



# Digital marketing and advertising to children: a literature review

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# Abstract

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This literature review looks at children's use of digital devices on a global scale and in particular considers in-depth the available literature that has focused on digital marketing and advertising to children. While many new marketing techniques are being developed using the internet and digital devices as communication tools, little literature exists that has considered the implications for children in-depth. Partly because the field of digital marketing is growing so rapidly, and partly because children's use of the internet is increasing so fast and at a younger age, much of the academic literature struggles to keep up with new trends. What literature does exist tends to be highly critical, but is not necessarily based on sound research that looks at the real world of children's engagement with digital technology. There are many similarities in the way digital communication is considered to the way in which more traditional forms of advertising and marketing to children are viewed, but there is a sense that digital marketing may be less easily recognised and therefore potentially more harmful. In contrast, literature from emerging economies views digital marketing as a powerful and effective tool, but does not necessarily consider the possible harmful effects on children. There is overall agreement that far more research needs to take place that looks closely at what children are actually doing online when using their various digital devices, and how marketing and advertising messages are being absorbed and understood. Self-regulation, particularly in developed countries, is well thought through and robust, but may lag behind the reality of what is happening in the digital world.

## Key Words

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*children's understanding of advertising and marketing; digital advertising and marketing; children's understanding of commercial intent, children, youth, young people, adolescents, online, Internet, digital, marketing, advertising, advergames, social networking sites, mobile, location based, geo-targeting, product placement*

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# Background

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The Advertising Education forum (AEf) is a non-profit organisation dedicated to understanding the interaction between advertising, children and the media. AEf is a leading reference on academic, political and regulatory developments on children, marketing communications and the media.

AEf's mission is twofold:

1. To be an information resource providing real-time information on worldwide developments relating to all aspects of marketing communications and children.
2. To contribute to the public debate and to inform responsible marketing practices, effective self-regulation and proportionate policy-making.

The growth of digital media and digital communication is well documented, and AEf has reviewed its objectives in view of the growing importance of the media for children. The recent literature review that looked at Children and Advertising (Credos, 2011), carried out on behalf of CREDOS (The UK Advertising Association's think tank), highlighted the growth in digital marketing communication to children.

The overall objective of the literature review was to provide an up-to-date, robust, and comprehensive picture of children and young people up to 18 years and their use of digital media (including different devices), and to explore the latest literature on children, young people and digital marketing communications. The review aims to highlight areas that are currently under-researched that would benefit from increased robust scrutiny. In particular the literature review asked the following key questions:

- What is the state of play of the scientific literature on digital marketing communications and children? How much research is there? In what disciplines, in what languages?

- ▶ Is this research part of the broader research agenda on “traditional” advertising (TV, radio, print, cinema, outdoor, etc)? Or is it rather separate? Are many of the same academics active in both areas or is it a new field?
- ▶ Are the same research methodologies being used? What methodological discussions are under way if any?
- ▶ What is the focus of the available research?
- ▶ What marketing techniques within the field of digital marketing communications are being discussed?
- ▶ What are the leading academic views on the issue, in respect of children’s understanding of and interaction with digital marketing communications; their impact on children’s well-being, development and health, also vis-à-vis traditional media?
- ▶ Can consensual views be drawn out of the available research or is the debate still largely open? If so, on which specific questions?
- ▶ What are the implications for future industry action/ (self) regulation?

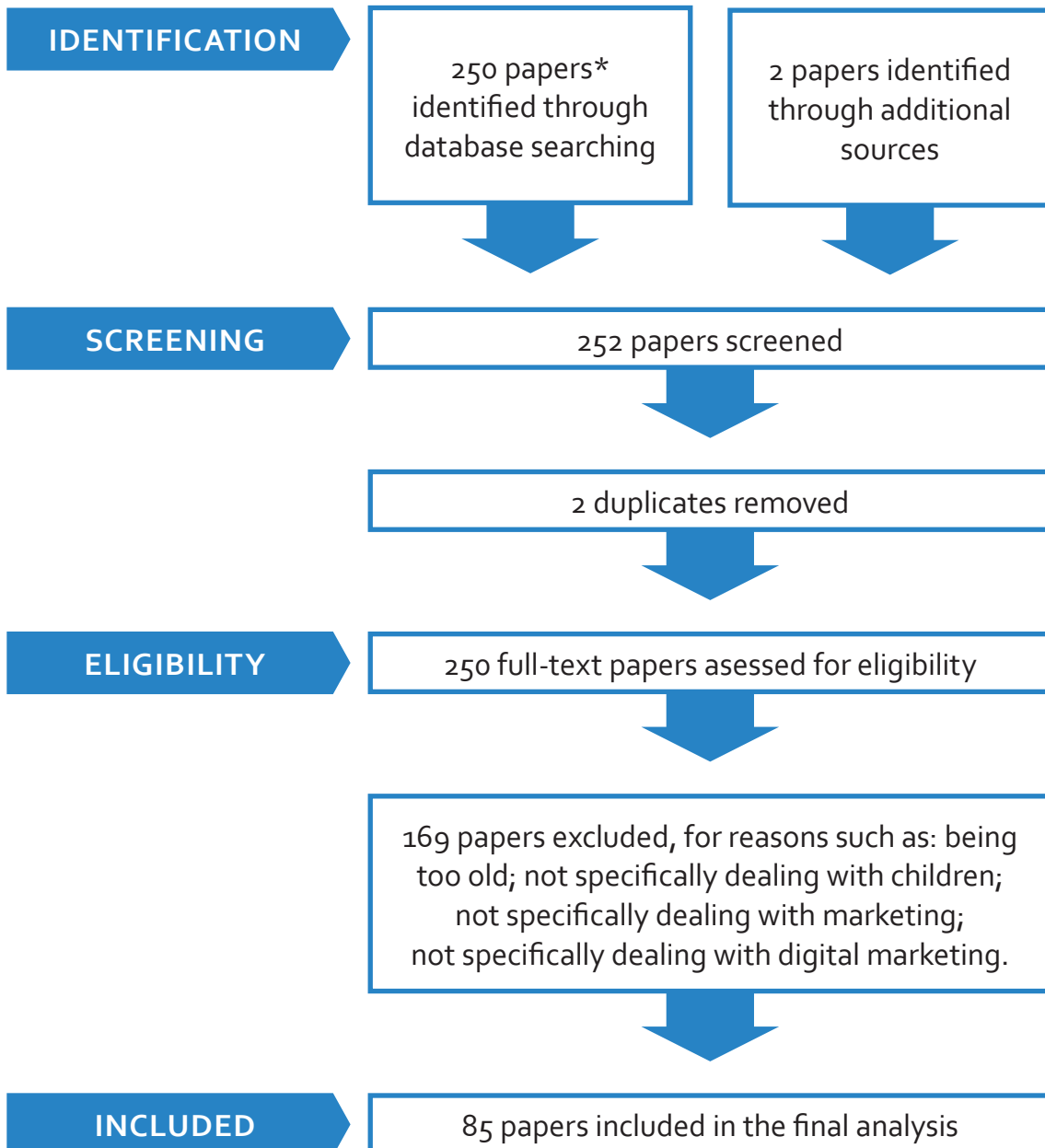
To answer these questions, the AEF asked Dr Barbie Clarke and her team at Family Kids and Youth to carry out a literature review that looks at the latest research both into children’s use of digital media, and into digital advertising and marketing to children.

The literature review was carried out between 24 October 2011 and 31 January 2012. Using keywords: children, youth, young people, adolescents, online, Internet, digital, marketing advertising, advergames, social networking sites, mobile, location based, geo-targeting, product placement we searched bibliographic databases using CSA Illumina with access to more than 100 databases including ERIC, BEI, Psycinfo and Web of Knowledge. The total number of papers and reports located was 245 of which 85 were used. Records have been kept of each paper used in the search.

The following charts give an overview of the review process. Please see Appendix 2 (page 77) for the Subject of Papers Reviewed.

# Review Process

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\* Papers include peer-reviewed journals, reports, academic conference papers and research reports.



# Papers Reviewed by Field of Study

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| FIELD OF STUDY                   | NUMBER OF PAPERS |
|----------------------------------|------------------|
| Health and Nutrition/Food Policy | 31               |
| Media and Communications         | 22               |
| Marketing and Consumer Behaviour | 17               |
| Psychology                       | 10               |
| Law                              | 3                |
| Sociology                        | 1                |
| Consumer Research                | 1                |

Please note that many of the papers are written by academics from different disciplines and could potentially be put in different categories. This table therefore gives an *indication* of academic discipline. A full analysis of content of each paper is included in the Appendices (page 77).

# Papers Reviewed by Country

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| COUNTRY        | NUMBER OF PAPERS |
|----------------|------------------|
| United States  | 44               |
| United Kingdom | 11               |
| Australia      | 6                |
| Netherlands    | 4                |
| Canada         | 3                |
| Norway         | 2                |
| Sweden         | 2                |
| Denmark        | 2                |
| China          | 2                |
| New Zealand    | 1                |
| Hungary        | 1                |
| Turkey         | 1                |
| Estonia        | 1                |
| Nigeria        | 1                |
| South Africa   | 1                |
| Mexico         | 1                |
| Singapore      | 1                |
| Japan          | 1                |

**Total Papers: 85**

# Management Summary

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1. There is significant concern about advertising and marketing to children, and academics are beginning to look at the emerging new forms of communicating sales and marketing messages to children, especially online. However because technology is developing so fast and children are accessing digital technology at a younger age, much of the academic literature is behind in its assessment of what is actually happening.
2. There is a perceived need to ensure that, as the use of digital marketing communication techniques grows, both regulatory restrictions and self-regulatory commitments applicable in the offline world, e.g. in relation to high fat/sugar/salt (HFSS) food and beverage product advertising, are adequately translated into the digital sphere..
3. Much of the literature is critical of advertising and marketing to children, but academic agreement on a) the level of children's understanding of what constitutes marketing and advertising, and b) children's vulnerability to marketing and advertising messages, is uneven and inconsistent. Some of the most knowledgeable academics express disquiet about the arguments put forward that criticise marketers, and call for more robust research that looks at children's experiential interaction with online marketing.
4. While some academics argue in the literature that any form of marketing or advertising to children is unacceptable, others recognise that children live in a commercial world where marketing messages are rife and good media literacy is the solution. However there is also some criticism of the nature of media literacy programmes, questioning how effective these are when they invariably make assumptions about children's level of social and cognitive competence.
5. Meanwhile regulatory bodies representing marketers, especially in developed markets, are making moves to self-regulate, inform and educate parents and marketers, and allow a platform for discussion and complaint. This is particularly the case in the UK ([parentport.org.uk](http://parentport.org.uk)) and Canada ([Cbc.ca](http://Cbc.ca)).

6. In emerging economies however it may be that the interests of children are not at the forefront of marketing research, with the excitement about the opportunities that digital media provides overriding consideration of vulnerable audiences.
7. There is a strong argument to suggest that some of the skilful marketing techniques used to target children online could be equally used to convey positive messages such as healthy eating, exercise and learning about drugs and alcohol abuse. Such behaviour-change campaigns may be helpful to young consumers and marketers alike.
8. The literature points out fairly consistently that parents are unaware of much of what children are doing digitally, and this in turn makes children particularly vulnerable. This is not because parents are being negligent, but more because children's skills with digital devices and content often outstrip those of their parents.
9. There is also evidence to support the use of peer influence by marketers on product and brand choice. While the industry is mostly in agreement that child brand ambassadors are unacceptable, nevertheless the use of communication using social network brand pages and social network style language (e.g. 'like' something) on websites may be having a similar effect.
10. There is evidence in the literature that children have more difficulty recognising advertising, marketing and brand messages within digital media than through traditional media, and this is causing some concern. A clear indication that the communication is indeed one of marketing or advertising rather than just information is sought.
11. Given the popularity of online games with children it is perhaps not surprising that many marketers have chosen advergames as a form of communicating advertising and marketing messages to children. Inevitably therefore this has created the greatest level of concern and criticism from some academics. There is evidence that advergames are particularly prominent on HFSS brands' websites; in many countries such brands now have restrictions on conventional TV and print advertising to children.

12. The issue of privacy, and the collection of children's data for marketing purposes on websites and social networking sites they visit generate a great deal of concern, although little research has been carried out to monitor the extent of this, as it is so new. Under accepted international guidelines for carrying out research with children, the consent of an adult, as well as the child themselves, must be sought before data is collected that gives a picture of preferences and potential buying patterns. Where such content is not sought, it raises ethical concerns.
13. Location based, or geo-targeting advertising is barely covered in the research literature to date. As it is a new phenomenon, and many of its uses are still being mapped out, academic research simply has not yet caught up with it.
14. There is some evidence to show that mobile marketing techniques are being used to target young people. Mobile ads have much higher click through rates than online banner ads, and it is reported that more companies are expected to adopt a mobile strategy.
15. One of the most recent digital developments is the creation of "Apps" that can be downloaded by children. Many companies adopt this new marketing strategy, including those which advertise HFSS products (such as fast food chains). Monitoring the use of downloads by children (e.g. for their favourite fast food restaurant) may be a challenge.
16. There are acknowledged advantages to children in using the internet and accessing information, learning and entertainment. However the relatively unregulated nature of such interaction and the lack of parental knowledge or understanding of what children are accessing (especially from 11 years) means that children are a particularly vulnerable group. Reasonable, measured and well thought self-regulation needs to be discussed and defined, and constantly revisited.
17. Overall there is a call for far more research to be carried out into the real world of children and their engagement with digital technology, and the effects of digital marketing and advertising on the wellbeing of children. Such research should not necessarily be 'laboratory' based (i.e. carried out in universities) but located in real time and in real homes where children are more likely to access digital devices.

# 1. Introduction

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Increased attention in recent years has been given to children's role in the commercial marketplace, as well as advertising directed at children, and advertising that children are exposed to, whether directed at them or not. New forms of marketing and what is seen as a greater presence of commercial forces in the lives of children have prompted a greater focus on children's role in the commercial world, as exemplified most recently by the Bailey Review (2011) in the UK and the UNICEF UK Report on well-being, inequality and materialism (2011). The Bailey Review in the UK has led to a number of new measures, including the creation of the ParentPort. Set up by the UK's media regulators to protect children, the website allows members of the public to report inappropriate material on TV, online, in film, advertising, a video game or in print ([parentport.org.uk](http://parentport.org.uk)). At the same time stricter guidelines have been issued in the UK by the Advertising Standards Authority, with a voluntary ban on under-16 year olds being employed as brand ambassadors and an 'active choice' web browsing parental control. In Canada, new legislation has been introduced to protect children from data collection by advertisers ([Cbc.ca](http://Cbc.ca)). In the US, increasing concerns over rising youth obesity levels recently led consumer groups to file a complaint, along with the Federal Trade Commission, against PepsiCo for 'engaging in deceptive and unfair digital marketing practicing' (Center for Digital Democracy, Consumer Action et al. 2011). In Scandinavia, where children have traditionally been heavily protected from advertising, new forms of advertising such as social media and applications have caused concern, and there has been an increased focus on the commercialisation of childhood ([Barneombudet.no](http://Barneombudet.no)).

As children spend increasing amounts of time online (Rideout, Foehr et al. 2010; Livingstone, Haddon et al. 2011), and, importantly, not only in spaces created especially for them, advertising and other aspects of the commercial world are an inevitable part of their media environment. While there is a considerable body of research focusing on the risks associated with children's digital

activities (such as privacy threats, cyber-bullying, sexting and stranger danger) it is important to acknowledge that the online world also provides opportunities for learning, exploration, entertainment and is a source of fun for children.

### **1.1 CHILDREN'S ROLE IN MARKETING IN 2012**

It is argued that children and young people have long been viewed by marketers as a lucrative market, and one that wields considerable spending power. David Buckingham, author of the government report on the 'Impact of the Commercial World on Children's Wellbeing' (2009), has suggested that children have acquired increased spending power and are thought to influence the purchasing habits of family members (Buckingham 2000). Research has been carried out looking at children's role in simple and planned purchases, and the child as primary instigator and decision maker of purchases within the family (Kuhn and Eischen 1997). However Tinson and Nancarrow (2007) have pointed out that this might be an exaggerated claim; whilst children do have an influence, they are not the final decision makers. Other research has shown however that children tend to frequently make independent purchases by the age of eight (McNeal and Yeh 1993; Marshall 1997).

The debate still continues therefore about children and commercial communications. Arguments regarding short and long term effects of advertising on children, children's understanding of and engagement with advertising and following this, what is best practice are likely to be at the forefront of the debate for some time to come.

### **1.2 THE REPORT**

This report gives a summary of the current state of global research on and the debate over these issues. It considers which disciplines are focusing on advertising and marketing to children and in particular digital marketing. It also assesses which countries research is mainly coming from, which forms of marketing are given most attention, what the implications are for methodology and regulation, and finally what is needed of future research.

## 2. Children's Use of the Internet and Digital Devices

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A global view of children's ownership and use of digital devices, as well as children's interactions with the internet, is difficult to establish and some of the data appears to be somewhat dated, meaning that latest figures are probably greater than summarised below. There is a need to continue to monitor children's global use of the internet as this is a key factor in understanding the extent to which children are exposed to digital marketing and advertising.

