of social norms media marketing in reducing drinking and driving. A statewide campaign. *Addictive Behaviours*, 35, 866–874.

Peterson, R. (2014). 11 Studies Prove Digital Marketing ROI. Retrieved from <http://www.business.rutgers.edu/executive-education/blogs/11-studies-prove-digital-marketing-roi>

Pew Research Center (2015, September 4). Teens, social media & technology, 2015. Retrieved from http://www.pewinternet.org/files/2015/04/PI_TeensandTech_Update2015_0409151.pdf

Potvin Kent, M., Dubois, L., Kent, E., Wanless, A. (2013). Internet marketing directed at children on food and restaurant websites in two policy environments. *Obesity*, 21, 800-807

Rosen, E. (2015, April 21). Why Instagram and Snapchat Fail at Selling. L2 [website report]. <https://www.l2inc.com/why-instagram-and-snapchat-fail-at-selling/2016/blog>

Rozendaal, E., Buijzen, M. & Valkenburg, P. (2011) Children's understanding of advertisers' persuasive techniques. *International Journal of Advertising*, 30(2), 329–350.

Sandvig, C., Hamilton, K., Karahalios, K. & Langbort, C. (2014). An algorithm audit. In Gangadharan, S.P., Eubanks, V. & Barocas, Data and discrimination: Collected essays, pp. 6-10 @New America: New America/Open Technology Institute. Retrieved from <https://www.newamerica.org/downloads/OTI-Data-an-Discrimination-FINAL-small.pdf>

Scarborough, P., Payne, C., Agu, C.G., Kaur, A., Mizdrak, A., Rayner, M., Halford, J.C.G., & Boyland, E. (2013). How important is the choice of the nutrient profile model used to regulate broadcast advertising of foods to children? A comparison using a targeted data set. *European Journal of Clinical Nutrition*, 67, 815–820.

Stead, M., McDermott, L., MacKintosh, A.M. & Adamson, A. (2011). Why healthy eating is bad for young people's health: Identity, belonging and food. *Social Science & Medicine*, 72, 1131-1139.

Stelzner, M.A. (2015). 2015 Social media marketing industry report. *Social Media Examiner*. Retrieved from <http://www.socialmediaexaminer.com/social-media-marketing-industry-report-2015/>

Sweney, M. (2013, January 23). Facebook admits it is powerless to stop young users setting up profiles. *The Guardian*. Retrieved from <http://www.theguardian.com/technology/2013/jan/23/facebook-admits-powerless-young-users>

Sweney, M. (2013, July 26). More than 80% of children lie about their age to use sites like Facebook. *The Guardian*. Retrieved from <http://www.theguardian.com/media/2013/jul/26/children-lie-age-facebook-asa>

Swinburn, B. A., Sacks, G., Hall, K.A., McPherson, K., Finegood, D.T., Moodie, M.L. & Gortmaker, S.L. (2011). The global obesity pandemic: shaped by global drivers and local environments. *The Lancet* 378 (9793), 804-814.

Tatlow-Golden, M., Hennessy, E., Hollywood, L. & Dean, M. (2014). Young children's food brand knowledge. Early development and associations with television viewing and parent's diet. *Appetite*, 80, 197-203

Tatlow-Golden, M., Murrin, C., Bergin, R., Kerr, M. O'Brien, S. & Livingstone, B. (in press). Creating good feelings about unhealthy food: Children's 'advertised diet' on the island of Ireland in a climate of regulation. *Irish Journal of Psychology*.

