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University

Food marketing to children in a digital world

Methods, ethics, challenges

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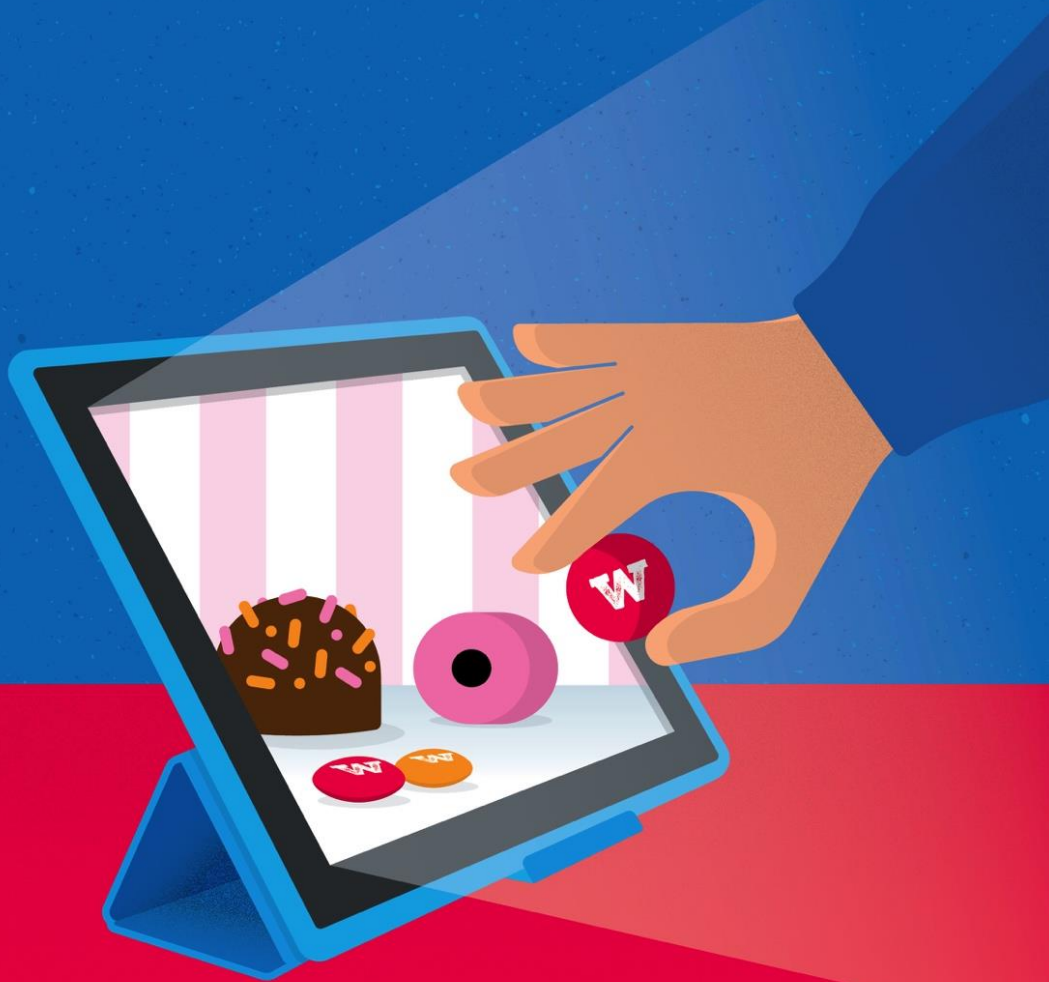


Peer reviewed by
Clayton Hamilton, WHO
Jennifer Harris, Rudd Center, UConn
Jonathan Liberman, U Melbourne



WHO'S FEEDING THE KIDS ONLINE?

Digital Food Marketing and Children in Ireland



Report prepared for the Irish Heart Foundation – 2016



Irish Heart Foundation

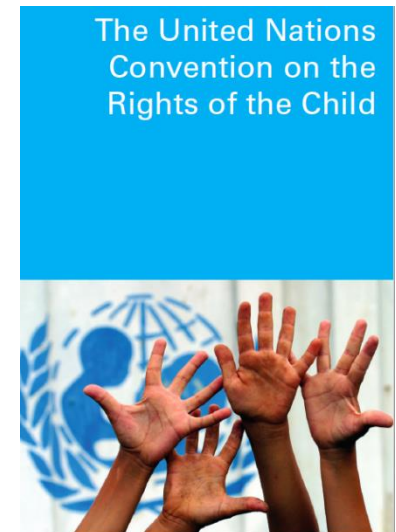
Images © Martin O'Brien; O'Brien Creative, Dublin

The Rights framework

UNCRC, 1989

- Children have rights...
 - to *protection* of health, of privacy, and against economic exploitation
 - to *participation* (including in digital media)
- Parents should facilitate these rights
- States should support parents in this

- UNCRC, Arts. 3,4,5,12, 13,14, 16, 17, 18, 24, 32
- International Covenant on Economic, Social and Cultural Rights
- UN 'Ruggie' Guiding principles on business and human rights

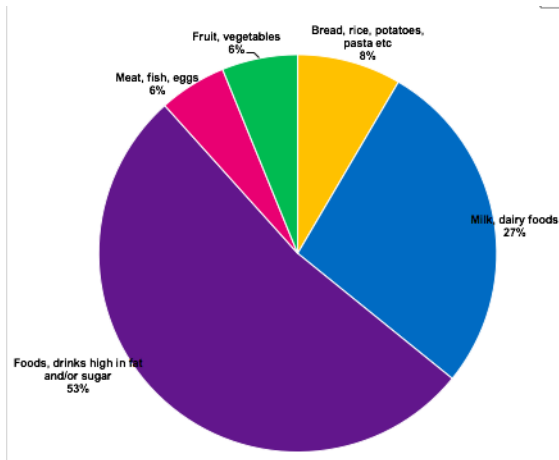


Gaps in current regulation

- Addresses “child-directed”/ “children’s” media, *not children’s greatest media use*
- Applies to marketing *targeted at* children, not marketing *to which they are exposed*
- Nutrient Profiling methods: weak or absent
- Adolescents rarely protected
 - NB: In social media, everyone’s an adult
- Digital media rarely addressed

'Advertised diet' on regulation-compliant children's TV Island of Ireland

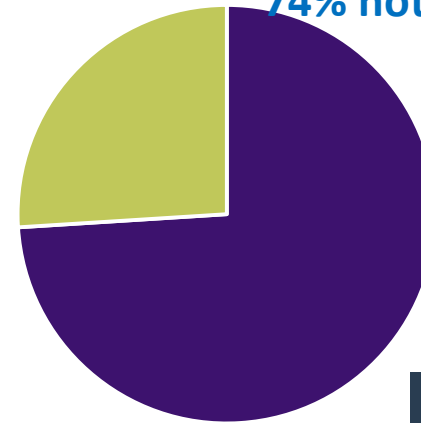
Viewing patterns: 4-6 years (NI/RoI)



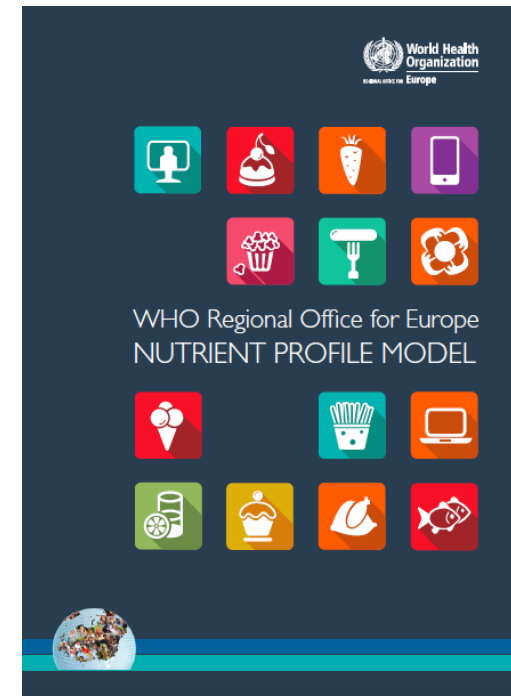
UK Nutrient Profiling (NP) 53% not permitted

Tatlow-Golden, Murrin, Bergin, O'Brien, Kerr & Livingstone (2016) *Irish Journal of Psychology*