### 2.1 DIGITAL DEVICES

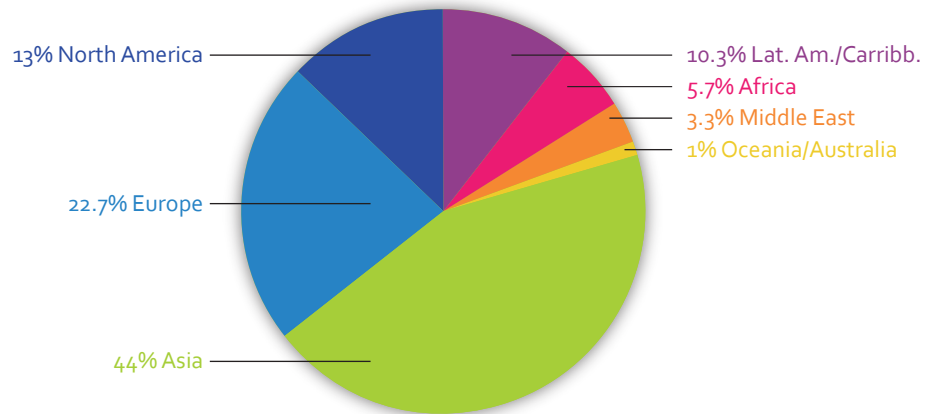
Part of the difficulty in defining children's use of the internet is in establishing what devices are being used. No longer a matter of simply measuring children's use of PCs or laptops, it is now well established that the internet can be accessed through many different devices including iPods and iPads, and other tablet devices including Amazon Kindle, Sony Tablet, HP TouchPad, Samsung Galaxy, BlackBerry Playbook and Motorola, to name but a few. Many schools around the globe are now introducing internet enabled tablets into schools to enable learning, with a particular emphasis in Asia (<http://www.ipadinschools.com/>). Internet connection is also available through games consoles such as Xbox Live, PS3, Nintendo Wii. Indeed research in the US showed that 23 per cent of households had games consoles that could be connected to the internet (LRG 2011). The introduction of Smart TV is likely to revolutionise the way that the internet is accessed. Access to the Internet through smart phones is now well established, and is especially a feature in Asia, where smart phone internet access has overtaken access to the internet through PC's (Carmichael 2012).



## 2.2 ACCESS TO THE INTERNET

The latest figures available on global penetration figures for internet access are as follows:

**Figure 1: Distribution of global internet users**

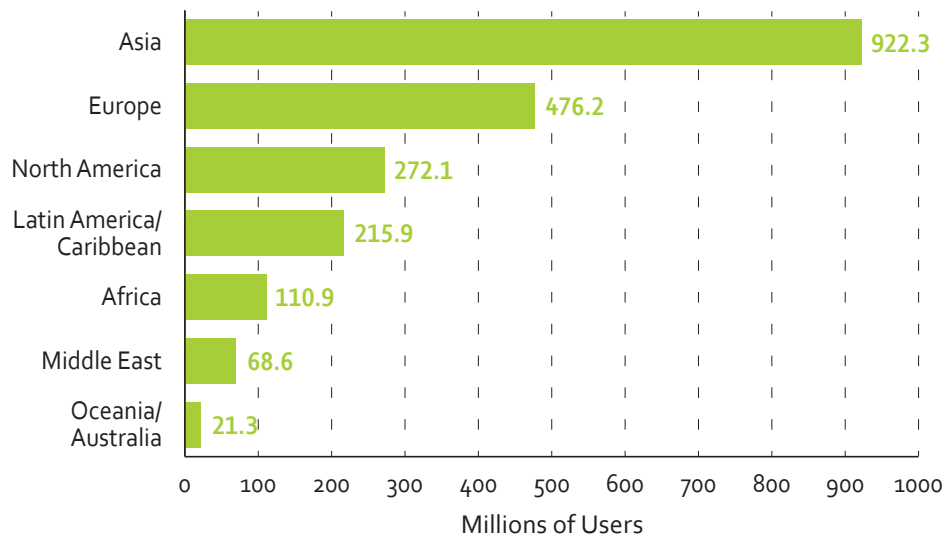


Source: Internet World Stats - [www.internetworldstats.com/stats.htm](http://www.internetworldstats.com/stats.htm)

Basis: 2,095,006,005 Internet users on March 31, 2011

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**Figure 2: Total estimated number of Internet Users, 2011**



Source: Internet World Stats - [www.internetworldstats.com/stats.htm](http://www.internetworldstats.com/stats.htm)

Basis: 2,095,006,005 Internet users on March 31, 2011

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This highlights that Asia by far outstrips the rest of the world, followed by Europe and North America. It is interesting also to look at penetration versus population figures, which gives a different picture. From this it can be seen that North America, followed by Oceania/Australia and Europe have the highest penetration figures by percentage of the population (see figure 3 below).

**Figure 3: World Internet Usage and Population Statistics (Internet Worldstats, 2011)**

| World Internet Usage and Population Statistics<br>March 31, 2011 |                           |                                 |                               |                               |                      |                     |
|--|---------------------------|---------------------------------|-------------------------------|-------------------------------|----------------------|---------------------|
| World Regions  | Population<br>(2011 Est.) | Internet Users<br>Dec. 31, 2001 | Internet Users<br>Latest Data | Penetration<br>(% Population) | Growth<br>2000- 2011 | Users %<br>of Table |
| Africa   | 1,037,524,058             | 4,514,400                       | 118,609,620                   | 11.4%                         | 2,527.4%             | 5.7%                |
| Asia   | 3,879,740,877             | 114,304,000                     | 922,329,554                   | 23.8%                         | 706.9%               | 44.0%               |
| Europe   | 816,426,346               | 105,096,093                     | 476,213,935                   | 58.3%                         | 353.1%               | 22.7%               |
| Middle East  | 216,258,843               | 3,284,800                       | 68,553,666                    | 31.7%                         | 1,987.0%             | 3.3%                |
| North America  | 347,394,870               | 108,096,800                     | 272,066,000                   | 78.3%                         | 151.7%               | 13.0%               |
| Latin America/<br>Caribbean                                      | 597,283,165               | 18,068,919                      | 215,939,400                   | 36.2%                         | 1,037.4%             | 10.3%               |
| Oceania/<br>Australia  | 35,426,995                | 7,620,480                       | 21,293,830                    | 60.1%                         | 179.4%               | 1.0%                |
| <b>WORLD TOTAL</b>   | <b>6,930,055,154</b>      | <b>360,985,492</b>              | <b>2,095,006,005</b>          | <b>30.2%</b>                  | <b>480.4%</b>        | <b>100.0%</b>       |

NOTES: (1) Internet Usage and World Population Statistics are for March 31, 2011.  
 (2) Demographic (Population) numbers are based on data from the US Census Bureau.  
 (3) Internet usage information comes from data published by Nielsen Online, by the International Telecommunications Union, by GfK, local Regulators and other reliable sources.  
 (4) For definitions, disclaimer, and navigation help, please refer to the Site Surfing Guide.  
 (5) Information may be cited, giving the due credit to [www.internetworldstats.com](http://www.internetworldstats.com).  
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While these figures are useful in giving a global picture of internet penetration, they do not necessarily look at children's use of the Internet. For this we need to rely on a diverse range of studies, some of them quite old (in Internet terms).

We have used as our main source the UNICEF report Child Safety Online published December 2011, and the EU Kids Online survey (Livingstone, Haddon et al. 2011). Reflecting internet penetration figures illustrated above, it appears that the highest levels of online connectivity of children and young people are in developed

countries, although emerging economies are fast catching up. Within these figures it is clear that in all countries higher income families are more likely to have access to the internet at home than low income countries (Hasebrink, Görzig et al. 2011). It also appears to be the case that children under the age of 18 make up the highest percentage of users globally (ITU 2008; Lenhart, Purcell et al. 2010), although in Europe the number of parents accessing the internet is beginning to catch up with under 18's (Livingstone and Haddon 2009). As Livingstone et al (Livingstone, Haddon et al. 2011) point out, the more familiar parents are with using the Internet, the more children are likely to be protected as parents are able to manage their child's interaction online effectively.

The literature shows that while there is little difference in use between gender, not surprisingly there are differences in age, with a significant increase in use as children grow older (ITU 2008; Livingstone and Haddon 2009). A survey with parents in the EU in 2008 indicated that 60 per cent of 6-10 year olds were using the Internet, compared with 86 per cent of 15-17 year olds (Eurobarometer 2008). It could be assumed, given the availability of internet-connected devices now available (see above), that in 2012 this number has increased. This usage pattern is reflected globally although there appears to be a significant difference in the time spent online. As the UNICEF (2011) report points out, the time spent online in Europe by children aged 9 to 16 is one to five hours each day (Livingstone, Haddon et al. 2011). In Bahrain access is on average longer, between two and a half and five hours each day (Davidson and Martellozzo 2010). Average time spent online by children in South Africa is far less, on average once a week for less than half an hour (Chetty and Basson 2006). Yet another picture emerges in Brazil where 69 per cent of children between 10 and 15 years old access the Internet every day (CSICT 2010), although this is challenged by other research that indicates that children in Brazil aged 5 and 14 are less likely to use the Internet every day (ITU 2008).

A more comprehensive global picture of children's internet use emerges from a 2009 report (Symantec 2009), although once again this is likely to be outdated as the actual research was

carried out in 2008. The survey was conducted online in 12 countries (the United States, Canada, the United Kingdom, France, Germany, Italy, Sweden, China, Japan, India, Australia, and Brazil) by Harris Interactive on behalf of Symantec between 13 October and 5 December 2008 among 6,427 adults (including 1,297 parents of children aged 8-17) and 2,614 children aged 8-17 who spend one or more hours online each month.

The survey found that in the U.S. children report spending twice as much time online as parents estimate (42 hours per month for children vs. 18 hours per month for parents). Similarly, there is a large discrepancy between how often US parents think they know where their children are online and how often children believe their parents know where they are online (73 per cent parents vs. 61 per cent children). The survey also found that parents in Australia are not aware of the time their children are spending online (children spend on average 39 hours per month on the Internet, twice as much time as their parents estimated). The research found that parents in Australia however are the most confident about knowing what their children are doing online. In Brazil, children appear to spend the most time online (70 hours per month), while their parents believe they only spend 56 hours per month online. Children in Brazil spend most time socialising online (13 hours). Parental confidence in Brazil is high with 74 per cent claiming they know what their child is looking at online; while 72 per cent of children report that their parents know what they are doing online. Parents in Canada are most likely to report being extremely/very knowledgeable in discussing Internet activities in which their children participate, particularly websites frequently visited (73 per cent). Almost three-quarters of adults (73 per cent) and an even higher number of parents (77 per cent) in Canada believe that children spend too much time online, in contrast to just over half of children (54 per cent) who believe children spend too much time online. A very different picture emerges in Japan where the 2008 survey found that parents are least likely to set parental controls (18 per cent), monitor their children online (10 per cent), or discuss safe online habits (10 per cent). More than other countries surveyed, a large proportion of online parents in Japan (40 per cent) report that it is also the child's responsibility to protect himself/herself online.

The Norton survey goes on to look at Europe, and again there are differences in parental attitudes and children's online behaviour. Children in Sweden (along with children in Brazil at 13 hours) socialize online to a greater extent (nine hours) than those in other countries surveyed (average five hours). Along with Japan, Swedish parents were least likely to set parental controls on family computers (22 per cent for Sweden, 18 per cent for Japan). However in Sweden there was a high level of agreement between parent and child about what their children was looking at online. In the UK by contrast the survey found that there are major discrepancies between children's reports of time spent online versus parents' reporting of their child's online use. Children in the UK reported spending twice as much time online as parents estimate (44 hours per month children vs. 19 hours per month parents). Over half (54 per cent) of parents in the UK say they have set parental controls, higher than the global average of one-third, and 81 per cent of UK parents are confident they know what their child is looking at online although just 69 per cent of UK children claim their parents know what they are doing online. In France half of parents admit they have monitored their children's Internet use by reading their email or tracking websites they visited, and interestingly French parents are far more confident that their children are following family rules for Internet use than the children are reporting (85 per cent parents vs. 71 per cent children). The survey also found that in Germany parents are most likely to have had a media-free day at home, during which their child did not watch TV, go online or use the computer. This is the highest out of the countries surveyed by Norton, compared with 20 per cent globally. Parental confidence in Germany is extremely high with 81 per cent claiming they are confident they know what their children are looking at online. The children report a different story with just two-thirds of children in Germany claiming their parents know what they are doing online. Interestingly, Italy places the least amount of responsibility on children to protect themselves online (7 per cent) and feels that most of the responsibility lies with the parents (91 per cent). In Italy, half of parents with access to the internet admit to having monitored their children's Internet usage by reading email or tracking websites visited using cookies.

Parental attitude towards children using the Internet may be a little more relaxed in emerging countries and there may be less of a sense that parents should take control. In contrast to other countries, in India 16 per cent of parents feel their children are not spending enough time online. While amongst all parents surveyed in the twelve countries, one in three (35 per cent) agree that their child is more careful online than they are, almost three in four (72 per cent) parents in India agree that their child is more careful online than they are. In China (70 per cent) parents are among the most likely to trust parental controls, and of all the countries surveyed, China feels the strongest (54 per cent) that Internet security companies have responsibility for protecting children online.

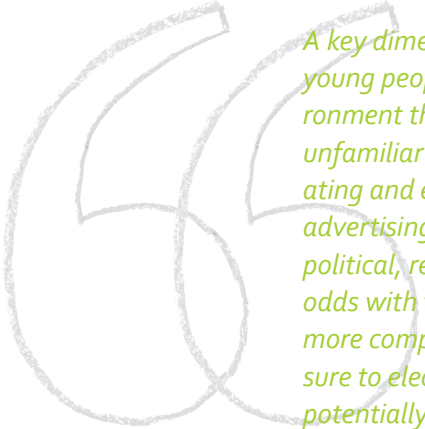
### 2.3 CHILDREN'S USE OF SOCIAL NETWORKING SITES

Social networking sites (SNS) create great opportunities for children and young people to maintain friendships and develop relationships (Clarke, 2009), but this nevertheless can pose risks, not least because young people may not understand privacy settings (Westminster Forum 2012), and can accept 'friends' they do not necessarily know. It is also well established that children lie about their age, claiming to be 13 (the age at which most SNS start allowing children to register) when in fact they are younger (Clarke 2009). As a result, the type of advertising children may see on SNS could be inappropriate, and is also an area of concern (see page 33). It is worth looking therefore at the available figures for children's SNS use, although once again it should be pointed out that these are likely to be out of date. In the United States it is now estimated that 73 per cent of teenagers online are using SNS (Lenhart, Purcell et al. 2010). Across the EU it is estimated that 59 per cent of 9 to 16 year olds use a SNS, and this includes 26 per cent of 9 to 10 year olds and 82 per cent of 15 to 16 year olds (Livingstone, Haddon et al. 2011). In India it is estimated that around 5 per cent of the 37 million Facebook users are between 13 and 15 years old, and 7 per cent are between 16 and 17 years old (Socialbakers.com 2011). In Brazil the number of Facebook users had reached 29 million by October 2011, and of these 6 per cent were between 13 and 15 years old and 7 per cent were between 16 and 17 years old (Socialbakers.com 2011).

Research has shown that young people are, perhaps naively, placing a large amount of personal information online. In Brazil a study has found that 46 per cent of children and adolescents consider it normal to publish personal photos online on a regular basis (SaferNet 2009). And similarly in Bahrain research has shown that children frequently post personal information online with very little concept of the notion of privacy (Davidson and Martellozzo 2010).

## 2.4 PROTECTIVE FACTORS

While it is undoubtedly the case that parental engagement will help to protect children online (Cho and Hongsik 2005; Livingstone, Haddon et al. 2011), there is growing evidence that children and young people like to protect each other, and that peer mentoring and educators might be most effective for children to learn to be safe online (UN 2010; van der Gaag 2010). The UNICEF report 'Child Safety Online: Global challenges and strategies' (2011) perhaps sums up the challenges of children's interaction with digital devices that allow them access to the Internet:



*A key dimension of the growth of online activity is that children and young people are participating in, learning from, and creating an environment that, in many parts of the world, still remains unknown and unfamiliar to their parents. Growing numbers of children are now creating and exploring their own virtual social networks. Through online advertising, through exposure to knowledge and information, and to political, religious, cultural or sexual ideas that may be profoundly at odds with those of their parents, their worlds today are significantly more complex. There are also concerns that greater access and exposure to electronic media can have harmful implications, including potentially diminishing parental capacity to understand children's experiences or to offer effective protection and support. While the generational divide around Internet usage is beginning to narrow in the industrialized world, the gulf between children and parents in Internet use in lower-income countries remains significant.*

UNICEF (2011) Child Safety Online:  
Global challenges and strategies page 4.

### 3. Children's Understanding of Advertising and Marketing

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Much research has been dedicated to the question of children's understanding of advertising, and this is summed up in the Cremos Report (Cremos, 2011). The available literature builds on cognitive approaches to child development, and especially Piaget's theories. Piaget argues that children grow gradually from a state of incompetence, or immaturity, to competence, that is mature, logical thought. He makes the point that while each stage would be achieved by *all* children at a certain age, children pass through the same developmental stages as they get older. As Kellet, Robinson et al. (2004) point out, Piaget sought to understand and to explore the extent that children understood the situation they were in. Similarly, understanding children's social competence and ability to take the perspectives of others is another area that is important to assess children's processing of advertising.

Roedder-John (1999) provided an influential three tier conceptual model of consumer socialization which built on Piaget's model of development. She argued that the child develops from the perceptual stage (3-7), through the analytical stage (7-11), and reaching the reflective stage (11-16). It is not until the reflective stage, Roedder-John argues, that children have a mature understanding of advertising and marketing, because it is at this age that they are able to fully understand other people's perspectives and the complexities of communication. It is only at adolescence that most children are able to make rational judgements, understand abstract ideas, and question what they are being told, which is needed to make judgements about the persuasive intent of marketing.

