



UPCYCLING OF FOOD PRODUCTS – CONSUMER ACCEPTANCE ACROSS CATEGORIES

Anne O. Peschel

Jessica Aschemann-Witzel

MAPP Centre, Aarhus University



MAPP CENTRE – RESEARCH ON VALUE CREATION
IN THE FOOD SECTOR
DEPARTMENT OF MANAGEMENT
AARHUS UNIVERSITY

ANNE O. PESCHEL & JESSICA ASCHEMANN-WITZEL
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MAPP CONFERENCE, COPENHAGEN

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WARM-UP

Test yourself:

www.menti.com

Code 55 48 91



WASTE TO VALUE – CONSUMER REACTIONS

- ▶ Waste to value or 'upcycling' is a noticeable trend – also in food areas
- ▶ Little is known towards consumer reactions towards consuming what previously was waste
- ▶ Sustainable consumption is a multifaceted concept that comprises different trends in consumption, i.e. "healthy", "vegetarian", "local", "natural",...

PROPOTATO



- Danish Innovation fund
- 20 mill DKK – investment 14.3 mill DKK
- Starting March 2016, runs for 5 years

PROPOTATO



Background:

Most potato protein ends in animal feed because of accompanying toxic substances

Goals:

- Develop processes to eliminate the toxic substances
- Extract, identify and characterise the protein functionalities and develop new ingredients
- Explore relevant consumer behaviour and develop recommendations for marketing and communication

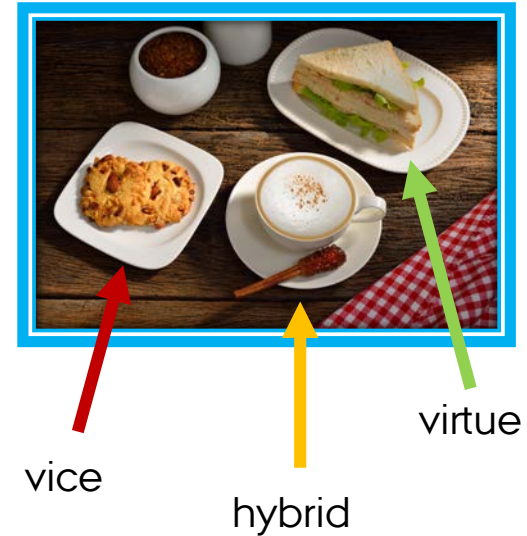
'WASTE TO VALUE' – CONSUMER REACTIONS

- ▶ Am I given 'waste' (lower quality - lower WTP, contagious and unsafe and disgusting ...?) ...
- ▶ ... or am I given 'value' (higher quality – higher WTP)?
- ▶ 'value' for whom – me, or the supply chain actors?
- ▶ 'value' for me directly (health) or indirectly (sustainability)?

'WASTE TO VALUE' – CONSUMER REACTIONS

Expected to differ across product categories

- Organic has been found to be less preferred in vice categories (van Doorn and Verhoef 2011)
- Fair trade labelling has been shown to offset guilt related to consuming vice products (Bradu, Orquin, and Thøgersen 2014)
- Averaging effect was found for hybrid categories (Chernev and Gal 2010)



‘WASTE TO VALUE’ – CONSUMER REACTIONS

- ▶ 800 Danish respondents (online consumer panel) August 2016
- ▶ "Imagine you are in a coffee bar and want to order a caffe latte, sandwich with cheese, chocolate cookie" => choice likelihood of alternatives in %
- ▶ Alternatives are healthy, organic, origin, plant-based

‘WASTE TO VALUE’ – CONSUMER REACTIONS

3 experimental groups

- ▶ Plant-based alternatives are called sustainable and presented as either:
 - › ‘plant-based’
 - › ‘local Danish potato’
 - › ‘plant-based by-products which else would have ended as food waste in the supply chain’

MENUKORT

Kaffedrikke

- A: Skinny Café latte
(med Minimælk)
- B: Café latte – økologisk
- C: Café latte –
sortenren Arabica
- D: **PlantFuture** café latte*

