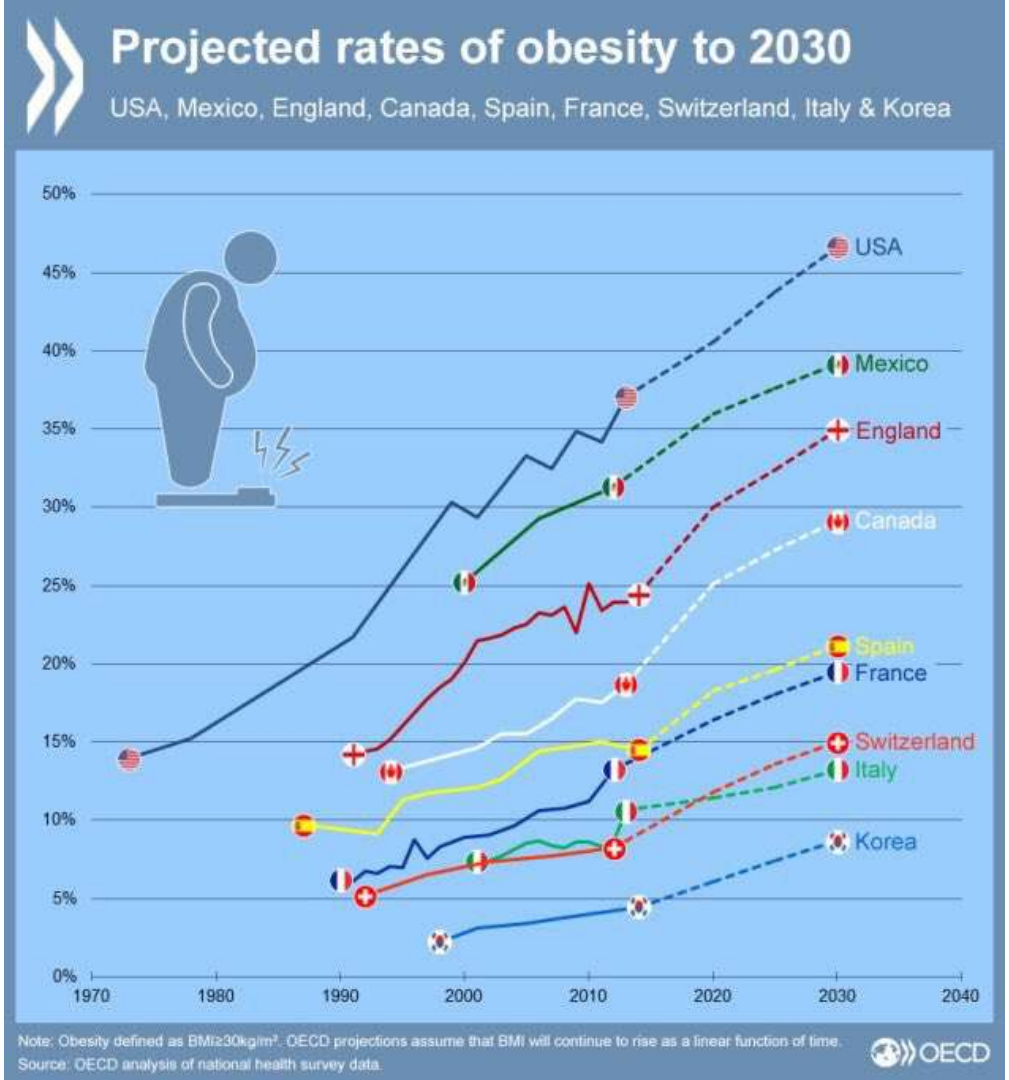
Virtual Reality for promoting healthy food choice

Dr. Ir. Nynke van der Laan

Associate professor, coordinator New Media Design


Second life
HELLO.INK P


Projected rates of obesity to 2030
USA, Mexico, England, Canada, Spain, France, Switzerland, Italy & Korea
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
1970
1980
1990
2000
2010
2020
2030
2040
USA
Mexico
England
Canada
Spain
France
Switzerland
Italy
Korea
Note: Obesity defined as BMI≥30kg/m². OECD projections assume that BMI will continue to rise as a linear function of time.
Source: OECD analysis of national health survey data.
OECD

First life

We need:


Better insights into how people make food choices
Novel intervention approaches (to leverage these insights)

VR as novel measurement tool

Why VR?

