

Stimulating consumers to make dietary choices to eat sustainably

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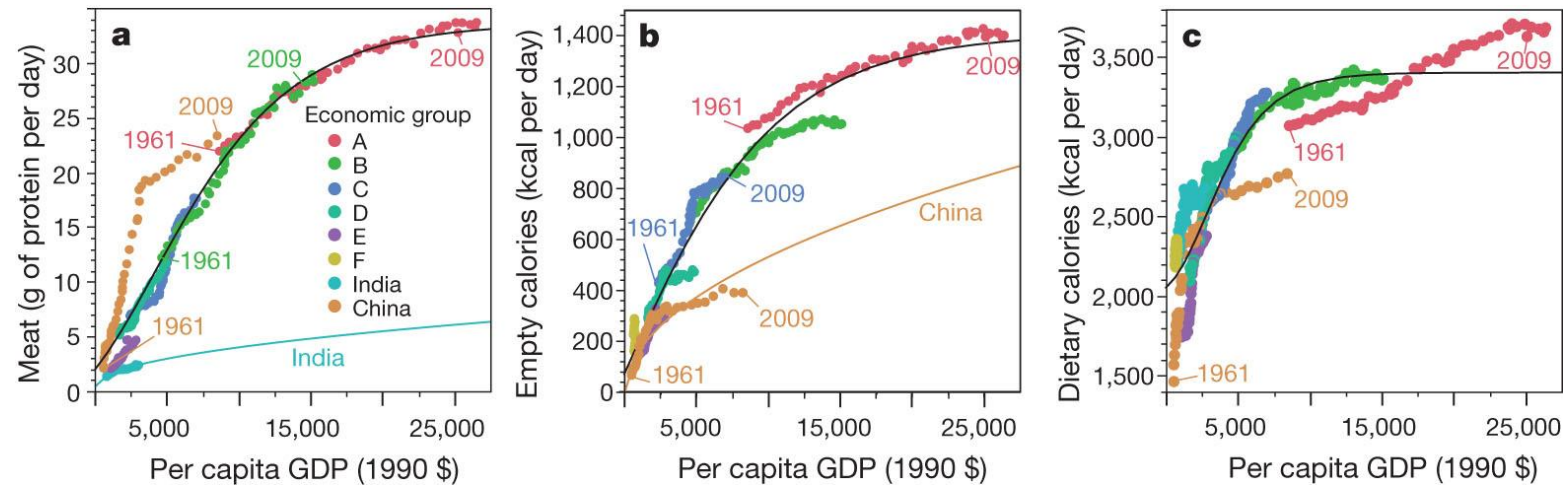
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What is the challenge?

- Increasing world population: 7.2 billion today to 9.3 billion in 2050 (so + 30%) (UN, 2013)
- Income growth in emerging economies and developing countries
- Changing diets because of income growth = income-dependent change in diets
 - E.g. we eat more
 - E.g. we consume more saturated fats
 - E.g. we consume more calories and particularly more empty calories
 - E.g. we consume more meat and dairy products

Dietary trends and income.