WHO NP 74% not permitted



- Not permitted to be marketed...
- Permitted

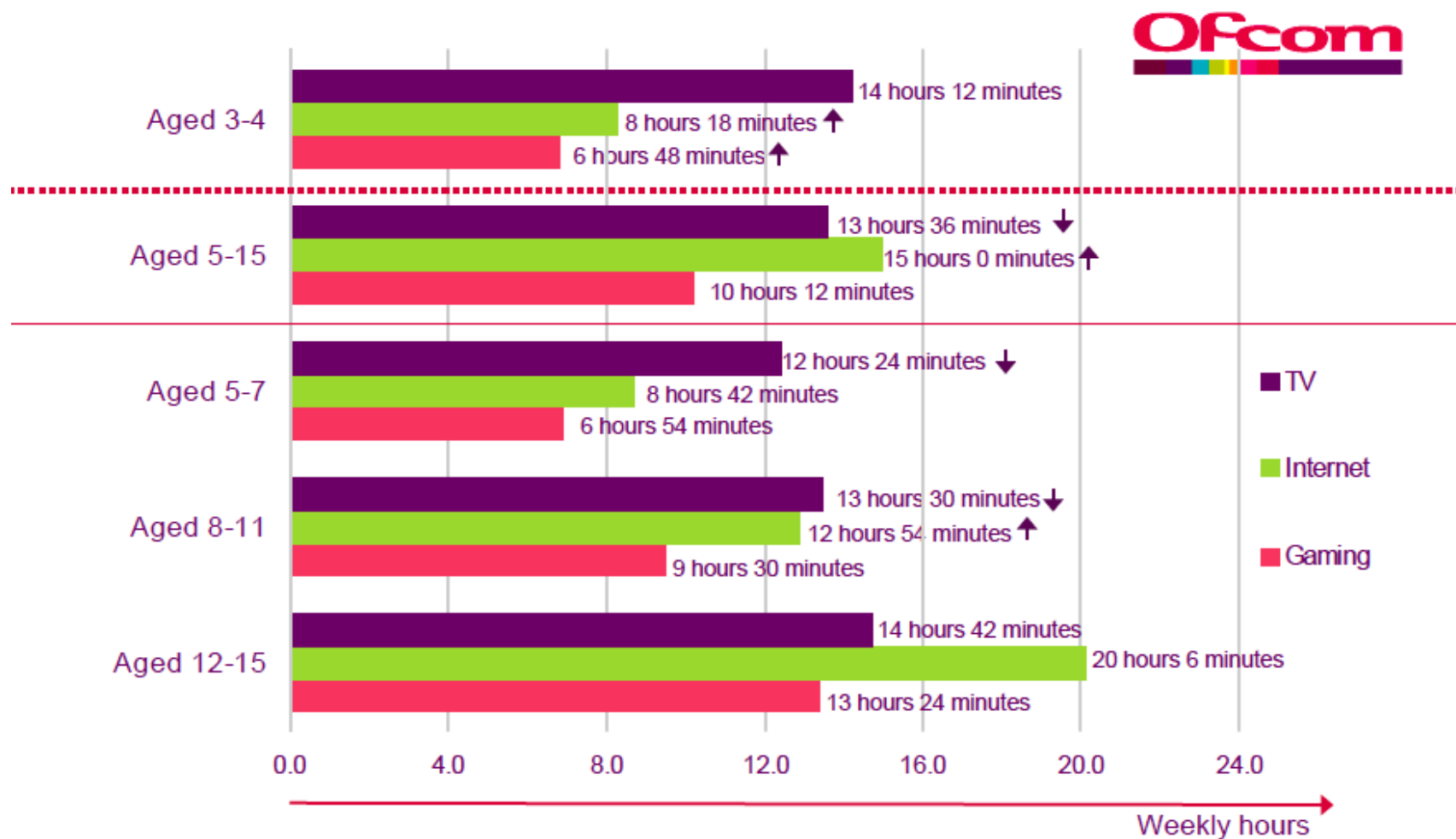


World Health Organization
Regional Office for Europe

WHO Regional Office for Europe
NUTRIENT PROFILE MODEL

The graphic displays a grid of food icons. A legend indicates that red icons represent 'Not permitted to be marketed...' and green icons represent 'Permitted'. The permitted icons include: a person at a computer, a carrot, a smartphone, a shopping basket, a fork and knife, a flower, an ice cream cone, a bowl of food, a laptop, a wheelchair, a cupcake, a leaf, and a fish.

Figure 14: Estimated weekly hours of media consumption at home or elsewhere among users, by age: 2016



Q13A-B/ Q25A-B/ Q66A-B How many hours would you say he/ she spends [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: Parents of children aged 3-7 and children aged 8-15 who use each medium (VARIABLE BASE) - Significance testing shows any change between 2015 and 2016



Since the **EU Kids Online 2010 survey of 25 countries**, our sister project **Net Children Go Mobile** updated the survey in seven countries in 2014.*

Data from 11- to 16-year olds in 2010 and 2014 (for Belgium, Denmark, Italy, Ireland, Portugal, Romania and the UK) show what they do online on a daily basis.

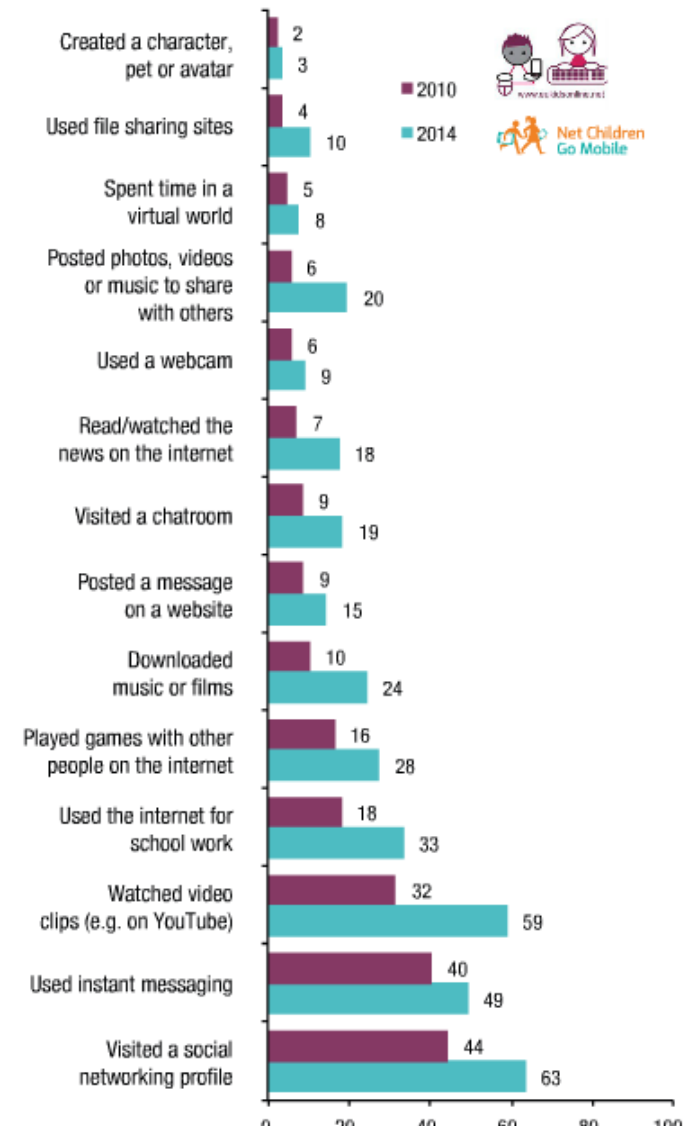
While they are indeed doing more than before, the ladder of opportunities is as steep as ever.

Children are most likely to engage with social network sites, instant messaging, YouTube and gaming.

They are much less likely to create or upload content, read the news online or participate in virtual worlds.

***Net Children Go Mobile** surveyed 9- to 16-year olds in Belgium, Denmark, Italy, Ireland, Portugal, Romania, UK.

CONTENTS

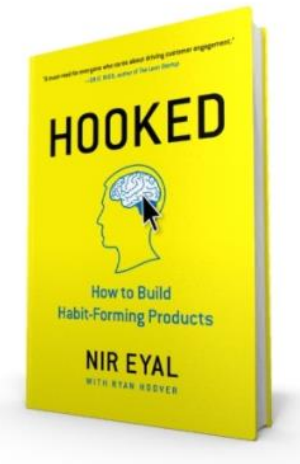


Designed to be addictive

"A must read for everyone who cares about driving customer engagement."

—Eric Ries, author of *The Lean Startup*

Get your autographed copy



<https://www.ted.com/watch/ted-institute/ted-ibm/nir-eyal-what-makes-some-technology-so-habit-forming>



Details **Transcript** **Reading List** **Footnotes** **Comments**
About the talk 9 languages Further learning Notes + references Join the conversation

A handful of people working at a handful of tech companies steer the thoughts of billions of people every day, says design thinker Tristan Harris. From Facebook notifications to Snapstreaks to YouTube autoplays, they're all competing for one thing: your attention. Harris shares how these companies prey on our psychology for their own profit and calls for a design renaissance in which our tech instead encourages us to live out the timeline we want.

This talk was presented at an official TED conference, and was featured by our editors on the home page.

1,420,408 views

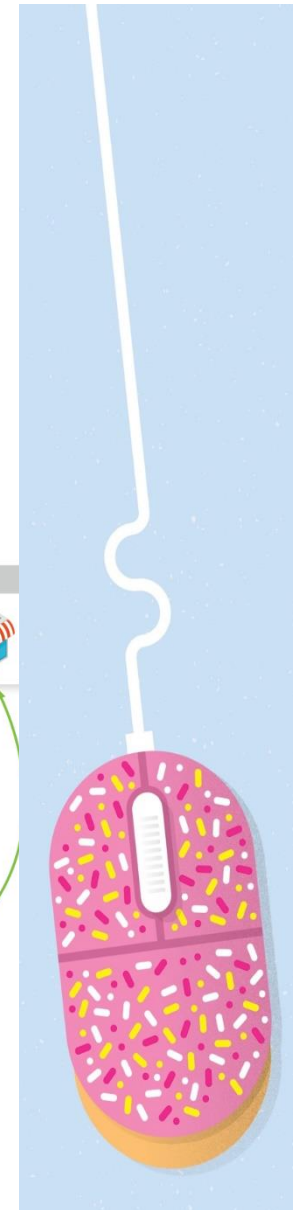
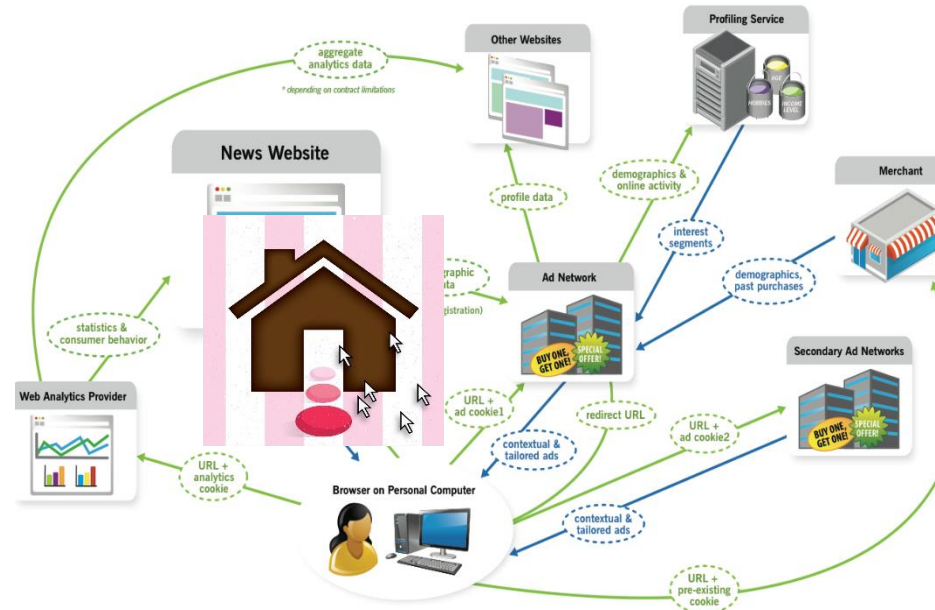
Filmed
April 2017 at TED2017

