





Using virtual food reality to design food stores and buffet

- try out the Virtual Food Choice Simulator (VFCS)

dVices4Food Mini-Workshop, June 8 2015
 University of Pittsburgh
 3520 Forbes Ave, Suite 202 (conference room)
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Agenda

- Background
- Complementary scientific field
- Aim of the project
- Method (video-clip)
- Experiments
- Findings
- Potential of the project
- Clarifying questions?

Background

- Health status
 13,4% of Danish adults have bad eating habits
(Danish Ministry of Medicine and Health 2014)
- Health strategies
 Different campaigns have been used
(Danish ministry of Food, Agriculture and Fishery 2003)
- 47% of Danish adults are overweight,
 13% are obese
(Danish Ministry of Medicine and Health 2014)
- Increases unless prevented




What is causing people to eat unhealthy?

- The environment affects the decision making
- Supermarket strategies
- Food items in eye level makes the easy choice



Contemporary scientific field

- In this case the focus is on the supermarket
- Shopping is often handled by the automatic system
(Thaler and Sunstein 2008)
- Only approx. 40% of Danes shop with a shopping list
(The consumer council TÆNK 2012)



Contemporary approaches to interventions

- Environmental modifications affect shopping behavior
(Turley and Milliman 2000)
- Studies have focused on the shopping (retailers, local food shops etc.)
- Investigating pricing strategies, increased availability, advertising strategies

Conclusion: Shopping behavior **CAN BE CHANGED**

However

- Studies are expensive to conduct
- The checkout aisle is ideal
- Focus on shopping habits
- E.g. The Dutch Virtual Supermarket
(Waterlander et al. 2011)



Aim of the project

Proofing the concept of The Virtual Food Choice Simulator (**VFCS**) in the **design** of a healthy virtual supermarket checkout aisle.

It **forms** the **formative research** needed to understand how consumer perception of **healthier choice architectures** in retail stores can be **measured** and whether virtual reality can be used in the design process of **store layout**

The basis of the case

- A corporation with Medialogy students
- A corporation with a supermarket
- Lidl has made two kinds of checkout aisles (healthy/unhealthy)



Method - VFCS

Item	How to get	Price (Approx. \$)
Oculus Rift	Off-the-shelf item	350
Walk 'n' choose leg sensors (Nintendo Wii Controller + leg bag)	Off-the-shelf item + Custom made	55 + 5
Find 'n' grab glove	Custom made	25
Computer	Off-the-shelf item	1000

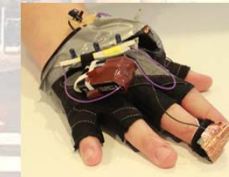
See



Walk



Grab



Video

<https://www.youtube.com/watch?v=2pQbFzDOJz8>

Experiment details

Order	Place/location	Research activity	Purpose	Type of research
A (E1)	Campus lab	Using VFCS with <u>no changes</u>	Understand the consumers choices	"See, walk and grab" + survey
B (Lidl)	Living lab	Conducting questionnaire and observe	Get answers from the customers of their perception of a healthy checkout aisle	Observe + survey
C (E2)	Campus lab	Using VFCS with <u>changes</u>	Understand the consumers choices	"See, walk and grab" + survey

A - Experiment 1

- No changes in the Virtual Food Choice Simulator
- Walk through the VFCS
- Grab an item at the checkout aisle
- Questionnaires and observations
- Did they notice the healthy Checkout aisle?



B - Lidl

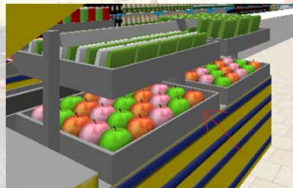
- Questionnaires after purchasing the groceries
- Similar questionnaire as in experiment 1
- Observations
The current checkout aisle
- Examples of a healthy supermarket



C - Experiment 2

- We used nudging to make people change behavior
"Changing people's behavior in a predictable way without forbidding any choices"
(Thaler and Sunstein 2008)
- Changes were applied in the VFCS (based on questionnaire and analysis):

- Design
- Colors
- Shelves
- Signs



Before – unnatural colors



After – the healthy choice

Findings

A – Experiment 1 (Campus lab)

- Not reflective about choice of checkout aisle
- Support for a healthy checkout aisle

B – Lidl (Living lab)

- Not reflective about choice of checkout aisle
- Support for a healthy checkout aisle
- Few noticed the healthy checkout aisle

C – Experiment 2 (Campus lab)

- More visible
- Support for a healthy checkout aisle
- Free choice



Potential of the Project

Advantages/dis-advantages

Technology/research

- VFCS is feasible +
- VFCS is perceived meaningful by the participants +
- Further research is needed (bigger sample size) -
- There are technical issues -
- For educational use

Store designers

- VFCS is cost effective \$\$ +
- VFCS is easy to use +
- Consumers are aware of the retailers increasing responsibility +

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Thank you for your attention.