Sandwich med ost

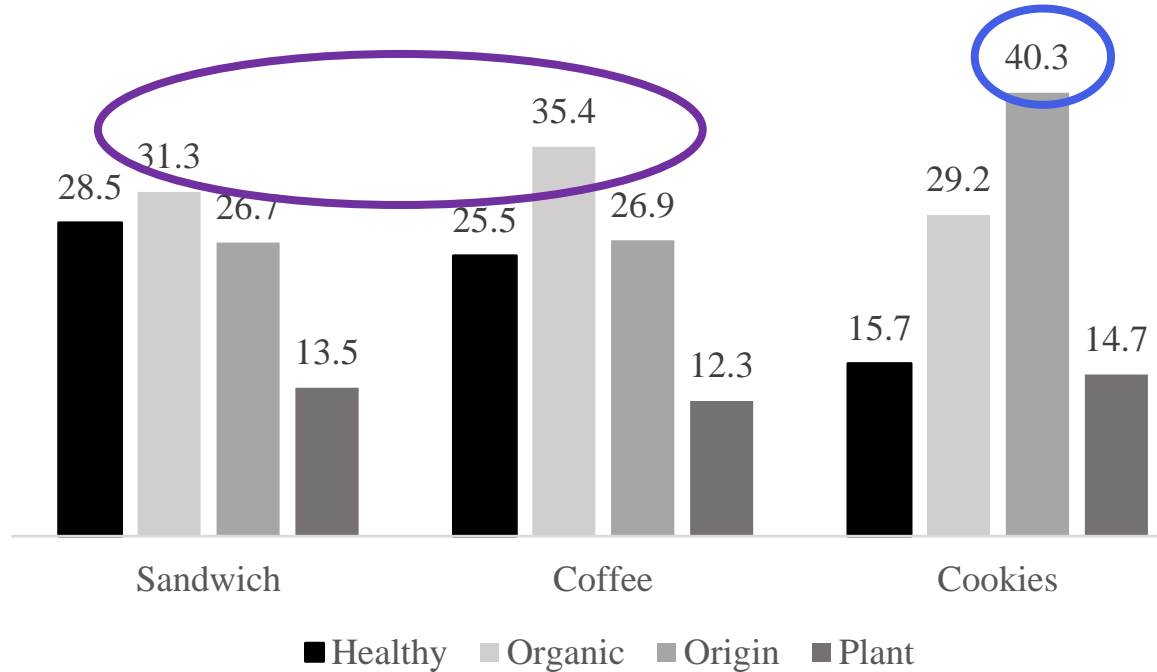
- A: Sandwich – fuldkorn og
uden smør og sauce
- B: Sandwich – økologisk
- C: Sandwich –
bjergost fra Schweiz
- D: **PlantFuture** sandwich*

Cookies

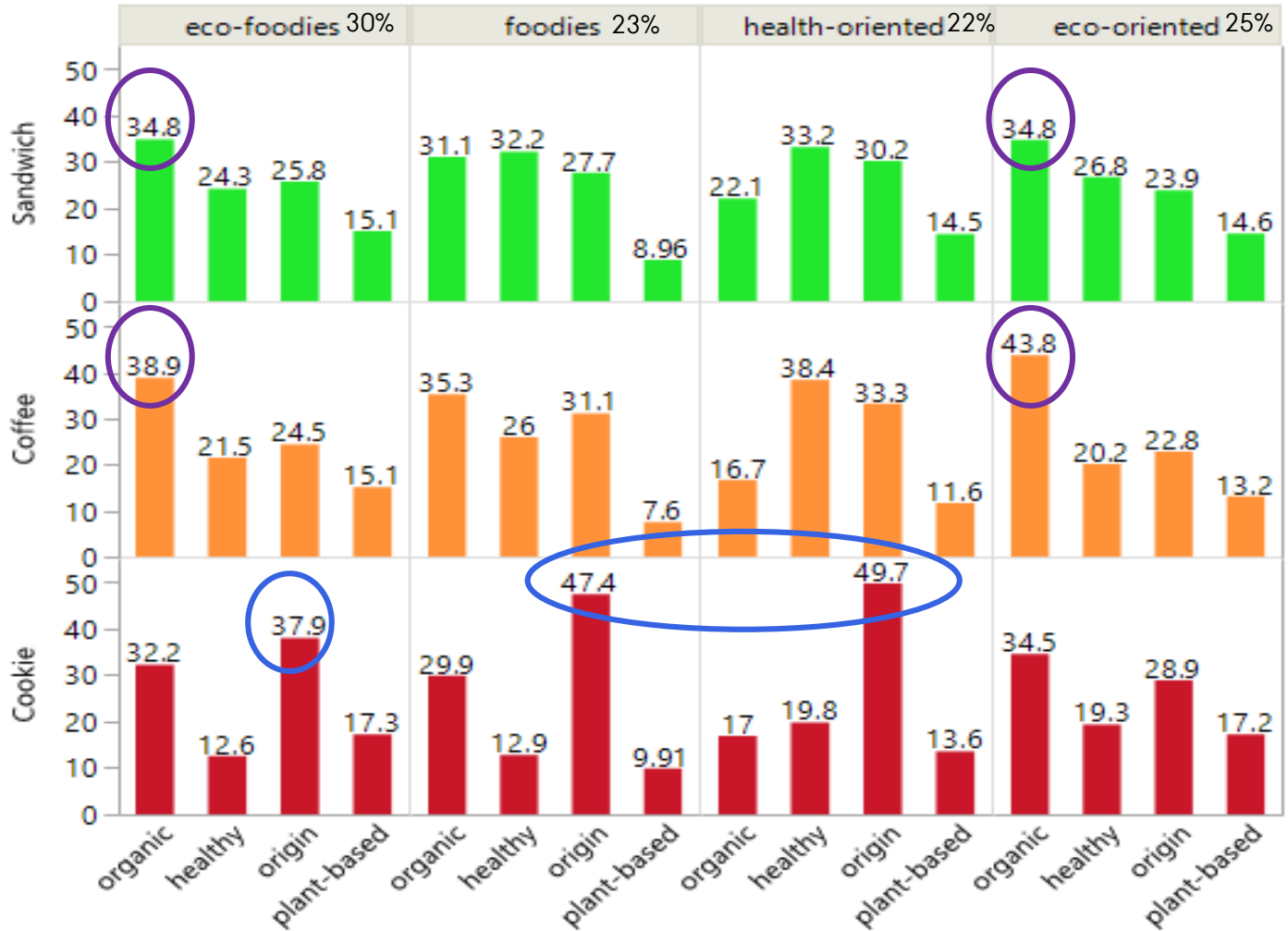
- A: Cookie – sødet med stevia
- B: Cookie – økologisk
- C: Cookie – mørk chokolade
fra Elfenbenskysten
- D: **PlantFuture** cookie*

