

# Healthy Food Promotion – A Theoretical Framework

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# Neoliberalism/Capitalistic System

- Obesity-epidemiology (childhood)
- Chronical diseases
- Underfeeding
- Climate Change
- Drastical decrease of number and diversity of insects/animals
- Intensive farming (suffering of animals)

## Libertair Paternalisme (Thaler en Sunstein, 2003)

Synthesis of seemingly opposing political philosophies: libertarianism, which advocates the broadest possible freedom of choice for the individual, and paternalism, in which freedom of choice is much more limited and the government / authoritative patronage occurs in relation to its citizens / children



## Libertair Paternalisme (Thaler en Sunstein, 2003)

Nudging: "...any aspect of choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives"



# Example Netherlands

nrc.nl

Digitale editie

Webwinkel

Carrière

Familieberichten

Service



Binnenland

Buitenland

Economie

Cultuur

Sport

Opinie

Wetenschap

Tech & Media

Meer



Opinie

## Gemeentes moeten invasie fastfoodketens stoppen

**Opinie** Als we willen dat in Nederland de gezonde keuze de makkelijkste keuze is, dan moet de omgeving gezonder worden, schrijft *een groep voedingswetenschappers*.

Martijn Katan e.a. 25 april 2017



Foto Ilvy Njikiktjien/ANP



Nederland moet over vijf tot tien jaar wereldwijd koploper zijn in gezonde en duurzame voeding. Deze ambitie werd in januari door diverse partijen uit de voedselketen uitgesproken tijdens de Nationale Voedseltop. Het gezonder maken van onze omgeving werd benoemd als prioriteit.

Twee maanden later is Nederland twee grote fastfoodketens rijker. En er kloppen er nog aan de deur. Hoe valt dit te verklaren? En wat komt er terecht van de visie om Nederland gezonder te maken?

Advertentie

XTR branded content



### Zo voorkom je een hack

Overal kunnen werken waar je wilt, geeft vrijheid. Maar het kan ook risico's met zich meebrengen. "Net als inbrekers kiezen hackers voor locaties met de slechtste beveiliging. Je moet het hackers dus moeilijk maken."