D Tilman & M Clark *Nature* , 1-5 (2014) doi:10.1038/nature13959

nature

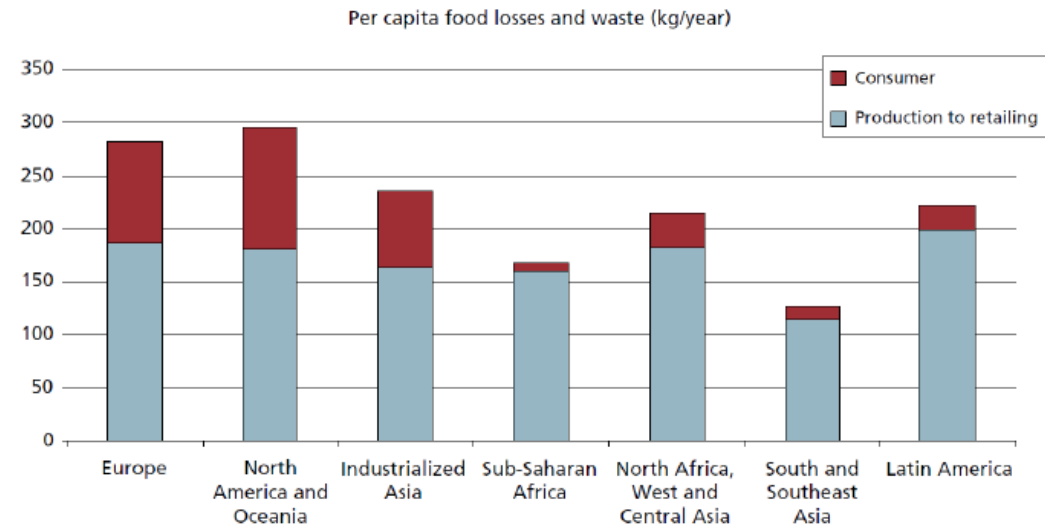
Food consumption: the rich versus the poor

In one of the 15 richest countries	In one of the 15 poorest countries
Daily food demand - measured as food that enters the household – per person is about 3,500 calories	The average person's daily food demand is about 2,000 calories
Up to 25% of this food is wasted after it reaches the household	Waste is much lower
About 20% of daily calories consumed in these wealthy nations come from meat, milk and eggs	Only 3% of total calories is coming from meat, milk and eggs
38% of daily calories are from empty calories	12% from empty calories

➔ By 2050, agriculture needs to produce 60% more food if the current income dependent consumption patterns do not change

Food consumption – other challenges

- Chronic hunger still exists while agriculture produces enough food to feed 12 to 14 billion people (FAO, 2013)
- Every year around 1/3rd of the food produced in the world for human consumption – approximately 1.3 billion tons – gets lost or wasted

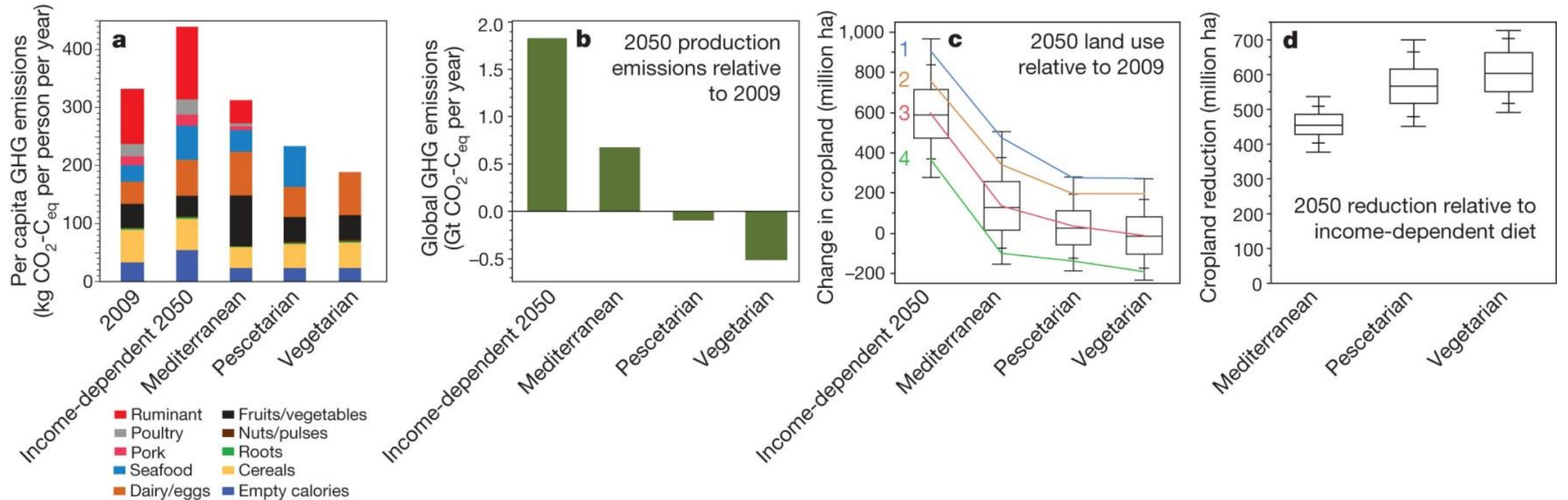


FAO. 2011. *Global food losses and food waste – Extent, causes and prevention*. Rome