Thielmann, S. (2015, July 29). Facebook's second-quarter earnings call points toward focus on video content. *The Guardian*, 29.7.2015. Retrieved from <http://www.theguardian.com/technology/2015/jul/29/facebook-second-quarter-earnings-video-content>

Trew, K., Barnett, J., Stevenson, C., Muldoon, O., Breakwell, G., Brown, K., Doherty, G. & Clark, C. (2005). Young people and food: Adolescent dietary beliefs and understandings. Retrieved from <http://www.safefood.eu/Publications/Research-reports/Young-People-and-Food--Adolescent-Dietary-Beliefs.aspx>

Tufekci, Z. (2015). Algorithmic harms beyond Facebook and Google: Emergent challenges of computational agency. *Journal on Telecommunications & High Technology Law*, 13, 203-217

UK Department of Health (2011). The nutrient profiling model. Retrieved from <https://www.gov.uk/government/publications/the-nutrient-profiling-model>

UK Health Forum/WHO (2015). Proportion of overweight and obese males and females to increase in most European countries by 2030, say latest projections by WHO. Retrieved from <http://www.ukhealthforum.org.uk/prevention/pie/?entryid43=41043>

UN (1990). Convention on the Rights of the Child. <http://www.ohchr.org/en/professionalinterest/pages/crc.aspx>

UN (2014). Unhealthy foods, non-communicable diseases and the right to health. Report A/HRC/26/31 of the UN Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Retrieved from http://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session26/Documents/A-HRC-26-31_en.doc

Ustjanuskas, A.E., Eckman, B., Harris, J.L., Goren, A., Schwartz, M.B. & Brownell, K.D. (2010). Rudd Report. Focus groups with parents: What do they think about food marketing to their kids? Retrieved from http://www.uconnruddcenter.org/files/Pdfs/RuddReport_FocusGroupsParents_5_10.pdf

WHO (2015). WHO Regional Office for Europe nutrient profile model. Copenhagen: World Health Organization Regional Office for Europe.

WHO (2016). Report of the Commission on Ending Childhood Obesity. Geneva: WHO Press.

World Cancer Research Fund (n.d.). Restrict Food Marketing [within the NOURISHING database]. Retrieved from <http://www.wcrf.org/int/policy/nourishing-framework/restrict-food-marketing>.