Brian Young (1986; 1990) has argued that children need to have acquired 'advertising literacy' to be able to fully understand what advertising is and how it works. They thus need to understand the persuasive intent to sell behind the advertisement, and the function of the advertisement. The age at which children fully



understand this is much debated. Some researchers (Donohue, Lucy et al. 1980; Macklin 1987) point to children's abilities to recognise an advertisement on TV, as distinct from the main programme, as proof that they understand the intent of advertising. As Oates et al. (2001) point out however, there is sometimes confusion between children's ability to make a distinction between the programmes they are watching and the advertisements. Levin et al. (1982) established some time ago that children can identify television programmes from advertising, but Butter et al. (1981) have shown that children cannot explain the *difference* between the two. As Andronikidis and Lambrianidou (2010) point out, the fact that children can distinguish advertising from programming or other content does not necessarily mean that they also understand its persuasive role. It is significant that most recent research has indicated that the age at which children understand advertising has been over-estimated (Oates, Blades et al. 2001; Oates, Gunter et al. 2003; Owen, Auty et al. 2007). It is argued that real understanding does not emerge until early adolescence.

There has also been a debate over the ways in which research with children has been carried out. Much of it has relied on questions, but children's ability to verbalise their thoughts and feelings take some years to be established. Using more sophisticated and child-orientated research methods and observation have helped to give a greater accuracy to the research. However, new forms of marketing have sparked another debate over methods and validity in research on children's understanding of advertising.

## 4. The Current Debate on Digital Marketing to Children

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To a large extent, the debate over children and digital marketing follows the debate over traditional advertising, and indeed traditional media use, predominantly TV. This debate reflects a wider, familiar issue in the research literature concerning whether children are active media savvy consumers, or vulnerable innocents. For example Buckingham's (2007) main argument is that this polarisation is indeed constructed and that the truth probably lies somewhere in between the two. He contends that the growth of a consumer society is a complex social development which cannot be understood, explained or blamed solely on advertising and marketing.

This polarisation of the debate is seen again in the gap between industry research on marketing, and sometimes highly critical blame-led academic research. It seems that the research field between the two should be explored more, as this would help construct a balanced debate and contribute towards consistency in the conceptualisation of the issue and measurement techniques (Sandberg 2011). It is argued that better collaboration between practitioners and researchers is needed to ensure that an understanding of how children engage with digital media can inform good practice (Miyazaki, Stanaland et al. 2009).

Not surprisingly, academic research on digital marketing communications to children lags behind industry developments. There is little research published, from a relatively small number of countries, and with limitations in terms of research focus and methods applied. One of the main challenges to academics following this issue is how fast technologies and practices are evolving. Academic research in many areas struggles to keep up. One issue is that websites are never constant; many of the papers conducting content analyses of popular websites might even be outdated by the time they get published. Another reason why research has become outdated is due to the rapid changes in regulation, and

thus by the time papers commenting on the 'current' situation are published the situation might have already changed (Jones and Reid 2010).

What research exists is still mainly coming from countries familiar with the field of children and media such as the UK, the US, Australia, New Zealand, the Netherlands and the Scandinavian countries. Few papers have been found in this literature review that debate emerging marketing trends in new areas where marketers have up until now not directed much focus, such as China (Chan and McNeal 2006), Turkey (Bati and Atici 2010), Nigeria (Gbadamosi 2010), Mexico (Hernandez and Chapa 2010) and South Africa (Wright 2011). In these new areas, advertisers tend to have much more freedom, and there tends to be more focus on the opportunities provided by the ability to target audiences, and less on ethical or regulatory constraints. In the case of Nigeria for example the emphasis is on the many social benefits of advertising to children (Gbadamosi 2010). A common theme is discussion about whether new forms of marketing can bypass more traditional forms, and thus allow marketers to reach a much greater audience than before (Bati and Atici 2010; Hernandez and Chapa 2010; Wright 2011). It is also suggested, in the case of China, that the more sudden rise of a consumer society may have an impact on how children understand the commercial world (Chan and McNeal 2006). The authors argue that the Chinese parents in their study did not play an important role in their children's consumer socialisation. They speculate whether this is due to the current generation of parents not yet being sophisticated consumers, and argue that the media environment children are in might influence children's understanding of advertising. While young children in their study could not fully understand the intent of a specific commercial due to their lack of cognitive development, more understood the intent of the commercial system. According to the authors, the children's responses were especially triggered by the mention of 'making money', and they hypothesise whether this is due to the drastic change in the media economy and rapid rise of the consumer society in China over the past two decades. They however point out that more research is needed to validate this.

Clearly more research is needed to map out industry practices in these areas, especially since new forms of marketing, such as mobile, are expected to be very important due to low Internet figures but high mobile penetration. There is also a need for more research with children looking at their responses, understanding and engagement with the material. It is important to note that in some of these areas regulation is much less stringent than in European and North American contexts (Valero 2009; Gbadamosi 2010; Wright 2011), and thus advertising might not follow the same patterns. There is also research suggesting that marketing is more successful in less advertising saturated environments, and that where regulation is already weak it will also develop slower (Hawkes 2007).

Digital marketing in many ways evades national boundaries. An example of this is the Children's Online Privacy Protection Act (COPPA). COPPA applies to website operators targeting children under 13, and requires them to seek parental permission before seeking any kind of personal information, and further details what responsibilities the operator has to protect children's privacy and safety online. A child can legally give personal information if parental permission has been obtained, however many websites choose not to target under 13 year olds altogether. This is the reason social networking sites such as Facebook officially do not target children, although it is widely recognised that children as young as 7 or 8 are now using Facebook (Clarke, Harrison et al. 2010). Although COPPA is a US law, the requirements of COPPA also apply to overseas websites that are directed at US children. Similarly, US websites that target overseas children must also comply.

As with regulation and marketing itself, it is important not to assume that the child and youth market is a global homogenous market, as cultural differences do exist with regards to spending and acceptance of advertising. In relation to the 'tween' market (in this example ages 10-12) Andersen, Tufte et al.(2008) reported a contrast in attitudes towards advertising between tweens in Denmark and Hong Kong, due to differences in their media use and spending habits. Both countries have high Internet penetration and usage, but large variance in youth culture, resulting in

disparity in how young people use media, as well as differences in spending and perceptions of advertising. Therefore, the authors advise marketers as well as researchers not to assume this market to be globally homogenous, but to expect cross cultural differences.

It is important to point out that while some research is quite critical of and concerned about the commercial climate children and adolescents are living in, researchers also see the need to acknowledge the role advertising can play in identity formation and entertainment for children and adolescents (Skaar 2009; Montgomery 2011).

## 5. The Digital Marketing Techniques Discussed

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### 5.1 ADVERGAMES

The use of Advergames is noticeably the marketing technique targeting children that attracts most comment from academic literature (Moore 2006; Turnipseed and Rask 2007; Dahl, Eagle et al. 2009; Lee, Choi et al. 2009; Culp, Bell et al. 2010; Hernandez and Chapa 2010; Purswani 2010; Cicchirillo and Lin 2011; Hofmeister-Tóth and Nagy 2011; Quilliam, Lee et al. 2011; Van Reijmersdal, Rozendaal et al. in press). The research studies report the high prevalence of advergames on websites popular with children, and there is considerable disquiet about their use. Particularly, a number of food brands have popular advergames dedicated to them, and it is thought that the fun and excitement associated with playing the game will have a positive impact on children's food preferences (Lee, Choi et al. 2009; Cicchirillo and Lin 2011). These can be food products which because of their nutritional value are not recommended as part of children's diet (Lingas, Dorfman et al. 2009), and the concern is therefore that the popularity of the games will have a harmful impact on children's health.

A quantitative study carried out in the US showed that already in 2007 over seventy-eight per cent of American children aged 6-11 had played games online (Mediamark Research & Intelligence 2007), showing just how popular these are with children. Using Advergames therefore could be seen as a particularly successful means of attracting and appealing to children. Some authors argue that advergames promoting HFSS foods on their branded websites are particularly prominent since the promotion of these products to children on traditional media (print, TV) is restricted in many countries. Interestingly, this also confirms a link between low nutrition food types and digital advertising that had been identified previously (Calvert 2008; Chester and Montgomery 2008; Sandberg 2011). Researchers such as Purswani (2010), Culp, Bell et al. (2010), Quilliam, Lee et al. (2011), Turnipseed and Rask (2007), Pempek and Calvert (2009) and Mallincrodt and Mizerski (2007) have made a similar correlation between HFSS and advergames. Lee and Youn

(2006) argued that food was among the top three industries that incorporated advergames into their marketing strategy, and in the literature on advergames covered in this review companies such as Kellogg's, McDonalds, Cadbury, Kraft and Millsberry, and brands such as Froot Loops, Lucky Charms, M&M's, Apple Jacks, Walker's Crisps, and Red Bull are frequently mentioned as popular examples (Moore 2006; Mallinckrodt and Mizerski 2007; Dahl, Eagle et al. 2009; Culp, Bell et al. 2010; Purswani 2010; Thompson 2010; Thomson 2010; Quilliam, Lee et al. 2011).

In advergames, the brand is an integrated part of the game, offering children an immersive, fun experience (Bailey, Wise et al. 2009). It is therefore argued that advergames are extremely effective in terms of attracting children because they increase exposure time to the brand (Mallinckrodt and Mizerski 2007; Dahl, Eagle et al. 2009; Culp, Bell et al. 2010; Hernandez and Chapa 2010). They are argued to be persuasive by creating positive emotional investment, increased brand memory and loyalty (Lee, Choi et al. 2009; Purswani 2010). Because the brand is incorporated into the game itself, the game offers a positive emotional experience with the brand, which is thought to increase memory of and loyalty towards the brand (Hernandez and Chapa 2010). Brands are in this way thought to capitalise on the emotional experience of the game, and of the association of fun and entertainment with the brand (Bailey, Wise et al. 2009; Culp, Bell et al. 2010; Thomson 2010).

Advergames are thought to be especially effective with children because they have been shown to be particularly susceptible to affective communication (Van Reijmersdal, Rozendaal et al. in press).

Due to advergames' popularity and cost-effectiveness, it is argued that they can form a central and important part of wider marketing strategy (Hofmeister-Tóth and Nagy 2011). Researchers also point out the high levels of engagement on the part of the child with the game, and therefore with the brand, because of the prominence of the branding within the game. These important aspects of advergames are argued to have positive effects on cognitive and affective responses, which in the case of children is thought to increase brand memory (Van Reijmersdal, Rozendaal et al. in press). It is also argued that interactivity and positive affect has an impact on short

term memory (Hernandez and Chapa 2010). In other words, if the child can engage with the brand, and finds the experience fun and exciting, he or she is more likely to remember the brand, and have a positive association to it, and potentially request this product. However, there is agreement that more empirical research is needed to validate this (Hofmeister-Tóth and Nagy 2011; Van Reijmersdal, Rozendaal et al. in press). Many games encourage the use of an avatar, that is the 'persona' within the game that the player can adopt. It is suggested that customising an avatar may make games more immersive and effect their persuasive impact and prolong exposure time to the brand (Montgomery and Chester 2007; Bailey, Wise et al. 2009). Such increased exposure time and engagement with the product, it is argued, make the commercial message more powerful, and creates a conflation of the food item with fun and excitement (Thomson 2010).

A major question that is asked about advergames in the literature is whether children understand that these games are a form of advertising products (Dahl, Eagle et al. 2009). There is concern expressed about their effectiveness, and whether they are likely to influence children more if they do not recognise the commercial intent behind the game (Ali, Blades et al. 2009; Cicchirillo and Lin 2011). This leads to a belief that advergames should be more clearly labelled (Purswani 2010; Cicchirillo and Lin 2011). Interestingly it is also argued that given the popularity of gaming for children, websites using games could include more nutritional information, and could actually be used to encourage healthy behaviour (Kelly, Bochynska et al. 2008; Culp, Bell et al. 2010; Montgomery and Chester 2011; Quilliam, Lee et al. 2011). Due to their popularity with children, and children's willingness to share them with their peers, it is also suggested that social networking sites might function as an important space for viral marketing of advergames (Hofmeister-Tóth and Nagy 2011).

Although there is more research on this particular technique than on any other, it is still a new area of research, and academics are still debating how to explain their use, purpose and effect (Turnipseed and Rask 2007). Turnipseed and Rask argue that product placement and integrated marketing communications (IMC) are two ways in which to describe advergames. Although



advergaming as product placement fits in the broadest sense, they argue that seeing these as IMC better explains their role in an on-going, interactive, synergistic marketing campaign. Any theory aiming to explain the influence of advergaming must therefore account for their place in wider, on-going campaigns, and how they tie in with other aspects of them.

## 5.2 SOCIAL NETWORKING SITES

To date, very little academic research has been carried out on advertising on social networking sites. There is evidence however that an increasing number of children are using social networks such as Facebook and Twitter and at a younger age (Clarke, Harrison et al. 2010; Livingstone and Brake 2010; Ofcom 2011). A report from the Kaiser Family Foundation (Rideout, Foehr et al. 2010) claimed that 18 per cent of the 8-10 year olds in the US used social networking sites, jumping up to 42 per cent for 11-14 year olds and 53 per cent for 15-18 year olds. In Europe, 38 per cent of 9-12 year olds and 77 per cent of 13-16 year olds have a social network profile (Livingstone, Ólafsson et al. 2011). Facebook is the most popular network; one in three 9-16 year olds have a Facebook account, and one in five 9-12 year olds, rising to four in ten in some countries. 65 per cent of Australian 9 - 16 year olds have social network profiles, including 44 per cent of 9-12 year olds (Green, Hartley et al. 2011).

While many social networking sites (SNS) have age limits, for example Facebook is age 13, these barriers to using a SNS are fairly easily overcome by children and it is acknowledged that children lie about their age (Clarke 2009). While research has been carried out about children's use of SNS, these studies have been mainly in relation to issues of privacy, cyber-bullying and sexual harassment (Lenhart and Madden 2007; Duncan 2008; Hinduja and Patchin 2008; Livingstone 2008; Ybarra and Mitchell 2008; De Souza and Dick 2009; boyd and Marwiche 2011).

Just two papers have been identified that focus specifically on social networking sites and advertising to children (Skaar 2009; Kjørstad, Brusdal et al. 2011), although it is important to note that the presence of advertising on social networks is mentioned in several of the general reports on marketing (Harris, Schwartz et al. 2009; Harris, Schwartz et al. 2010; Berkeley Media Studies

Group 2011; Harris, Schwartz et al. 2011; Montgomery 2011; Montgomery and Chester 2011; Montgomery, Grier et al. 2011). The two papers take a close look at two different social networks, Habbo and Piczo. Skaar (2009) looks at how Piczo is an important part of identity exploration for eleven to twelve year olds, and how their online social world related to their offline world. The other paper (Kjørstad, Brusdal et al. 2011) looks at Habbo from the perspective of consumer rights, and whether Habbo is conducting good practice with regards to its young users. Both of these papers originate from Norway, where broadcast advertising to children under 13 is banned, and thus the exposure of new forms of advertising may be causing particular concern. Internet penetration is also very high, with 98 per cent of children having access to the Internet according to Medietilsynet (Medietilsynet 2010). Along with other Scandinavian countries, academic research on children and digital media in Norway has therefore been substantial. Research has looked at the risks of children's increasing use of digital media, but has also given a great deal of attention to social and educational benefits for children (Tingstad 2007; Staksrud 2008; Staksrud 2008; Tingstad 2008; Staksrud 2011).

No studies have been identified that look specifically at Facebook and Twitter in relation to advertising, as these sites are not supposed to be targeting children. As children are lying about their age in order to get onto these social networking sites (Clarke 2009; Livingstone, Ólafsson et al. 2011), it is questionable whether advertising on Facebook and Twitter counts as targeted advertising, however it is a very real factor in children's exposure to online advertising, and should therefore be addressed. There appear to be two main issues regarding advertising and social networks. One of them is data collection and targeted advertising. Networks such as Facebook and Twitter are in compliance with COPPA (see page 28) in that they have set their age limit to 13, and thus do not collect personal information without parental consent. Another issue is that social networks often highlight the ubiquitous nature of marketing communication in that they can blur the previously clear distinctions between advertising, information and entertainment and thus make marketing communications harder for children to recognise. Most of the major players in

marketing to children have a presence on Facebook and Twitter, and these interactive spaces allow for a variety of techniques including viral, peer to peer, user-generated content and mobile marketing (Chester and Montgomery 2008).

Skaar (2009) and Kjørstad, Brusdal et al. (2011) both deal with SNS directed at children and youth (Piczo and Habbo). The two papers are somewhat critical of the forms of stealth marketing children are exposed to, although they acknowledge the positive aspects of these networks, such as their role in identity formation and expression of self in a fun way. Skaar (2009) argues that such sites could lay the foundations for social competition and reinforce tendencies to social exclusion. Piczo for example is a social network where users can share blogs and pictures with their contacts; Habbo is a commercial social network where users construct avatars and can then purchase clothes and furniture for their avatars. Brands such as H&M, Summit Entertainment (producers of the Twilight Saga films) and MTV are present on Habbo, which counted 168 million users in 2010 (Business Insider 2011). Research has suggested that advertising through avatars provides opportunities for identity experimentations, which further increases brand memory and positive associations (Bailey, Wise et al. 2009). Although Skaar (2009) and Kjørstad, Brusdal et al. (2011) argue that their research indicates that the websites (Habbo and Piczo) have become an important social space for children and offers them important experiences, the researchers are concerned that SNS encourage consumerism, and blur the lines between games, information, user generated content, entertainment and market research and advertising. They are also critical of the terms of conditions being too complicated to expect children to be able to give informed consent. Particular criticism is levelled at Habbo, the authors arguing that the purchase agreements are too complicated, and made without parental consent (Kjørstad, Brusdal et al. 2011).

Skaar (2009) and Kjørstad, Brusdal et al. (2011) point out however that many of the ethical concerns stem from a lack of knowledge; academics simply do not know or understand the implication or use of data collection. In a way it could be argued that we cannot be certain of how children understand online advertising, nor

the long term effects of children's exposure to advertising. It is also the case that there needs to be more research into the positive aspects of these social spaces in order to maintain a balanced discussion. Skaar (2009) and Kjørstad, Brusdal and Ånestad (2011) acknowledge that one of the main challenges for potential regulation is fairly placing responsibility; deciding who is responsible when a child sees something he or she is not meant to see in the interconnected world of digital is a much more complicated issue than with traditional media advertising.