Consequences of income-dependent shift in diets combined with increasing world population

- For the environment
 - Per capita dietary **GHG emissions** from crop and livestock production would increase **32%** from 2009 to 2050 if global diets shift in an income dependent way.
 - In combination with a 36% increase in world population the net effect is an estimated **80% increase in global GHG emissions from food production and global land clearing by 2050**

Effect of diets on GHG emissions and cropland.

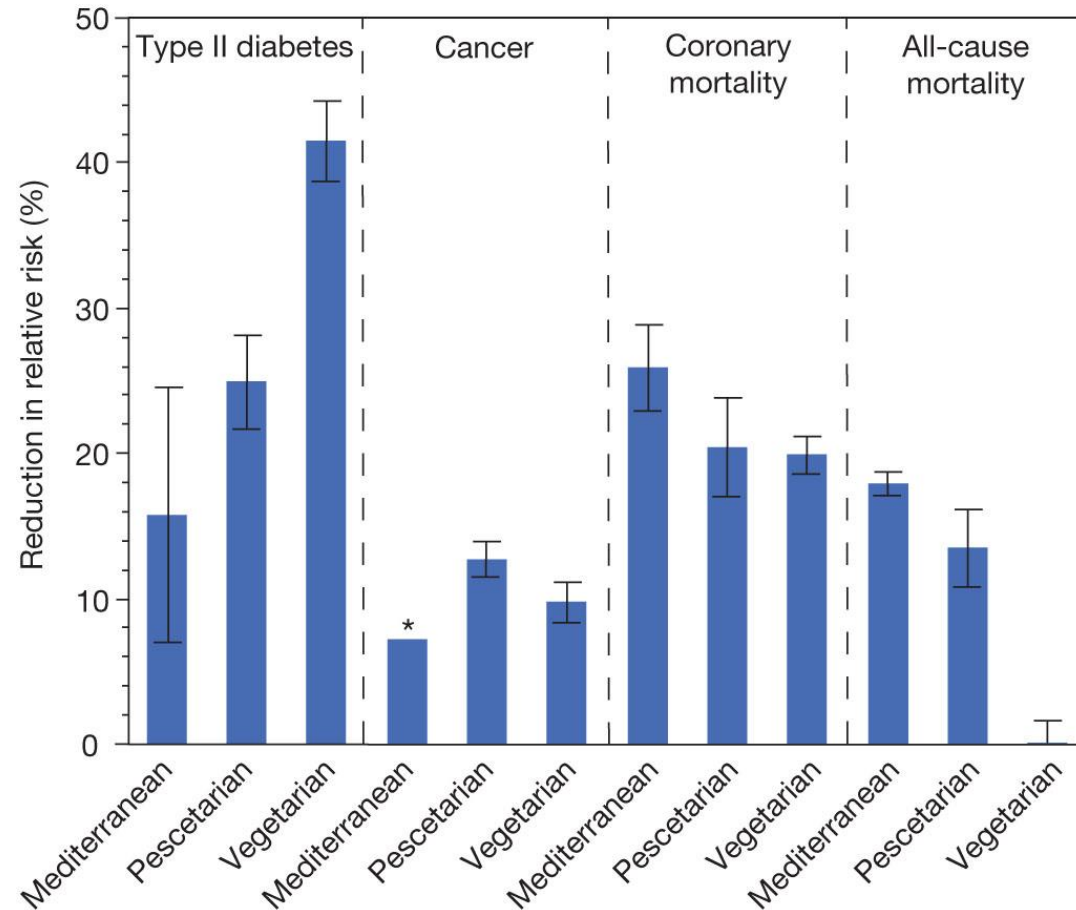


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Consequences of income-dependent shift in diets combined with increasing world population