Endnotes

1. PomBear Sourced from www.pom-bear.co.uk/home.html 07.10.2015 The copyright in the website is stated to be that of © Intersnack Limited 2016 - All Rights Reserved. Pom-Bear is a registered trademark of Intersnack Limited
2. Tayto Crisps Sourced from www.taytocrisps.ie 28.09.2015 The copyright in the website was stated to be that of ©Largo Foods Limited - All Rights Reserved. Tayto Crisps is a registered trademark of © Largo Foods Limited. Tayto Park Sourced from www.taytopark.ie 12.10.2015 The copyright in the website is stated to be that of © Ashbourne Visitor Centre LTD 2016 - All Rights Reserved. Tayto Park is a registered trademark of Ashbourne Visitor Centre LTD
3. Avonmore Sourced from www.avonmore.ie 12.10.2015 The copyright in the website is stated to be that of © Glanbia plc 2016 - All Rights Reserved. Avonmore is a registered trademark of Glanbia plc
4. John West Sourced from www.john-west.ie 07.10.2015 The copyright in the website is stated to be that of © John West Foods Limited 2016 - All Rights Reserved. John West is a registered trademark of John West Foods Limited
5. McDonald's Happy Meal Sourced from www.happymeal.com 24.10.2015 The copyright in the website is stated to be that of © McDonald's Corporation 2016 - All Rights Reserved. Happy Meal is a registered trademark of McDonald's Corporation
6. <https://play.google.com/store/apps/details?id=com.arworks.mybuggy&hl=en>; a demo can be viewed at <https://www.youtube.com/watch?v=fqCCEU4-0o>
7. M&M's Sourced from <http://www.mms.com/> 04.10.2015 The copyright in the website is stated to be that of © Mars Limited 2016 - All Rights Reserved. M&Ms is a registered trademark of Mars Limited
8. Kinder Sourced from <http://www.kinder.co.uk/> 07.10.2015 The copyright in the website is stated to be that of © Ferrero UK Ltd 2016 - All Rights Reserved. Kinder is a registered trademark of Ferrero
9. Maltesers Sourced from <https://www.maltesers.co.uk/age-gate.aspx> 07.10.2015 The copyright in the website is stated to be that of © Mars Limited 2015 - All Rights Reserved. Maltesers is a registered trademark of Mars Limited
10. Coca-Cola Sourced from <http://www.Coca-Cola.ie/> and <https://www.happiness.Coca-Cola.com/ie/en/hom> 11.10. 2015. The copyright in the website is stated to be that of ©The Coca Cola Company 2016 - All Rights Reserved. 'Coca Cola', 'Coke', 'Coca Cola Zero', 'Coke Zero', 'Coca Cola Life' and the Contour Bottle are registered trade marks of The Coca Cola Company
11. Pringles Sourced from <http://www.pringles.com/ie/home.html> 10.10. 2015. The copyright in the website is stated to be that of ©PRINGLES, S.A.R.L. 2016 - All Rights Reserved. Pringles is a registered trademark of PRINGLES, S.A.R.L
12. Tayto Park Sourced from www.taytopark.ie 12.10.2015 The copyright in the website is stated to be that of © Ashbourne Visitor Centre LTD 2016 - All Rights Reserved. Tayto Park is a registered trademark of Ashbourne Visitor Centre LTD. Tayto Crisps Sourced from www.taytocrisps.ie 28.09.2015 The copyright in the website was stated to be that of ©Largo Foods Limited - All Rights Reserved. Tayto Crisps is a registered trademark of © Largo Foods Limited.
13. Lucozade Sourced from <http://www.lucozadeenergy.ie/> and <https://www.lucozadesport.ie/rugby-instant-win/> 13.10.2015 The copyright in the website is stated to be that of © Lucozade Ribena Suntory Limited 2016 - All Rights Reserved. LUCOZADE, LUCOZADE ENERGY and the Arc Device are registered trade marks of Lucozade Ribena Suntory Limited
14. KitKat Sourced from <http://www.KitKat.co.uk/content> in 07.10.2015 The copyright in the website is stated to be that of © Nestlé 2016 * Reg. Trademark of Société des Produits Nestlé S.A 2016 - All Rights Reserved. Kitkat is a registered trademark of Société des Produits Nestlé S.A
15. Ben & Jerry Sourced from <http://www.benjerry.ie/> 04.10.2015 The copyright in the website is stated to be that of ©Ben & Jerry Homemade Limited 2016 - All Rights Reserved. Ben & Jerry is a registered trademark of Ben & Jerry Homemade Limited
16. Volvic Sourced from <http://www.volvic.co.uk/> 04.10.2015 The copyright in the website is stated to be that of © Danone Waters (UK and Ireland) Ltd 2016 - All Rights Reserved. Volvic is a registered trademark of Danone Waters (UK and Ireland) Ltd
17. Glenisk Sourced from <http://www.glenisk.com/> 07.10.2015 The copyright in the website is stated to be that of ©Glenisk Limited 2016 - All Rights Reserved. Glenisk is a registered trademark of Glenisk Limited
18. Coca-Cola Sourced from <http://www.Coca-Cola.ie/> and <https://www.happiness.Coca-Cola.com/ie/en/hom> 11.10. 2015 The copyright in the website is stated to be that of ©The Coca Cola Company 2016 - All Rights Reserved. 'Coca Cola', 'Coke', 'Coca Cola Zero', 'Coke Zero', 'Coca Cola Life' and the Contour Bottle are registered trade marks of The Coca Cola Company.
19. Coca-Cola Sourced from <http://www.Coca-Cola.ie/> and <https://www.happiness.Coca-Cola.com/ie/en/hom> 11.10. 2015The copyright in the website is stated to be that of ©The Coca Cola Company 2016 - All Rights Reserved. 'Coca Cola', 'Coke', 'Coca Cola Zero', 'Coke Zero', 'Coca Cola Life' and the Contour Bottle are registered trade marks of The Coca Cola Company.

