

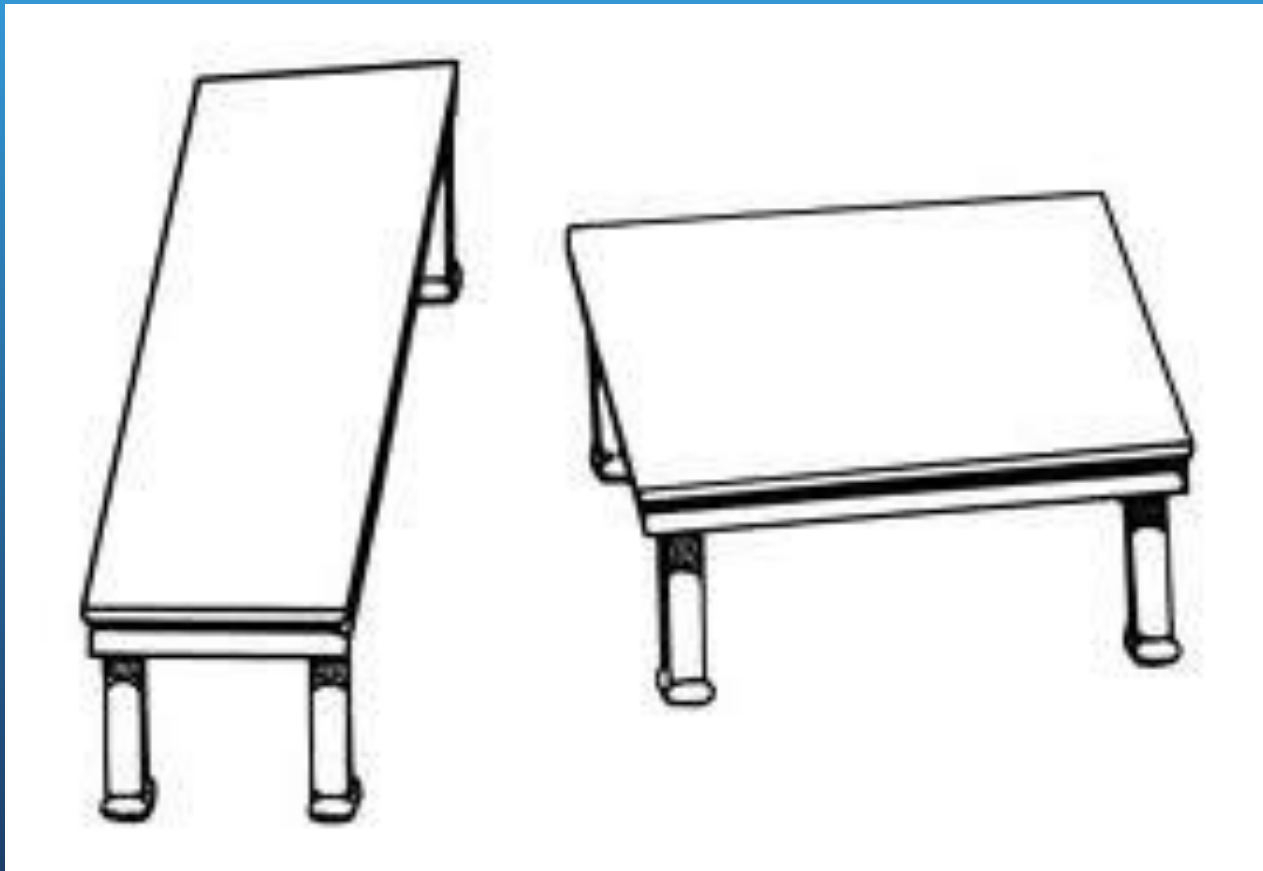
MIND THE FOOD

The traps of the mind and the value of facts

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THE TWO TABLES ILLUSION (from Shepard, 1990)



THE TABLE-TOPS

Legs and orientation generate the illusion!



THE CHOICE ARCHITECTURE

- The way in which context is organized influences people's decisions
- The *choice architect* is the one who has the responsibility for organizing the context in which people make decisions

AN EXAMPLE OF CHOICE ARCHITECTURE

- The way the food is displayed and arranged influences the choices kids make at the school cafeteria



- Choices can be greatly influenced by small changes in the context (i.e. fruits at eye level)

THE “NUDGE” THEORY

- NUDGE: any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives
- Nudges are not mandates!

