NUDGE Projekttutorium

TEIL 1

Bessere Entscheidungen für Gesundheit, Gemeinwohl und Nachhaltigkeit

→ theoretische Aspekte und Beispiele

TEIL 2

Action Research in Designing Choices for Health and Sustainability

→ praktische Umsetzung und Test

GEORG LIEBIG
Student of MSc. Integrated Natural Resource Management

NUDGE it!
Initiative für Nachhaltigkeit

NUDGE 1

1. Why do we need Nudges?
2. Nudge Examples
3. What is a Nudge?
4. When do we need a Nudge
5. Political/Ethical Considerations

NUDGE 1

Bessere Entscheidungen für Gesundheit, Gemeinwohl und Nachhaltigkeit

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Why do we need nudges?

- **Pressing Societal Problems**

→ Health:

- obesity
- cancer
- diabetes
- malnutrition
- lack of drinking water

→ Welfare:

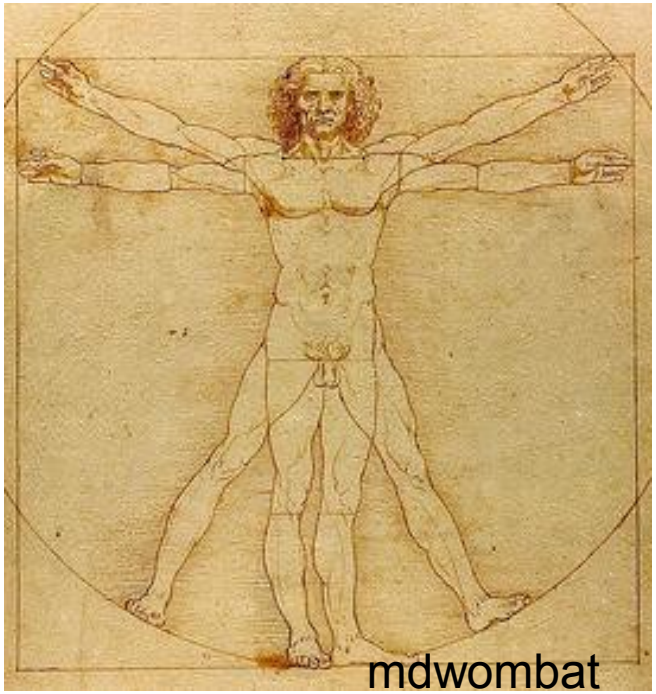
- welfare gap within countries
- welfare gap between countries

→ Sustainability:

- depletion of natural resources
- climate change

Why do we need nudges?