20. Glenisk Sourced from <http://www.glenisk.com/> 07.10.2015. The copyright in the website is stated to be that of ©Glenisk Limited 2016 - All Rights Reserved. Glenisk is a registered trademark of Glenisk Limited
21. Lucozade Sourced from <http://www.lucozadeenergy.ie/> and <https://www.lucozadesport.ie/rugby-instant-win/> 13.10.2015 The copyright in the website is stated to be that of © Lucozade Ribena Suntory Limited 2016 - All Rights Reserved. LUCOZADE, LUCOZADE ENERGY and the Arc Device are registered trade marks of Lucozade Ribena Suntory Limited
22. Red Bull Sourced from <http://www.redbull.com/ie/en> 05.10.2015 The copyright in the website is stated to be that of © Red Bull GmbH 2016 - All Rights Reserved. Red Bull is a registered trademark of Red Bull GmbH
23. Pringles Sourced from <http://www.pringles.com/ie/home.html> 10.10. 2015 The copyright in the website is stated to be that of ©PRINGLES, S.A.R.L. 2016 - All Rights Reserved. Pringles is a registered trademark of PRINGLES, S.A.R.L
24. Lucozade Sourced from <http://www.lucozadeenergy.ie/> and <https://www.lucozadesport.ie/rugby-instant-win/> 13.10.2015The copyright in the website is stated to be that of © Lucozade Ribena Suntory Limited 2016 - All Rights Reserved. LUCOZADE, LUCOZADE ENERGY and the Arc Device are registered trade marks of Lucozade Ribena Suntory Limited
25. https://www.facebook.com/pages/create/?ref_type=sitefooter
26. <http://www.socialbakers.com/statistics/facebook/pages/total/ireland/brands/>
27. M&M's – Image as appeared on Facebook.com on 8.6.2015 public setting.
28. Supermac's – Image as appeared on Facebook.com on 10.7.2015 public setting.
29. Coca-Cola – Image as appeared on Facebook.com 22.5.2015 on public setting.
30. Pringles – Image as appeared on Facebook.com 4.6.2015 on public setting.
31. Apache Pizza – Image as appeared on Facebook.com 7.6.2015 on public setting.
32. Apache Pizza – Image as appeared on Facebook.com 26.6.2015 on public setting.
33. Eddie Rockets Ireland – Image as appeared on Facebook.com 12.7.2015 on public setting.
34. Ben & Jerry's – Image as appeared on Facebook.com 4.7.2015 on public setting.
35. KitKat – Image as appeared on Facebook.com 22.5.2015 on public setting.
36. Lucozade Energy Ireland – Image as appeared on Facebook.com 20.5.2015 on public setting.
37. Subway UK & Ireland – Image as appeared on Facebook.com 21.4.2015 on public setting.
38. Cadbury Dairy Milk – Image as appeared on Facebook.com on 17.6.2015 public setting.
39. Coca-Cola – Image as appeared on Facebook.com 18.6.2015 on public setting.
40. Subway UK & Ireland – Image as appeared on Facebook.com 4.5.2015 on public setting.
41. Cadbury Dairy Milk – Image as appeared on Facebook.com 23.5.2015 on public setting.
42. Cadbury Dairy Milk – Image as appeared on Facebook.com 2.6.2015 on public setting.
43. Mr. Tayto – Image as appeared on Facebook.com 22.4.2015 on public setting.
44. Domino's Pizza Ireland – Image as appeared on Facebook.com 21.6.2015 on public setting.