“EVERYTHING MATTERS”

- Small and apparently insignificant details can have major impacts on people's behaviour

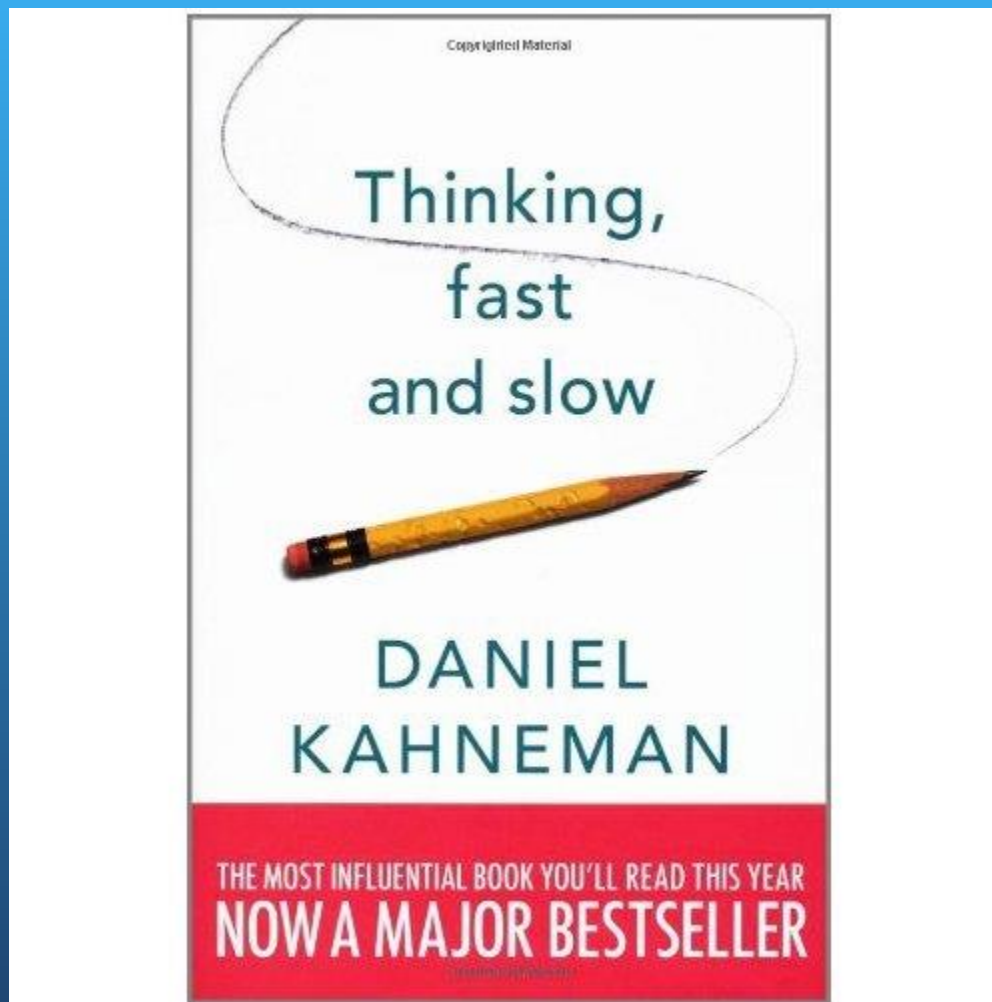


Spillage
reduced by
80%



People's choices are pervasively
influenced by the design elements
selected by choice architects

- People make good choices in contexts in which they have experience, good information and prompt feedback
- They do less well in contexts in which they are inexperienced and poorly informed, and in which feedback is slow or infrequent (i.e. choosing between fruit and ice-cream - where the long term effects are slow and feedback is poor)





SYSTEM I

Fast
Automatic
Frequent
Emotional
Stereotypic
Subconscious

SYSTEM II

Slow
Effortful
Infrequent
Logical
Calculating
Conscious



SYSTEM I

Humans often struggle to think statistically failing to precisely associate reasonable probabilities to outcomes