lees verder



Toon meer

Trending

Veel gedeeld



Hoe de overheid 100 miljoen uitgaf aan drie ict-mislukkingen

Hoe Trumps belastingwet Amerika zal veranderen

Enkel twijfel brengt ons naar de waarheid

De schaduwzijde van adoptie

# Example Netherlands

☼ 📶 BANEN

TOPICS DIGITALE KRANT SERVICE WINKEL INCLUSIEF 🐦 📺

ABONNEER

Nieuws

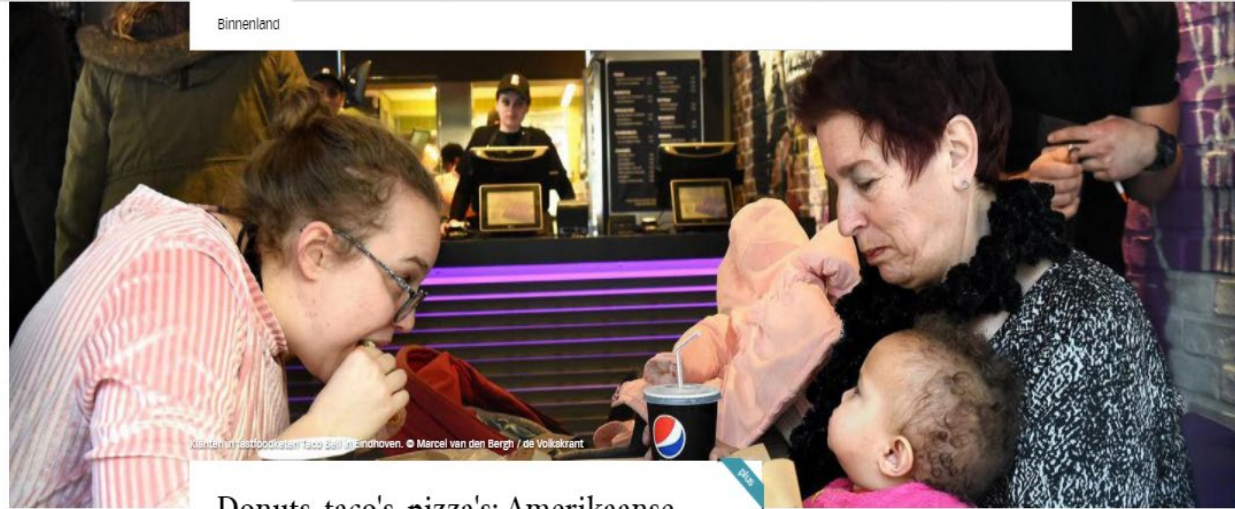
Cultuur & Leven

de Volkskrant

🔍 ZOEKEN

👤 FRANS FOLKVORD

Binnenland



## Donuts, taco's, pizza's: Amerikaanse fastfoodketens overspoelen Nederland. Is de tijd nu wel rijp?

De fastfoodmarkt wordt steeds internationaler

ARTIKEL Natuurlijk, McDonald's en KFC zitten hier al jaren. Maar er komen nog veel meer snelle happen uit de VS deze kant op.

Door: Giel Pols 28 november 2017, 18:48



**D**eze nacho's zijn om voor te sterven', zegt Rowan Verbraak (23) terwijl hij rond lunchtijd een hap neemt van de maïschips van Taco Bell. Toen de Amerikaanse tacoketen in april haar eerste Nederlandse vestiging opende, stond Verbraak met ruim vijftig anderen in Eindhoven in de rij om zich op het mexvoedsel te storten. 'Op sociale media sprak iedereen over de opening. De komst van Taco Bell was in Eindhoven echt een happening.'

### Blijf op de hoogte

Iedere dag rond lunchtijd het belangrijkste nieuws van de ochtend, de mooiste fotografie en het gesprek van de dag? Schrijf u in voor onze gratis nieuwsbrief.

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OK

### AANBEVOLEN ARTIKELN

Vernietigend rapport over knalvuurwerk: alleen zo wordt Oud en Nieuw weer een veilig feest voor de hele familie

3 december 2017

Grimmige sfeer, maar anti-Zwarte Pietendemonstratie in Dokkum verloopt relatief rustig

2 december 2017

174 wetenschappers in open brief: stop met gebruik van voedselgewassen voor 'groene' brandstof

2 december 2017

ADVERTENTIE

# Unhealthy Food Marketing

- Omnipresent --> Off/Online
- Branding
- A great number of different forms and techniques
- Experimentally tested (Moss, 2015)
- Effective (Boyland et al., 2016; Folkvord et al., 2016)
- Always one or multiple steps ahead of science
- Very powerful
- Makes use of evolutionary predispositions of children/people
  
- *Protective messages are ineffective* (Folkvord et al., 2017)

# Unhealthy Food Marketing

## Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food and nonalcoholic beverage advertising on intake in children and adults<sup>1,2</sup>

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### ABSTRACT

**Background:** Several studies have assessed the effects of food and nonalcoholic beverage (hereafter collectively referred to as food) advertising on food consumption, but the results of these studies have been mixed. This lack of clarity may be impeding policy action.

**Objective:** We examined the evidence for a relation between acute exposure to experimental unhealthy food advertising and food consumption.

**Design:** The study was a systematic review and meta-analysis of published studies in which advertising exposure (television or Internet) was experimentally manipulated, and food intake was measured. Five electronic databases were searched for relevant publications (SCOPUS, PsycINFO, MEDLINE, Emerald Insight, and JSTOR). An inverse variance meta-analysis was used whereby the standardized mean difference (SMD) in food intake was calculated between unhealthy food advertising and control conditions.

**Results:** Twenty-two articles were eligible for inclusion. Data were available for 18 articles to be included in the meta-analysis (which provided 20 comparisons). With all available data included, the analysis indicated a small-to-moderate effect size for advertising on food consumption with participants eating more after exposure to food advertising than after control conditions (SMD: 0.37; 95% CI: 0.09; 0.65;  $I^2 = 98\%$ ). Subgroup analyses showed that the experiments with adult participants provided no evidence of an effect of advertising on intake (SMD: 0.00;  $P = 1.00$ ; 95% CI: -0.08, 0.08;  $I^2 = 8\%$ ), but a significant effect of moderate size was shown for children, whereby food advertising exposure was associated with greater food intake (SMD: 0.56;  $P = 0.003$ ; 95% CI: 0.18, 0.94;  $I^2 = 98\%$ ).

**Conclusions:** Evidence to date shows that acute exposure to food advertising increases food intake in children but not in adults. These data support public health policy action that seeks to reduce children's exposure to unhealthy food advertising.