Other papers relating directly to social networks are concerned with alcohol marketing (McCreanor, Barnes et al. 2008; Griffiths and Casswell 2010), and both originated in New Zealand. Although alcohol marketing is not included in the brief for this review, it is interesting to note that these papers discuss how marketing on social networks can create commercial digital spaces, where peer to peer and viral marketing are causing marketers and consumers to merge. The advertising message becomes incorporated into users' profiles, and is passed on from consumer to consumer through their social network, reinforcing the message of the advertisement. Griffiths and Casswell briefly discuss the implications for methodology and recommend cyberspace ethnographies as the most beneficial route. It should be pointed out however that there are ethical issues to be considered in this regard. The notion of children giving informed consent to take part in research would be severely challenged, and their privacy could be compromised.

### 5.3 MOBILE AND LOCATION BASED MARKETING

Mobile marketing refers to marketing to a mobile phone device, and includes text message advertising, mobile website banner ads, QR codes and smartphone applications. Location-based marketing is a way of sending targeted advertising to customers based on their current location. Mobile marketing is not well covered in the specific research literature based on fieldwork, but is mentioned in almost all general discussions of the field. Although it is still fairly limited, it is predicted to become a major trend (Harris, Schwartz et al. 2009; Harris, Schwartz et al. 2010; Berkeley Media Studies Group 2011; Harris, Schwartz et al. 2011; Montgomery and Chester 2011; Montgomery, Grier et al. 2011),

and companies like Burger King, McDonald, Kellogg's, Subway and PepsiCo are already making use of this strategy. Mobile advertisements have much higher click through rates than online banner advertisements, and thus more and more companies are expected to adopt a mobile strategy (Miller and Washington 2011). In the US market there has been an extensive rise in mobile marketing, including location based services and banner advertising. One of the newer developments is that of Apps for downloading, with one report claiming that 8 of the 12 biggest fast food chains have adopted (Berkeley Media Studies Group 2011).

Location based, or geo-targeting advertising is barely covered in the research literature to date. As it is a new phenomenon, and many of its uses are still being mapped out, academic research simply has not yet caught up with it. However the indications are that there are likely to be many more studies done on this, especially in relation to youth in urban areas and studies relating to food advertising to ethnic minorities or less affluent youth; both these cohorts are seen as particularly vulnerable (Montgomery, Grier et al. 2011). The Pew Internet and American Life Project reported that twenty-eight per cent of *adult* Internet users had used location based services (Zickuhr and Smith 2011).

One particular concern voiced about location-based advertising, as with mobile marketing or behavioural targeting, is that it can radically reduce the time between exposure and consumption, and thus increase impulse buying, to which adolescents especially are thought to be vulnerable (Calvert 2008).

#### 5.4 OTHER DIGITAL MARKETING TECHNIQUES

It is interesting to note that product placement is barely mentioned in the literature (Hunter 2009). While it is argued that product placement forms part of high levels of branding on websites (Linn and Novosat 2008; Jain 2010), and has been a feature for example of Habbo Hotel, more focus is given to techniques that offer interaction between the screen and the user, as this is viewed as an important area that makes digital marketing successful and interesting.

## 6. Arguments and Criticisms of Digital Marketing to Children

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While there is some research commenting on digital marketing as part of the larger concern about children's constant exposure to commercial messages, and the commercialisation of childhood (Buckingham 2007; Linn and Novosat 2008; Skaar 2009; Thomson 2010), most of the research focuses on food marketing and its potential role in the current childhood obesity epidemic. Childhood obesity is, according to the World Health Organisation (WHO) one of the most public health challenges of the 21<sup>st</sup> century, with over 42 million children under 5 estimated to be overweight (WHO). The epidemic is caused by a global trend towards radically reduced physical activity levels. This is coupled by a global shift in diet towards energy-dense foods that are high in fat, salt and sugars (HFSS), but low in vitamins and minerals, and advertising and marketing for these types of food products are argued to be partly to blame for the shift in dietary intake.

### 6.1 WIDER CONCERNS

This review referred earlier to children's use of SNS (see page 22) and there is some considerable concern expressed about the level of children's exposure to brands on social networks, leading to complex arguments about children's resulting sense of reality and feelings of self-esteem. Skaar (2009) for example argues that the constant viewing of brands and products online, and the opportunity for children to adopt the strategies and resources of professional marketers to market themselves, lay foundations for social competition and reinforces patterns of exclusion and uniformity. Similarly, Thomson (2010) argues that the presence of advertising in children's digital lives, particularly advergames, are familiarising children with the notion of 'maximum consumption', and so encouraging social consumption within peer groups. Although discussing the effects of food advertising, a similar argument is put forward by Linn and Novosat (2008) who suggest that even if the same marketing techniques were used to promote healthy lifestyles, the marketing itself would still be harmful to children. They suggest that advertising makes unrealistic promises of

happier, more successful lives, with little relationship to reality, and thus should not form the basis for children's product preferences. Buckingham (2007) on the other hand views such advertising and marketing in a far wider context and accepts that it is part of children's world, in other words it is part of their reality. He suggests that the notion of the commercialisation of childhood must also include the commercialisation of parenthood, and argues for the importance of considering the wider context of social class, gender and ethnicity when discussing the role of marketing and advertising in children's lives. Not all children are the same, and not all have the same experiences, so they are unlikely to respond to advertising and marketing in the same way.

## 6.2 FOOD MARKETING

The current debate around food marketing and its need for regulation or self-regulation is polarised. As Hawkes (2007) points out, on one hand advertising is being blamed for rising obesity levels (Montgomery and Chester 2007; Jones, Wiese et al. 2008; Kelly, Bochynska et al. 2008; Corbett and Walker 2009; Hunter 2009; Pempek and Calvert 2009; Brown and Bobkowski 2011; Hawkes and Harris 2011; Montgomery, Grier et al. 2011), and on the other advertising is viewed as a positive contributor to children's lives, and indeed something they are entitled to (WFA, 2006; ICC, 2004). Because of the focus on food and nutrition, much research is coming out of health organizations, such as Yale Rudd Centre (Yale Rudd Centre for Food Policy and Obesity; Harris, Schwartz et al. 2009; Harris, Schwartz et al. 2010; Ustjanauskas, Eckman et al. 2010; Harris, Schwartz et al. 2011), the Institute of Medicine (2006), the Cancer Council (Jones, Phillipson et al. 2011) and Robert Wood Johnson Foundation (Berkeley Media Studies Group 2011).

The concerns stem from a link between HFSS products and the companies at the forefront of digital advertising (Calvert 2008; Chester and Montgomery 2008; Lingas, Dorfman et al. 2009; Sandberg 2011). At this end of the debate the research argues that because of the amount of unhealthy food advertising children are exposed to, HFSS manufacturers and retailers must take some of the responsibility for the rising levels of obesity among children and young people, and therefore proposes that such advertising must be more heavily regulated. An alternative view is that the



integration of commercial messages into all aspects of children's environment may normalise HFSS products, and thus impact on eating habits (Kelly, Bochynska et al. 2008). They argue that the evidence to date is too weak to draw conclusions.

### 6.3 DIGITAL FOOD MARKETING

Research findings are being used to link HFSS advertising, including digital advertising, to obesity levels. There is some research that considers the extent of advertising for HFSS products, and the link to short term eating preferences, causing some to argue for a 'cause and effect' relationship (Hunter 2009). There is less research however on the *long term* effects on eating habits. The main study cited for this is Mallinckrodt and Mizerski (2007) which was carried out with 295 children aged 5-8 year olds in a laboratory setting, testing for their ability to recognise advertisements online and brand preference after playing an advergame. Mallinckrodt and Mizerski reported lower levels of awareness of advertising amongst those playing the advergame, compared with television advertising, and higher preference of 'Fruit Loops' in groups that had played the Fruit Loops advergame compared to the control groups. While this was a substantial sample, and the immediate effect of exposure to the advergame was clearly a preference for the product, which could be a cause for concern, it is difficult to argue that this has a direct effect on obesity levels or prove any large scale impact on overall dietary intake. It is clear that more research is needed therefore to establish the long term effects of food advertising exposure online, and the role it plays in the much wider picture of a global health issue (Jones, Wiese et al. 2008).

Perhaps not surprisingly, the amount of research on advertising and obesity mirrors the countries and areas where this concern is most prevalent, such as the United States, Australia, New Zealand and the United Kingdom. The concern over the link between HFSS foods and emerging marketing techniques such as digital marketing has spawned reports presenting overviews and commenting on the current general picture in food marketing, pointing out the prevalence of new ways of food advertising. Examples of this are three reports from the US by the Yale Rudd Centre for Food Policy and Obesity (Harris, Schwartz et al. 2009; Harris, Schwartz et al. 2010; Harris, Schwartz et al. 2011), looking at the marketing



strategies used to advertise sugary drinks, cereal and fast food. The reports argue that new techniques such as social networking sites were used by almost all the brands they studied which included Coca Cola, Kraft, PepsiCo Red Bull, McDonald's, Burger King, KFC and Subway, and the children's virtual world website Millsberry. All three reports include content analyses of company websites, counting the various techniques used, and similarly counting Facebook pages and number of friends, although it is questionable how much of the effect of these pages is captured by this method.

Mobile marketing was used by most fast food and sugary drink brands, but was not reported in the survey of the cereal brands. Researchers note that even though most of the advertising budgets are still spent on TV advertising, the non-traditional advertising budgets are increasing, and these strategies are often less expensive than TV ads. An important issue for health policy advocates such as the Yale Rudd Centre is the lack of nutritional information connected to the products and within the adverts, and the lack of marketing of healthier food options. All three reports also express concern over disproportionate targeting of American ethnic youth.

It appears to be that emerging trends in marketing are used in tandem with more traditional techniques such as characters, TV ads, celebrities and give-aways (Corbett and Walker 2009). Much of the research is attempting to map out what is happening and trying to measure the potential exposure children have to such digital marketing through techniques such as content analysis. This is done through tracking websites popular with children and counting banner ads, advergames, links and so on (Jones, Wiese et al. 2008; Kelly, Bochynska et al. 2008; Lee, Choi et al. 2009). Other examples of this are the three Yale Rudd Centre reports discussed above. These papers do give an accurate picture of the prevalence of advergames, the uses of banner ads and downloads and how people are finding well-known brands on Facebook, but they say very little about what children and young people do with this material, what it means to them and how it affects them. The prevalence of such content analysis and similar techniques as a research tool may not be the most effective way of assessing

affect and behaviour, and the ideal methods for assessing the impact of what is sometimes described as 'stealth advertising' on children are still very much in development.

#### **6.4 ADVOCATING ENGAGEMENT WITH WEBSITES AND SOCIAL MEDIA TO PROMOTE HEALTHY EATING AND LIFESTYLE**

There is some interesting and relevant discussion of non-profit versus for profit websites, and the marketing tactics used (Cai 2008; Pempek and Calvert 2009; Cai and Zhao 2010; Cicchirillo and Lin 2011) to promote *healthy* eating. Some of these claim that 'not for profit' digital communications such as charities and education should learn from 'for profit' companies in terms of creating interactive, engaging digital environments. It is argued that the same techniques used by highly skilled marketers could be used to promote learning and healthy eating habits (Cicchirillo and Lin 2011). Recognising the role that friends play in children's lives, and the importance of peers for information and recommendations on products and consumption, as well as behaviour, similar peer related techniques could be used to promote a healthy lifestyle. Social media is seen as especially important, and the opportunities for customization, personalization, user generated content, sharing and interaction presented is considered to be a valuable and productive vehicle for healthy messages (Brennan, Dahl et al. 2010). As an example American ethnic minority youth, particularly African Americans and Hispanics, have been shown to be disproportionately exposed to and targeted by corporate marketing, causing Pempek and Calvert (2009) to question whether the same methods can target such young people to promote healthy eating.

#### **6.5 PARENTS' VIEW ON DIGITAL MARKETING**

Parents' views can be expected to have an influence on their children's behaviour and decision making and the extent to which they are concerned about digital marketing is therefore important. Several studies that have looked at the view of parents report little awareness of digital marketing amongst them (Bakir and Vitell 2010; Ustjanauskas, Eckman et al. 2010; Clarke 2011). However once parents are shown examples of digital marketing they express concern. In both the Yale Rudd (2010) research, and the Credos (2011) research, whilst expressing concern about

advertising, parents did not want to ban advertising in general, but rather preferred the notion of finding ways of limiting children's exposure to advertising. Another study shows that parents under estimate how much advertising their children see during their day, especially with regards to non-traditional forms of marketing (Speers, Harris et al. 2008).

When considering parental views however it appears that they might vary from country to country, or between different cultural groups. Two of the studies mentioned above (Speers, Harris et al. 2008; Ustjanauskas, Eckman et al. 2010) were carried out in the US, and both reported differences in levels of awareness and concern between ethnic groups, income levels and social groups. The papers also reported differences in attitudes towards government regulation between cultural groups. It seems likely therefore that differences in attitudes and awareness will also exist between countries, although more research is needed to confirm this.

Bakir and Vitell (2010) report that specific advertisements might be seen differently from advertising in general, so for example if parents are not very concerned with advertising per se, a specific advertisement or strategy such as food advertising targeted to children might upset them. Similarly, parents' negative perception of a specific advertisement in these findings did not impact their overall attitudes to food marketing. Others argue that the generational gap between young and old Internet users, and parents' sense of not understanding what their children are doing online is causing some concern (Consumers International 2009).

Importantly, much of the scepticism towards digital marketing comes from a sense that it is going on 'under the radar', bypassing parents and governments, and is therefore not sufficiently regulated (Brady, Farrell et al. 2008; Thomson 2010; Berkeley Media Studies Group 2011).

## 6.6 PEER INFLUENCE

Some argue that research must move beyond merely measuring children's exposure to digital advertising. Brady, Farrell, Wong and Mendelson (2008) attempted to measure children's awareness of

and engagement with digital marketing, and found that children were eager to recommend commercial websites to each other, and that, unsurprisingly, this increased with age. Many children found these websites after watching TV ads, leading the authors to argue for more research on the synergistic impact of marketing campaigns, as well as to go beyond preference when measuring impact. Hunter (2009) suggests that websites represent a further channel for previously well-developed character marketing, such as Tony the Tiger, Ronald McDonald and Chester Cheetah. Similarly, it is argued that the new marketing ecosystem does not exclude traditional channels, such as TV, but adds new routes for marketing strategies, and thus creates an even greater, cross media marketing campaign exposure for the same characters or actors that were successful in traditional forms of marketing, such as McDonalds, Burger King, PepsiCo and Kraft (Montgomery and Chester 2007). However, the effects of synergistic impact of cross media marketing is as of yet not pursued further in the literature reviewed here, as the research framework is still designed to capture isolated mediums (Montgomery, Grier et al. 2011). The combination of greater exposure, targeting, user generated content and the possibilities for peer-to-peer marketing on social networks add great potential for large, viral marketing campaigns (Montgomery and Chester 2007).

## 7. Children's Understanding of Digital Marketing

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The advances in digital marketing question the legitimacy of previous research on children's understanding of advertising and marketing. The ethics of marketing to children, the question of when it is 'fair' to advertise to children revolves around when children can critically understand persuasive intent, and thus presumably defend themselves from it. Most studies looking at children's understanding of advertising and marketing have been carried out with traditional forms of advertising (see Young 1990; Chan and McNeal 2006; Andronikidis and Lambrianidou 2010; Carter, Patterson et al. 2011) and it could be argued that digital marketing changes the context of children's advertising. It is recognised for example that children make use of structural cues to distinguish advertising from content, for example being shorter than the main program (Cai 2008; Ali, Blades et al. 2009; Cai and Zhao 2010), but with digital marketing this becomes more complex.

### 7.1 RECOGNITION OF DIGITAL ADVERTISING

Some studies have focused on children's ability to recognise advertisements on webpages (Mallinckrodt and Mizerski 2007; Ali, Blades et al. 2009). These papers found lower awareness of advertising on websites compared with television, and greater difficulty recognising it, and they discuss what structural cues might help children spot advertisements. However, this research is still fairly limited. Some argue for the widespread use of digital cues, such as labelling or bridge windows to help children recognise advertising online (Cai 2008; Nairn and Fine 2008; Cai and Zhao 2010; Rozendaal, Capierre et al. in press). Currently these are not widely used. Two papers by Xiaomei Cai (2008; Cai and Zhao 2010) assessed the use of advertising labelling and bridge windows on popular US websites, and found them to be scarcely used. These papers did not include any evidence of the *effects* of labelling or bridge windows on these websites. The use of price as a cue has been proved to be unsuitable, as it is not until adolescence children fully understand the relationship between products and prices (Ali, Blades et al. 2009). Questions also remain about how to implement structural cues across all types of advertising.

Rozendaal, Buijzen, Valkenburg (2011) have argued that children will understand the intent of different tactics, such as celebrity endorsements, premiums and peer popularity appeal, at different points. This research was however carried out with traditional marketing methods such as television and print, and the authors argue that the same kinds of questions should be asked with regards to digital marketing tactics to explore which of them children find easier or more difficult to understand. It is suggested that due to their ubiquitous nature, digital marketing strategies will be harder for children to understand. The studies so far suggest, not surprisingly, that recognition and understanding of digital advertising is complex, and in need of more research, including into the effects of unrecognised advertising (Ali, Blades et al. 2009; Van Reijmersdal, Rozendaal et al. in press).