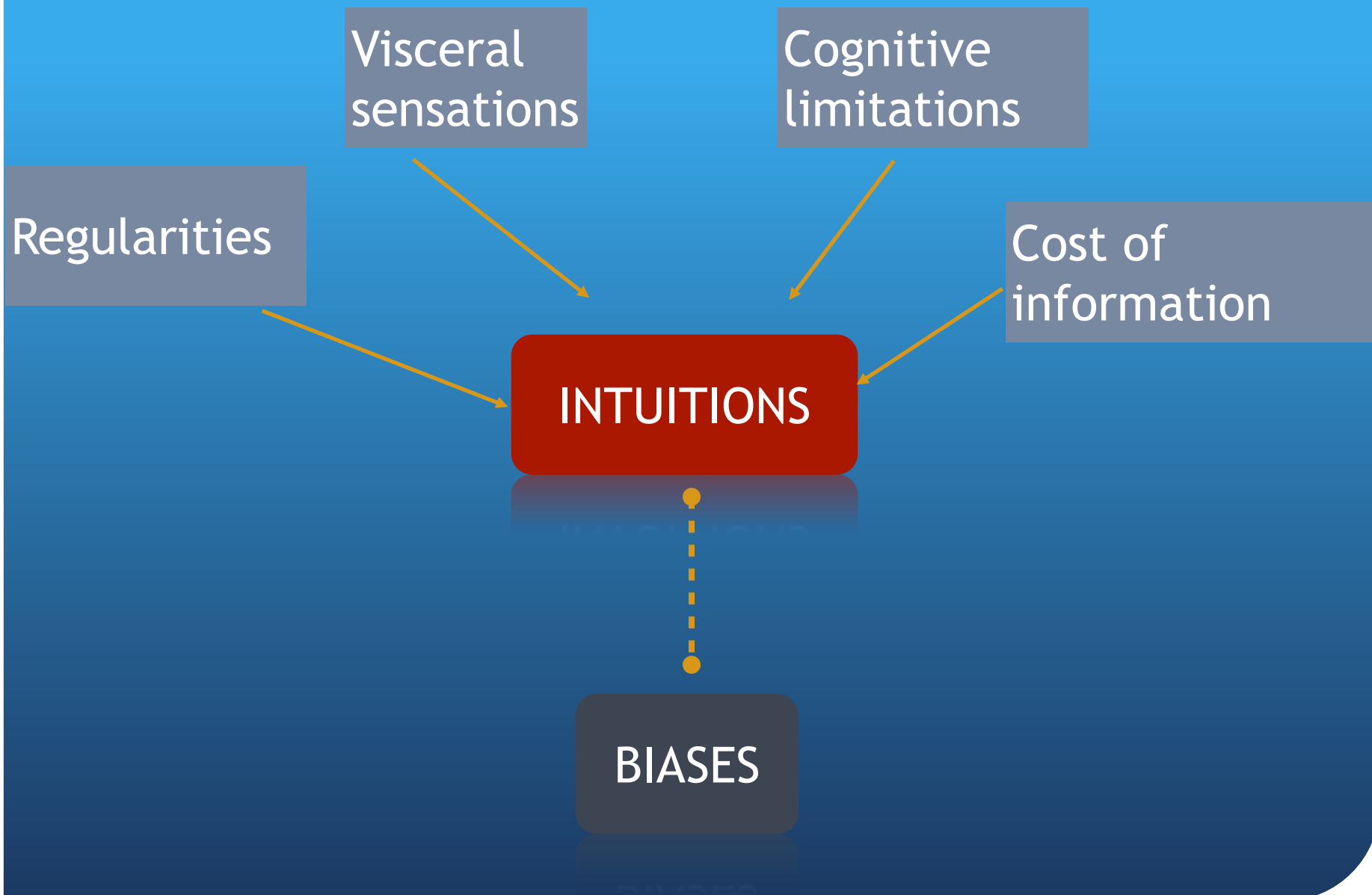
HEURISTICS

System 1 thinking involves associating new information with existing patterns, or thoughts, rather than creating new patterns for each new experience.



BIASES

Systematic reasoning errors occur



THE “DOER” AND THE “PLANNER”

- The PLANNER tries to promote long-term welfare
- The DOER experiences feelings, mischief, strong will and temptations and often acts in an “automatic pilot” mode in which he does not actively pay attention to the ongoing task
- The PLANNER needs a number of available *internal and external* strategies to control the DOER



BASIC PRINCIPLES INFLUENCING HUMAN DECISIONS

- Inertia
- Response to incentives
- Social influence (via information and peer pressure)

WHAT ABOUT FOOD CHOICES?

- Eating is one of the most mindless activities we do
- Many of us simply eat whatever is put in front of us
- This is why large plates and large packages mean more eating: *they are a form of choice architecture, and they work as major nudges*

WILL YOU STOP EATING THEM?



Ordinary consumers are novices, interacting in a world inhabited by experienced professionals trying to sell them things



RESPONSE TO INCENTIVES: THE INTELLIGENT POTATO



PIÙ LA PATATA È BUONA, PIÙ SI DIVENTA INTELLIGENTI.