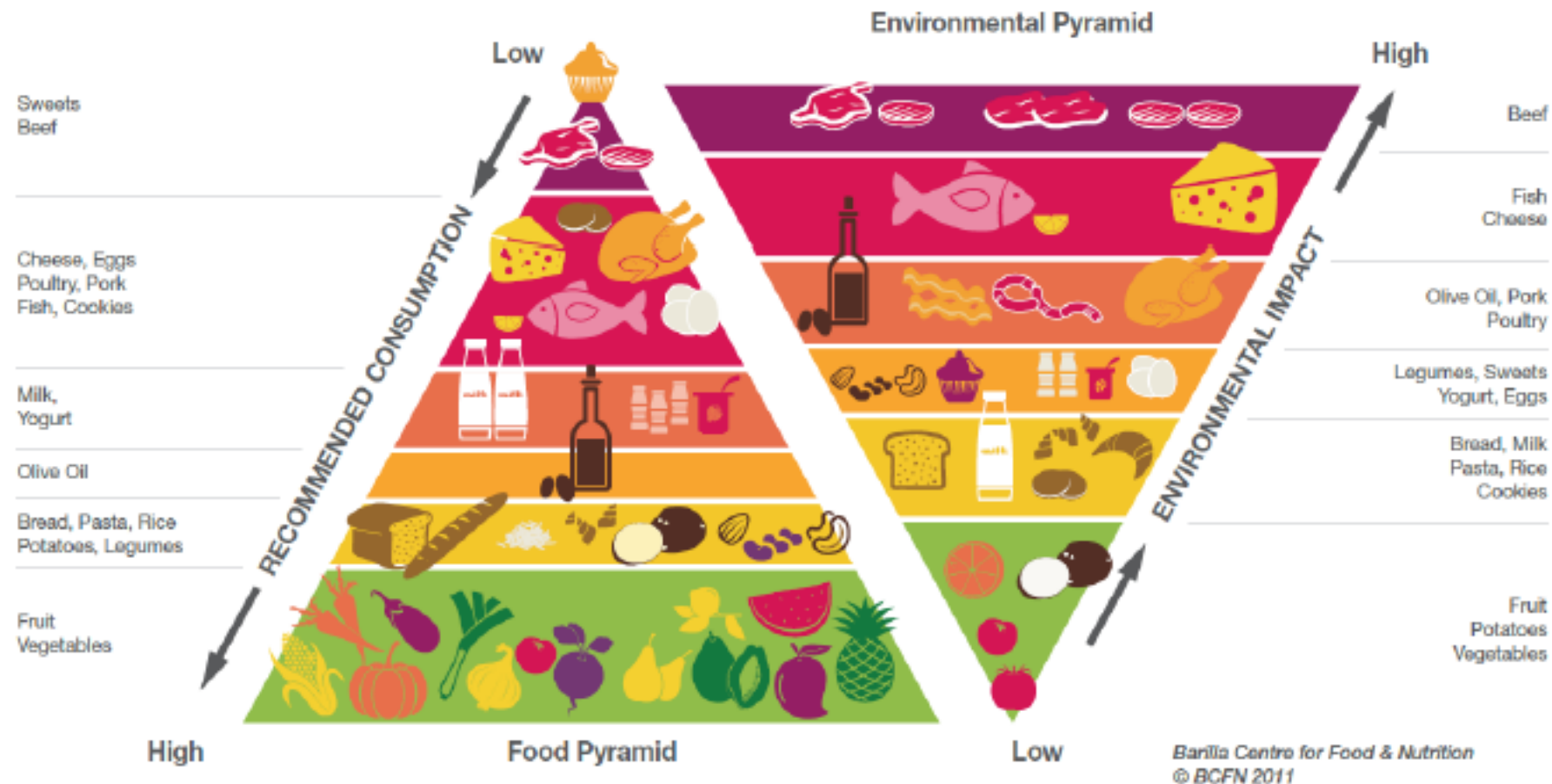
- For human health
 - More type II diabetes, coronary heart disease, cancer



D Tilman & M Clark *Nature*, 1-5 (2014) doi:10.1038/nature13959

nature

“Because it directly links and negatively affects human and environmental health, the global dietary transition is one of the great challenges facing humanity” – Tilman & Clark, 2014, Nature



Engaging consumers in a global dietary shift...