- https://www.ted.com/talks/tristan_harris_the_manipulative_tricks_tech_companies_use_to_capture_your_attention



Designed to extract data

Targeted advertising is the business model



Browser sniffing, Browser fingerprinting
 'Flash', 'Zombie' cookies
 Geo-location
 Device fingerprinting, Device graphs
 Social graphs ... & more

The Intersect

98 personal data points that Facebook uses to target ads to you

By **Caitlin Dewey** August 19, 2016 



Proceedings of the National Academy of Sciences of the United States of America

PNAS

CURRENT ISSUE // ARCHIVE // NEWS & MULTIMEDIA // AUTHORS // ABOUT // COLLECTED ARTICLES // BROWSE BY TOPIC // EARLY EDITION // FRONT MATTER

Home > Current Issue > vol. 110 no. 15 > Michal Kosinski, 5802–5805, doi: 10.1073/pnas.1218772110



Private traits and attributes are predictable from digital records of human behavior

Michal Kosinski^{a,1}, David Stillwell^a, and Thore Graepel^b

Author Affiliations 

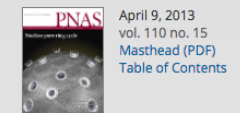
Edited by Kenneth Wachtler, University of California, Berkeley, CA, and approved February 12, 2013 (received for review October 29, 2012)

Abstract | Full Text | Authors & Info | Figures | SI | Metrics | Related Content | PDF | PDF + SI

Abstract

We show that easily accessible digital records of behavior, Facebook Likes, can be used to automatically and accurately predict a range of highly sensitive personal attributes including: sexual orientation, ethnicity, religious and political views, personality traits, intelligence, happiness, use of addictive substances, parental separation, age, and gender. The analysis presented is based on a dataset of over 58,000 volunteers who provided their Facebook Likes, detailed demographic profiles, and the results of several psychometric tests. The proposed model uses dimensionality reduction for preprocessing the Likes data, which are then entered into logistic/linear regression to predict individual psychodemographic profiles from Likes. The model correctly

This Issue




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Don't Miss



Navigate This Article

-  Top
-  Abstract
-  Results
-  Conclusions

Marketing in digital media

Promotional activity in digital media, maximizing impact with novel **creative and/or analytical** methods

- **creative and social methods to activate engagement and implicit emotional persuasion** include immersive narratives; entertainment/ humour; augmented reality, online games and virtual environments; social network engagement (e-Word-of-Mouth); and ‘influencers’ popular with children (e.g., YouTube video bloggers);
- **analytics**
 - **of behaviour:** hone marketing communications and maximize creative impact;
 - **of emotions, responses, preferences, behaviour and locations:** target specific groups, individuals, and moments of vulnerability.



INBOUND MARKETING

Context Marketing is the New Content Marketing: Are You Ready?

By [Karen Taylor](#) Dec 7, 2015


Buyer 'personas'
Buyer 'journeys'
Contextual data

<https://www.kunocreative.com/blog/context-marketing-content-marketing>

Designed to target = greater vulnerability

Article

Finding Orchids in a Field of Dandelions: Understanding Children's Differential Susceptibility to Media Effects

American Behavioral Scientist
2015, Vol. 59(14) 1776–1789
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DOI: 10.1177/0002764215596552
abs.sagepub.com


Jessica Taylor Piotrowski¹ and Patti M. Valkenburg¹

Abstract

Most youth and media researchers do not believe that media affect all youth in the same manner or to the same degree. While most media effects theories reflect this belief, empirical efforts often do not. Rather than conceptualizing individual differences as noise or nuisance variables, we argue that the future of media effects research lies within understanding these differences. To that end, the aim of this article is to help youth and media researchers identify appropriate moderators for study inclusion. We discuss the concept of differential susceptibility, with a particular focus on the differences between orchid and dandelion children, highlighting theoretical and empirical applications of this susceptibility paradigm to media effects research. We believe that a more integrative approach to youth and media research, built on a differential susceptibility paradigm in which moderators are thoughtfully integrated a priori, can provide us with nuanced answers to the complex questions associated with youth and media effects.



The Guardian article header shows the navigation menu: sport, football, opinion, culture, business, lifestyle, fashion, environment, tech, travel, and a 'browse all sections' button. The main headline reads: 'Facebook told advertisers it can identify teens feeling 'insecure' and 'worthless''. Below the headline is a sub-headline: 'Leaked documents said to describe how the social network shares psychological insights on young people with advertisers'. The image shows a person's silhouette looking at a computer monitor displaying the Facebook logo.

Digital 'natives'? Problematic concept... and doesn't confer protection

Aren't children protected?




FEDERAL TRADE COMMISSION
PROTECTING AMERICA'S CONSUMERS

ABOUT THE FTC NEWS & EVENTS ENFORCEMENT POLICY TIPS & ADVICE

Enforcement & Rules - Children's Online Privacy Protection Rule (COPPA)

Children's Online Privacy Protection Rule ("COPPA")



Global Privacy Enforcement Network

GPEN Privacy Sweep 2015 – Final Results

Total Number of Sites and Apps Examined: 1494
Total Number of DPAs: 29*

Indicators	Frequency	Percentage
1. Number of websites / apps examined which collect one or more pieces of personal information	999	67%
2. Number of websites / apps for which protective controls effectively limit the collection of personal data	332	31%
3. Number of websites / apps for which there is an accessible means for deletion of account information	304.5	29%
4. Number of websites / apps for which sweepers identified concerns	446	41%
Disclosure	Frequency	Percentage
Number of websites/apps which may disclose personal information	561	51%
Controls	Frequency	Percentage
Number of websites/apps which request some form of parental involvement	365	24%
Number of websites/apps with a parental dashboard	158	14%
Number of websites/apps for which the child could be redirected off the site	861	58%
Number of websites/apps that tailor protective communications to children	230	22%

- Under-13s:
- Online Behavioural Advertising not permitted

BUT

- Can collect data with 'verifiable parental permission'

Ethical and legal challenges

- Children's data
- Public or private?
- Valid consent?
- Sensitive information
- Security of processing
- Withdrawal of data
- Benefits and harms

**Tatlow-Golden, Verdoodt, Oates, Jewell, Breda & Boyland, WHO Public Health Panorama
forthcoming**

Ireland
Top 100 retail
brands: 73 food,
drink websites

Nearly 1 in 5 have
teen appeal



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



Entertainment: Co-creating content, downloading Coca-Cola emojis and cycling on Coca-Cola bikes ²⁶



Entertainment/celebrity: Angela Scanlon (TV presenter & digital host of The Voice) launched Coke's 360 festival selfie stage ²⁶



Sport/celebrities: Glenisk is the official yogurt of the IRFU and Ireland rugby stars feature ²⁶



Sport/celebrities: Rugby World Cup stars feature in a Lucozade Sport competition ²⁷

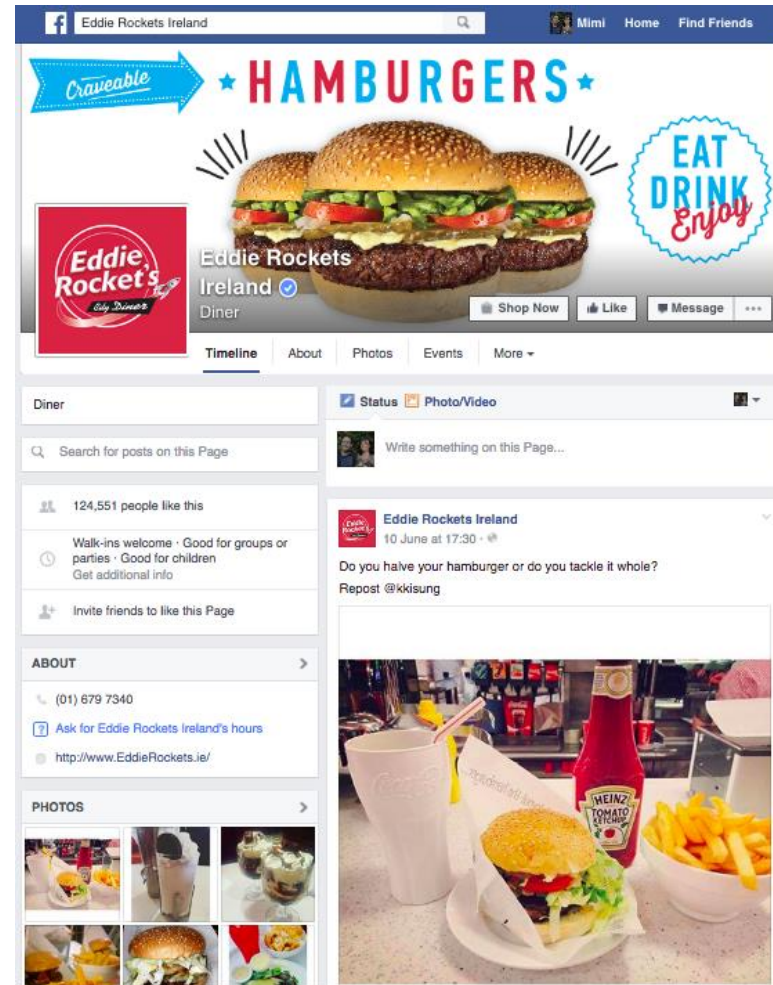


Entertainment: Red Bull site with features on gaming and music news ²⁷



Social media marketing

- Brand Pages – Build a ‘*closer relationship*’ with social media users
- Ask them to be a ‘friend’/ ‘follow’ / ‘like’ / ‘tag’ others...
- Brand posts appear like friends’ news and updates
- **User-generated content**





Contents lists available at ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet



Adolescents' presentation of food in social media: An explorative study

Christopher Holmberg ^{a,*}, John E. Chaplin ^b, Thomas Hillman ^c, Christina Berg ^a