- Presence
- Realistic behavior
- Standardized & highly controlled
- ‘Easy’


VirtuMart

VirtuMart

Interactive - screen-based

Immersive - headset-based

Interactive screen-based VirtuMart

Interactive screen-based VirtuMart

346 participants x 5 grocery shopping sessions

Usability outcomes*:

- Easy to understand: 90%
- Easy to find products and way: 80%
- Products bought resemble those IRL: 78%
- Could imagine themselves doing groceries in VR: 49%

Jody Hoenink,
PhD candidate

Supreme Nudge

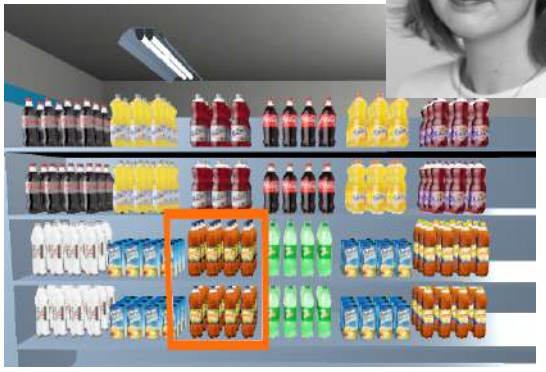
* % Agree or Strongly Agree

Immersive headset-based VirtuMart

Point of purchase

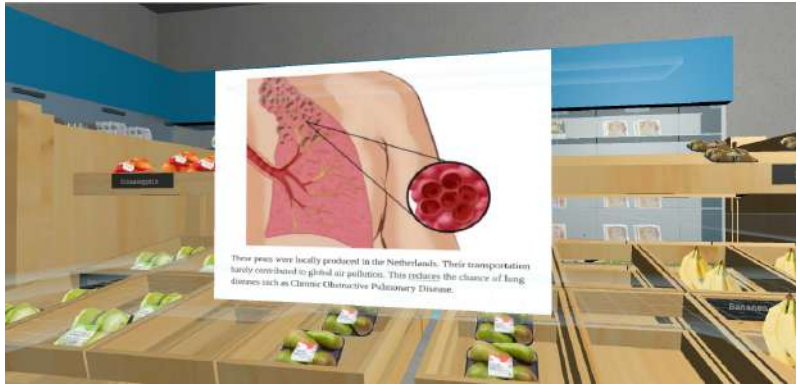
Femke de Boer, UU

Salience nudges: increase visibility



Packaging complexity

Edith Smit, Corine Meppelink, UvA



Health & environmental appeals

Marijn Meijers, Eline Smit, UvA

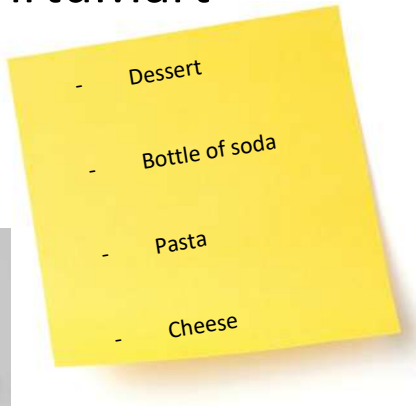
Extreme shopping experiment @ Betweter festival (Oct 18)

115 participants (60% female)