45. Cadbury Dairy Milk – Image as appeared on Facebook.com 6.7.2015 on public setting
46. Eddie Rockets Ireland – Image as appeared on Facebook.com 23.6.2015 on public setting.
47. Lucozade Energy Ireland – Image as appeared on Facebook.com on 26.6.2015 public setting.
48. Supermac's – Image as appeared on Facebook.com 5.7.2015 on public setting.
49. KitKat – Image as appeared on Facebook.com May 2015 on public setting.
50. Supermac's – Image as appeared on Facebook.com 5.10.2015 on public setting.
51. Glenisk – Image as appeared on Facebook.com 11.10.2015 on public setting.
52. Coca-Cola – Image as appeared on Facebook.com 11.10.2015 on public setting.
53. HB Cornetto Sourced from <http://www.icecreammakesuhappy.ie/> 05.10.2015 The copyright in the website is stated to be that of ©Unilver Group 2016 - All Rights Reserved. HB and the HB logo are registered trademarks of Unilever Ireland Ltd and its affiliates
54. Aero Sourced from <http://www.aerochocolate.co.uk/> 04.10.2015 The copyright in the website is stated to be that of © Société des Produits Nestlé S.A. 2004 - All Rights Reserved. Aero is a registered trademark of Société des Produits Nestlé S.A
55. Cadbury Sourced from <http://www.cadbury.ie/> 28.09.2015 The copyright in the website is stated to be that of © Cadbury 2013 Mondelez Europe Services GmbH – Ireland Branch - All Rights Reserved. Cadbury is a registered trademark of Mondelez Europe Services GmbH
56. 7Up Sourced from <http://www.7upideashub.ie/> and <http://www.7up.com/en> 10.10.2015 The copyright in the website is stated to be that of © Dr Pepper/Seven Up, Inc 2016 - All Rights Reserved. 7Up and Live It Up are registered trademarks of Dr Pepper/Seven Up, Inc
57. Fanta Sourced from <http://www.fanta.ie/en/home/> 07.10.2015 The copyright in the website is stated to be that of ©XYZ Limited 2016 - All Rights Reserved. X is a registered trademark of XYZ Limited
58. Maltesers Sourced from <https://www.maltesers.co.uk/age-gate.aspx> 07.10.2015 The copyright in the website is stated to be that of © Mars Limited 2015 - All Rights Reserved. Maltesers is a registered trademark of Mars Limited
59. M&Ms Sourced from <http://www.mms.com/> 04.10.2015 The copyright in the website is stated to be that of © Mars Limited 2016 - All Rights Reserved. M&Ms is a registered trademark of Mars Limited
60. Innocent Sourced from <http://www.innocentdrinks.ie/> 07.10.2015 The copyright in the website is stated to be that of © Fresh Trading Limited 2016 - All Rights Reserved. Innocent is a registered trademark of Fresh Trading Limited
61. Deep River Rock Sourced from <http://www.deepriverrock.ie/> redirected to <https://www.deepriverrocksplashthecash.com> in 04.10.2015 The copyright in the website is stated to be that of ©Coca Cola HBC Northern Ireland Limited 2016 - All Rights Reserved. Deep River Rock is a registered trademark of Coca Cola HBC Northern Ireland Limited