Demand driven transition by

- **Informing and motivating consumers**
 - ➔ Make it the most *desirable* choice
- **Creating an enabling food environment**
 - ➔ Make it the most *effortless* choice

Engaging consumers in a global dietary shift...

Demand driven transition by

- **Informing and motivating consumers**
 - ➔ Make it the most *desirable* choice
 - ➔ Harder to achieve behavioral change, but more persistent
 - ➔ This relates to issues like
 - Attitude-behavior gap
 - (Ir)rational consumers
- **Creating an enabling food environment**
 - ➔ Make it the most *effortless* choice, but less persistent

Attitude-behaviour gap

- Growing interest in sustainability aspects of food consumption and production
- Consumers indicate that they are willing to buy and pay a mark-up for more sustainably produced food products
- But... positive attitudes are not translated in actual behaviours
- Why?

Attitude-behaviour gap

Reasons

- What is sustainable food?

Food sustainability is multi-dimensional concept → difficult to determine the overall sustainability of food consumption patterns and to signal this to consumers

- Trade-offs between sustainability aspects
- A multitude of labelling schemes and choice overload
- Green washing
- Routines and habits govern our behaviour.



The (ir)rational consumer...

- Consumer theory starts from the assumption of rational behaviour.
- However, emotional, psychological and irrational aspects affect our behaviour.

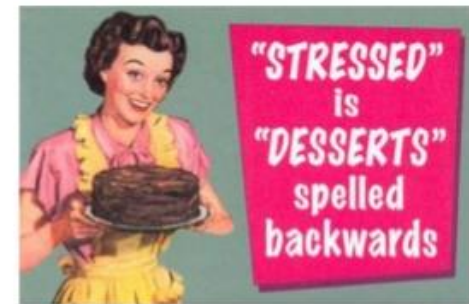
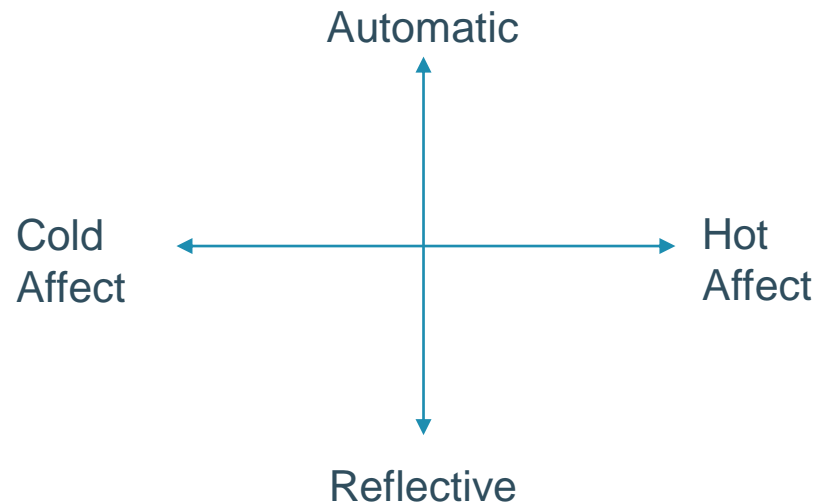
This holds particularly for food consumption because:

200-plus food-related decisions per day (i.e. when, what, how much and where we eat)

- ➔ not always cost-benefit calculating individuals
- ➔ many choices are not the result of careful deliberation