- Age: M = 30.7, SD = 10.9
- Alcohol intake: M = 2.5, SD = 3.9

Shopping trip in Immersive VirtuMart

Between-subjects design:
Nudge vs no nudge



Femke de Boer, UU

Nudge conditions

- Salience nudge: increase visibility

- Frames around 4 healthy, low calorie products

Dessert

Soda

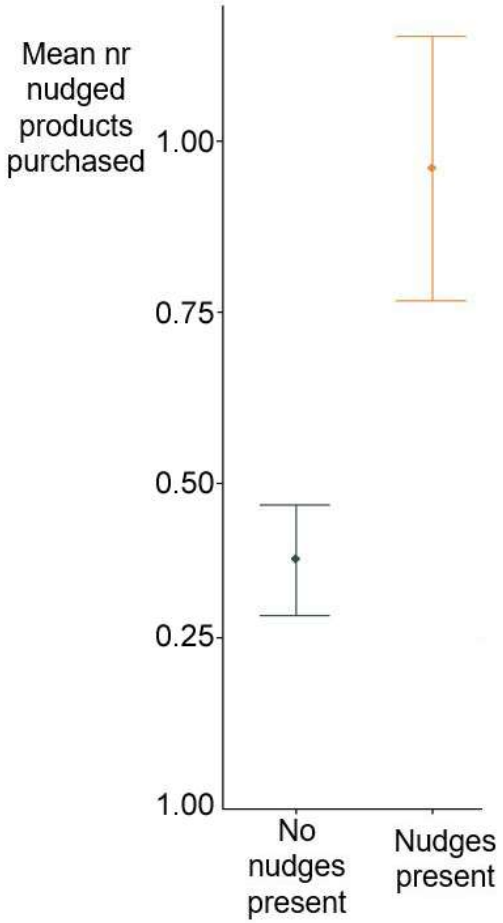
Pasta

Cheese

Do salience nudges increase healthy food choice?

- Yes: **significant main effect** of nudges on food choice ($F(1, 95) = 7.20$, $p = 0.013$)

- In terms of kilocalories:
  - Control: 495.1 kcal
  - Nudge: 451.1 kcal

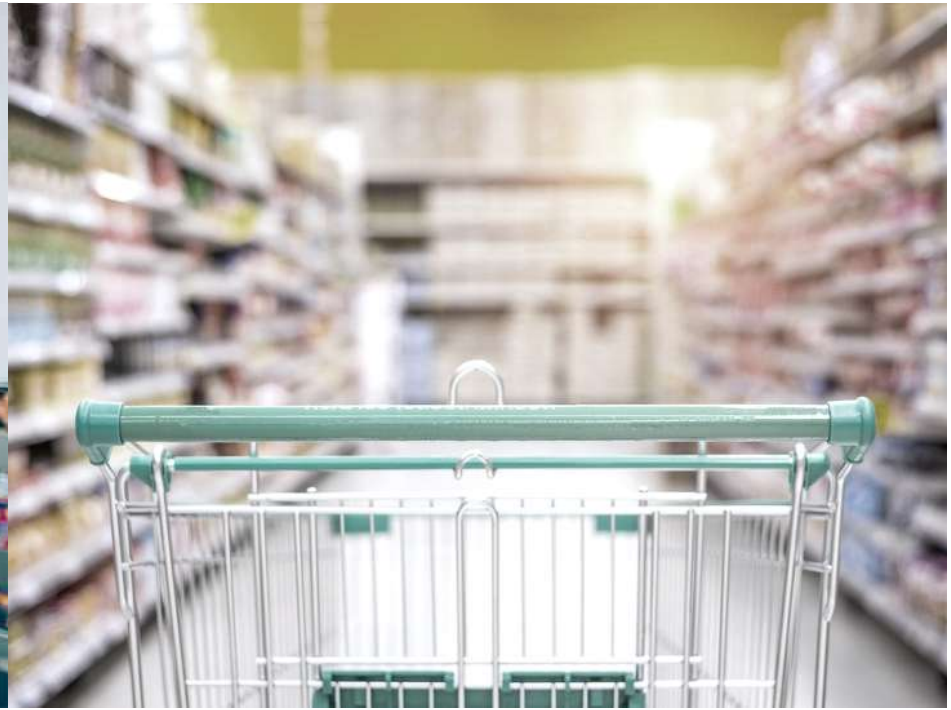


VR as novel intervention tool

Unique features VR → behavior change theory

- **First person perspective**
- **Embodiment**
- **Scenarios difficult/impossible to experience in IRL**

Cognitive bias modification




VirtuMart
Shopping game
A gamified VR cognitive bias modification training
TILBURG UNIVERSITY