Glossary

Advergame	Promotional digital game embedded with branding.
App	An app is a software application or program that is downloaded to a user's mobile device (smartphone, tablet, etc) to perform a particular function, e.g., play a game, etc.
Big Data	The vast volume of digital data available for analysis in the digital age (for example, in 2010, estimates were made that Facebook processed about 1 million photographs per second).
Children	Children defined here as under 18 years. Young children as under 13 years.
Digital platforms	This refers to various social media and media sharing websites, including (but not limited to) Facebook, Instagram, SnapChat and YouTube.
Facebook Newsfeed	A Facebook user's Newsfeed is a rolling list of the 'news' updates that their account receives. This consists of posts from their Facebook friends, posts from advertisers, paid-for ads, and many more. Facebook selects which of these to present to the user (only about 1 in 5 posts) using a complex algorithm aiming to select what Facebook considers most relevant.
Facebook Timeline	A Facebook user's Timeline is a page with a sequential listing of all their posts
Food	Food and non-alcoholic beverages (soft drinks)
Hashtag #	The # sign (hashtag), when attached to a word or phrase in Twitter, Facebook and elsewhere, turns the word/phrase into a link with which one can search for or be linked to related similarly tagged content.
High in fat, sugar and salt (HFSS)	HFSS is one of the widely used terms that defines foods and non-alcoholic drinks that are considered less healthy and contributors to obesity if they are eaten in excess.
Mobile device	A smartphone or tablet: Portable digital devices that can access the internet.
OBA	The shift from broadcast to targeted advertising that is crafted for individual users' demographics and their online behaviours - Online Behavioural Advertising, or OBA.
Nutrient Profiling Model (NPM)	A system of categorising foods according to the nutrients in them. NPMs typically have the goal of identifying which foods are healthier (and hence are permitted to be marketed to children).
'Reach' (Organic, paid and viral)	Marketing reach in Facebook and elsewhere is the number of people to whom an ad is delivered. See p. 26 for explanation of organic, paid and viral reach in Facebook
Proprietary algorithm	Platforms like Facebook, Google, Instagram and others select what users see online using extensive, secret and highly complex formulae (algorithms), or step-by-step operations with which data processing is carried out. In these cases, algorithms aim to predict accurately what will be of interest to users, including advertising.
Social marketing	Social marketing aims to create positive change by implementing a programme to promote a new behaviour in a target group such as drinking less alcohol or eating healthier foods.
Spokescharacter	A spokescharacter is a character created specifically by a brand to promote its own products, such as Ronald McDonald (McDonalds), Coco the Monkey (Coco Pops) or Tony the Tiger (Frosties). In contrast, licensed characters are media characters popular with children such as SpongeBob Squarepants, the Simpsons or KungFu Panda – companies buy access to these in order to promote their products.
'Tile' icon	In Facebook, a small square 'tile' icon at the top left of each post in the NewsFeed identifies the author of the post
To 'like'	In Facebook and other social media, users indicate whether they like certain content by clicking on a 'like' button. 'Likes' have become valuable indicators of a level of interest in events, products, etc as well as in users' Facebook friends' personal posts.
Unique post	In this study, a 'unique' post refers to each individual Facebook post that was analysed. The posts are described as unique because repeat postings of the same post were excluded from analysis. Each brand analysed had a Facebook Page with its own Timeline on which these posts were posted.
User-generated content	In social media, brands encourage consumers to engage with them as they hope for their marketing to spread across users' social networks. This viral reach (see Reach) occurs when users like, share, or comment on a post e.g. in Facebook. The activity is registered by the digital platform's algorithms as indication of interest and will therefore alter the kind of content delivered.
Webisode	A webisode is an episode of a story, soap opera or other engaging narrative that is delivered online e.g. on a website.
Young people	Young people defined here as 13 to 18 years.

Appendix

Urls of 73 websites identified for the 83 food and drink brands in the Checkout/Nielsen (2014) Top 100 Retail Brands for Ireland

Coca cola (2 sites)	http://www.coca-cola.ie/ https://www.happiness.coca-cola.com/ie/en/home
Cadbury (Dairy Milk, Roses, Snack & Twirl)	http://www.cadbury.ie/
Tayto (2 sites)	http://www.taytocrisps.ie/park/ http://www.taytocrisps.ie
Lucozade (2 sites)	http://www.lucozadeenergy.ie/ http://www.lucozadesport.ie/
7Up	http://www.7up.com/en http://www.7upideashub.ie/
Walkers	https://www.walkers.co.uk/
Club (Orange)	http://www.club.ie/ redirects to www.bestbits.ie
Mc Vities	http://www.mcvities.co.uk/
Red Bull	http://www.redbull.com/ie/en
KP (snacks, crisps)	http://www.pom-bear.co.uk/home.html
Pringles	https://www.pringles.com/ie/home.html
Maltesers	https://www.maltesers.co.uk/age-gate.aspx
Galaxy	http://www.galaxychocolate.co.uk/
Volvic	http://www.volvic.co.uk/
Deep River Rock	http://www.deepriverrock.ie/ redirects to https://www.deepriverrocksplashthecash.com
Nestle KitKat	http://www.kitkat.co.uk/content
Pepsi	http://www.pepsico.ie/
Miwadi	http://www.miwadi.ie/
Fanta	http://www.fanta.ie/en/home/
Kellogs Cornflakes [Kelloggs]	http://www.kelloggs.ie/en_IE/kellogg-s-corn-flakes-consumer-brand.html
HB Cornetto	http://www.icecreammakesuhappy.ie/
Nestle Aero	http://www.aerochocolate.co.uk/
M&M's	http://www.mms.com/
Ben & Jerry's	http://www.benjerry.ie/
Glenisk	http://www.glenisk.com/
Avonmore (Milk and Cream)	http://www.avonmore.ie/our-range/our-products-cream-rice-and-custard/fresh-cream
Brennans	http://brennansbread.ie/
Danone	http://www.danone.ie/
Jacobs biscuits, Batchelors beans, Batchelors veg (Valeo Foods)	http://www.valeofoods.com/our-brands/jacobs-biscuits/
Dairygold	http://www.yourdairygold.ie/home.aspx
Kinder	http://www.kinder.co.uk/en/
Dr Oetker Pizza	http://www.oetker.ie/ie-en/our-products/home-baking/surprise-inside/overview.html
88. Uncle Bens	https://unclebens.co.uk/
Irish Pride bread	http://www.irishpride.ie/