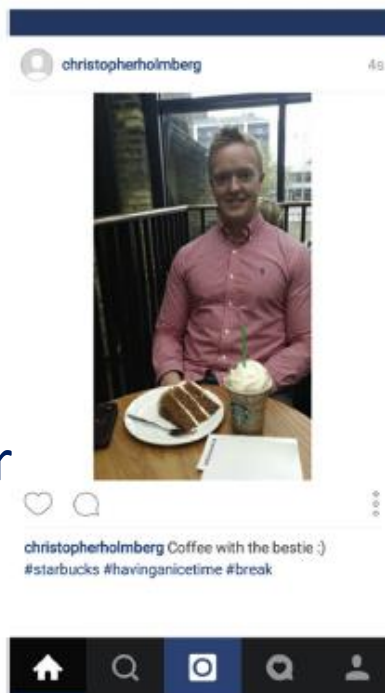


#14 år (14 years)

85% shared food images

68% energy-dense, nutrient poor

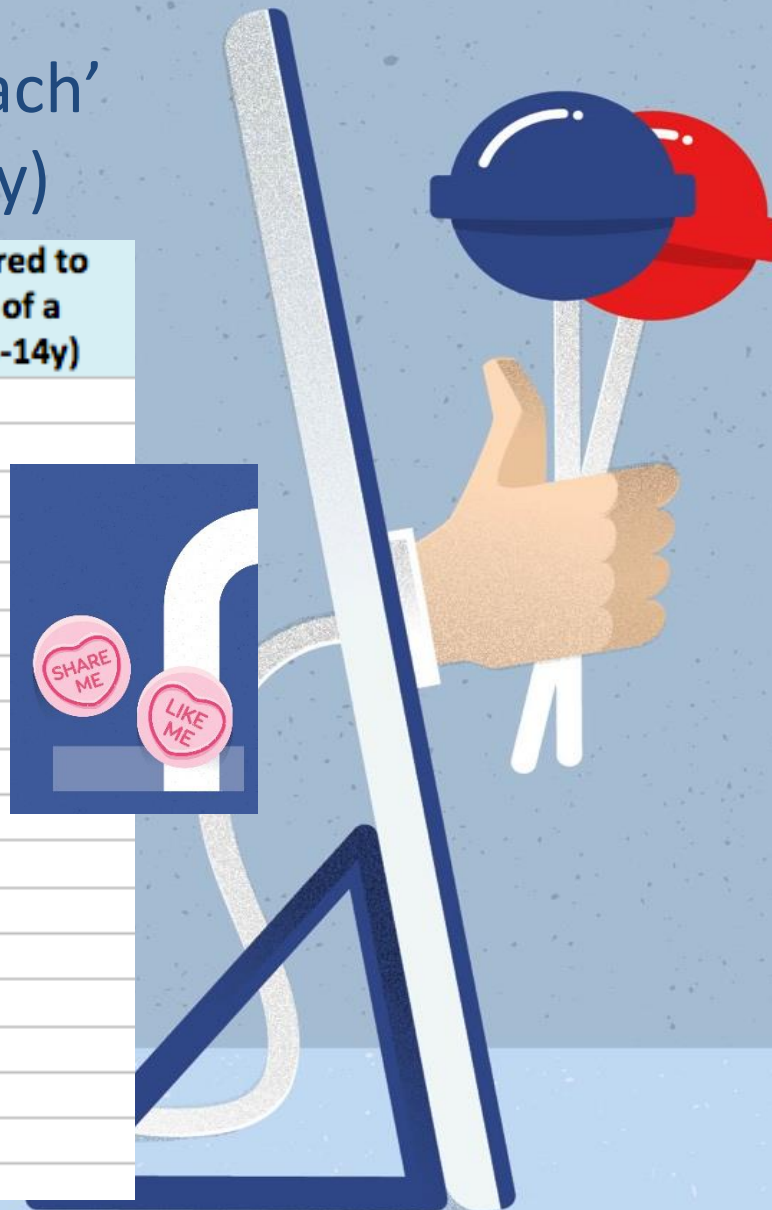
21% fruit & veg

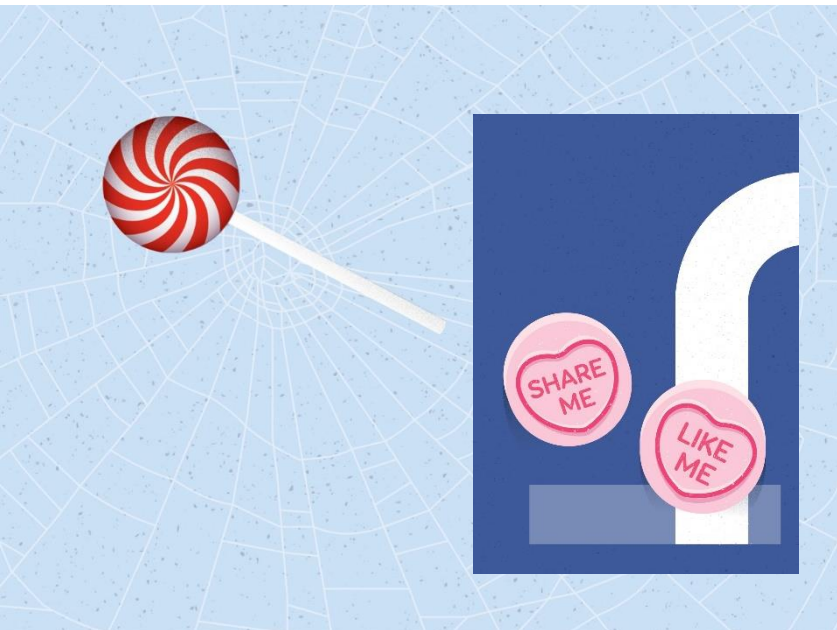


Food brands: Facebook 'reach' among young teens (13/14y)

Food/drink *Interest* entered to estimate potential reach of a youth page in Ireland (13-14y)

- | |
|-----------------------|
| Coca-Cola |
| McDonald's |
| Tayto |
| Cadbury Dairy Milk |
| Ben & Jerry's |
| Domino's Pizza |
| Pringles |
| Subway (Ireland & UK) |
| Lucozade |
| Eddie Rockets Ireland |
| Supermac's |
| Apache Pizza |
| 7 Up |
| Haribo |
| M&Ms |
| Nando's |
| Abrakebabra |
| KitKat |





Humour

Eddie Rockets Ireland

I like **BIG BUNS** and I cannot lie! Tell us your favourite hamburger for a chance to win a €3000 trip to the USA! To enter just fill in an entry form at your nearest diner!!



Humour, Engagement (comment, in-store), Competition, Bold graphics

Lucozade Energy Ireland

Get yourself over the midweek hump with a Grafruitti 😊



Food or drink, packaging, or brand logo shown; or none shown

Ben & Jerry's

Remote control, check. Spoon, check. Chocolate Fudge Brownie, check. And relaaaaaaax!



Food shown, Packaging shown

KitKat

Retro or real-life, beat your high-score gaming break with KitKat.



No food, brand logo or packaging shown in the post; Fun

Subway UK & Ireland

#chooseday you know what to do! Chicken Pizziola vs Big Beef & Chorizo Melt you decide!



Cadbury Dairy Milk

Looks delicious right? All you have to do is upload a pic of your favourite #PuddlesRainDance move and we'll send you one!



Engagement

Emotion

Entertainment

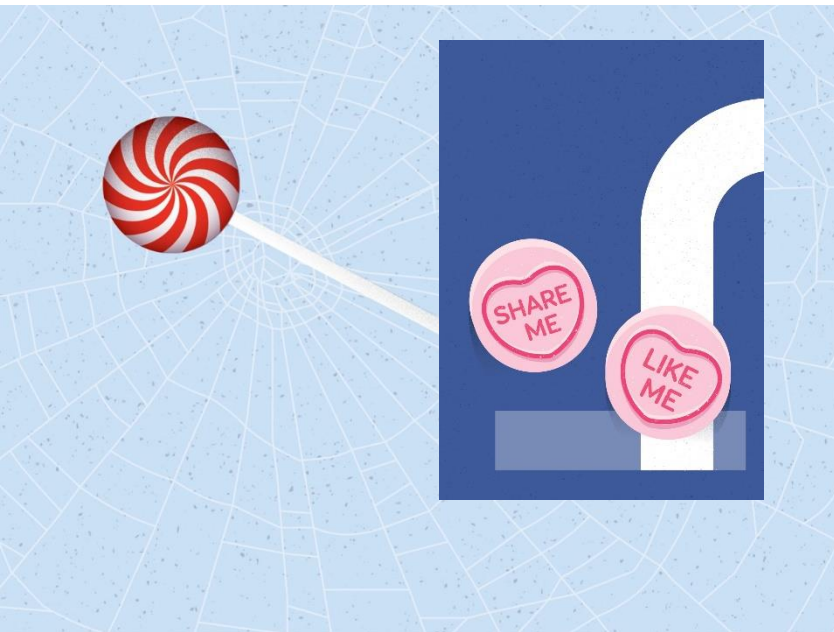
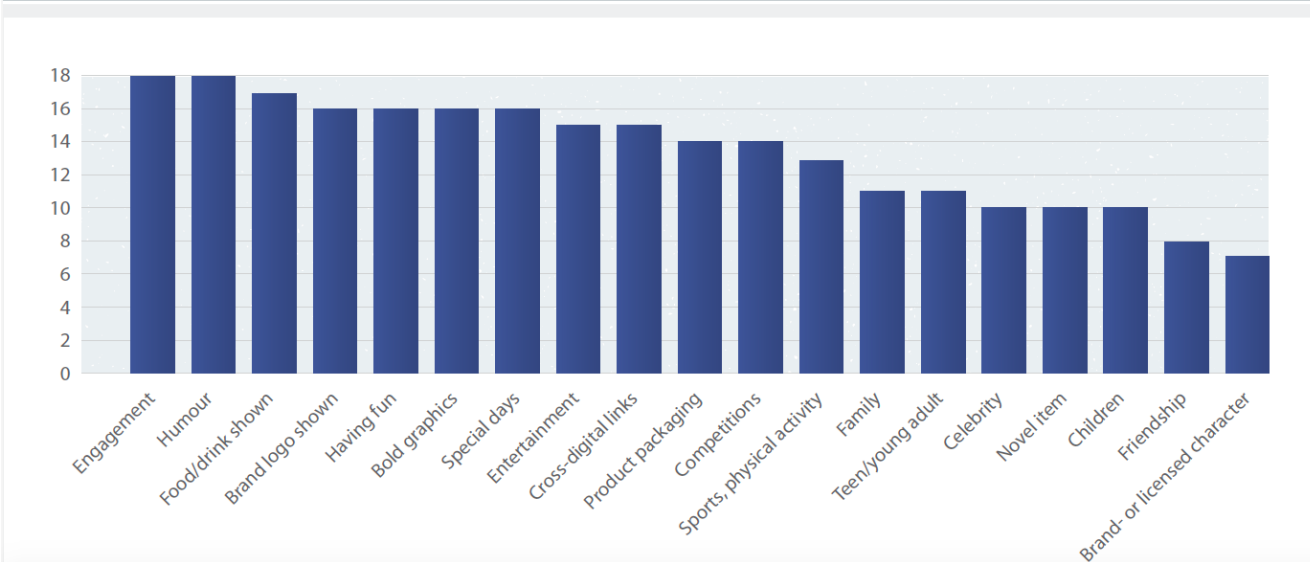