## **7.2 THE RELATIONSHIP BETWEEN THE CURRENT LITERATURE ON CHILDREN'S UNDERSTANDING OF ADVERTISING AND MARKETING AND THE DIGITAL ENVIRONMENT**

It has been pointed out earlier that this is a very new area, and academic research is so far quite limited. Interestingly much of the most recent research on children's understanding of advertising is coming out of the 'Center for Research on Children, Adolescents and the Media' at the University of Amsterdam. Although previously mostly concerned with television and print advertising, researchers there have now begun to focus increasingly on digital marketing and what this means to research on effects of advertising and persuasive literacy. An important study from 2010 compared children to adults in terms of advertising competences (Rozendaal, Buijzen et al. 2010). They argued the importance of differentiating between recognising and understanding advertising. Their fieldwork showed that in terms of understanding at ages 10-11 children's competences become comparable to adults, but even at 12 years there was a gap between them and 'adult' levels. However, the researchers predict that these results might not keep up in light of newer marketing developments. They also remind us that there are several other competencies in play besides persuasion knowledge; and they may not be related to advertising competencies.

### 7.3 DOES DIGITAL MARKETING TO CHILDREN MAKE A DIFFERENCE?

Currently there is little consensus on whether digital marketing changes the previously accepted research that considered persuasive intent and children's understanding of advertising and marketing. There is an argument that persuasive understanding of advertising is a complex process, and remains in development for a long period of time (Ali, Blades et al. 2009; Leslie, Levine et al. 2009; McAlister and Cornwell 2009). It is therefore difficult to categorise children into different groups (Kunkel 2010). Attempts have been made to understand the different stages of this process and the age differences that occur. Some studies for example differentiate between 'selling' and 'persuasive intent' (Carter, Patterson et al. 2011), and similarly 'selling intent' and 'source bias' (Kunkel 2010) and argue that understanding 'selling intent' precedes understanding of 'persuasive intent' and 'source bias'. In other words, children will understand that someone is trying to sell them something before they understand that someone is also trying to persuade them and that this intent influences communication.

### 7.4 THE NATURE OF CHILDREN'S UNDERSTANDING OF DIGITAL MARKETING: THEORETICAL PERSPECTIVES

The understanding of persuasive intent is the critical factor for 'cognitive defence'. According to this theory once children fully understand that the advertisement is created to try and convince them to buy something, they can defend themselves from it. The cognitive defence model has been the foundation for research on advertising literacy in relation to traditional media, but has come under critique with the growth of what is described in the literature as 'stealth marketing', meaning marketing where the persuasive intent is less obvious. Some studies therefore argue for the introduction of 'dual process models of persuasion' (Livingstone and Helsper 2006; Nairn and Fine 2008; Montgomery 2011; Montgomery, Grier et al. 2011). This model attempts to account for both conscious and unconscious processes of persuasion. The dual processes of persuasion model claims that there are two routes through which we process persuasive communication: the main or peripheral route. The main route is associated with high levels of elaboration of the content, and with explicit forms of persuasion, e.g. a spokesperson for a brand telling



his audience that it is cheaper and more effective than competing products, leading the audience to consciously process the arguments and make a decision. The peripheral route on the other hand is associated with low levels of elaboration, implicit processing and affective responses. In this form of commercial communication the selling intent is less clear, and the focus is more on attitude changes and on associating the brand or product with positive feelings. The argument is that digital marketing techniques rely heavily on implicit processing of information and affective responses, and that they will result in low levels of critical evaluation of the persuasive message, which in the case of children makes it unlikely for them to retrieve knowledge of persuasion and advertising and protect themselves from these messages (Rozendaal, Capierre et al. in press). It is argued that these advertising techniques will not give children the motivation and ability to retrieve information, and therefore that they might be in need of external cues to make them do so. The authors suggest factual comments as one strategy that might help children, although they acknowledge that much more research is needed to determine which types of cues will be most successful. They also note that more research is needed to establish which formal features of the advertisement will reduce or increase understanding of advertising and retrieval of persuasion knowledge.

In addition to dual process models the 'theory of mind model' has been suggested as an addition to our understanding of children's development of persuasion knowledge (McAlister and Cornwell 2009). Theory of mind is the ability to understand other people's perspectives, and use this to predict and understand behaviour. Theory of mind is said to precede persuasion knowledge. The strength of theory of mind models is that it would account for variance within age groups as it can be influenced by background and environment (McAlister and Cornwell 2009).

The link between advertising or media literacy and effects is a complicated one, and here there is little consensus. Livingstone and Helsper (2006) argue that in fact advertising or media literacy has very little influence. They reviewed the research literature on advertising effects, and found that younger children were not more influenced by advertising than older children, teenagers and adults, despite the assumption that these groups should have



higher levels of media literacy and therefore be less susceptible. They instead argue that marketers use different ways of persuasion depending on the age of the target audience. Because their results suggested that advertising literacy did not impact the effect on brand or product preference they proposed the introduction of the 'Elaboration Likelihood Model'; a dual process model of persuasion that would account for advertising influencing brand preference or product choice, despite the audience recognising and understanding the nature of marketing. It is argued that digital marketing will increasingly foster emotional and unconscious choices (Montgomery, Grier et al. 2011), and that therefore research into persuasion and communication must take this into account, and try and explain how these forms of communication affect us and our product choices (Calvert 2008). Similarly, Van Reijmersdal, Rozendaal and Buijzen (in press) found that 'persuasion knowledge', recognising and understanding a commercial message, has less of an impact in relation to new marketing strategies than with traditional ones, specifically TV advertising, and therefore argue that if persuasion knowledge is to have an effect we need to find cues to make children apply it.

Another piece of research from the Amsterdam Center for Research on Children, Adolescents and Media (Rozendaal, Capierre et al. in press) argues that we must break down advertising literacy into three categories: conceptual advertising knowledge; advertising literacy performance (being able to apply our knowledge of advertising); attitudinal advertising literacy. These, it is argued, would account for the more affective responses and implicit communication processes of digital marketing practices. Rozendaal et al further critique the cognitive defence model (which argues that once we recognise and understand advertising we can defend ourselves from it) for its lack of empirical support for its effect, and advertising literacy research for a lack of focus on children's ability to actually use their acquired persuasion knowledge. According to their theory, there is not enough evidence to claim that once children understand advertising they will not be influenced by it. Nairn and Fine (2008) similarly argue that cognitive abilities do not decrease effect, and that research into advertising must give greater attention to implicit persuasion.

## 7.5 CHILDREN AND PRIVACY

A related issue to the one of fairness is one of privacy, as children cannot be expected to understand the intricate ways data collection works. Research therefore has focused on the extent to which websites that are popular with children collect personal information, with or without parental consent and how easy these are to circumvent (Cai 2008; Miyazaki, Stanaland et al. 2009; Cai and Zhao 2010; Kjørstad, Brusdal et al. 2011). Several of these track compliance with COPPA (see page 28), and some criticise age verification systems. There are also questions posed about the distinction between websites that target children, and websites that are merely 'child centred', which could be seen as one way of circumventing COPPA regulations (Miyazaki, Stanaland et al. 2009). However data collection is an area where there is not yet sufficient empirical evidence, making it difficult to draw any conclusions around the effects of this (Dahl, Eagle et al. 2009). Reflecting the call for better structural cues in digital marketing, demands are also made for more reliable age verification devices. Although Facebook is in compliance with COPPA, it has been criticised for not taking protection of minors online seriously enough. Founder and CEO Mark Zuckerberg has caused controversy by claiming that younger children should be allowed to use the social network, and that Facebook might challenge COPPA on this 'at some point' (Huffington Post 2011; Warman 2011).

## 7.6 ADOLESCENTS AND DIGITAL MARKETING

With relation to age, most research focuses on young children and children in early adolescence (i.e. 10-14 years), due to their developing cognitive abilities. There is however also some focus on adolescents (Leslie, Levine et al. 2009). Adolescents are thought to be especially susceptible to digital marketing due to the importance of their peers and social environments and their susceptibility to emotional arousal (Chester and Montgomery 2008; Leslie, Levine et al. 2009). It is argued that they are especially vulnerable to risky behaviour, with a tendency to be drawn to products which may not be healthy, and which they are said to increasingly come into contact with online. It is claimed that advertising at this developmental stage taps into adolescent development where identity formation, independence, and peer contacts are extremely important (Montgomery and Chester 2007; Calvert 2008; Montgomery 2011).

Even though the cognitive defence model has come into question in light of new marketing development and new research, there is as of yet no new consensus concerning digital marketing and age. No new age limits have been introduced, and it has yet to be proven if the age at which most children can understand digital advertising is different from the age they can understand traditional advertising, although it is predicted that there might be a difference. As far as regulation goes, most research agrees that restrictions should extend to children at least up to 12 years old, as it is really not until early adolescence that children fully understand advertising (Carter, Patterson et al. 2011).

## 8. Regulation and Self-regulation

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There is some discussion in the literature of the possibilities of regulation and self-regulation. While some remain critical of the power of pledges to self-regulation alone (Hunter 2009; Hawkes and Harris 2011; Quilliam, Lee et al. 2011), others see it as the most likely way to regulate, and see many examples of good industry practice (Ambler 2008), and others again who expect organisations such as the World Health Organisation (WHO) to take leadership in global self-regulation pledges (Hawkes and Harris 2011). There has been extensive development in self-regulation in recent time. Hawkes (2007) argues that self-regulation always follows from external pressure from governments and civil society, and with recent debates in the US and UK that would certainly be the case. In the UK, the Buckingham (2009) and Bailey (2011) reviews led to new regulations to protect children from commercial forces. In the US increased attention on major fast food companies led to pledges to self-regulation in 2011, which included a common nutritional standard. Recommendations by the WHO (2010) led to global pledges by some of the major food and beverage companies (Burger King, Coca-Cola, Danone, Ferrero, General Mills, Kellogg, Kraft Foods, Mars, Nestlé, PepsiCo, Unilever, the European Snacks Association (ESA) and McDonalds). Interestingly, Hawkes (2007) further argues that evidence is a much weaker policy driver than ethics. Thus she argues that future development of self-regulation will depend more on some form of ethical consensus than on research evidence. Considering the current polarisation in the debate this is perhaps not surprising, however there should be more of a collaboration and conversation between researchers and practitioners in order to have sufficient regulation or self-regulation that is informed by good research. Due to the ubiquitous nature of much of digital marketing, problems of defining what actually constitutes as advertising becomes another challenge for any regulatory consensus. Another challenge for regulation is of course also the borderless nature of the Internet, and the task of regulating a global phenomenon on a national level, or attempting to introduce universal standards into widely different markets. Some of the areas where

researchers are looking for more of a consensus in terms of regulation or self-regulation however are age, nutrient criteria, and data tracking.

### **8.1 IMPLICATIONS FOR REGULATION AND SELF-REGULATION**

Regulation of data tracking is one of the main discussions that surrounds digital marketing to children (Chester and Montgomery 2008). Since the beginning of this literature review, Canada has introduced new regulations that ensures collection of data can only take place with informed consent. It stipulates that giving consent must be easy and accessible and, importantly, children's data cannot be collected as they cannot be expected to give consent (Cbc.ca 2011). The recommendations for regulation in the literature can be summed up in relation to two main issues:

### **8.2 AGE (WHEN IT IS FAIR TO ADVERTISE TO CHILDREN)**

Much of the research supports the previous notion that 12 is an appropriate age limit in terms of children and advertising (Ali, Blades et al. 2009; Rozendaal, Buijzen et al. 2010; Carter, Patterson et al. 2011; Rozendaal, Buijzen et al. 2011). That is, under this age, children are not believed to fully understand the nature of advertising, nor its commercial intent. Some however suggest 16 as an age limit due to adolescents' susceptibility to new marketing strategies (Consumers International 2009; Corbett and Walker 2009; Leslie, Levine et al. 2009), however there is no widespread consensus on this as of yet. As previously mentioned there is a need for more research into children's understanding of digital marketing, and how it differs from traditional media advertising.

### **8.3 FOOD TYPES AND NUTRITIONAL INFORMATION (WHAT IS ADVERTISED TO CHILDREN)**

With regards to product type, universal nutritional criteria are suggested to enable consistent regulation according to nutrition (Kelly, Bochynska et al. 2008; Culp, Bell et al. 2010; Berkeley Media Studies Group 2011; Hawkes and Harris 2011). Restrictions on 'unhealthy' food marketing, such as the UK ban on HFSS food during children's television programmes are suggested,

as are increased advertising for healthier options (Mallinckrodt and Mizerski 2007; Speers, Harris et al. 2008; Hunter 2009; Ustjanauskas, Eckman et al. 2010; Quilliam, Lee et al. 2011).

Because of the time lag between academic research that might be seen to assess effects, and industry developments in terms of marketing and advertising to children, there are calls for the regular monitoring of marketing practices, and to have a continual source of information for researchers and experts to comment (Montgomery and Chester 2007; Lingas, Dorfman et al. 2009).

## 9. Leading academic and practitioner views

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To ensure that relevant literature was not missed and that the latest thinking from leading academics and practitioners in the field was recorded this review has also included interviews with the following:

- ▶ Professor David Buckingham, Director of the Centre of the Study of Children, Youth and Media, Institute of Education, University of London; author of Government report 'The Impact of the Commercial World on Children's Wellbeing'.
- ▶ Professor Sonia Livingstone, Professor of Social Psychology and Head of the Department of Media and Communications at LSE; director of the 33-country EU Kids Online Programme.
- ▶ Dr Julie Tinson, Reader and Director of Research Centre for Consumers, Cultures and Society, Stirling Management School, University of Stirling; author of book 'Conducting Research with Children and Adolescents'.
- ▶ Dr Brian Young, Honorary University Fellow, Department of Psychology, University of Exeter; Editor of the journal 'Young Consumers'.
- ▶ Mike Cooke, Global Director, Panel Management, GfK NOP and Vice President, ESOMAR

(For full profiles of respondents see Appendix 1 – page 73).

Academics argued that the debate over the commercialisation of childhood could be seen as a vehicle to criticise a bigger, more complex issue, which is the capitalistic consumer society. They were in agreement that some of the arguments that criticise advertising and marketing to children are not always well thought through or consistent, and that digital media is an area in which new, more relevant, and better research is needed. It was argued that divergent methods of research and contradictory estimations of children's exposure to advertising and marketing have led to different results and therefore a lack of consensus. One academic noted for example that new marketing

techniques called for the measurement of children's exposure to advertising and marketing as well as an assessment of their effects on children.

It was felt that there was a need for more child-centred approaches, with a behavioural focus, looking at what children are actually doing online. Related to this was a call from some of our respondents for a shift from merely studying marketing techniques, and alongside this a blame culture towards marketers, to studying consumption practices as an integrated and inseparable part of a capitalistic society. Academics argued for more participatory as well as experimental research. As media is increasingly immersed in children's personal lives, it was pointed out that research that looks at advertising and marketing to children will inevitably bring up issues of ethics, but equally strong criticism of the validity of the research and the risk of generalisation on the part of researchers. As an example it was argued in particular that studies that focus on food advertising must be careful to ensure external validity in their research and to ensure there was not an exaggeration of the link between food preference and obesity.

It was also pointed out by our respondents that the age of child included in the research is made very clear, as well as the outcomes for different ages; children up to eighteen will clearly include many developmental stages, media uses and different levels of exposure to digital content. There was also a call for more research into gender differences in levels of exposure, the effect this has on children, and understanding of advertising. As children tend to be unsupervised in their digital media use, it was suggested that it might be relevant to revisit the parental mediation debate. Academics called for more research into social networks and the importance of peer influence, while warning that there will be big age differences as children use social networks differently according to age and development.

In terms of regulation, some of our respondents felt more government regulation was needed, while others felt that a self-regulatory approach would be more effective. This belief is founded on problems of definition: defining what is advertising and what is targeted advertising is a challenge. There is also a problem of



operation; it was argued by one respondent for example that in terms of data tracking and targeted advertising children cannot be expected to be able to give informed consent, and therefore, from an ethical standpoint children should not be tracked online. Similarly, it was argued by another respondent that the understanding of online advertising entails an understanding of the systematic workings of an abstract system; this refers to the age at which children can master abstract thought, their level of social competence, and the ability to recognise commercial intent.

It was also pointed out that digital marketing changes what 'consumer literacy' entails, and that this must be taken into account when considering children's acquisition or development of these skills.

Our respondents pointed out that not only will there be many operational challenges, but also issues connected with attempting to nationally regulate something which does not have a national remit. These are the same challenges, it was suggested, that face social networks such as Twitter and Facebook in terms of operation and of fairly placing responsibility. It is likely that social and commercial content will merge completely, and providers will need to find a way to make sponsorship, brand ambassadors and social marketing explicit. One respondent felt that regulating advertising was likely to push marketing activities towards product placement and sponsorship, hence the importance to make their commercial intent explicit. It was felt that weaker regulation and the growing presence of consumer groups in emerging markets in particular would make such markets essential and interesting case studies for future research.

## 10. Implications For Methodology

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There is some discussion amongst academics about the implications for methodology in relation to digital marketing and advertising to children. Montgomery, Grier et al. (2011) argue for a new framework for research on digital (food) marketing, and point out that some of the key concepts for research must include

- ▶ **Ubiquitous connectivity:** Children and young people have access to an increasing number of media devices and are increasingly connected to technology. Marketing campaigns directed at them therefore also move across platforms, increasing exposure. This makes it very difficult for researchers to grasp the sum of an individual's interaction with marketing.
- ▶ **Engagement:** Unlike traditional media like television and magazine advertisements, digital media is increasingly interactive and allows for active engagement with the material. Rather than merely exposing the consumer to the brand or product, digital marketing creates environments where people can interact with the brand, create emotional connections and integrate it into their social relationships. Researchers must therefore find ways of assessing people's interaction and emotional involvement with the brand.
- ▶ **User generated content:** With digital media, children and young people can engage in creating brand related content, such as videos or personalised packaging. This form of active, creative participation with the brand may intersect with important identity development during adolescence.
- ▶ **Personalisation and behavioural targeting:** With the help of data collection and tracking digital marketers can create personalised marketing based on the customer's behaviour and preferences. This requires researchers to take into account the personalised nature of digital marketing.
- ▶ **Social graph:** Social networking sites have added an important element to digital marketing; the ability to tap into the social graph, the complex web of relationships among individuals online. This allows marketers to understand the nature of online social relationships, how they work and who influences

whom. As previously mentioned (see page 38), this may be especially important for teens as they are relying more on peers than on parents and family. Researchers therefore need to explore the role of peer influence in brand promotion, and how social interactions online intersect with eating behaviours.