Continued.

Yoplait (all)	http://www.yoplait.com/ links to petitsfilloous.co.uk
Pat the baker	http://patthebaker.com/
Denny (Bacon & sausages)	http://www.denny.ie/
Florette salad bags	http://www.florettesalad.co.uk/
Birds Eye (fish & frozen poultry)	http://www.birdseye.co.uk/range/Fish
Wrigleys Extra	http://www.wrigley.com/uk/index.aspx
Goodfellas	http://goodfellaspizzas.com/
Tropicana	http://www.tropicana.co.uk/
McCain	http://www.mccain.co.uk/
Flahavans (Oats, granolas)	http://www.flahavans.ie/?fr=roi
Hellmans	https://www.hellmanns.ie/
Flora	http://www.flora.com/
Keeling's (berries)	http://www.keelings.com/home
John West	http://www.john-west.ie/
Innocent (juices, smoothies, etc)	http://www.innocentdrinks.ie/
Johnston Mooney & OBrien bread	http://www.jmob.ie/
King Crisps (Largo Foods)	http://www.largofoods.ie/our-brands/king/
Hunky Dorys	http://www.hunkydorys.ie/
Ballygowan	http://www.ballygowan.ie/
Charleville	http://www.charleville.ie/home/
Donegal Catch (frozen fish)	http://www.2sfg.com/our-brands/donegal-catch/
Magnum	http://www.magnumicecream.com/
Kerrygold	http://www.kerrygold.com/
Galtee (bacon, ham)	http://www.okaneirishfoods.co.uk/products/galtee
Brady Family ham	http://bradyfamily.ie/
Nestle Rowntrees (fruit pastilles)	http://www.nestle.co.uk/brands/chocolate_and_confectionery/rowntree
Kilmeaden	http://www.kilmeaden.ie/
Clonakilty (sausage, etc)	http://www.clonakiltyblackpudding.ie/products/clonakilty-sausages
McCambridge	http://www.mccambridge.ie/
Kellogs Special K	http://www.specialk.ie/en_ie/splitter.html
Knorr (soup & sauces)	http://www.knorr.ie
Dolmio	http://www.dolmio.co.uk/
Haribo	https://www.haribo.com/enIE/home.html
Weetabix	http://www.weetabix.co.uk/
Cully and Scully (chilled soups etc)	http://www.cullyandsully.com/
Premier Milk	No website found

Urls of Facebook Brand Pages analysed

Subway	https://www.facebook.com/SUBWAY.UK.Ireland
McDonald's	https://www.facebook.com/McDonaldsIreland?brand_redir=50245567013
Eddie Rockets	https://www.facebook.com/eddierockets?fref=ts
Supermac's	https://www.facebook.com/supermacsofficial?fref=ts
Domina's Pizza	https://www.facebook.com/DominosIreland
Nando's	https://www.facebook.com/Nandos.Ireland
Apache Pizza	https://www.facebook.com/apachepizza
Abrakebabra	https://www.facebook.com/Abrakebabra?ref=profile
Coca-Cola	https://www.facebook.com/coca-cola/timeline
Cadbury Dairy Milk	https://www.facebook.com/CadburyIreland
Tayto	https://www.facebook.com/MrTayto
Lucozade	https://www.facebook.com/LucozadeEnergyIRL
7Up	https://www.facebook.com/7UpFreeIreland?brand_redir=127848957229303
Pringles	https://www.facebook.com/pages/Pringles/173814766108446?brand_redir=2
Haribo	https://www.facebook.com/HariboIreland
KitKat	https://www.facebook.com/KitKatuk?brand_redir=17452092075
M&M's	https://www.facebook.com/mmsireland
Ben & Jerry's	https://www.facebook.com/BenandJerrysIreland