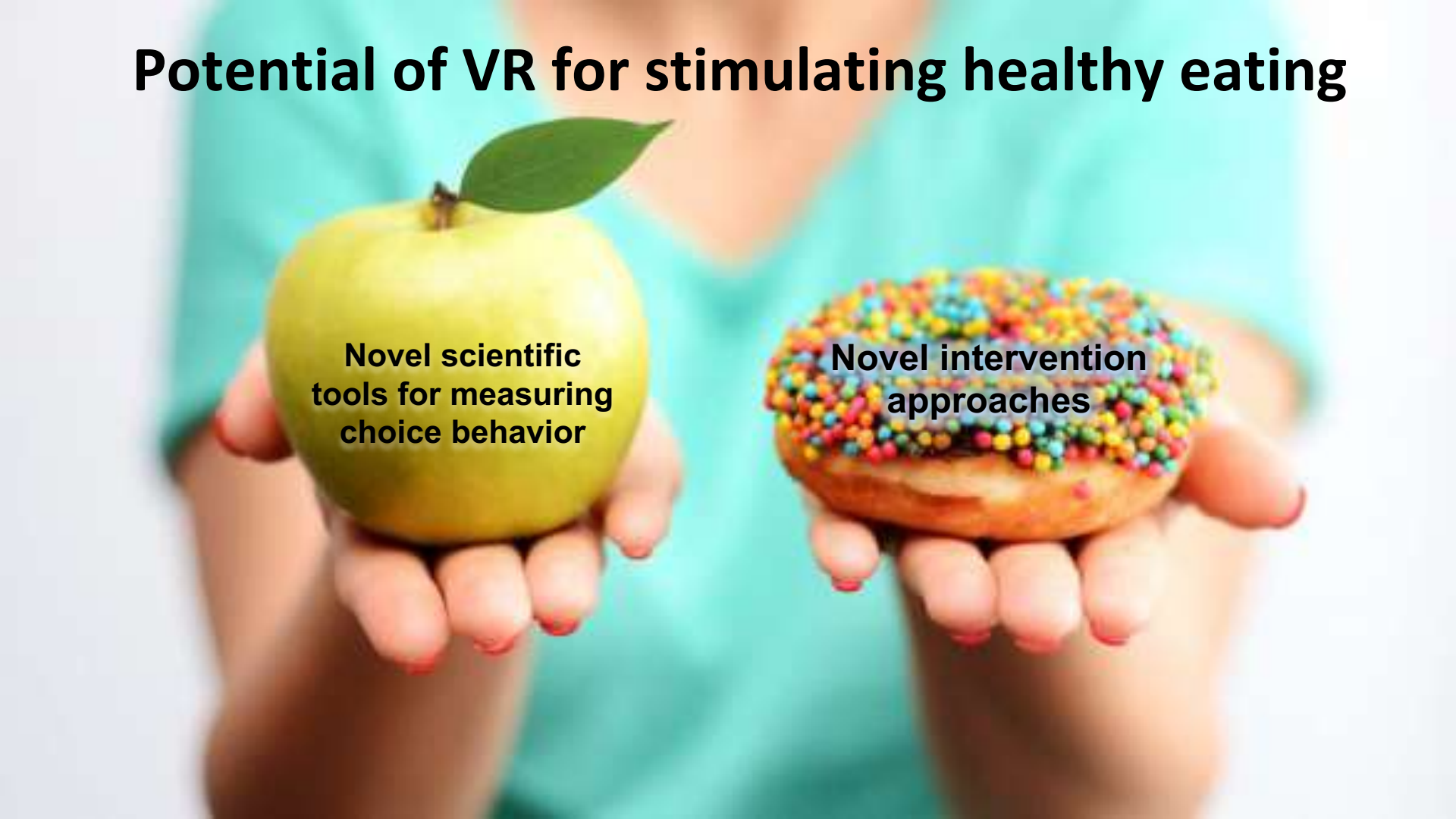

Ga op zoek naar dit product:
Sportlife peppermint 4 stuks


Scoreboard
Je hebt het product gevonden!
Jouw score: 8.6 seconden


Coca Cola
2 + 1 gratis!


Markant bronwater
2 + 1 gratis!

Potential of VR for stimulating healthy eating



Thank you for your attention!

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Contact:
Dr. ir. Nynke van der Laan
Associate professor Digital Health Communication
Tilburg University
l.n.vdlaan@uvt.nl

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