- **Immersive environments:** Immersive environments create an experience of being inside the action, and a sense of 'presence', using interactive games, three-dimensional virtual worlds, realistic images and sounds and other multimedia applications. These environments are designed to create intense experiences and a strong sense of subjectivity and emotional arousal.

Montgomery, Grier et al. (2011) argue that research should move from a focus on viewing advertising as the notion of the communication of received messages to a new focus on advertising as an interactive form of communication between multiple players, including the brand, the company, the receiver (which in this case is the child) and the end user. These authors also point out that the research currently being carried out focuses mainly on areas that can be covered by traditional methods, such as content analysis. This might explain the proportionately large amount of research on advergames, apart from the popularity of gaming with children. Advergames are relatively easy to identify, locate, and separately analyse; the process of assessing exposure to them, and understanding them is quite easy to measure, compared to the exposure to more ubiquitous commercial messages that might be found on social networks. Therefore, there are many studies that focus on food-company-sponsored advergames that are easy to quantify (Moore 2006; Moore and Rideout 2007; Lee, Choi et al. 2009; Montgomery, Grier et al. 2011).

Speaking generally of Internet research, danah boyd (2008) suggests that the main challenge for researchers is the problem of boundaries, as digital media, and social networking in particular becomes increasingly entwined in people's lives. boyd argues that when ethnography first went online it tended to focus on more static spaces, with a clearer sense of boundaries. The question becomes how to set the limits of a research project when the online world is constantly changing. The continuously evolving nature of, for example, social networks, and the way different

websites are integrated into each other through links or embedded texts or videos with users moving between them present a challenge to any researcher. boyd points out that in trying to understand social spaces it is difficult to separate online from offline worlds. Thus in the case of understanding digital marketing it might be difficult to isolate the impact of one medium (e.g. SNS or advergames) separately from other more traditional media such as TV or print, as well as its connection to wider social aspects. This is particularly the case when TV can be viewed online and the internet can be accessed on the move through a smart phone.

It has also been suggested by researchers that another methodological issue is to do with time. Because the digital world is moving and developing so fast, particularly in relation to children and their interaction with digital media, the time lag between industry developments and academic research is inevitably great. As such, there is a call for scientific, objective but efficient methods that can allow the critical debate to keep up to date with the industry (Jones, Wiese et al. 2008).

It is argued that a methodological confusion and the lack of a common conceptual ground is leading to a lack of consensus in the field (Kunkel 2010). Kunkel argues for more research into age related understanding, but warns that there might be individual differences in terms of children's understanding of persuasive intent (e.g., levels of sophistication and exposure; learning difficulties etc), and that it may therefore be difficult to categorise young people by age groups.

It is evident that in the literature there is a large proportion of content analysis and before exposure/after exposure experiments (Mallinckrodt and Mizerski 2007; Ali, Blades et al. 2009; McAlister and Cornwell 2009; Pempek and Calvert 2009; Rozendaal, Buijzen et al. 2010; Van Reijmersdal, Rozendaal et al. in press). Much of this could be described as being carried out in 'laboratory' conditions. While the measuring of the amount of advertising on websites, and the testing for effect after exposure could both be said to be using scientific methods, such research runs the risk of drawing a quite different picture from the natural media environment children inhabit, and ending up with results that might be

quite different from more organic environments. For example asking children to watch content in a controlled environment and measuring their responses might be very different from viewing at home where siblings and parents are present and where the child might well be multi-tasking and distracted by other tasks such as eating and playing. In terms of measurement there is a possible discrepancy between potential and actual exposure. While typical 'content analysis' will measure the potential exposure, predicting exactly what children are exposed to, and their recognition, the actual understanding and processing of this is a rather more complicated issue (Sandberg 2011).

It can also be argued that these methodologies make it difficult to make any claims over and critically discuss long term effects, as this is not being measured, but which nevertheless is what many researchers are most concerned about. While some researchers do make it clear that they cannot make the leap to claims on behaviour, many do use results on short term eating preferences as proof of long term behaviour change. As Vandewater and Lee (2009) argue, the challenge for any type of media measuring methodology in a digital age is connecting exposure to individual children's behaviour. There is a further question of how close the researcher needs to be to their subject, as he or she runs the risk of sacrificing ethical concerns for validity. Any researcher must decide how much detail and information they need to collect in order to get a reasonable estimate for what it is they want to assess. With digital media increasingly entwined in young people's lives, the question becomes how close we want to get, and how we can generalise our findings. There is thus a need for both long term studies, as well as studies that take into account the convergences of media and the synergistic effects, rather than trying to isolate marketing mediums (Brown and Bobkowski 2011; Montgomery, Grier et al. 2011). Media content is increasingly converging online, and it will become important to understand whether platform or context matters, and in what ways. Synergies across platforms and how platforms and content within them relate to children's perception of advertising also need to be assessed.

# 11. Further Research

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There are still many gaps in the research literature, and future research should seek to shed more light on the following areas:

## 11.1 AGE DIFFERENCES

As children's activities online change as they grow older, so does their exposure to and engagement with digital advertising (Brady, Farrell et al. 2008; Rideout, Foehr et al. 2010). Thus, more research is needed into the age related differences in exposure to, engagement with, understanding, and the impact of digital marketing. Tweens for example are a social group given much attention both by advertisers and academics. At this age (8-12) children are increasingly consuming digital media but their use has different patterns from that of older teenagers on whom much of the research has been focused (Tufte 2006; Clarke, Harrison et al. 2010).

## 11.2 GENDER DIFFERENCES

There are differences in girls' and boys' perceptions of advertising as well as their consumption patterns and media use. For example, boys tend to play more games and are likely to watch more videos, while girls spend more time on social networking sites and instant messaging (Rideout, Foehr et al. 2010; Livingstone, Haddon et al. 2011). Thus, further research should look more closely on engagement with digital media, and the effects of advertising between genders (Tufte 2006; Buckingham 2007).

## 11.3 LONG TERM AND REAL TIME RESEARCH

Due to the previously mentioned time lag between the marketing industry and academic research there is a call for research and monitoring practices that can better keep up with developments. It is argued that one of the limitations of many pieces of research on advertising on websites directed at or popular with children is that too much time passes between the researchers initially visiting the website and the research finally being published (Cowburn and Boxer 2007; Jones and Reid 2010), leading to many of the websites already having changed or closed. Jones, Wiese

et al.(2008) therefore argue that research must, and themselves attempt to, report website findings in 'real time', thus shortening the time period between fieldwork and publication.

There are also calls for more long term research in order to take into account the complexities of advertising children's dietary intake and food preference behaviour (Brady, Farrell et al. 2008; McAlister and Cornwell 2009; Pempek and Calvert 2009; Van Reijmersdal, Rozendaal et al. in press). The previously mentioned 'laboratory' type experiments (see page 40) may prove effects on short term brand preference, but they are less suited for accounting for long term effects of eating habits and health. Long term research projects could potentially also account for how advertising interacts with other issues related to food intake, such as food prices, availability, location and social class.

#### **11.4 VULNERABLE GROUPS OF CHILDREN AND YOUNG PEOPLE**

US research literature indicates that ethnic youth have been shown to be disproportionately targeted by, and more accepting of new forms of marketing, especially urban forms (Buckingham 2007; Montgomery and Chester 2007; Berkeley Media Studies Group 2011; Montgomery 2011; Montgomery, Grier et al. 2011). African Americans and Hispanics in the US for example have been shown to have much higher Internet and mobile use, making them a lucrative market (Rideout, Foehr et al. 2010). There is however to date very little research on particularly vulnerable groups, and more research should be conducted to assess whether this is also the case in other countries, and what the long term effect of this may be. Researchers outside the US should also focus on differences in social and cultural groups, and assess whether less affluent groups or ethnic minorities are targeted or affected in significant ways.

#### **11.5 INAPPROPRIATE ADVERTISING**

This literature review has focused on digital marketing and advertising targeted to children. It has not looked at inappropriate advertising that children might see, for example advertising for alcohol, gambling or weight loss, all of which have been observed on children's social networking sites (Clarke 2009). While there is

no sense that such advertising is targeted to children, it is nevertheless the case that children younger than 13 are lying about their age to gain access to social networking sites such as Facebook, and so are vulnerable to inappropriate digital advertising and marketing messages. A wide-scale review of what children are actually viewing online would establish the extent to which children are vulnerable to inappropriate advertising and marketing messages. While the literature has referred to concern about this, and there is widespread concern expressed (Bailey 2011), it is difficult to establish the extent of children's exposure to such advertising without further research.

### 11.6 ASSESSING CONSUMPTION PRACTICES

The academics and practitioners interviewed for this review called for a shift in the way research is carried out to assess the effects of digital marketing and advertising on children. Buckingham (2007) argues for the focus to be on consumption *practices*, that is to gain a clear understanding of how children are using digital media, and the role of marketing and advertising communication within this. In particular the focus should be on the role of parents in monitoring their children's consumption, potential differences in understanding and consumption in terms of age, gender and class, and the role of consumer literacy within this. Related to this is new measurement techniques, that take differences in medium and platform, and how they are interacted with into account (Brown and Bobkowski 2011).



## 13. Conclusion

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Research on digital marketing to children still has significant gaps, but is no doubt an area of increasing interest. A large proportion of the research focuses on the role of digital marketing in children's diets and rising obesity levels. There is to date little research assessing the wider role of digital marketing in the social lives of children and young people.

It is suggested that digital marketing challenges previously established research on children's understanding of advertising, as it is argued that the techniques employed in digital marketing will prove more difficult for children to critically understand compared to traditional advertising. There appears to be a consensus that the research on children's persuasion literacy needs to be revised in light of new techniques and forms of exposure. Equally some suggest that the ages of children in advertising regulation and self-regulation need to be reviewed. However, there is too little research evidence to establish a consensus on what age children can understand digital forms of marketing. There are also calls for food marketing regulation to include common nutritional standards, as well as the encouragement to market healthier food products in order to attempt to decrease the levels of HFSS food in children's diets.

Research has mainly focused on the levels of advertising on popular children's websites, the number of banner ads, links, videos, logos, and on advergames. Advergames are shown to be very popular with children, and it is argued that this popularity may influence children's brand preferences and, when it comes to food marketing, eating habits, as the products marketed by advergames tend to be lower in nutritional value. There is very little research to date on social networking sites, mobile and location based marketing and product placement, although these are predicted to become increasingly important.

There is also a call for research into age and gender differences in terms of understanding of and engagement with advertising, as well as vulnerable social groups and their exposure to and engagement with advertising. With regards to food marketing there is a need for more research into long term effects of marketing, and its role in interaction with other issues related to children's health, such as food prices, health care systems and parenting culture.

It is argued that new forms of digital marketing challenge the methods previously employed to study children and advertising. In particular effective methods to assess the web of cross-media marketing, the levels of interactivity and engagement with marketing, the social aspects of marketing on social networks and the fast pace and fluid nature of digital advertising is needed.

The debate about children and digital marketing and children's role in the commercial world more generally is still fairly polarised, and there is a need for more research to ensure a more balanced discussion. Research should attempt to fairly assess the role of digital marketing in the social lives of children and their family and peers, not only in relation to eating habits but also other aspects of children's lives, positive or negative. Digital media is becoming an increasingly integrated part of children's lives globally, and digital marketing in one form or another will be part of their online experience. Research can play an important role in assessing the potential harm or benefits of digital marketing to children and young people, and ensure best practice and sound regulation or self-regulation. As Internet and mobile penetration increases in areas where marketers have previously struggled to reach large audiences, digital marketing is likely to be very important, and thus research should monitor and critically assess these developments. This will be an important aspect of establishing digital marketing to children as an independent field of study, separated from research on television and print advertising, with its own methodology and encompassing wider social issues.

# References

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- Ali, M., M. Blades, et al. (2009). "Young children's ability to recognize advertisements in web page designs." British Journal of Developmental Psychology **27**(1): 13.
- Ambler, T. (2008). "Whose minds are messed up? A response to Nairn and Fine." International Journal of Advertising: The Quarterly Review of Marketing Communications **27**(5): 11.
- Andersen, L. P., B. Tufte, et al. (2008). "The tweens market and responses to advertising in Denmark and Hong Kong." Young Consumers **9**(3): 12.
- Andronikidis, A. and M. Lambrianidou (2010). "Children's Understanding of Television Advertising: A Grounded Theory Approach." Psychology & Marketing **27**(4): 23.
- Bailey, R. (2011). Letting Children be Children - Report of an Independent Review of the Commercialisation and Sexualisation of Childhood. London, United Kingdom, Department of Education.
- Bailey, R., K. Wise, et al. (2009). "How Avatar Customizability Affects Children's Arousal and Subjective Presence During Junk Food-Sponsored Online Video Games." Cyberpsychology and Behavior **12**(3): 9.
- Bakir, A. and S. J. Vitell (2010). "The ethics of food advertising targeted toward children: Parental viewpoint." Journal of Business Ethics **91**(2): 13.
- Barneombudet.no. "Barneombudet: Kommersialisering." Retrieved 11/01, 2012, from [http://www.barneombudet.no/temasider/kultur\\_fri/kommersial/](http://www.barneombudet.no/temasider/kultur_fri/kommersial/).
- Bati, U. and B. Atici (2010). The effects of advergames towards Turkish youth. EDULEARN10 Conference. Barcelona, Spain.
- Berkeley Media Studies Group (2011). Food and beverage marketing to children and adolescents: An environment at odds with good health, Robert Wood Johnson Foundation.
- boyd, d. (2008). How Can Qualitative Internet Researchers Define the Boundaries of Their Projects: A Response to Christine Hine. Internet Inquiry: Conversations About Method. A. Markham and N. Baym. Los Angeles, Sage.
- boyd, d. and A. E. Marwich (2011). Social Privacy in Networked Publics: Teens' Attitudes, Practices, and Strategies. Oxford Internet Institute's 'A Decade in Internet Time: Symposium on the Dynamics of the Internet and Society'. Oxford, United Kingdom.
- Brady, J., A. Farrell, et al. (2008). "Beyond Television: Children's Engagement with Online Food and Beverage Marketing." Clinical Medicine: Pediatrics **2**: 9.
- Brennan, R., S. Dahl, et al. (2010). "Persuading young consumers to make healthy nutritional decisions." Journal of Marketing Management **26**(7-8): 21.
- British Heart Foundation (2007). Protecting children from unhealthy food marketing: A British Heart Foundation and Children's Food Campaign proposal for a statutory system to regulate non-broadcast food marketing to children' British Heart Foundation.
- Brown, J. D. and P. S. Bobkowski (2011). "Older and newer media: Patterns of use and effects on adolescents' health and well-being." Journal of Research on Adolescence **21**(1): 19.
- Buckingham, D. (2000). After the Death of Childhood. Cambridge, Polity.
- Buckingham, D. (2007). "Selling Childhood? Children and consumer culture." Journal of Children and Media **1**(1): 10.
- Buckingham, D. (2009). The impact of the commercial world on children's wellbeing. London, United Kingdom, Department for Children, Schools and Families.
- Business Insider (2011). "The 100 Most Valuable Startups In The World, Revamped And Revised!". Retrieved 24/01/2012, 2011, from <http://www.businessinsider.com/2011-digital-100>.
- Butter, E., P. Popovich, et al. (1981). "Discrimination of Television Programmes and Commercials by Pre-school Children." Journal of Advertising Research **April**: 4.
- Cai, X. (2008). "Advertisements and Privacy: Comparing For-Profit and Non-Profit Web Sites for Children." Communication Research Reports **25**(1): 9.
- Cai, X. and X. Zhao (2010). "CLICK HERE, KIDS!: Online advertising practices on popular children's websites." Journal of Children and Media **42**(2): 20.
- Calvert, S. (2008). "Children as Consumers: Advertising and Marketing." Future of Children **18**(1): 20.
- Carmichael, M. (2012). "Stat of the Day: Mobile Phones overtake PC's' Adage." Retrieved 24/01, 2012, from <http://adage.com/article/adagestat/mobile-phones-overtake-number-pcs-key-global-markets/232304/>.