Figure 1: Top techniques used in Facebook food and drink marketing: 18 brand Pages popular with young people in Ireland



Digital marketing impact: Industry research

1. Amplifies TV & other effects

- reach
- recall
- brand likeability (Facebook, 2015)

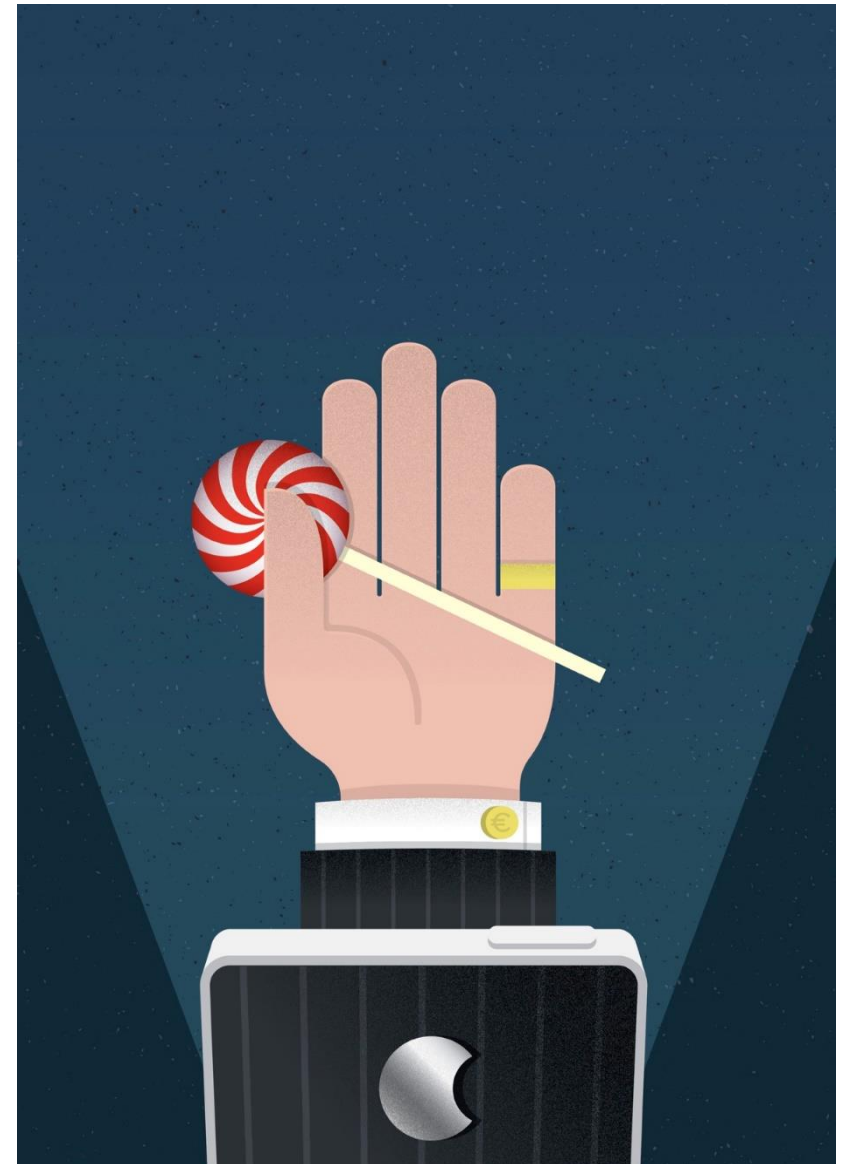
70% increase of TV effects

(Microsoft, 2013)

2. Greater effects for less spend

x4 direct return, vs TV (Peterson, 2014)

x3 recall compared to control groups
FB, 14 campaigns (Gibs & Bruich, 2010)



Do teens make informed choices?



Our promise.

At Mars we take our responsibility for marketing our brands appropriately very seriously.

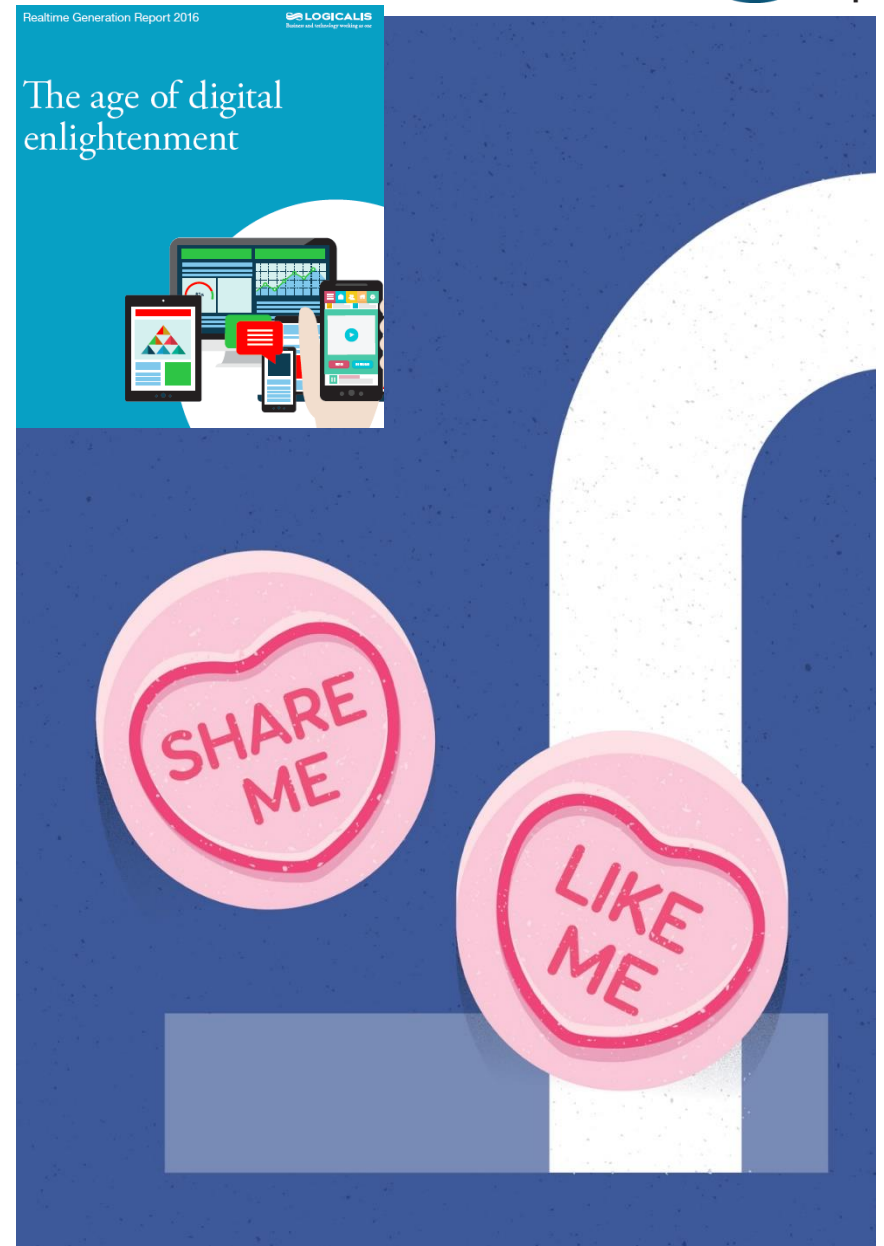
*... Marketing Code ... states that we only promote our products to people aged **12 and over** as this is the **age at which we believe that people can make informed choices about sensible snack consumption***

Are teens interested in digital marketing?

