Marketing food to children: The messages and their impact

Jason C G Halford, Lauren McGale, Rosa, Whalen, Emma J Boyland
Why market to children?

The child is a key market due to:

1. Influence over family spending (‘pester power’)

2. ‘Direct market’, due to personal spending power

3. ‘Future market’, lifelong spending potential (‘cradle-to-grave consumer’)

[Image of children in a supermarket]
Despite recent fluctuations TV viewing still higher than ten years ago.

Internet use has increased dramatically as expected.

Using both at same time via smart phones etc (OfCom 2016).

**Figure 1: Estimated weekly hours of media consumption, at home or elsewhere among users, 8-11s and 12-15s: 2005 and 2015**

<table>
<thead>
<tr>
<th>Year</th>
<th>Aged 8-11</th>
<th>Aged 12-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>13.2</td>
<td>8</td>
</tr>
<tr>
<td>2015</td>
<td>14.8</td>
<td>18.9</td>
</tr>
</tbody>
</table>

QP13A-B/ QP25A-B How many hours would you say you spend [using medium] on a typical school day/ on a weekend day?
Responses are taken from the child aged 8-11 or 12-15 rather than the parent.
Base: Children aged 8-15 who use each medium (variable base).

More children are now going online at home, and tablets and mobile phones are now more popular than desktop computers for online access.
As shown in Figure 2, more children are able to access the internet at home. In 2005 61% of 8-11s and 67% of 12-15s had the internet at home and 65% of 12-15s and 48% of 8-11s used it. Less than two-thirds of these connections were broadband, and 21% of 8-11s and 28% of 12-15s still had dial-up. In 2015 close to nine in ten 8-11s (91%) and nearly all 12-15s (96%) have internet access at home, either through a fixed broadband connection or through using a mobile network signal.
World Health Organisation recommendations and frameworks (WHO, 2010;2012)

Taken from ‘A framework for implementing the set of recommendations on the marketing of foods and non-alcoholic beverages to children’ (WHO, 2012).
Core, non-core and miscellaneous food advertising
For all view time across 4 channel types in 2010

Children's 2010
- Core: 20.5%
- Non-core: 51.2%
- Miscellaneous: 27.4%

Sports
- Core: 16%
- Non-core: 75.9%
- Miscellaneous: 8%

Music
- Core: 22.6%
- Non-core: 67.9%
- Miscellaneous: 9.6%

Family
- Core: 27.2%
- Non-core: 58.3%
- Miscellaneous: 14.5%
# Children’s channels Food types advertised 2008 versus 2010

**UP**

- Fast food (+13.8%)
- Sugar sweetened drinks (+7.3)
- Full fat dairy items (+4.8%)
- Low fat milk (+2.6)
- Fruit and fruit products (+7.2%)
- Vegetables (+6.1%)

Four are **non core** and three are **core** (still more non core)

<table>
<thead>
<tr>
<th>Food Type</th>
<th>2008 (%)</th>
<th>2010 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast food</td>
<td>13.6</td>
<td>27.4</td>
</tr>
<tr>
<td>Supermarkets advertising no food/non specified</td>
<td>13.3</td>
<td>12.9</td>
</tr>
<tr>
<td>Low fat milk, yoghurt</td>
<td>8.5</td>
<td>10.8</td>
</tr>
<tr>
<td>Sugar sweetened drinks</td>
<td>2.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Fruits and fruit products</td>
<td>10.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Full cream milk</td>
<td>3%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>6.6%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Baby and toddler milk formulae</td>
<td>10.3%</td>
<td>4.2%</td>
</tr>
<tr>
<td>High sugar/low fibre breakfast cereals</td>
<td>3.2%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Tea and coffee</td>
<td>2.8%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
Top 10 food types advertised during peak times
2008 versus 2010

**Fast food and sugar sweetened drinks** up from 2008

Seven are **non core** and only one **core** (i.e. 7 times as many)

<table>
<thead>
<tr>
<th>Category</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast food restaurants</td>
<td>11.6%</td>
<td>13%</td>
</tr>
<tr>
<td>S/markets generic</td>
<td>11.2%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Chocolate and confectionary</td>
<td>8.2%</td>
<td>7.8%</td>
</tr>
<tr>
<td>High fat/sugar/salt spreads</td>
<td>9.4%</td>
<td>8%</td>
</tr>
<tr>
<td>Full cream milk</td>
<td>9.4%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>6.6%</td>
<td>6.8%</td>
</tr>
<tr>
<td>S/markets non-core</td>
<td>8%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Sugar sweetened drinks</td>
<td>6%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Low fat dairy</td>
<td>2.8%</td>
<td>3.8%</td>
</tr>
<tr>
<td>High sugar/low fibre breakfast cereal</td>
<td>4.7%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