### INTRODUCTION

Obesogenic food environments are thought to be a key driver of the obesity epidemic (1). Because of this association, environmental factors that promote unhealthy dietary habits and excess consumption are of public health concern (2, 3). Specifically, the role of food marketing, particularly to children [because of concerns about their comprehension of marketing and its persuasive intent (4, 5)], has been closely scrutinized. Such marketing is extensive, perhaps most notable on television and the Internet, and almost entirely promotes high-fat, -sugar, and -salt foods (6–9). However, despite guidance from the WHO (10, 11) and numerous policy initiatives (12), few countries have enforced effective restrictions in this area (7, 13).

A small number of systematic reviews have sought to capture and evaluate the evidence base that links unhealthy food promotion to diet-related outcomes for the purposes of informing policy action (14–17). These narrative reviews have been in broad agreement that unhealthy food marketing has a detrimental impact on children, although the data relating to adults was deemed too limited to draw firm conclusions (17).

There is a growing body of research that explores the acute experimental effects of unhealthy food advertising [the most prominent form of marketing (4)] on food intake. Such studies are important because they have indicated the potential impacts of exposure to longer-term food advertising, which is more difficult to measure within fully controlled paradigms. Several studies have shown that, relative to control conditions (nonfood advertisements or no advertisements), ad libitum food intake of participants was greater after exposure to unhealthy food advertising in terms of the amount consumed (18–20) and/or caloric load

<sup>1</sup>The authors reported no funding received for this study.

<sup>2</sup>Supplemental Material is available from the "Online Supporting Material" link in the online posting of the article and from the same link in the



# Unhealthy Food Marketing



Appetite

journal homepage: [www.elsevier.com/locate/appet](http://www.elsevier.com/locate/appet)



## The persuasive effect of advergames promoting unhealthy foods among children: A meta-analysis

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### ABSTRACT

Multiple studies have examined the effects of advergames promoting unhealthy foods on eating behavior among children. Although the individual results of the existing studies suggest that advergames have a significant influence on (predictors of) eating behavior, a lack of clarity concerning the size of the effect may impede policy actions. Therefore, a meta-analysis was conducted to examine the strength of the effect of playing advergames that promote unhealthy foods on (predictors of) eating behavior among children. Five electronic databases were searched for relevant publications (Web of Science, PsychInfo, Pubmed, JSTOR, and SCOPUS). Fifteen articles were considered eligible for inclusion and analyzed in the meta-analysis. Employing a random-effects model to estimate the composite effect of advergames yielded a small-to-moderate and significant effect of  $g = 0.30$ . Results showed that advergames promoting unhealthy foods induced unhealthy eating behavior among children. Although only a limited number of studies were included, this meta-analysis supports public health policy action that seeks to reduce children's exposure to unhealthy digital food marketing. Stricter regulation to protect children against new forms of (online) marketing techniques that promote unhealthy foods should be developed and implemented.

### 1. Introduction

A number of systematic research reviews into the extent, nature and effects of food advertising directed at children conclude that advertising

Most of the studies on food advertising targeted at children have focused on traditional media forms, with only limited attention for newer forms of food advertising, like online food marketing (Buijzen, Owen, & Van Raaij-Medendorp, 2010; Cairns, Angus, Hastings, & Campbell

# Protective Message

Appetite 112 (2017) 117–123



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Contents lists available at [ScienceDirect](#)

Appetite

journal homepage: [www.elsevier.com/locate/appet](http://www.elsevier.com/locate/appet)



## Does a 'protective' message reduce the impact of an advergame promoting unhealthy foods to children? An experimental study in Spain and The Netherlands



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### ABSTRACT

The weight of evidence points to the advertising of food affecting food consumption, especially among children. Such advertising often promotes unhealthy foods. Current policy deliberations focus on developing effective 'protective' messages to increase advertising literacy and consequent scepticism about advertising targeting children. This study examined whether incorporating a 'protective' message in an advergame promoting energy-dense snacks would reduce children's snack intake. A randomized between-subject design was conducted in the Netherlands ( $N = 215$ ) and Spain ( $N = 382$ ) with an advergame promoting either energy-dense snacks or nonfood products. The results showed that playing an advergame promoting energy-dense snacks increased caloric intake in both countries, irrespective of whether the 'protective' message was present or not. These results point to the limitations of 'protective' messages and advertising literacy and provide policy makers with a rationale for extending the current prohibition of food advertising to young children in the terrestrial media to online environments.