UK 13-17y online (Logicalis, 2016):

- 73% follow brands they like
- 62% click on ads
- 57% make in-app or in-game purchases

- Media-literate but... susceptible to emotional, networked, social effects of advertising



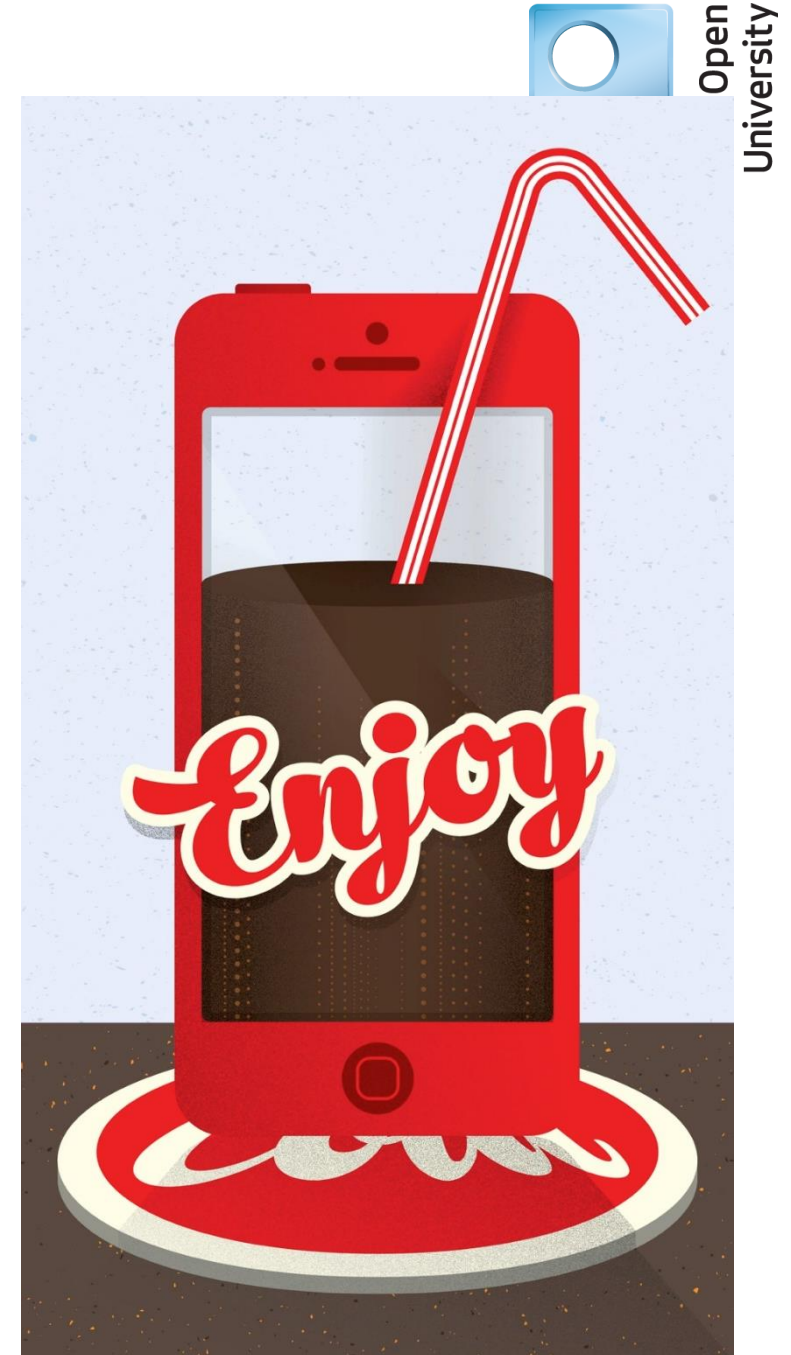
'Informed choices'?

'Media literate' = can recognise ads, understand persuasion and yet...

Adolescent developmental needs

- **Social:** Connect with peers
- **Biological:** More impulsive, more responsive to HFSS ads than adults
- **Identity:** social media, HFSS foods are actively used

Gearhardt et al., 2014, Harris et al., 2009; Harris et al., 2014; Leiss et al, 2013; McCreanor et al., 2005; Pechmann et al., 2005; Fitzgerald et al., 2010, 2013; Ionnanou, 2009; Stead et al., 2011; Trew et al., 2005



Social Influence on Risk Perception During Adolescence

**Lisa J. Knoll¹, Lucía Magis-Weinberg², Maarten Speekenbrink²,
and Sarah-Jayne Blakemore¹**

¹Institute of Cognitive Neuroscience and ²Department of Experimental Psychology, University College London

Psychological Science
1–10

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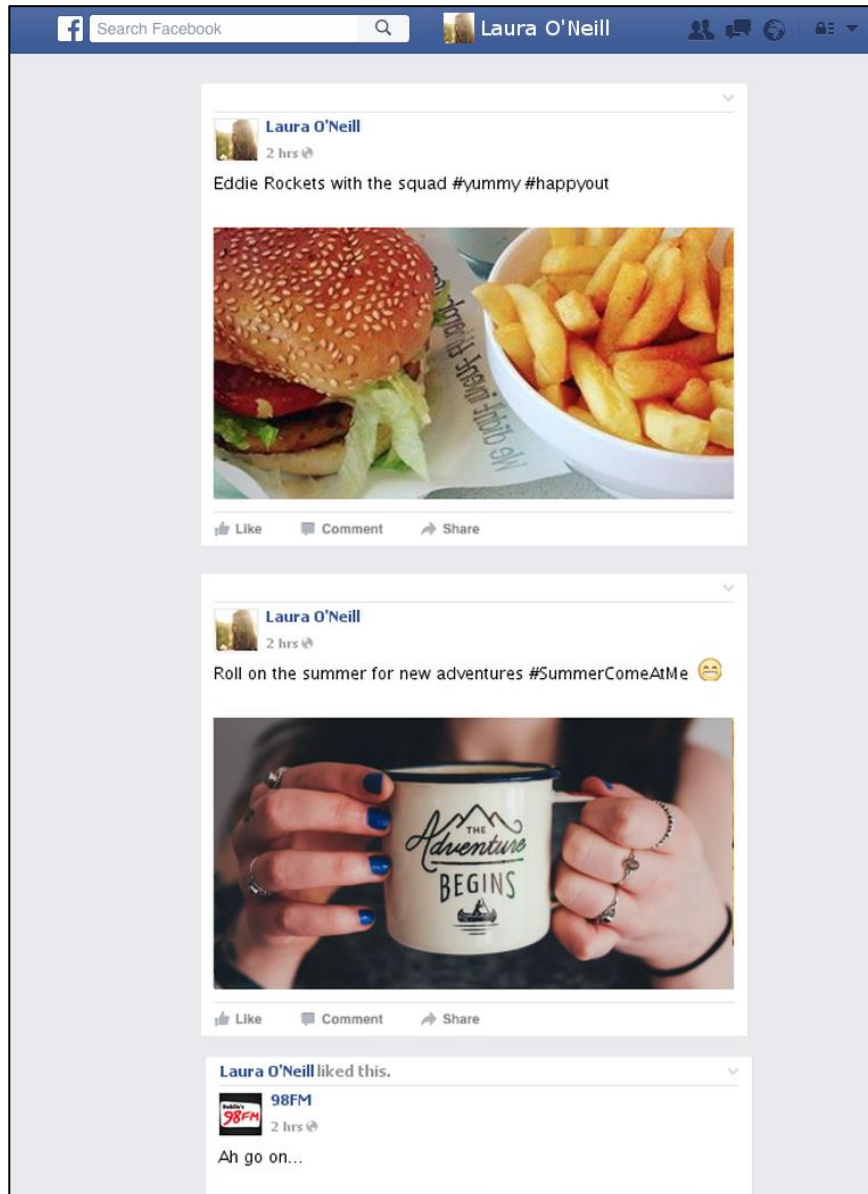
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DOI: 10.1177/0956797615569578

pss.sagepub.com



of social influence on risk perception from late childhood through adulthood. Five hundred and sixty-three participants rated the riskiness of everyday situations and were then informed about the ratings of a social-influence group (teenagers or adults) before rating each situation again. All age groups showed a significant social-influence effect, changing their risk ratings in the direction of the provided ratings; this social-influence effect decreased with age. Most age groups adjusted their ratings more to conform to the ratings of the adult social-influence group than to the ratings of the teenager social-influence group. Only young adolescents were more strongly influenced by the teenager social-influence group than they were by the adult social-influence group, which suggests that to early adolescents, the opinions of other teenagers about risk matter more than the opinions of adults.



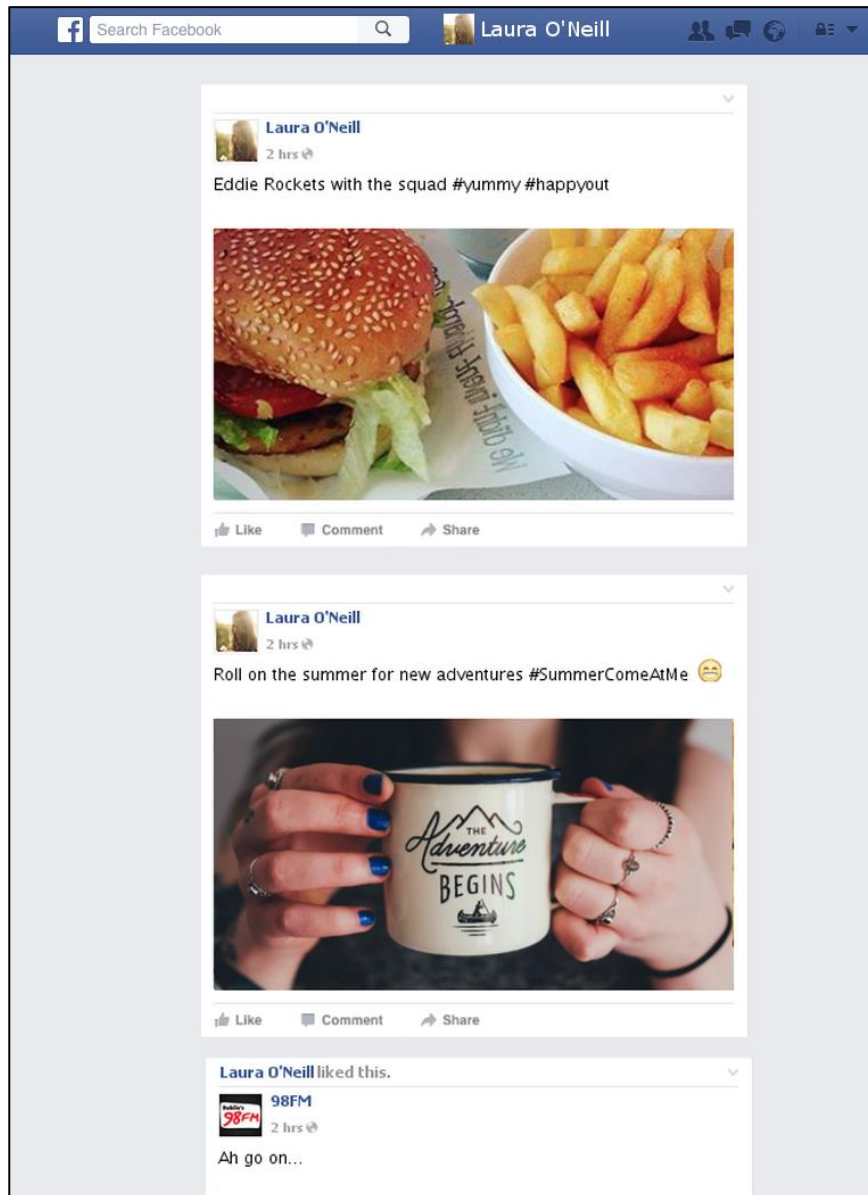
In social media, young adolescents...

recall and recognise unhealthy food brands more than healthy- or non-food brands

Sheppard, Rooney, Murphy, Boyland & Tatlow-Golden (under review)

Awareness:

The first step in the hierarchy of effects (Kelly et al, 2015)

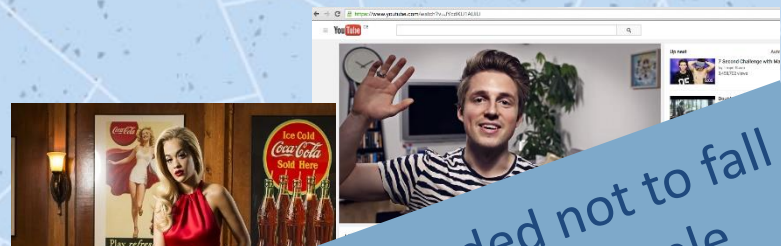


In social media, young adolescents...