- Carter, O. B. J., L. J. Patterson, et al. (2011). "Children's understanding of the selling versus persuasive intent of junk food advertising: Implications for regulation." *Social Science & Medicine* 72(6): 7.
- Cbc.ca (2011). "Advertisers must let consumers skip online tracking." Retrieved 08/12, 2011, from <http://www.cbc.ca/news/technology/story/2011/12/06/technology-privacy-online-tracking.html>.
- Center for Digital Democracy, Consumer Action, et al. (2011). Complaint and request for investigation. Washington DC, United States, Federal Trade Commission.
- Chan, K. and J. McNeal, U. (2006). "Chinese children's understanding of commercial communications: A comparison of cognitive development and social learning models." *Journal of Economic Psychology* 27(1): 21.
- Chester, J. and K. C. Montgomery (2008). "Digital marketing to youth: an emerging threat." *Consumer Policy Review* 18(6): 8.
- Chetty, I. and A. Basson (2006). Report on Internet Usage and the Exposure of Pornography to Learners in South African Schools'. Houghton, South Africa, Film and Publication Board.
- Cho, C. and J. C. Hongsik (2005). "Children's Exposure to Negative Internet Content: Effects of family context." *Journal of Broadcasting and Electronic Media* 1 December: 22.
- Cicchirillo, V. and J. Lin (2011). "Stop Playing with Your Food: A Comparison of For-Profit and Non-Profit Food-Related Advergaming." *Journal of Advertising Research* 51(3): 16.
- Clarke, B. (2009). "Early Adolescents' Use of Social Networking Sites to Maintain Friendship and Explore Identity: Implications for Policy." *Policy & Internet* 1(1).
- Clarke, B. (2011). Children and the commercial world: Exploring the attitudes of children and parents. London, United Kingdom, Credos.
- Clarke, B., A. Harrison, et al. (2010). The digital world of children and young adolescents: CHILDREN'S EMOTIONAL ENGAGEMENT WITH DIGITAL MEDIA. *ESOMAR Congress 2010 - The changing face of market research*.
- Consumers International (2009). New Media, Same Old Tricks: A Survey of the Marketing of Food to Children on Food Company Websites. London, UK, Consumers International.
- COPPA. "COPPA - Children's Online Privacy Protection Act." Retrieved 07/01, 2012, from <http://www.coppa.org/coppa.htm>.
- Corbett, C. and C. Walker (2009). "Catchy cartoons, wayward websites and mobile marketing – food marketing to children in a global World." *Education Review* 21(2): 84.
- Cowburn, G. and A. Boxer (2007). "Magazines for children and young people and the links to Internet food marketing: A review of the extent and type of food advertising." *Public Health Nutrition* 10(10): 8.
- CSICT (2010). Survey on the Use of Information and Communication Technologies in Brazil 2009. São Paulo, Brazil, Center of Studies on Information and Communication Technologies, Brazil Internet Steering Committee.
- Culp, J., R. A. Bell, et al. (2010). "Characteristics of Food Industry Web Sites and "Advergaming" Targeting Children." *Journal of Nutrition Education and Behavior* 42(3): 5.
- Dahl, S., L. Eagle, et al. (2009). "Analyzing advergaming: active diversions or actually deception: An exploratory study of online advergaming content." *Young Consumers: Insight and Ideas for Responsible Marketers* 10(1): 14.
- Davidson, J. and E. Martellozzo (2010). State of the Nation Review of Internet Safety 2010. Kingdom of Bahrain, Manama, Telecommunications Regulatory Authority.
- De Souza, Z. and G. N. Dick (2009). "Disclosure of information by children in social networking—Not just a case of "you show me yours and I'll show you mine." *International Journal of Information Management* 29(4): 7.
- Donohue, T., L. Lucy, et al. (1980). "Do Kids Know What TV Commercials Intend?" *Journal of Advertising Research* 20(5): 58.
- Duncan, S. H. (2008). "MySpace Is Also Their Space: Ideas for Keeping Children Safe from Sexual Predators on Social Networking Sites." *Kentucky Law Journal* 96(4): 51.
- Eurobarometer (2008). Safer Internet Programme: Towards a safer use of the Internet for children in the EU – A parents' perspective. Brussels, Belgium, Eurobarometer, European Commission.
- Gbadamosi, A. (2010). "Regulating child-related advertising in Nigeria." *Young Consumers* 11(3): 11.
- Green, L., J. Hartley, et al. (2011). Risk and safety for Australian children on the internet. London, EU Kids Online, London School of Economics.
- Griffiths, R. and S. Casswell (2010). "Intoxicogenic digital spaces? Youth, social networking sites and alcohol marketing." *Drug and Alcohol Review* 29: 6.

- Harris, J. L., M. B. Schwartz, et al. (2010). Fast Food Facts: Evaluating Fast Food Nutrition and Marketing to Youth, Yale Rudd Center for Food Policy and Obesity.
- Harris, J. L., M. B. Schwartz, et al. (2011). Sugary Drinks FACTS: Evaluating Sugary Drink Nutrition and Marketing to Youth, Yale Rudd Centre for Food Policy and Obesity October
- Harris, J. L., M. B. Schwartz, et al. (2009). Cereal FACTS: Evaluating the Nutritional Quality and Marketing of Children's Cereals, Yale Rudd Centre for Food Policy and Obesity.
- Hasebrink, U., A. Görzig, et al. (2011). Patterns of risk and safety online. In-depth analyses from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries. London, United Kingdom, EU Kids Online, London School of Economics.
- Hawkes, C. (2007). "Regulating and Litigating in the Public Interest: Regulating Food Marketing to Young People Worldwide. Trends and Policy Drivers." American Journal of Public Health 97(11): 12.
- Hawkes, C. and J. L. Harris (2011). "An analysis of the content of food industry pledges on marketing to children." Public Health Nutrition 14(8): 12.
- Henson, R. (2006). Forward inference using functional neuroimaging: Dissociations versus associations. Trends in Cognitive Sciences, 10, 64-69.
- Hernandez, M., D. and S. Chapa (2010). "Adolescents, advergames and snack foods: Effects of positive affect and experience on memory and choice." Journal of Marketing Communications 16(1-2): 10.
- Hinduja, S. and J. Patchin (2008). "Personal Information of Adolescents on the Internet: A Quantitative Content Analysis of MySpace." Journal of Adolescence 31(1): 22.
- Hofmeister-Tóth, A. and P. Nagy (2011). "The content analysis of advergames in Hungary." Qualitative Market Research 14(3): 15.
- Huffington Post (2011). "Mark Zuckerberg Suggests Kids Under 13 Should Be Allowed On Facebook ". Retrieved 26/01, 2012, from [http://www.huffingtonpost.com/2011/05/20/mark-zuckerberg-children-facebook\\_n\\_864794.html](http://www.huffingtonpost.com/2011/05/20/mark-zuckerberg-children-facebook_n_864794.html).
- Hunter, N. E. (2009). "Revisiting the Regulation Debate: The Effect of Food Marketing on Childhood Obesity." Pierce Law Review 7(2): 29.
- ICC (2004) Framework for Responsible Food and Beverage Communications. International Chamber of Commerce. 2004. Paris, France.
- Institute of Medicine (2006). Food Marketing to Children and Youth: Threat or Opportunity?, Institute of Medicine.
- Ipsos Mori and A. Nairn (2011). Children's Well-being in UK, Sweden and Spain: The Role of Inequality and Materialism, UNICEF.
- ITU (2008). Use of Information and Communication Technology by the World's Children and Youth: A statistical compilation. Geneva, Switzerland, International Telecommunication Union.
- Jain, A. (2010). "Temptations In Cyberspace: New Battlefields In Childhood Obesity." Health Affairs 29(3): 5.
- Jones, S., C., L. Phillipson, et al. (2011). Food marketing to children in Australia Sydney, Australia, Cancer Council Australia.
- Jones, S., C. and A. Reid (2010). "Marketing to children and teens on Australian food company web sites." Young Consumers: Insight and Ideas for Responsible Marketers 11(1): 10.
- Jones, S., C., E. Wiese, et al. (2008). "Following the links: Food advertising and promotion on children's magazine websites." Journal of Nonprofit & Public Sector Marketing 20(2): 26.
- Kellet, M., C. Robinson, et al. (2004). Images of Childhood. Doing Research with children and Young People. S. Fraser, V. Lewis, D. S., M. Kellett and C. Robinson. London, Sage.
- Kelly, B. P., K. Bochynska, et al. (2008). "Internet food marketing on popular children's websites and food product websites in Australia'." Public Health Nutrition 11(11): 11.
- Kjørstad, I., R. Brusdal, et al. (2011). Barn som forbrukere av kommersielle nettsamfunn: En casestudie av Habbo.no. Oslo, Norway, National Institute for Consumer Research.
- Kuhn, M. and W. Eischen (1997). Leveraging the aptitude and ability of eight year-old adults: and other wonders of technology. European Society for Opinion and Marketing Research.
- Kunkel, D. (2010). "Commentary: Mismeasurement of children's understanding of the persuasive intent of advertising." Journal of Children and Media 4(1): 9.
- Lee, M., Y. Choi, et al. (2009). "Playing With Food: Content Analysis of Food Advergames." The Journal of Consumer Affairs 43(1): 26.
- Lee, M. and S. Youn (2006). A content analysis of advergames on megabrands' web sites. American Academy of Advertising. Reno, Nevada.
- Lenhart, A. and M. Madden (2007). Teens, Privacy & Online Social Networks: How teens manage their online identities and personal information in the age of MySpace. Washington, DC, Pew Internet & American Life Project.

- Lenhart, A., K. Purcell, et al. (2010). Social Media & Mobile Internet Use Among Teens and Young Adults. Washington D.C, Pew Internet & American Life Project.
- Leslie, F. M., L. J. Levine, et al. (2009). Adolescents' Psychological & Neurobiological Development: Implications for Digital Marketing. Memo prepared for The Second NPLAN/BMSG Meeting on Digital Media and Marketing to Children for the NPLAN Marketing to Children Learning Community.
- Levin, S., T. Petros, et al. (1982). "Preschoolers' Awareness of Television Advertising." Child Development 53: 5.
- Lingas, E. O., L. Dorfman, et al. (2009). "Nutrition Content of Food and Beverage Products On Web Sites Popular With Children." American Journal of Public Health 9(3): 5.
- Linn, S. and C. L. Novosat (2008). "Calories for Sale: Food Marketing to Children in the Twenty-First Century." The ANNALS of the American Academy of Political and Social Science 615: 23.
- Livingstone, S. (2004). A commentary on the research evidence regarding the effects of food promotion on children, Research Department of the Office of Communications (Ofcom).
- Livingstone, S. (2008). "Taking risky opportunities in youthful content creation: teenagers' use of social networking sites for intimacy, privacy and self-expression." New Media and Society 13(8): 20.
- Livingstone, S. and D. J. Brake (2010). "On the rapid rise of social networking sites: new findings and policy implications." Children and Society 24(1): 9.
- Livingstone, S. and L. Haddon (2009). EU Kids Online: Final Report. London, United Kingdom, EU Kids Online, London School of Economics.
- Livingstone, S., L. Haddon, et al. (2011). EU Kids Online: Final Report. London, United Kingdom, EU Kids Online, London School of Economics.
- Livingstone, S., L. Haddon, et al. (2011). Risks and safety on the internet: The perspective of European children. Full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries. London, United Kingdom, EU Kids Online, London School of Economics.
- Livingstone, S. and E. Helsper (2006). Advertising 'unhealthy' foods: Understanding promotion in the context of children's daily lives, Research Department of the Office of Communications (Ofcom).
- Livingstone, S., K. Ólafsson, et al. (2011). Social networking, age and privacy. London, EU Kids Online, London School of Economics.
- LRG (2011). Emerging Video Services V, Press Release, 29 March, 2011, Leichtman Research Group
- Macklin, M. (1987). "Preschoolers' Understanding of the Informational Function of Television Advertising." Journal of Consumer Research 14(September): 11.
- Mallinckrodt, V. and D. Mizerski (2007). "The effects of playing an advergame on young children's perceptions, preferences, and requests." Journal of Advertising 36(2): 14.
- Marshall, C. (1997). "Protect the parents: Exploiting parents and children through advertising. ." Management Today(September): 6.
- McAlister, A. R. and B. T. Cornwell (2009). "Preschool children's persuasion knowledge: The contribution of theory of mind." Journal of Public Policy & Marketing 28(2): 11.
- McCreanor, T., H. M. Barnes, et al. (2008). "Creating intoxicogenic environments: Marketing alcohol to young people in Aotearoa New Zealand." Social Science and Medicine 67: 9.
- McNeal, J. and C. Yeh (1993). "Born to shop. ." American Demographics 15: 6.
- Mediamark Research & Intelligence (2007). "Gaming Is Nearly Ubiquitous with Kids Online." Retrieved 22/01, 2012, from <http://www.gfkmri.com/pdf/gaming%20is%20nearly%20ubiquitous%20with%20kids%20online.pdf>.
- Medietilsynet (2010). Barn og digitale medier 2010. Fakta om barn og unges bruk og opplevelse av digitale medier. Fredrikstad, Medietilsynet, Norwegian Media Authority.
- Miller, R. K. and K. Washington (2011). Consumer Behavior 2012, Richard K. Miller and Associates.
- Miyazaki, A., D., A. Stanaland, J., S., et al. (2009). "Self-regulatory safeguards and the online privacy of preteen children: Implications for the advertising industry." Journal of Advertising 38(4): 13.
- Montgomery, K. C. (2011). "Balancing the Needs of Young People in the Digital Marketplace." Journal of Children and Media 5(3): 4.
- Montgomery, K. C. and J. Chester (2007). Interactive Food & Beverage Marketing: Targeting Children and Youth in the Digital Age. Berkeley, US, Berkeley Media Studies Group.
- Montgomery, K. C. and J. Chester (2011). Digital Food Marketing to Children and Adolescents: Problematic Practices and Policy Interventions, Public Health and Law Policy.



- Montgomery, K. C., S. Grier, et al. (2011). Food marketing in the digital age: A conceptual framework and agenda for research. Washington, US, Center for Digital Democracy.
- Moore, E. S. (2006). It's Child's Play: Advergaming and the Online Marketing of Food to Children: First Analysis of Online Food Advertising Targeting Children, Kaiser Family Foundation.
- Moore, E. S. and V. J. Rideout (2007). "The online marketing of food to children: Is it just fun and games?" Journal of Public Policy and Marketing 26(2): 18.
- Nairn, A. and C. Fine (2008). "Who's messing with my mind? The implications of dual-process models for the ethics of advertising to children." International Journal of Advertising: The Quarterly Review of Marketing Communications 27(3): 24.
- Oates, C., M. Blades, et al. (2001). "Children and television advertising: When do they understand persuasive intent?" Journal of Consumer Behaviour 1(3): 7.
- Oates, C. J., B. Gunter, et al. (2003). "Marketing to children." Journal of Marketing Management 19(3-4): 9.
- Ofcom (2011). UK Children's Media Literacy Report. London, United Kingdom, Department of the Office of Communication.
- Owen, L., S. Auty, et al. (2007). "Children's Understanding of Advertising: An Investigation Using Verbal and Pictorially Cued Methods." Infant and Child Development 16: 12.
- Pempek, T. A. and S. Calvert (2009). "Tipping the balance: use of advergaming to promote consumption of nutritious foods and beverages by low-income African American children." Archives of Pediatrics & Adolescent Medicine 163(7): 5.
- Purswani, G. (2010). "Advergaming, their use and potential regulation." Asia Pacific Public Relations Journal 11: 7.
- Quilliam, E. T., M. Lee, et al. (2011). "The Impetus for (and Limited Power of) Business Self-Regulation: The Example of Advergaming." The Journal of Consumer Affairs(Summer): 24.
- Rideout, V. J., U. G. Foehr, et al. (2010). Generation M2: Media in the lives of 8 to 18 years olds, Kaiser Family Foundation
- Roedder-John, D. (1999). "Consumer socialization of children: A retrospective look at twenty-five years of research." Journal of Consumer Research 26(3): 31.
- Rozendaal, E., M. Buijzen, et al. (2010). "Comparing Children's and Adults' Cognitive Advertising Competences in the Netherlands." Journal of Children and Media 4(11): 13.
- Rozendaal, E., M. Buijzen, et al. (2011). "Children's Understanding of Advertisers' Persuasive Tactics." International Journal of Advertising 30: 22.
- Rozendaal, E., M. A. Capierre, et al. (in press). "Reconsidering advertising literacy as a defense against advertising effects." Media Psychology.
- SaferNet (2009). "Safernet Brasil Surveys." from [www.safernet.org.br/site/prevencao/pesquisas](http://www.safernet.org.br/site/prevencao/pesquisas).
- Sandberg, H. (2011). "Tiger talk and candy king: Marketing of unhealthy food and beverages to Swedish children." Communications 36: 18.
- Skaar, H. (2009). "Branded selves: How children in Norway relate to marketing on a social network site'." Journal of Children and Media 3(3): 19.
- Socialbakers.com (2011). "Brazil Facebook Statistics." Retrieved 24/01, 2012, from [www.socialbakers.com/facebook-statistics/brazil](http://www.socialbakers.com/facebook-statistics/brazil).
- Socialbakers.com (2011). "India Facebook Statistics, Penetration, Demography." Retrieved 24/01, 2012, from [www.socialbakers.com/facebook-statistics/india#chart-intervals](http://www.socialbakers.com/facebook-statistics/india#chart-intervals).
- Speers, S., J. L. Harris, et al. (2008). Public Perceptions of Food Marketing to Youth: Results of the Rudd Centre Opinion Poll, Yale Rudd Centre for Food Policy and Obesity.
- Staksrud, E. (2008). "Children, Internet, pornography and policy." International Journal of Media and Cultural Politics 4(3): 6.
- Staksrud, E. (2008). Fairytale parenting: Contextual factors influencing children's online self-representation. Digital Storytelling, Mediatized Stories: Self-representations in New Media. K. Lundby. New York, Peter Lang Publishing Group.
- Staksrud, E. (2011). "Norske barn på Internett: Høy risiko - liten skade?" Nordicom Information 33(4): 12.
- Steinberg, L. (2009). Should the science of adolescent brain development inform public policy? American Psychologist, Vol 64(8), Nov 2009, 739-750. doi: 10.1037/a0003-066X.64.8.739 <http://psycnet.apa.org/journals/amp/64/8/739/>
- Symantec (2009). "Norton Online Living Report 09." Retrieved 15/01, 2012, from [http://us.norton.com/content/en/us/home\\_homeoffice/media/pdf/nofr/NOLR\\_Report\\_09.pdf](http://us.norton.com/content/en/us/home_homeoffice/media/pdf/nofr/NOLR_Report_09.pdf).
- The Royal Society (2011). Neuroscience and the Law. Brain Waves 4. Royal Society Policy Document. December 2011. London. [http://royalsociety.org/uploadedFiles/Royal\\_Society\\_Content/policy/projects/brain-waves/Brain-Waves-4.pdf](http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/projects/brain-waves/Brain-Waves-4.pdf)