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# Unhealthy Food Marketing

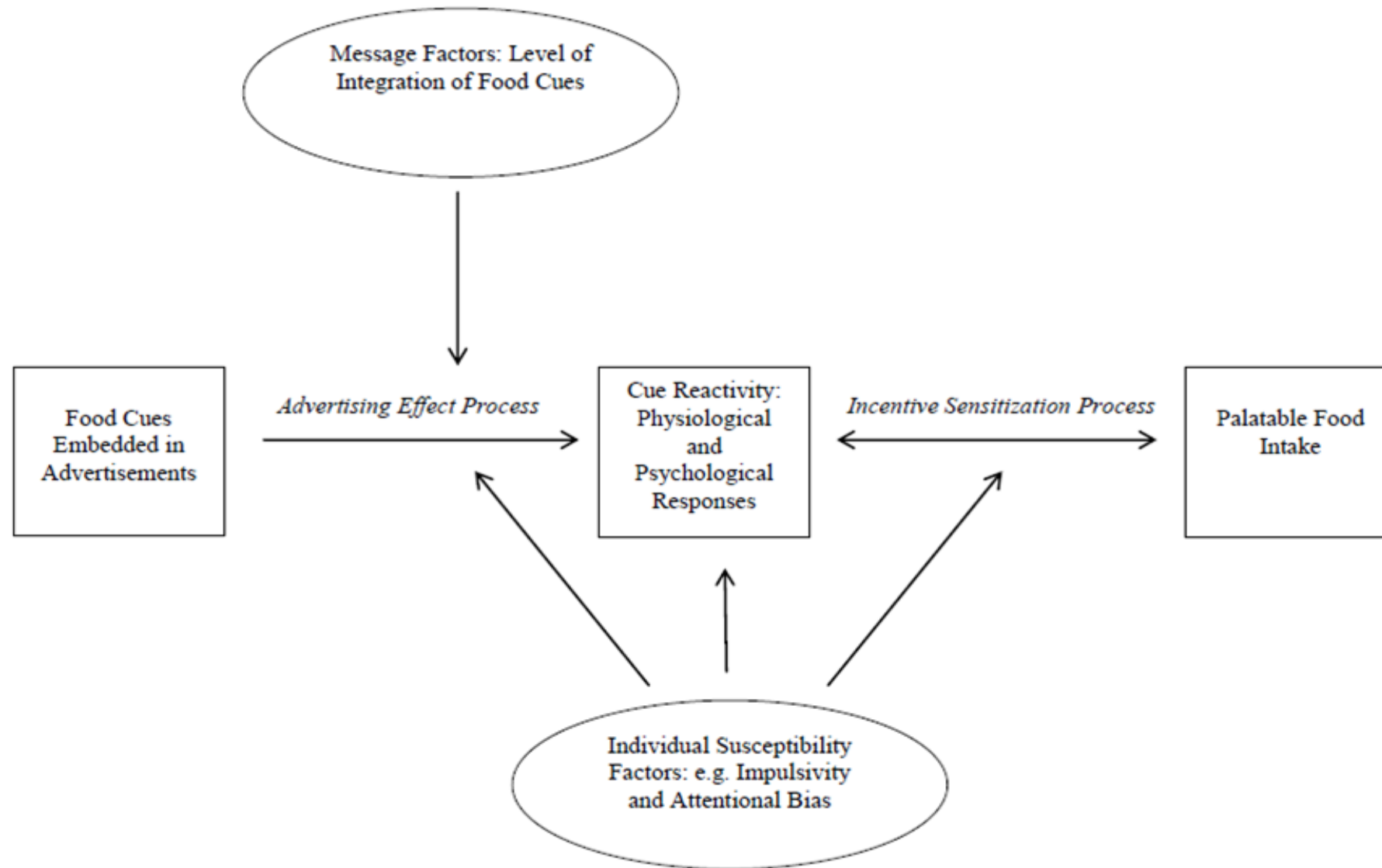


Figure 1: Reactivity to Embedded Food Cues in Advertising Model (REFCAM)