... would share content and like profiles more that feature food marketing for unhealthy items

Murphy, Tatlow-Golden, Boyland & Rooney (in preparation)

Unhealthy food items – role in adolescent identity



‘Great maturity needed not to fall for it’ - ‘messages from people they idolise’

‘The prizes are things they can identify with and want’



‘Dishonest’ – ‘immoral’



‘They’re much more subtle than first thought’

‘I asked my children if they see much online advertising and they said yes, they did’

‘Advertising by stealth’



‘Sean O’Brien is not going to eat that during training’



3 in 4 felt regulations ‘should apply’ online



Some caveats



FINANCIAL TIMES

HOME WORLD US COMPANIES MARKETS OPINION WORK & CAREERS LIFE & ARTS

Advertising [+ Add to myFT](#)

Digital advertising: Brands versus bots

Software fraud claims billions of dollars but the industry finds it difficult to stop

“The Big Read

<https://www.ft.com/content/fb66c818-49a4-11e6-b387-64ab0a67014c>



INDEPENDENT News InFact Politics Voices **Indy/Life** Business Sport Tech Culture [Subscribe](#)

Children want...

Fewer ads 71%

Less fake news 61%

More creative content 55%

More privacy 49%

News > Education > Education News

Children increasingly disillusioned with social media, survey shows

British students said they want to see fewer advertisements and less fake news

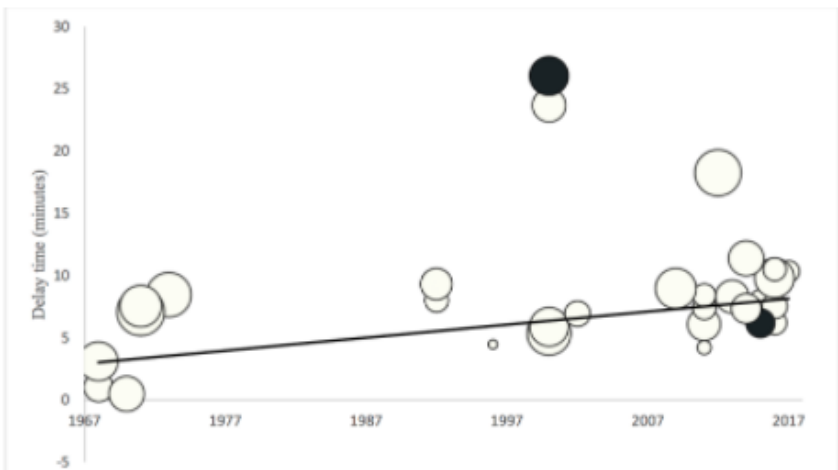
By David Young | 6 days ago | 

<http://www.independent.co.uk/news/education/education-news/facebook-survey-children-disillusioned-social-media-use-less-hmc-study-a7985391.html>



More self-control?

- <https://digest.bps.org.uk/2017/09/20/children-of-today-are-better-at-delaying-gratification-than-previous-generations/>



DEVELOPMENTAL

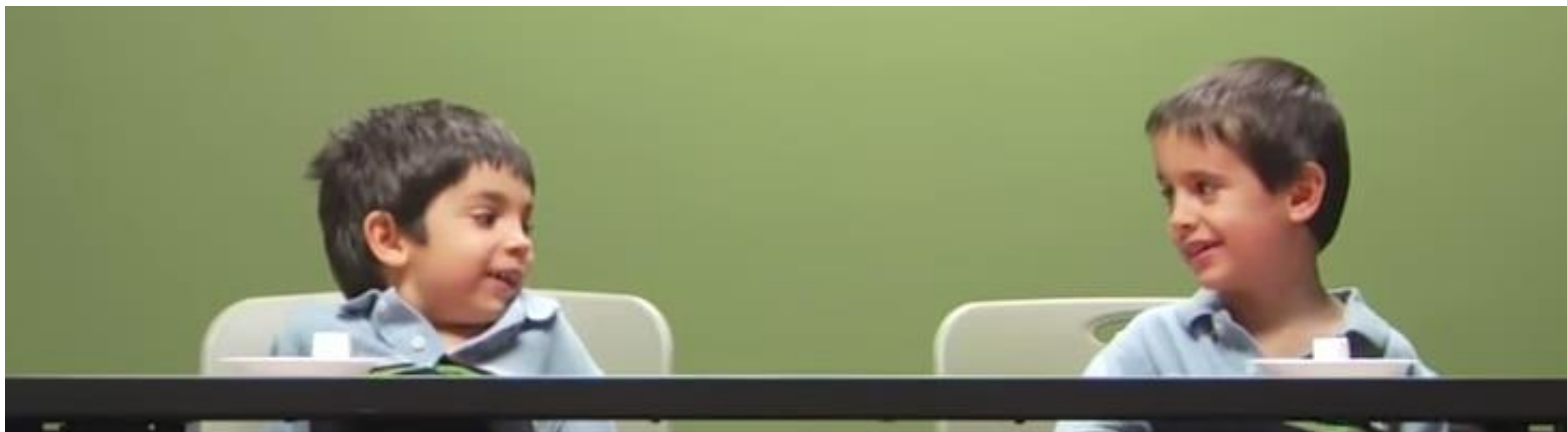
September 20, 2017

Children of today are better at delaying gratification than previous generations

By Christian Jarrett

If you believed the copious alarmist commentary in the newspapers, you'd fear for the future of our species. Today's children, we're told, are more hyperactive and technology addicted than ever before. They've lost any ability to sit still, instead craving constant stimulation from digital devices and exhausted parents.

The Marshmallow Test



CHILD DEVELOPMENT

Empirical Article

The Decline in Adult Activities Among U.S. Adolescents, 1976–2016

Jean M. Twenge^{1,*} and Heejung Park²

Version of Record online: 18 SEP 2017

DOI: 10.1111/cdev.12930

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Society for Research in Child Development, Inc.

Issue



Child Development
Early View (Online Version of
Record published before
inclusion in an issue)

Interaction of all these
various changes in
children's experience
and outcomes has not
been explored

Growing up more slowly? Less
Driving
Alcohol
Sexual activity
Dating
Working for pay
Going out without parents
... not explained by time on homework, and
may not be related to internet use

Is the conversation changing?



the guardian

sport football opinion culture business lifestyle fashion environment tech travel

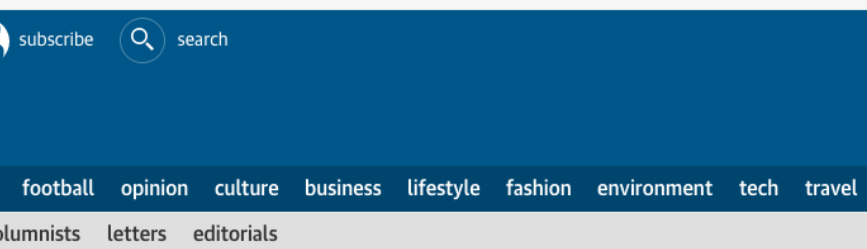
columnists letters editorials

≡ browse all sections

Why Facebook is in a hole over data mining

John Naughton

It's Mark Zuckerberg's business model that allows Facebook to be manipulated by political activists - no wonder he's in denial about it



subscribe search

football opinion culture business lifestyle fashion environment tech travel

columnists letters editorials

Let's take back control of our data - it's too precious to leave to the tech giants

Ravi Naik

Everything we do online leaves a trail. To hold power to account in the digital age, what is required is nothing less than a new civil rights movement



The Washington Post
Democracy Dies in Darkness

The Switch

Russian propaganda may have been shared hundreds of millions of times, new research says

By Craig Timberg October 5



Ofcom

Ofcom chair raises prospect of regulation for Google and Facebook

Patricia Hodgson says she believes sites could be classified as publishers, as businesses face pressure over fake news



82 55

Graham Ruddick Media editor

Tuesday 10 October 2017 14.28 BST



If they are 'publishers' they will be subject to regulation

And yet...