- **Rational Actions? Biases in Decision-Making?**



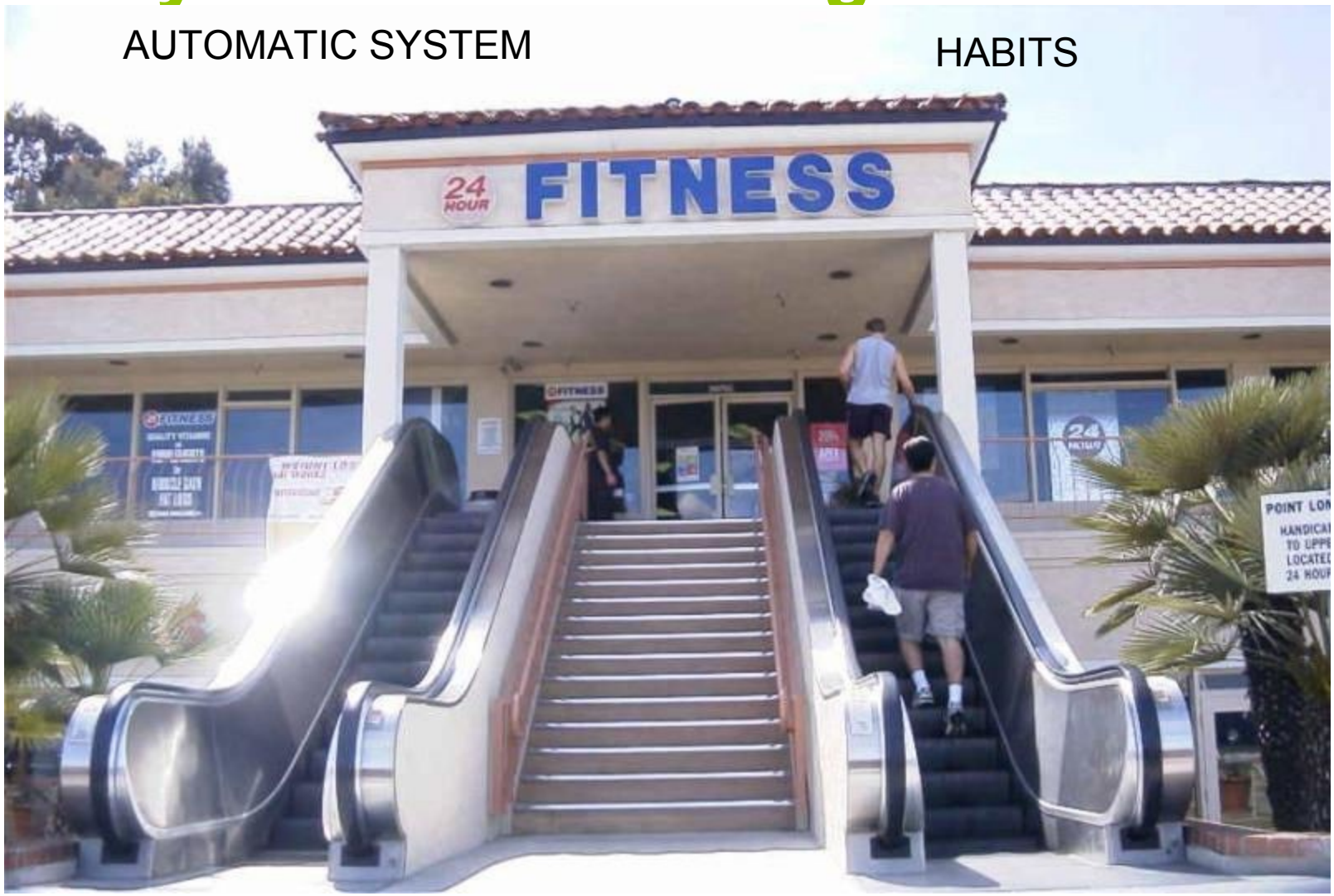
Reflective system

Automatic system

Why do we need nudges?

AUTOMATIC SYSTEM

HABITS



Why do we need nudges?

ARCHITECTURE OF DECISIONS MATTER

Say I told you, "the population of Chicago is 3 million. What is the population of Milwaukee?" You might guess something like 1 million.

If I instead told you, "The population of Green Bay is 100,000. What is the population of Milwaukee?" Most people guessed around 300,000. (The actual population is around 580,000.)

Chicago: 3.000.000 inh.
Milwaukee? 1.000.000 inh.

Green Bay: 100.000 inh.
Milwaukee? 300.000 inh.

Correct answer: Milwaukee: 580.000 inh,

Why do we need nudges?

Example:

A bat and a ball cost $1.10 in total. The bat costs $1more than the ball.
How much does the ball cost?

-”10 cents... but somehow I'm probably wrong

More than half of a group of students at Princeton and at the
University of Michigan gave precisely that answer

- ”… of course the answer to your question is 5 cents”

COGNITIVE BIASES

1. Aversion to extremes: *the tendency to avoid extremes, to prefer a choice simply because it is the middle-ground option. Consumers Avoid Extremes In Soda Sizes*

2. Bandwagoning or herd instinct: *the tendency to do (or believe) things simply because other people do.*

3. Choice-supportive bias: *the tendency to remember your own choices as better than they actually were.*

4. Conservatism bias*: the tendency to ignore the consequences and implications of new evidence.*

5. Contrast effect: *the tendency to perceive measurements of an object differently when comparing them with a recently observed contrasting object.*

6. Distinction bias: *the tendency to view two options as more dissimilar when viewing them together than when viewing them separately.*

7. Excessive temporal discounting/ **hyperbolic discounting** ***:*** *the tendency for people to have excessively stronger preferences for immediate gains relative to future gains.*

8. Exposure effect: *the tendency for people to like things simply because they are familiar with them.*

9. Framing effects: *the tendency to draw different conclusions based on how data are presented.*

a. *Anchoring*
b. *Mental accounting (current income, current wealth, future income – different marginal propensity to consume, eg: extra 1, spend 0.65)*

10. Scarcity value: *When we perceive something to be scarce it has a greater value in our eyes. Conversely, when we perceive it to be plentiful its perceived value falls. When valuing things, circumstantial factors tend to crowd out factors that point towards absolute value.*