*Note: The figures represent the percentage exposure of advertisements.*
World Health Organisation recommendations and frameworks (WHO, 2010; 2012)

A framework for implementing the set of recommendations on the marketing of foods and non-alcoholic beverages to children (WHO, 2012).
Commercial viewing is a predictor of children’s obesity

Zimmerman & Bell (2010)

<table>
<thead>
<tr>
<th></th>
<th>Model 1, a b (95% CI)</th>
<th>Model 2, b b (95% CI)</th>
<th>Model 3, c b (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television viewing in 1997, h/d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>0.11** (0.00, 0.21)</td>
<td>0.11** (0.00, 0.21)</td>
<td>0.10** (0.00, 0.21)</td>
</tr>
<tr>
<td>Noncommercial</td>
<td>0.03 (-0.07, 0.14)</td>
<td>0.03 (-0.08, 0.13)</td>
<td>0.04 (-0.07, 0.14)</td>
</tr>
<tr>
<td>Television viewing in 2002, h/d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>0.06 (-0.04, 0.16)</td>
<td>0.06 (-0.04, 0.16)</td>
<td>0.06 (-0.04, 0.17)</td>
</tr>
<tr>
<td>Noncommercial</td>
<td>0.00 (-0.10, 0.11)</td>
<td>0.01 (-0.10, 0.11)</td>
<td>0.00 (-0.10, 0.11)</td>
</tr>
<tr>
<td>Physical activity in 1997, min/d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None (Ref)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-30</td>
<td>-0.06 (-0.34, 0.22)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 30</td>
<td>0.01 (-0.21, 0.23)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical activity in 2002, min/d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None (Ref)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-30</td>
<td>-0.19 (-0.43, 0.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 30</td>
<td>0.02 (-0.18, 0.21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating in front of the television in 2002</td>
<td></td>
<td></td>
<td>0.03 (-0.04, 0.10)</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Zimmerman & Bell (2010)
Food promotion and childhood obesity: Impact on Policy

(a). Number of Adverts Recognised.

Non-Food Adverts  Food Adverts

*** = p < 0.001

(b). Amount of Food Eaten After Presentation of Adverts.

*** = p < 0.001  ** = p < 0.01  * = p < 0.05
Exposure to either the advert or the celebrity endorser exaggerated brand choice (Boyland et al., J Pediatrics, 2013)

Significant main effect of crisp brand (p<0.001) and an interaction between crisp brand and advert condition (p<0.001).
What effect does food marketing have on children’s food preferences and choices? PROMOTIONAL CHARACTERS

**Licenced characters** (Roberto et al., 2010)

Children tasted 3 pairs of identical foods presented in packages either with or without a popular cartoon character. Children significantly preferred the taste of foods that had popular cartoon characters (licensed characters) on the packaging, compared with the same foods without characters.

*Branding food packages with licensed characters substantially influenced young children’s taste preferences and snack selection.*

**Brand Equity (BE) characters** (McGale et al., 2015)

Adapted from Roberto et al. (2010) 209 UK children (4-8 years) asked to try 3 pairs of matched foods, either with or without brand equity character present on packaging. Phase 1: Congruent associations (n=60) Phase 2: Incongruent associations (n=149)

*Well known BE characters increase the preference for and liking of foods, Even those they are not associated with!*
Impact Licensed Characters on Ratings of Cereal Taste

Influence of Licensed Spokescharacters and Health Cues on Children’s Ratings of Cereal Taste

Matthew A. Lapierre, MA; Sarah E. Vaala, MA; Deborah L. Linebarger, PhD

Children (n=80 age 5.6yr 53% ♂️) viewed one of 4 cereal boxes for a ‘new cereal’ with and without characters and labelled healthy or sugary.

Asked to rate taste of cereal 1 to 5.

Licensed characters exert undue influence

Figure 17: Estimated weekly hours of internet consumption by age, at home (2007, 2011, 2013) or elsewhere (2015 and 2016)

5A-B: How many hours would you say he/she spends going online on a typical school day/on a weekend day? (unprompted responses, single coded) In 2007-2012 the response for 12-15 was taken from the child and the parent for 5-7s and 8-11s. In 2007-2013 parents/children were asked about use at home whereas from 2014 they were asked about use at home or elsewhere.