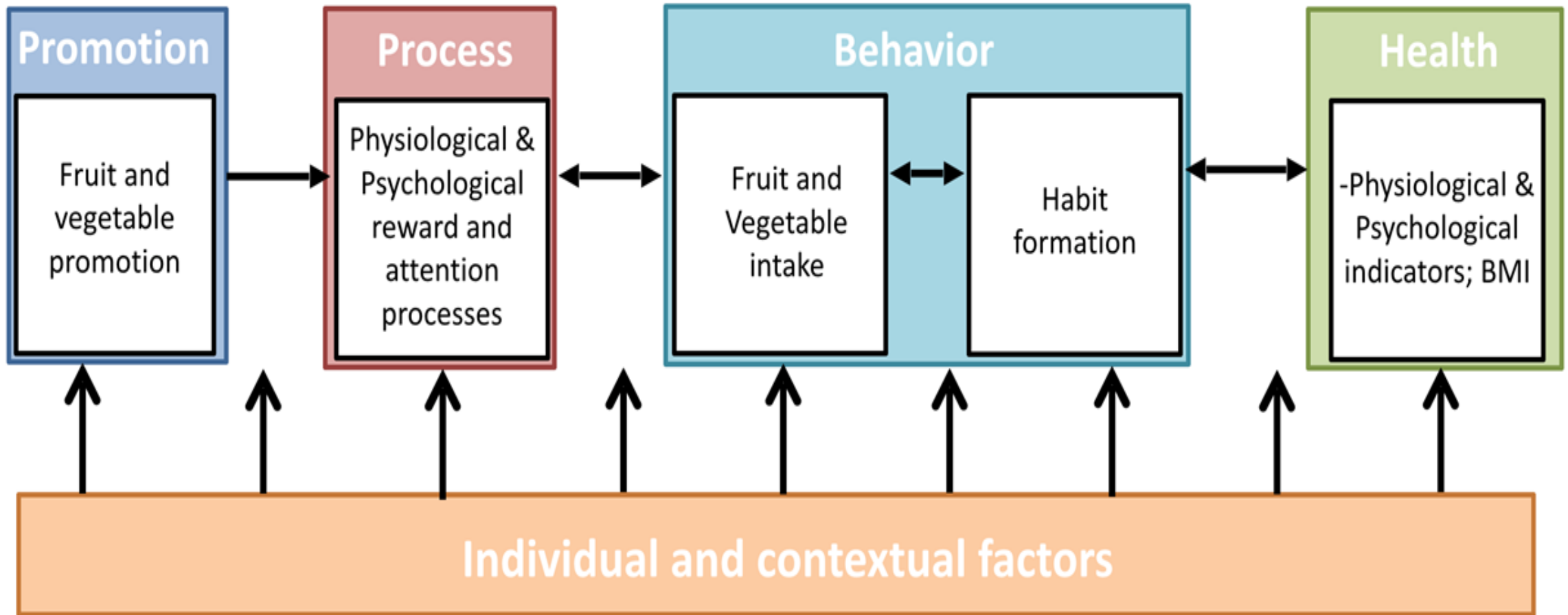
# Healthy Food Marketing

- Very limited amount of healthy food promotion
- Limited budget
- No, or limited number of (global) brands
- Limited knowledge about effectiveness → copy + paste?
- No evolutionary predisposition (Folkvord et al., 2013)
- Susceptibility children (Folkvord et al., 2016)
- Theoretical framework?

# Some Real Examples



# Theoretical Framework (Folkvord, under review)



## Some evidence

- **Negative effect** of Online Memory Game (Folkvord et al., 2013)
- **No effect** on healthy food intake of Serious Health Games (Alblas, Folkvord, et al., 2018 & in prep)
  
- **Positive effect** on fruit intake offline memory (Folkvord et al., 2017)
- **No effect** on vegetable intake of offline memory game (Folkvord et al., under review)



# Some evidence (under review!)

## Experimental Studies:

- Between subject design
- N=96
- 10 t/m 13 y
- 2 schools
- Amount of fruit
- Availability increased fruit intake ( $P < 0.01$ ), sticker with character even more ( $P < 0.01$ )

# Some evidence (under review!)

## Experimental Studies:

- Between subject-design
- N=202
- 7 t/m 12 y
- Sliced/not sliced + Spingebob Sticker
- Fruit and vegetable intake
- No differences in intake (marginal significant)

# Some evidence (under review!)

## Experimental Studies:

- Between subject design
- Vlogs
- N=172, 12 t/m 15 y
- Fruit vs. candy
- No differences; almost all children consumed the candy
  
- Between subject design
- Vlogs
- N = 176, 13 t/m 16 y
- Fruit vs. candy
- No differences; almost all children consumed the candy
  
- Between subject design
- Dutch Nutrition Centre Vlog
- N = 99, 12 t/m 14 y
- Fruit vs. candy
- No differences; almost all children consumed the candy

# Take Home Message

- Unhealthy balance
- Food choice for healthy vs. unhealthy is very difficult for children
- Lack of scientific evidence healthy food promotion
- Evolutionary predisposition and susceptibility (young) children
- **Libertarian Paternalism** instead of **Neoliberalism/Capitalism?**