ANCHE UN'UMILE PATATA PUÒ CELARE UNA SUPREMA INTELLIGENZA FATTA DI TERRA, SELENIO E TRADIZIONE. SELENELLA NASCE DA UN TERRENO CHE SEMBRA FATTO APOSTA PER LA PATATA, QUELLO DELLA CAMPAGNA BOLOGNESE, ED È RICCA DI UN OLIGOMINERALE ESSENZIALE PER LA SALUTE, IL SELENIO. SELENELLA È SENZA OGM, CERTIFICATA QC DALLA REGIONE EMILIA-ROMAGNA. SELENELLA, UNA VOLTA MANGIATA VI FARÀ SENTIRE ANCORA PIÙ INTELLIGENTI PER AVERLA SCELTA.



SALES

- 2000: 4,000 tons
- 2009: 30,000 tons
- 2011: 50,000 tons

“I have ensured that the potato is naturally enriched...selenium plays a positive biochemical role in several circulatory disorders and the onset of tumors, and in general prolongs life”

“Awareness of the importance of selenium to human health has markedly increased...As a result, there is now much more aggressive marketing of selenium supplements and functional foods, *even in situations where additional consumption of selenium is inappropriate*”

Prof. Rayman, international expert on the nutritional aspects of selenium

SOCIAL INFLUENCE: THE MIRACLE SUBSTANCE



To distinguish 2 identical products, simply add a substance that the consumer will identify as beneficial and publicise it on the package (*even if the substance is already naturally present in the food*)

NO CHEMICALS AND PRESERVATIVES?



- Ingredients: pork meat, pork tripe, salt, sugar, spices, natural flavourings. *Preservatives* (sodium nitrate) of natural origin. *Antioxidant* (ascorbic acid) of natural origin

LOW-FAT BUTTER

Since we don't want preservatives, we prefer to buy “low-fat butter” (but rich in preservatives) rather than the normal butter, eating less of it.



ARE GMOs DANGEROUS?

- Europeans in favour: 21%
- GMOs undergo a very great number of investigations before being released onto the market (similar procedure to new drugs)
- *“... The use of a more precise technology and the accurate assessments during the regulatory stage will probably render these plants and products even safer than the conventional ones”*

European Commissioner for the Scientific Research, 2000

WHEN COMMUNICATION IS BIASED...



A “DEFECT OF FORM”

- *“We can’t allow the use of GMOs until we are certain that they are 100% safe”*
- Do any human enterprises that are devoid of risk exist?
- Can science show with absolute certainty that a new technology will **never** cause health problems? (e.g. neuroimaging techniques, etc.)

- N.B. Strawberries, kiwis, oranges, soya and many other foods are allergenic and some people end up in hospital after eating them.
- Basil, nutmeg, coffe and mint contain substances which in high doses are toxic or even fatal



NUDGING PEOPLE TOWARD HEALTHIER CHOICES

The role of psychology in improving food choices

SMARTER LUNCHROOMS

- **Convenience** and **taste** are the two greatest determinants of food choice
- Most healthy foods are less convenient than their unhealthy counterparts