- The Times. (2012). Open letter on the minimum age of criminal responsibility. 16 January 2012. <http://www.justforkidslaw.org/docs/Open%20Letter%20to%20The%20Times.pdf>
- Thompson, D., M. (2010). "The mixed health messages of millberry: A critical study of online child-targeted food advergames." *Health Communication* **26**(4): 9.
- Thomson, D. (2010). "Marshmallow Power and Frooty Treasures: Disciplining the Child Consumer through Online Cereal Advergames." *Critical Studies in Media Communication* **27**(5): 17.
- Tingstad, V. (2007). New Technologies, New methods? Representing Children in Online and SMS Ethnography. *Children, media and Consumption. On the front edge*. K. M. Ekström and B. Tufle. Gothenburg University, Nordicom.
- Tingstad, V. (2008). Barn, dataspill og digital kompetanse. Perspektiver og forskningsutfordringer. *Den kompetenta gamern. En konferens om ny mediekompetens*. Nordicom.
- Tinson, J. and C. Nancarrow (2007). "Growing up: teenagers' involvement in family decision making." *Journal of Consumer Marketing* **24**(3): 10.
- Tufte, B. (2006). Tweens as Consumers - With Focus on Girls' and Boys' Internet Use. *Child and Teen Consumption*. Copenhagen Business School, Center for Marketing Communication.
- Turnipseed, T. R. I. and A. Rask (2007). Children's Health and Advergames: A Theoretical Study of Advertisement Driven Video Games, Product Placement and Integrated Marketing Communication. *NCA 93rd Annual Convention*.
- UN (2010). Voices of Youth, 'Survey on Internet Use, 2010' (internal document). New York, United Nations Children's Fund.
- UNICEF (2011). Child Safety Online: global challenges and strategies. Florence, Italy, UNICEF Innocenti Research Centre.
- Ustjanauskas, A., B. Eckman, et al. (2010). Rudd Report: Focus Groups With Parents: What Do They Think About Food Marketing to Their Kids?, Yale Rudd Centre For Food Policy and Obesity.
- Valero, M., P. (2009). "Advertising to Chinese children." *Young Consumers* **10**(2): 5.
- van der Gaag, N. (2010). Because I Am a Girl: The State of the World's Girls: Digital and Urban Frontiers Plan International.
- Van Reijmersdal, E. A., E. Rozendaal, et al. (in press). "Effects of prominence, involvement, and persuasion knowledge on children's cognitive and affective responses to advergames." *Journal of Interactive Marketing*.
- Vandewater, E. A. and S. Lee (2009). "Measuring Children's Media Use in the Digital Age: Issues and Challenges." *American Behavioral Scientist* **52**(8): 25.
- Warman, M. (2011, 24/05). "Mark Zuckerberg: Children should be allowed to use Facebook." Retrieved 18/01, 2012, from <http://www.telegraph.co.uk/technology/facebook/8533429/Mark-Zuckerberg-children-should-be-allowed-to-use-Facebook.html>.
- Westminster Forum (2012). Next Steps for Protecting Children Online. Royal Over-Seas League, London, .
- WFA.org. "The proof that food marketing self-regulation works". Retrieved 22/12, 2011, from <http://www.wfanet.org/en/global-news/the-proof-that-food-marketing-self-regulation-works->.
- WFA (2006) Responsible Advertising and Children Programme. World Federation of Advertisers, 2006.
- WHO. "Childhood overweight and obesity." Retrieved 24/01, 2012, from <http://www.who.int/dietphysicalactivity/childhood/en/>.
- WHO (2010). Set of recommendations on the marketing of foods and non-alcoholic beverages to children. Geneva, Switzerland, World Health Organization.
- Wright, B. (2011). "Beyond product placement: a model for advergames as viral marketing tool in South Africa." *Communicare* **30**(1): 19.
- Yale Rudd Centre for Food Policy and Obesity Fast food targeted marketing, Yale Rudd Centre for Food Policy and Obesity.
- Ybarra, M. L. and K. J. Mitchell (2008). "How Risky Are Social Networking Sites? A Comparison of Places Online Where Youth Sexual Solicitation and Harassment Occurs." *Pediatrics* **121**(2): 8.
- Young, B. (1986). Children's food choices, parents understanding and influence, and the role of food promotion. *Commercial Television and European Children*. S. Ward and R. Brown. Aldershot, UK, Gower.
- Young, B. (1990). *Children and television advertising*. Oxford, UK, Clarendon Press.
- Zickuhr, K. and A. Smith (2011). 28% of American adults use mobile and social location-based services, Pew Internet and American Life Project, Pew Research Center.



# Appendices

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## 1. RESPONDENTS' PROFILES



**David Buckingham,**  
Professor of Media and Communications,  
Loughborough University

David Buckingham is a Professor of Media and Communications in the School of Social Sciences at Loughborough University. Prior to joining Loughborough in 2012, he was Professor of Education at the Institute of Education, London University, where he directed the Centre for the Study of Children, Youth and Media. His research focuses on children's and young people's interactions with electronic media, and on media education. He is currently directing a project on learning progression in media education; and has recently completed projects on childhood, 'sexualisation' and consumer culture, and on young people, the internet and civic participation. He recently led an independent assessment for the UK government on 'the impact of the commercial world on children's wellbeing'. David is the author, co-author or editor of 25 books, including most recently *Beyond Technology* (2007), *Youth, Identity and Digital Media* (2008), *Video Cultures: Media Technology and Amateur Creativity* (2009) and *The Material Child: Growing Up in Consumer Culture* (2011).



**Professor Sonia Livingstone, LSE**

Sonia Livingstone is Professor of Social Psychology and Head of the Department of Media and Communications at LSE. She is author or editor of sixteen books and many academic articles and chapters. She has held visiting professor positions at the Universities of Copenhagen, Stockholm, Bergen, Illinois, Milan, and Paris II, and is on the editorial board of several leading journals. She was President of the International Communication Association (2007-8) and served for six years on ICA's Executive Committee.

Her research examines media audiences; children, young people and the internet in social, domestic and educational contexts; media and digital literacies; the mediated public sphere; internet use and policy; and the public understanding of communications regulation. These interests also shape her teaching on core MSc courses in theories and methods of research in media and communications, her graduate option course 'The audience in media and communications', and her supervision of PhD students.

Currently, Sonia Livingstone directs a 33-country network, EU Kids Online, for the EC's Safer Internet Programme. She serves on the Executive Board of the UK's Council for Child Internet Safety, for which she is the Evidence Champion. She has, at various times, served on the Department of Education's Ministerial Taskforce for Home Access to Technology for Children, Ofcom's Media Literacy Research Forum, and the boards of Voice of the Listener and Viewer and the Internet Watch Foundation. She has advised Ofcom, Department for Education, Home Office, Economic and Social Research Council, BBC, The Byron Review on children's online risk, and Higher Education Funding Council for England.



**Dr Julie Tinson,**  
**vReader and Director of Research Centre for**  
**Consumers, Cultures and Society,**  
**Stirling Management School, University of**  
**Stirling**

Julie has an MA from Edinburgh University and a PhD from Napier University which sought to understand how social factors affected the expectations of women using the maternity provision. She has subsequently researched consumer behaviour in relation to children, adolescents and the family. Before arriving at the University of Stirling in 2005, Julie worked at Southampton Business School for six years and Bristol Business School for four years. Julie has a particular interest in working with practitioners and has previously been successful in securing project funding from a range of organisations including Barclays, Associa, Tpoll and most notably Channel 4.

Julie's research considers consumption behaviour associated with consumer socialisation and periods of transition. She has published widely in the areas of families and family decision making as well as on the consumer behaviour of children and adolescents. Media, advertising and gender have also featured in past research studies.



**Dr Brian Young,  
Honorary University Fellow,  
Department of Psychology,  
University of Exeter**

Dr Brian Young is a leading media psychologist at the University of Exeter and an expert in the field of TV and media. He has written extensively on the topic of TV and media, editing and publishing journals and academic papers. He acts as a consultant for The Independent Television Commission (ITC) and the Advertising Association (AA). Dr Brian Young graduated with a BSc in psychology at the University of Edinburgh where he started his career researching children's minds as part of project with Professor Margaret Donaldson. He spent seven years in Hong Kong exploring cross-cultural psychology and was awarded a PhD by the University of Hong Kong for a thesis on Chinese-English bilingualism. After working at the University of Salford where he began his work into children's understanding of advertising, he moved to the University of Exeter where he is now an Honorary Research Fellow. He is Editor of the Journal Young Consumers.



**Mike Cooke,  
Global Director,  
Panel Management, GfK NOP**

Mike Cooke is Vice President of ESOMAR, the global Market Research organisation, and is a senior director at GfK NOP where he is Global Director of Online Panel Management. Mike assisted in the redrafting of the ESOMAR "Guidelines for Internet Research", the "ESOMAR 26 Questions to help research buyers of online sample". He has been the ESOMAR representative on the Association Collaborative

Effort, which has developed global definitions for online market research and is active in global initiatives to ensure knowledge sharing.

Mike is a Fellow of the Market Research Society and the Royal Society of Arts and a Trustee of the Marketing Sciences Institute in the USA. He was Vice Chairman of the British Market Research Society, on the Executive of the Social Research Association and on the Council of the Association of Management Sciences.

Cooke is a well known speaker, and has given many papers at ESOMAR, CASRO, MRS and other research events. He is also a regular lecturer on market research educational courses. He sits on the Executive Editorial Board of the International Journal of Market Research.

## 2. SUBJECT OF PAPERS REVIEWED

|                                 | A                  | B             | C                | D                      | E               | F                      | G                             | H                  | I                |
|---------------------------------|--------------------|---------------|------------------|------------------------|-----------------|------------------------|-------------------------------|--------------------|------------------|
| Paper:                          | All Mar-<br>keting | HFSS<br>Foods | Healthy<br>Foods | Kids'<br>Web-<br>sites | Adver-<br>games | SNS/<br>Social<br>Mkt. | Under-<br>Standing<br>Adverts | Mo-<br>bile<br>Mkt | Method-<br>ology |
| Ali et.al. (2009)               |                    |               |                  | X                      |                 |                        | X                             |                    |                  |
| Ambler (2008)                   |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Andersen et.al. (2008)          | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Bailey et.al. (2009)            |                    |               |                  |                        | X               |                        |                               |                    |                  |
| Bakir and Vitell (2010)         |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Bati and Atici (2010)           |                    |               |                  |                        | X               |                        |                               |                    |                  |
| Berkeley Media Studies (2011)   | X                  | X             |                  | X                      | X               | X                      | X                             | X                  |                  |
| boyd (2008)                     |                    |               |                  |                        |                 |                        |                               |                    | X                |
| Brady et.al. (2008)             |                    |               |                  | X                      |                 |                        | X                             |                    |                  |
| Brennan et.al. (2010)           |                    |               | X                |                        |                 |                        |                               |                    |                  |
| British Heart Foundation (2007) |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Brown and Bobkowski (2011)      | X                  | X             |                  |                        |                 |                        |                               |                    |                  |
| Buckingham (2007)               | X                  | X             |                  |                        |                 |                        |                               |                    | X                |
| Cai (2008)                      |                    |               |                  | X                      |                 |                        | X                             |                    |                  |
| Cai and Zhao (2010)             |                    |               |                  | X                      |                 |                        | X                             |                    |                  |
| Calvert (2008)                  | X                  | X             |                  | X                      | X               | X                      |                               | X                  |                  |
| Carter et.al. (2011)            |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Chan and McNeal (2006)          |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Chester and Montgomery (2007)   | X                  | X             |                  | X                      | X               | X                      |                               | X                  | X                |
| Chester and Montgomery (2008)   |                    | X             |                  | X                      | X               | X                      |                               | X                  | X                |
| Cicchirillo and Lin (2011)      |                    | X             |                  |                        | X               |                        |                               |                    |                  |
| Consumers International (2009)  |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Corbett and Walker (2009)       |                    | X             |                  | X                      | X               |                        |                               | X                  |                  |
| Cowburn and Boxer (2007)        |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Culp and Bell (2010)            |                    | X             |                  | X                      | X               |                        | X                             |                    |                  |
| Dahl et.al. (2009)              |                    |               |                  |                        | X               |                        | X                             |                    |                  |
| Evans (2008)                    |                    |               |                  |                        |                 | X                      |                               |                    |                  |
| Gbadamosi (2010)                | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Hara and Nakagawa (2011)        | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Harris et.al. (2009)            |                    | X             |                  | X                      | X               | X                      |                               |                    |                  |
| Harris et.al (2010)             |                    | X             |                  | X                      | X               | X                      |                               | X                  |                  |
| Harris et.al. (2011)            |                    | X             |                  | X                      | X               | X                      |                               | X                  |                  |
| Hawkes (2007)                   |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Hawkes and Harris (2011)        |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Hawkes and Harris (2011)        |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Hernandez and Chapa (2010)      |                    | X             |                  |                        | X               |                        |                               |                    |                  |
| Hill (2011)                     | X                  | X             |                  |                        |                 |                        |                               |                    |                  |

| Paper:                           | A                  | B             | C                | D                      | E               | F                      | G                             | H                  | I                |
|----------------------------------|--------------------|---------------|------------------|------------------------|-----------------|------------------------|-------------------------------|--------------------|------------------|
|                                  | All Mar-<br>keting | HFSS<br>Foods | Healthy<br>Foods | Kids'<br>Web-<br>sites | Adver-<br>games | SNS/<br>Social<br>Mkt. | Under-<br>Standing<br>Adverts | Mo-<br>bile<br>Mkt | Method-<br>ology |
| Hunter (2009)                    |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Jain (2010)                      |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Jones et.al. (2008)              |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Jones et. al. (2011)             |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Jones and Reid (2010)            |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Kaiser Family Foundation (2006)  |                    | X             |                  | X                      | X               |                        |                               |                    |                  |
| Keller and Kalmus (2009)         | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Kelly et.al. (2008)              |                    | X             |                  | X                      | X               |                        |                               |                    |                  |
| Kjørstad et.al. (2011)           | X                  |               |                  |                        |                 | X                      |                               |                    |                  |
| Kunkel (2010)                    |                    |               |                  |                        |                 |                        | X                             |                    | X                |
| Lee et.al. (2009)                |                    | X             |                  |                        | X               |                        |                               |                    |                  |
| Lee and Youn (2006)              |                    | X             |                  |                        | X               |                        |                               |                    |                  |
| Leslie et.al. (2009)             |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Linn and Novosat (2008)          |                    | X             |                  | X                      | X               | X                      |                               | X                  |                  |
| Lingas et.al. (2009)             |                    | X             |                  | X                      |                 |                        |                               |                    |                  |
| Livingstone (2009)               |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Livingstone and Helsper (2006)   |                    | X             |                  |                        |                 |                        | X                             |                    |                  |
| Mallinckrodt and Mizerski (2007) |                    | X             |                  |                        | X               |                        | X                             |                    |                  |
| McAlister and Cornwell (2009)    |                    |               |                  | X                      |                 |                        | X                             |                    |                  |
| Miller and Washington (2012)     |                    |               |                  |                        |                 |                        |                               | X                  |                  |
| Miyazaki et.al. (2009)           |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Montgomery (2001)                | X                  | X             |                  |                        |                 |                        |                               |                    |                  |
| Montgomery et.al. (2011)         |                    | X             |                  | X                      | X               | X                      | X                             | X                  | X                |
| Nairn (2008)                     | X                  |               |                  | X                      |                 |                        | X                             |                    |                  |
| Nairn and Dew (2007)             |                    |               |                  | X                      |                 |                        | X                             |                    |                  |
| Nairn and Fine (2008)            |                    |               |                  | X                      | X               | X                      | X                             |                    |                  |
| Ostry et.al. (2008)              |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Pempek and Calvert (2009)        |                    |               | X                |                        | X               |                        |                               |                    |                  |
| Purswani (2010)                  |                    |               |                  | X                      |                 |                        |                               |                    |                  |
| Quilliam et.al. (2011)           |                    |               |                  |                        | X               |                        |                               |                    |                  |
| Rideout et.al. (2010)            | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Rozendaal et.al. (2010)          |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Rozendaal et.al. (2011)          |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Rozendaal et.al. (in press)      |                    |               |                  |                        |                 |                        | X                             |                    |                  |
| Sandberg (2011)                  |                    | X             |                  | X                      |                 |                        | x                             |                    |                  |
| Skaar (2009)                     | X                  |               |                  |                        |                 | X                      |                               |                    |                  |
| Speers et.al. (2008)             |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Thomson (2010)                   | X                  | X             |                  |                        | X               |                        |                               |                    |                  |
| Thomson (2011)                   |                    | X             |                  |                        | X               |                        |                               |                    |                  |

|                                   | A                  | B             | C                | D                      | E               | F                      | G                             | H                  | I                |
|-----------------------------------|--------------------|---------------|------------------|------------------------|-----------------|------------------------|-------------------------------|--------------------|------------------|
| Paper:                            | All Mar-<br>keting | HFSS<br>Foods | Healthy<br>Foods | Kids'<br>Web-<br>sites | Adver-<br>games | SNS/<br>Social<br>Mkt. | Under-<br>Standing<br>Adverts | Mo-<br>bile<br>Mkt | Method-<br>ology |
| Thornley et.al. (2010)            |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Turnipseed and Rask (2011)        |                    | X             |                  |                        | X               |                        |                               |                    |                  |
| Tufte (2006)                      | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Ustjanauskas et.al. (2010)        |                    | X             |                  |                        |                 |                        |                               |                    |                  |
| Valero (2009)                     | X                  |               |                  |                        |                 |                        |                               |                    |                  |
| Vandewater and Lee (2009)         |                    |               |                  |                        |                 |                        |                               |                    | X                |
| van Reijmersdal et.al. (in press) |                    |               |                  |                        | X               |                        | X                             |                    |                  |
| Wright (2011)                     |                    |               |                  |                        | X               |                        |                               |                    |                  |
| Yngve (2007)                      |                    | X             |                  |                        |                 |                        |                               |                    |                  |

### KEY:

- A All marketing
- B HFSS foods
- C Healthy foods
- D Children's websites
- E Advergames
- F Social networks/social marketing
- G Understanding of advertising
- H Mobile marketing
- I Methodology