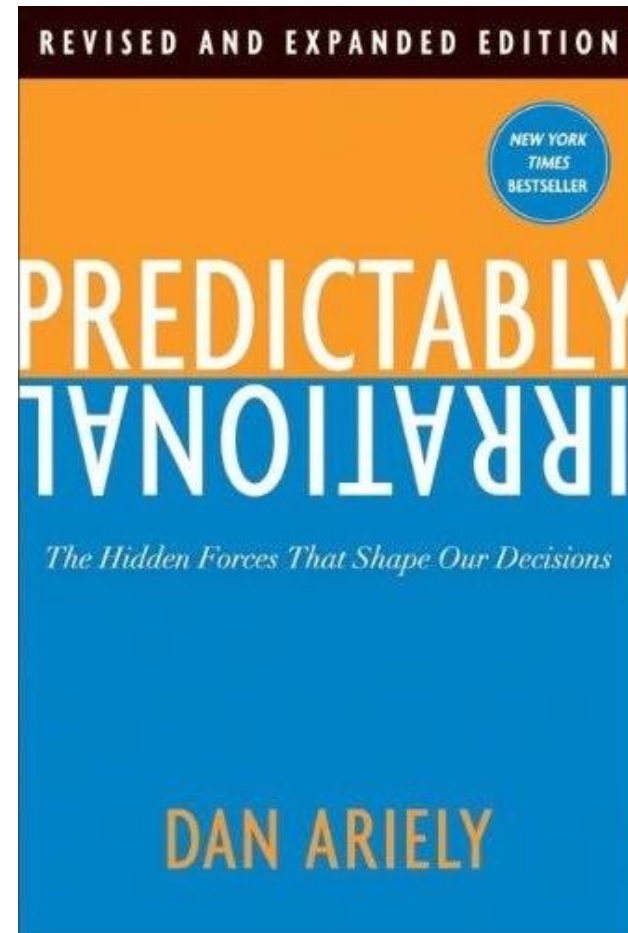
The (ir)rational consumer...

- Consumer theory starts from the assumption of rational behaviour.
- However, emotional, psychological and irrational aspects affect our behaviour.
- Decision making/choices are the result from different decision processes in different 'states'



What does this imply for engaging consumers as change agents?

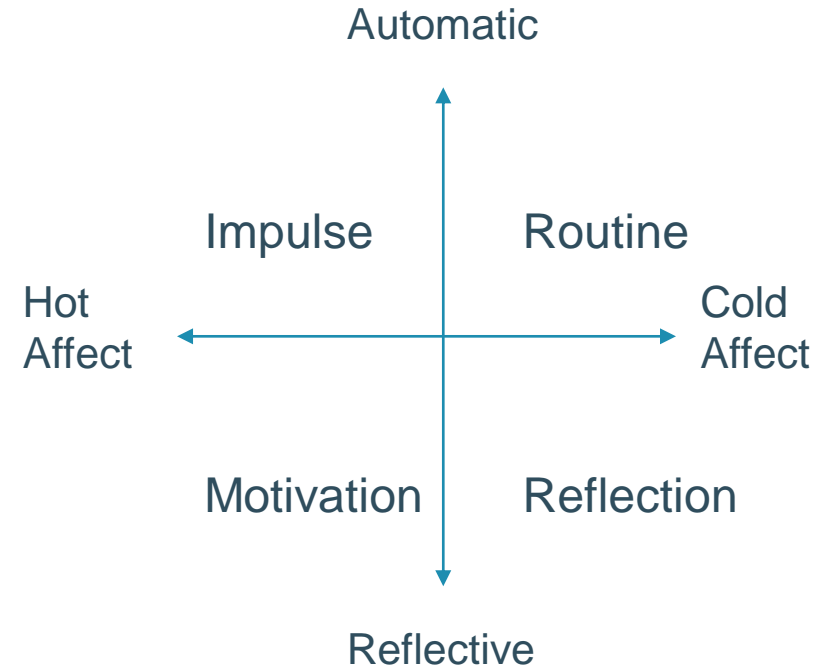
- Can we only engage the reflective, conscious consumer in change processes?
- No, luckily we are 'predictably' irrational
- So one can address the reflective, conscious consumers as well as the unconscious, thoughtless



Can we engage consumers in change processes?