Examples of websites that were selected for initial analysis for teen appeal, but excluded on the basis of having less potential appeal to teens

HB Cornetto

www.icecreammakesuhappy.ie⁵³

Although the products had appeal to teens and the site was visually appealing, it had multiple broken links and little content. Its link to Facebook contained reference to several competitions likely to appeal to teens such as for a Ginger-ed sandwich box (featuring Ed Sheeran), or HB Cornetto Taco or Freaky Footprint.



Aero

www.aerochocolate.co.uk⁵⁴

Although the product had likely appeal to teens the website visuals or content were not considered strong.



Cadbury

www.cadbury.ie⁵⁵

Although the visuals on the homepage were strong and appealing, we felt this site (featuring brand history and recipes) was more appealing to adults, and considered that teens are less drawn to cash prize competitions than e.g. products, events or family holidays.



7Up

www.7upideashub.ie⁵⁶

www.7up.com/en

The 7 Word Idea campaign created user engagement and activity on social media as the ideas had to be submitted on Facebook, Twitter or Instagram; featured ideas became cartoons on these media. We felt it might be more appealing to older teens /young adults.



Fanta

www.fanta.ie/en/home⁵⁷

The Fanta site lacked direction despite its youth-oriented home page; the Media Stream tab just links to social media posts of unclear appeal, from around the world in various languages. On the fanta.com site, links to downloadable wallpaper and screensavers were broken.



Continued.

Maltesers

www.maltesers.co.uk/age-gate.aspx⁵⁸

Although visually strong, this homepage was effectively a redirect to Facebook, with almost no content on the website itself other than the prominent link to the social networking site.

**M&Ms**

www.mms.com⁵⁹

As with other Mars brands M&Ms was behind an age gate. Although the product and visuals might be appealing to teens the brand characters projected an older adult image on the site and it was more US-oriented (no Irish site was found).

**Innocent**

www.innocentdrinks.ie⁶⁰

Although cute cartoon drawings are a key part of this brand's identity, its homepage and site were considered to appeal more to adults and parents. One link to games directed instead to a competition for winning a pack of seeds.

**Deep River Rock**

www.deepriverrock.ie⁶¹

redirects to www.deepriverrocksplashthecash.com

Although visually striking we felt that this cash prize competition for a water product was of less appeal to teens than adults.



Facebook for Business: Adverts pages

Facebook provides information on how their ads are targeted, how people view them, and how businesses can measure their effectiveness, promising 'seamless' ad viewing by Facebook users on both desktop and mobile by people to whom the ads are 'really relevant', as they 'show adverts to all the right people based on age, gender, location, interests and so much more'. Facebook also promise advertisers that their ads will be 'Naturally social: When people like your Page, their friends are more likely to be interested in what you have to offer'. They also offer targeting tips including specifying age: 'You can set a specific age range for your audience that is anywhere from 13-65+', device usage and more. Facebook also recommends that advertisers consider 'talking about things in terms of your customers' mindset and what might appeal to them emotionally'.

See www.facebook.com/business/products/ads and, among others,

www.facebook.com/business/learn/facebook-ads-choose-audience

www.facebook.com/business/products/ads/ad-targeting

www.facebook.com/business/products/ads/how-ads-show

(accessed 8 June 2016)



**IRISH HEART
FOUNDATION**
Fighting Heart Disease & Stroke

Irish Heart Foundation
50 Ringsend Road, Dublin 4
Phone: +353 1 668 5001
Email: info@irishheart.ie
Heart & Stroke Helpline: Freephone 1800 25 25 50
Web: www.irishheart.ie