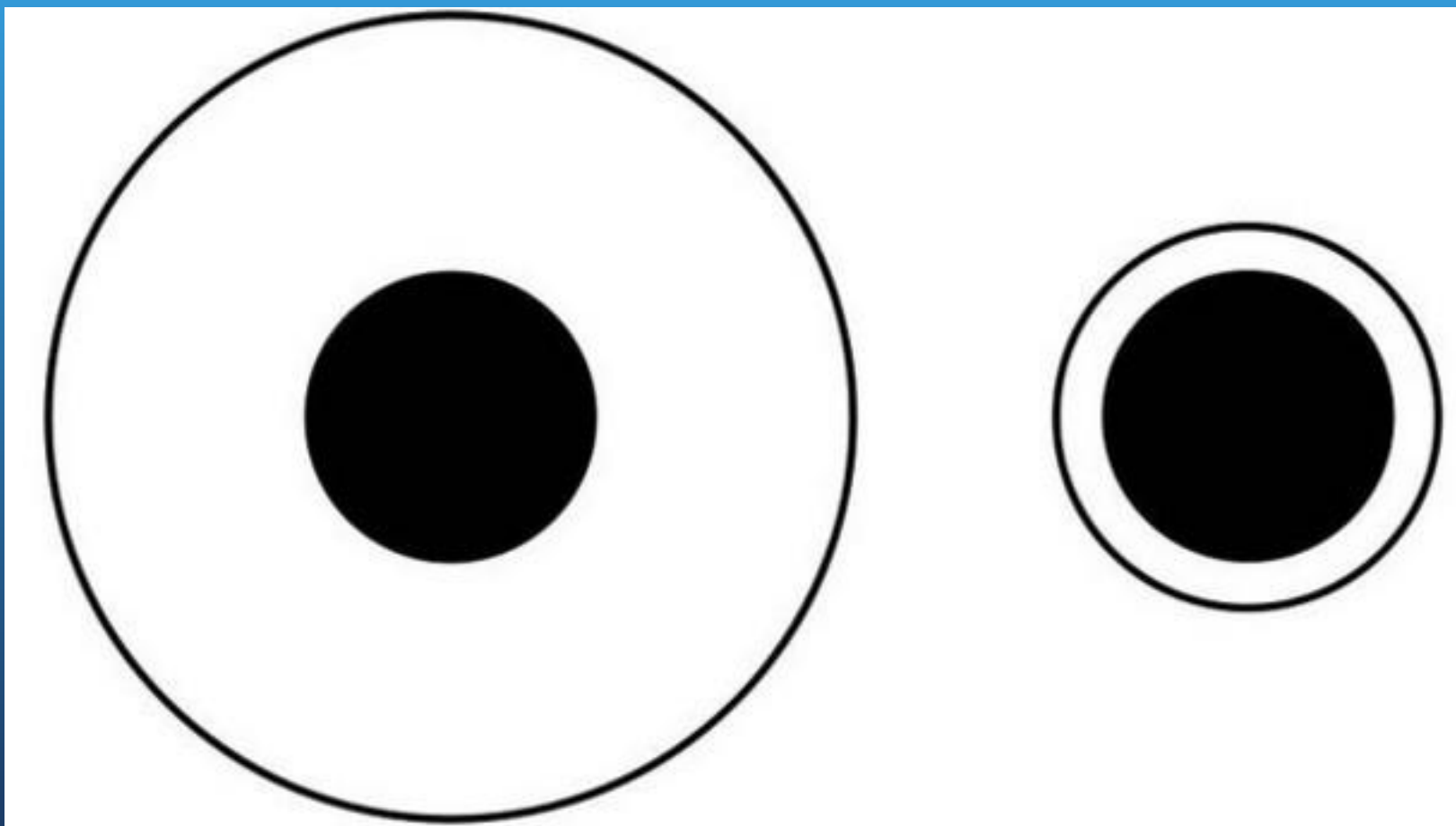
THE CAFETERIA MAKEOVER

A “cafeteria makeover” experiment show that small **rearrangements in the cafeteria** (making healthy foods more convenient) can have a **positive impact** on people eating behavior



Hanks, Just, Smith, and Wansink (2012)

THE DELBOEUF ILLUSION: Why expanding dinner plates are expanding our waistlines?



- Smaller plates typically encourage smaller serving sizes, not simply because we physically can't pile as much food on them...
- **Nudge: set the table with small plates!**

Van Ittersum, and Wansink (2012)

JUST A BITE...

- Snacking is a large contributor to the growing proportion of overweight individuals
- Snacks are often consumed to satisfy hedonic hunger, or that which is more psychological than physiological
- How different portion sizes can satisfy hunger and craving when snacking?

- Individuals would claim that they are hungrier after eating a small snack but if asked 15 minutes later, they would report feeling equally as satisfied as those who ate a larger snack
- **Nudge: buy small snacks and you'll be satisfied!**



EXAMPLES OF NUDGING VS REGULATORY ACTIONS

Behaviour	Nudge	Regulation
Smoking	Make non-smoking more visible through mass media campaigns communicating that the majority do not smoke and the majority of smokers want to stop	Ban smoking in public places
	Reduce cues for smoking by keeping cigarettes, lighters and ashtrays out of site	Increase the price of cigarettes
Alcohol	Serve drinks in smaller glasses	Regulate pricing through duty or minimum pricing per unit
	Make lower alcohol consumption more visible through highlighting in mass media campaigns that the majority do not drink to excess	Raise the minimum age for purchase of alcohol
Diet	Designate sections of supermarket trolleys for fruit and vegetables	Restrict food advertising in media directed at children
	Make salad rather than French fries the default side order	Ban industrially produced trans fatty acids
Physical activity	Design buildings so that the stairs, and not the lift, are the prominent feature of buildings	Increase duty on petrol
	Increase saliency of cycling through hire-bike schemes	Enforce car drop off zones around schools

Note: Adapted from “Judging nudging: can nudging improve population health?” by Marteau et al. (2011)

SO WHAT?

This is our human irrationality...



CONCLUSION

- Nudges are small features that can have massive (positive or negative) effects on people's behaviour, **limiting the effects of human irrationality**
- Nudges are everywhere, even if we don't (consciously) see them
- The presence of nudges preserve freedom of choice while also nudging people in directions that will improve or worsen their lives

Understanding of choice architecture and the power of nudges should lead us to think of creative ways to improve human lives in different domains, starting from health