Rely on different type of interventions

- E.g. Cognitive nudges like caloric labels address the reflective consumer
- E.g. Automatic nudges like product placement address the mindless consumer

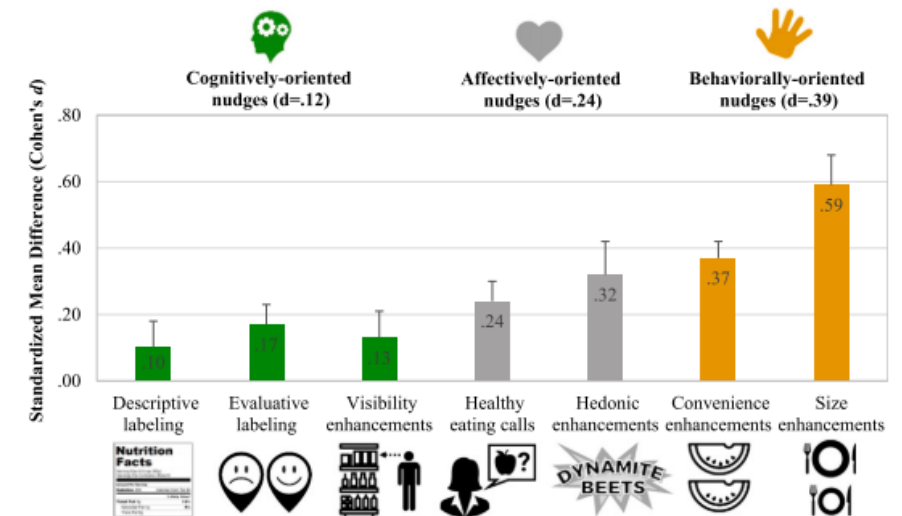


Can we engage consumers in change processes?

Yes, we Can !

- Through well-developed social awareness campaigns, educational campaigns, through information provision → change attitudes, induce social norms
- Through easy-to-understand intuitive information provision:
 - Labels (color coded, traffic light system)
 - Short simple cues in food environment
- Through interventions that address the intuitive consumer
 - Veggie = default option
 - Veggie = more visible on menu, not as separate section
 - Indulgence naming of more sustainable options
 - Disguise the change: veggie burger as protein source

Figure 3. (Color online) Effect Sizes by Nudge Type



Cadario & Chandon, 2020

Some insights from (own) ongoing research

- Provide objective information about the environmental and health impact of labels (organic, fair trade) → Significant increase in willingness-to-pay for labeled products (Rousseau & Vranken, 2013; Vlaeminck et al., 2016)
- An easy-to-understand, graded, comprehensive eco-label
 - Strong increase in eco-friendliness of consumer basket (Vlaeminck et al., 2014)
 - Substitution between food groups: increase in proportion of fruit & vegetables and in plant-based proteins basket (Vlaeminck et al., 2014)
 - Overrule often used heuristics such as 'eat local, think global' or the organic label and even proximity effects (= breaking through habits). (De Bauw et al., 2021c & d; Vlaeminck et al., 2014)
 - Limit decision time IF available on all products (De Bauw et al., 2021a&c)

Some insights from (own) ongoing research

Improved **nutritional quality** and **environmental impact** of food choices due to:

- Short simple cues in food environment like specific dietary recommendation

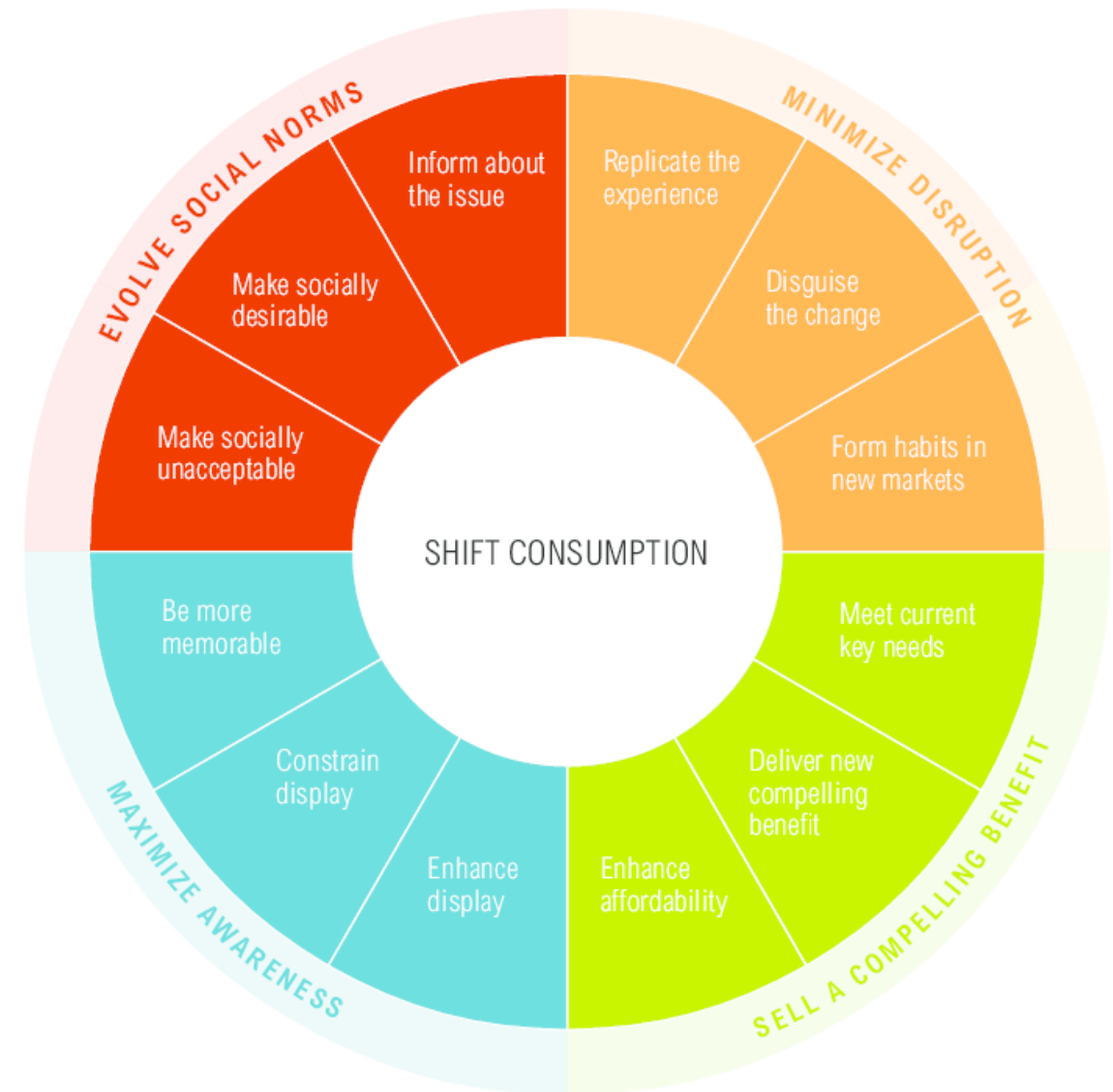
(De Bauw et al., 2021a)

- Graded, comprehensive eco-label combined with recommendation system

(De Bauw et al., 2021b)

What can universities do?

- Curriculum
- Student restaurants & catering



J. Ranganathan, D. Vennard, R. Waite, T. Searchinger, P. Dumas, and B. Lipinski, Shifting Diets, Installment 11 of Creating a Sustainable Food Future (Washington, DC: World Resources Institute, 2016)

Thank you for attention!

Questions?

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