*Alle vores **PlantFuture** produkter er lavet af plantebaserede biprodukter, som ellers ville være endt som madspild i fødevarekæden – det kalder vi bæredygtighed!
Spørg, hvis du vil vide mere om hvordan vi har erstattet mælk, smør, æg og ost.

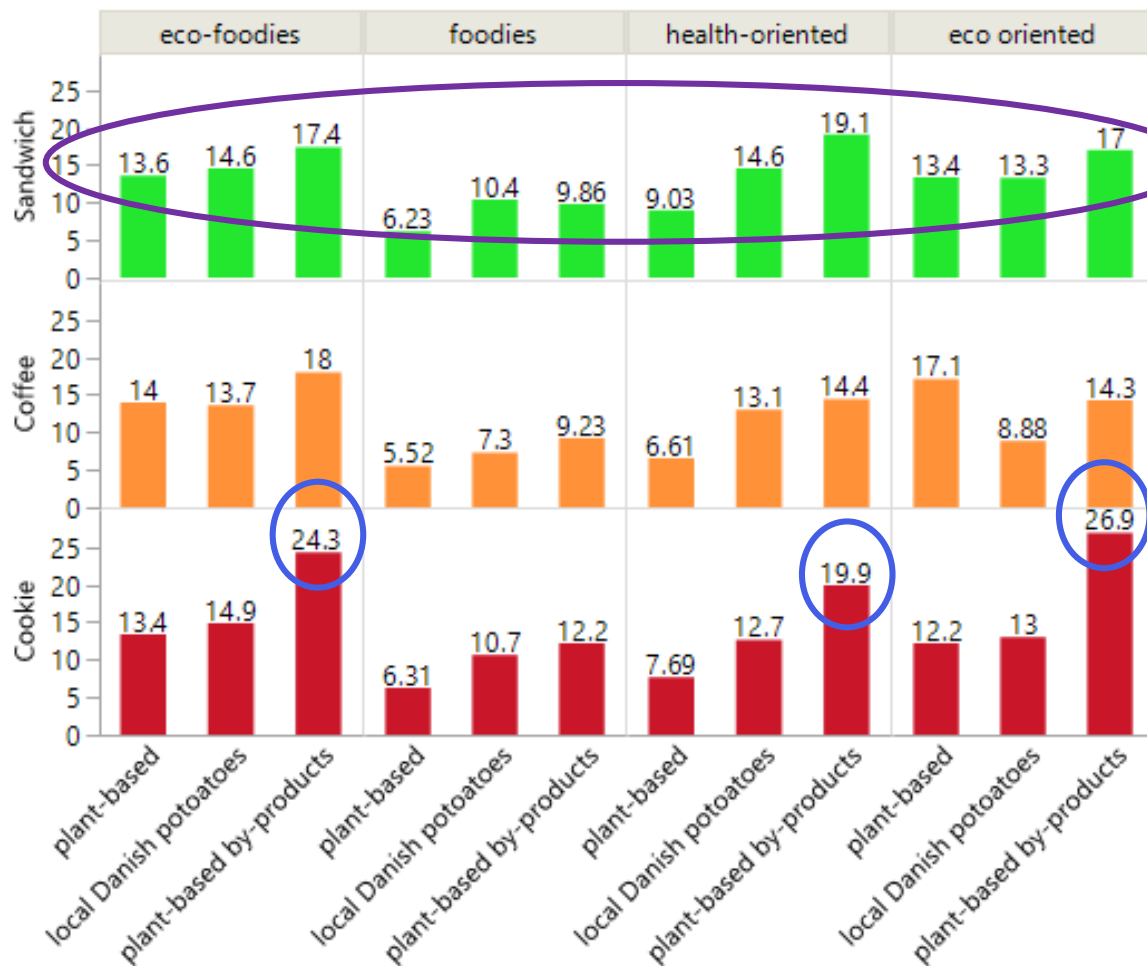
CHOICE LIKELIHOOD ACROSS CATEGORIES



Choice
likelihood across
categories,
segments and
food trend
alternatives



Choice
likelihood across
categories,
segments and
experimental
groups



SUM UP

- ▶ Plant-based alternatives least preferred to other competing trends
 - More communication effort needed to exploit plant-based food trends
- ▶ Upcycling most preferred in vice product category
 - Upcycling should be applied in vice product categories



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