POLICY & LAW \ REPORT \ US & WORLD \

Cambridge Analytica isn't worried about Facebook ad restrictions

'Facebook is largely the Wild West in terms of regulations,' targeting firm says

by Russell Brandom | @russellbrandom | Oct 3, 2017, 1:25pm EDT



SHARE



TWEET



LINKEDIN

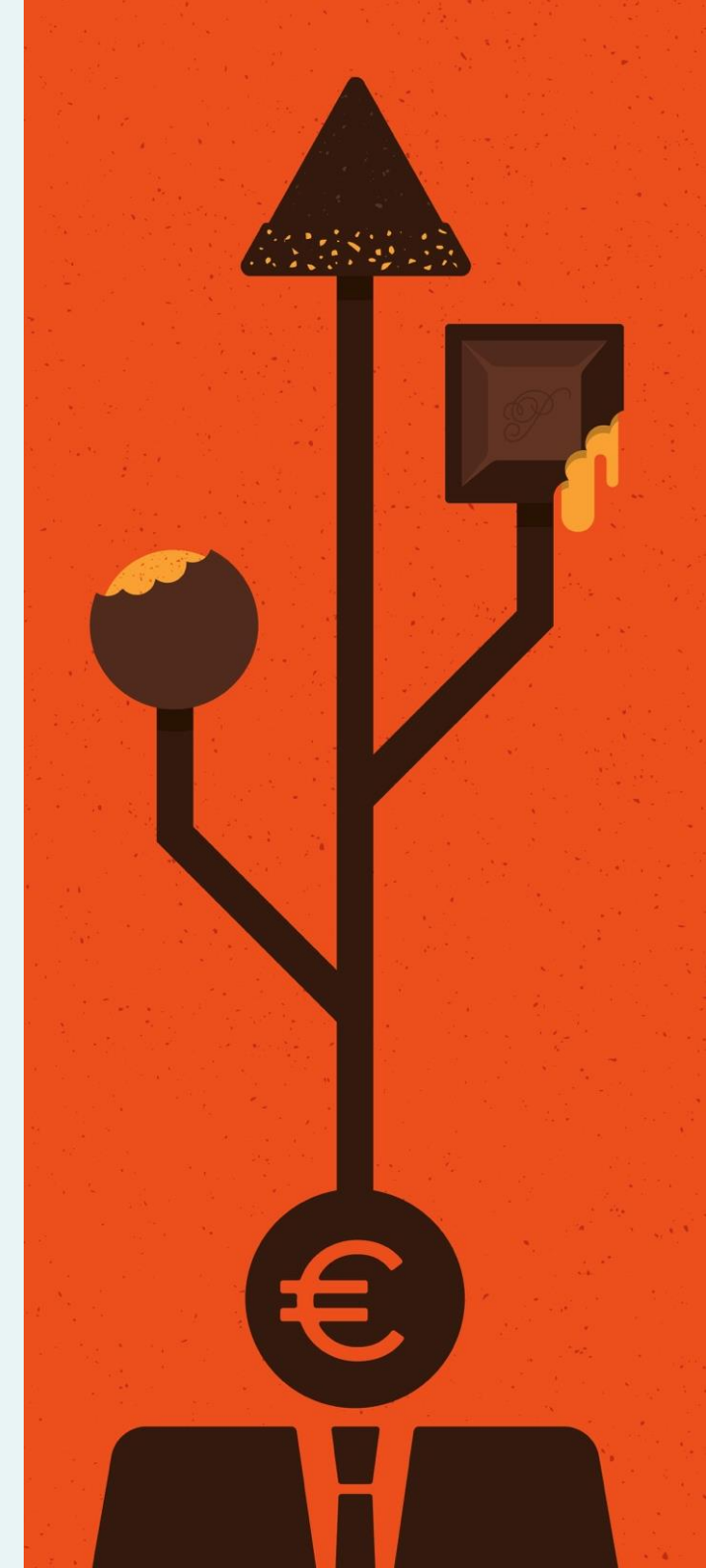


“Facebook is largely the Wild West in terms of regulations”

<https://www.theverge.com/2017/10/3/16410950/facebook-cambridge-analytica-russia-ad-targeting-restrictions>

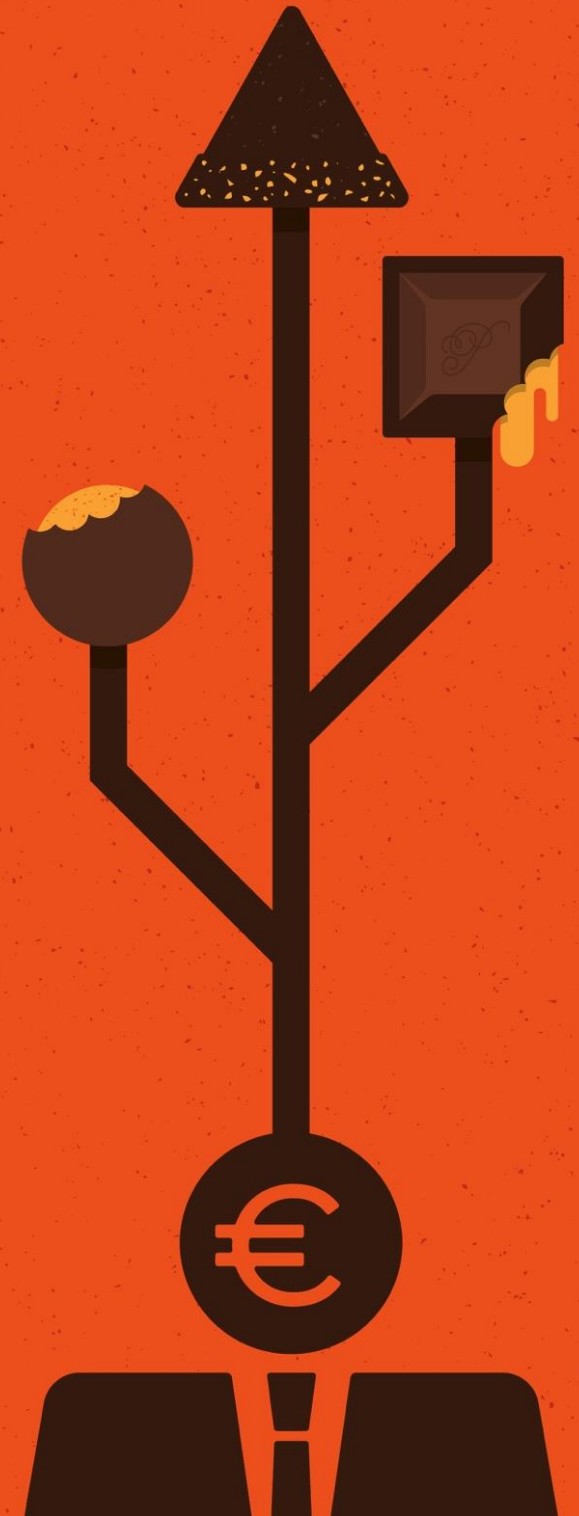
SUMMARY : The Issues

- Children's 'advertised diet'
 - Even more unhealthy in social media?
 - targeting creates more vulnerability
- Digital marketing: Engagement, emotion, entertainment
 - Ads grab attention, persuade covertly, subvert media literacy
- 'Big data' analytics
 - Amplify power of marketing
 - Target those most vulnerable
- Users' "choice" is distorted
- Parents unaware
- Researchers' access denied
- Children's rights not respected



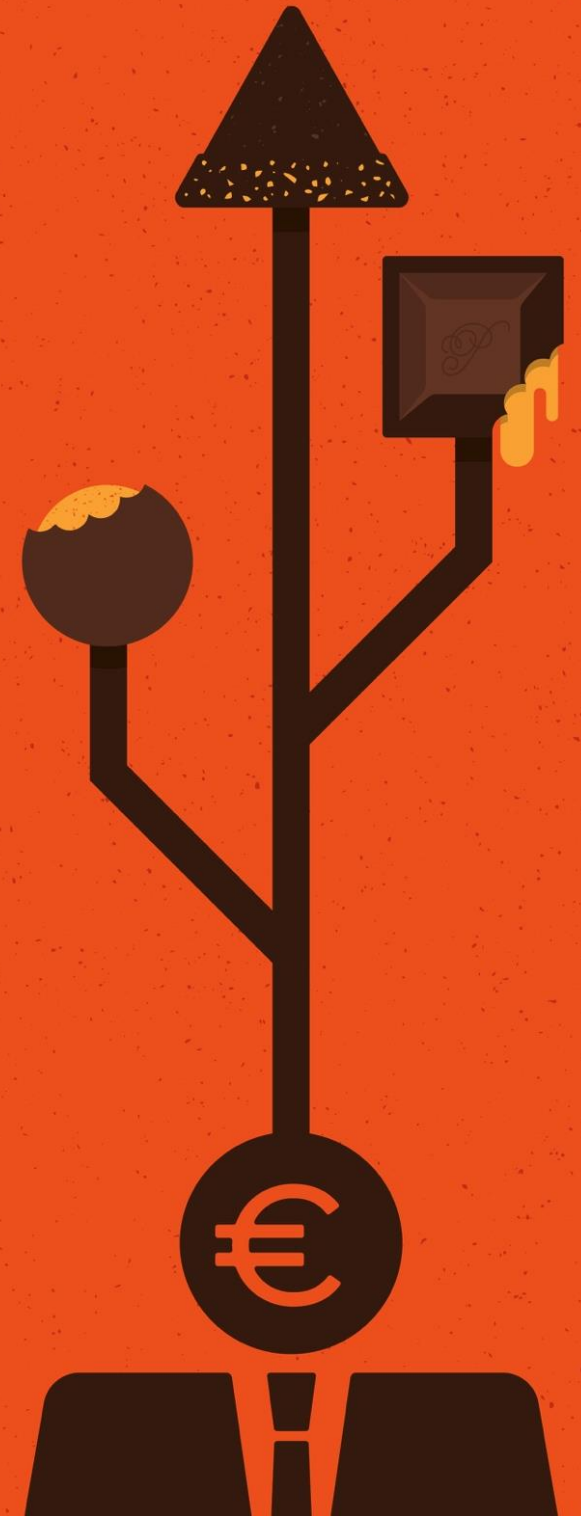
THE SEARCH FOR SOLUTIONS

- Research methods, ethics and legality remain to be specified in digital media
- Children and young people – what are their practices?
- BUT ... cognitive awareness, attitudes likely to be independent of emotional, unconscious effects of marketing
- Healthy apps, marketing, targeting, social marketing, media literacy – *caution required*



THE SEARCH FOR SOLUTIONS 2

- **Privacy and targeting:** Why is extraction, storage, sale of personal data and targeted advertising legally permitted for under-18s?
- **Children/youth as knowing subjects** when consuming food, data and digital privacy information. Are they?
- **Differential susceptibility** is critical. Vulnerability is washed out in studies reporting whole-group effects





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Thank you!

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