Parents of children aged 3-7 who use the internet at home or elsewhere and children aged 8-15 who use the internet at home or elsewhere (VARIABLE BASE) - significance testing shows any change between 2015 and 2016.
Website inclusion - 2008 versus 2010 (Whelan et al 2015)

1. Website links increased **5.3%** between 2008 and 2010 across the entire sample
2. an increase of **8.9%** on children’s channels,
3. Opportunity for further marketing opportunity via advergames and social networking.
TV is merely a gateway to a pan media immersive marketing
Many of these sites still have questionable content - March 2012
Effects of exposure to internet advergames on children’s food intake

Unhealthy AG exposure increases overall intake

Driven by large effects in advergamers

FIGURE 1
Differences in healthy and unhealthy food consumed by condition and individual factors. *p < .05, †p < .10

Jennifer L. Harris, Sarah E. Speers, Marlene B. Schwartz and Kelly D. Brownell
ISSN 1748-2798 print/1748-2801 online/12/010051-68
© 2012 Taylor & Francis http://dx.doi.org/10.1080/17482798.2011.633405
Healthy foods within fast food ads didn’t promote healthy choices

And in vulnerable groups promoted poor ones

Results

- No significant difference between the two advert conditions for the kcal, fat, CHO, sugar or salt content of the meal bundles ($p > 0.05$).
- Children’s liking for fast food in general (not specific to McDonald’s) increased after exposure to food ads relative to control ($p = 0.004$).
- Compared to those with high nutritional knowledge, those with low scores selected a meal with greater kcal content in the food advert condition only ($p = 0.016$).
Behaviour Change: Positive Effects in Children?

1. Evidence of positive effects of marketing techniques:

   A. Advergames in low income African American sample (Pempek & Calvert, 2009)
   B. Licensed Characters presented with health snack increases liking of and purchase intends for fruit (de Droog et al., 2011)
   C. Using logos such as McDonalds increases liking for fruit and veg served in branded wrapping (Borzekowski & Robinson, 2001)

2. Health food adverts/promotions can promote healthy intake in some groups but not other (Dovey et al 2011; Harris et al. 2012).

3. It may be those at most risk are least amendable to simple interventions.

4. Given the extent of unhealthy messages are these always going to out weight healthy messages?

5. What are the obvious synergies between health and sustainability in the context of children?
Find out more - food marketing research at the University of Liverpool

Department of Psychological Sciences, University of Liverpool

Food marketing research: Dr Emma Boyland, Professor Jason Halford, Rosa Whalen (PhD student), Lauren McGale (PhD student).

Twitter: @rosawhalen @emmaboyland @laurenmcgale

School of Law, University of Liverpool

Food marketing policy research: Nikhil Gokani and Professor Amandine Garde
Acknowledgements, Collaborators and Funding

Human Ingestive Behaviour Laboratory

- Dr Joanne Harrold (academic – team lead)
- Mrs Georgina Hughes (researcher)
- Dr Una Masic (researcher)
- Dr Emma Boyland (academic)
- Mrs Nicola Williams (laboratory supervisor)
- Dr Sonia Tucci (academic)
- Prof Matt Field (associate academic)
- Professor Tim Kirkham (academic)
- Professor John Blundell (honorary academic)
- Dr Graham Finlayson (honorary academic)
- Dr Andrej Stancak (associate academic)
- Ms Catherine Slevin (PhD Student)
- Ms Vassiliki Sinopoulou (PhD Student)
- Ms Sophia Komninou (PhD Student)
- Ms Lauren McGale (PhD Student)
- Ms Rosa Whalen (PhD Student)
- Ms Bethan Mead (PhD Student)
- Ms Jayne Pickering (PhD Student)

The laboratory receives support from the BBSRC, MRC/NRPI, and EU Framework 7. These grants are focused on appetite control and weight management and funding within such schemes is dependent on the involvement of various Universities, SMEs and Industry Partners.

The laboratory is a functional nutritional research facility and as such receives direct funding from the pharmaceutical, weight management, ingredients, and food industry for appetite research. Current research funders include American Beverage Association, Astra Zeneca, Bristol Meyers Squib and Unilever.

Companies engage the University in Consultancies related to weight management and appetite control (the generation of products that reduce hunger and increase satiety). The lab has advised Novo Nordisk, Optibiox and Orexigen on appetite control. No academic in the Laboratory takes any personally consultancy.

**NO POLICY WORK IS SUPPORTED BY INDUSTRY AND NO WORK ON POLICY INVOLVES INDUSTRY**

All work engaged on behalf of the University has to meet necessary institutional codes and standards. All research projects receive full independent review.