11. Social norms: *the rules that a group uses for appropriate and inappropriate values, beliefs, attitudes and behaviors. These rules may be explicit or implicit. Failure to follow the rules can result in severe punishments, including exclusion from the group.*

12. Irrational escalation: *the tendency to make irrational decisions based upon rational decisions in the past, or to justify actions already taken. The dollar auction is a thought exercise demonstrating the concept.*

13. Loss aversion: *the tendency to fear losses more than to value gains of equal size.*

14. Endowment effect: *the tendency to demand much more to give up an object than you would be willing to pay to acquire it. The Duke University basketball ticket experiment (a combination of loss aversion and the endowment effect =* ***Status quo bias*** *)*

15. Neglect of probability: *the tendency to disregard probabilities for absolutes when making a decision under uncertainty.*

16. 'Not Invented Here': *the tendency to ignore an idea or solution because its source is seen as unfamiliar.*

17. Planning fallacy: *the tendency to underestimate the time it takes to complete tasks.*

18. Post-purchase rationalisation: *the tendency to rationalise your purchases as 'good buys' merely based on the fact that you purchased them – and the reason why a 110% money back guarantee works.*

19. Pseudo-certainty effect/Gambler's fallacy: *the tendency, when seeking positive outcomes, to make only risk-averse choices; but to make risk-seeking choices to avoid negative outcomes.*

20. Selective perception: *the tendency for expectations to shape perceptions.*

21. Wishful thinking: *the formation of beliefs according to what is* ***pleasant to imagine rather than based on evidence or rationality.***

22. Zero-risk bias: *the preference for reducing a small risk to zero over a greater reduction in a larger risk.*

23. Self-serving bias *(****Illusory superiority/better-than-average effect****) occurs when people attribute their successes to internal or personal factors but attribute their failures to situational factors beyond their control.*

Taken from Oliver Payne

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Bessere Entscheidungen für Gesundheit, Gemeinwohl und Nachhaltigkeit

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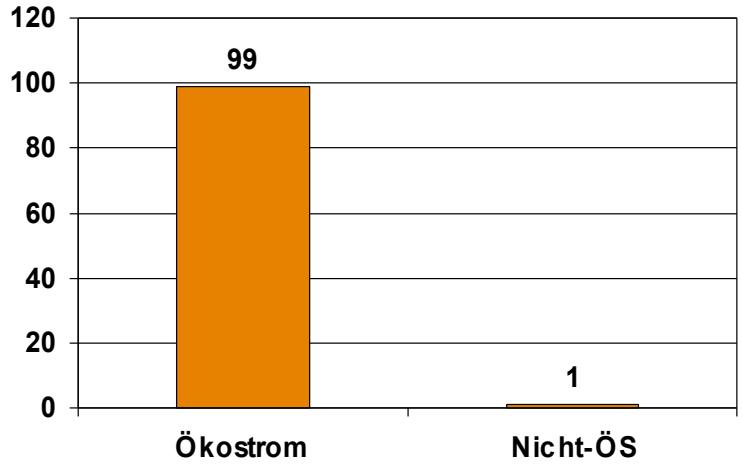
Energie - Ökostrom Default

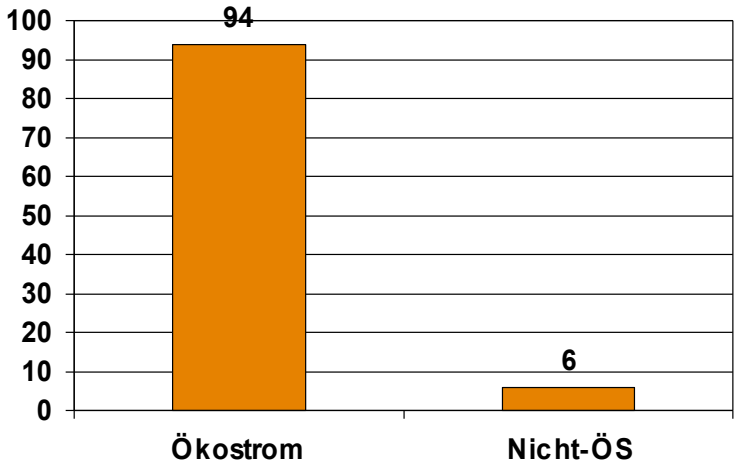
- Einstellungs-Verhalten-Lücke bei Ökostrom
- Warum? Kontext der Entscheidung bedeutend
- Hier: Default

Liberalisierung des Marktes



Schönau 2006

Umstellung des Default

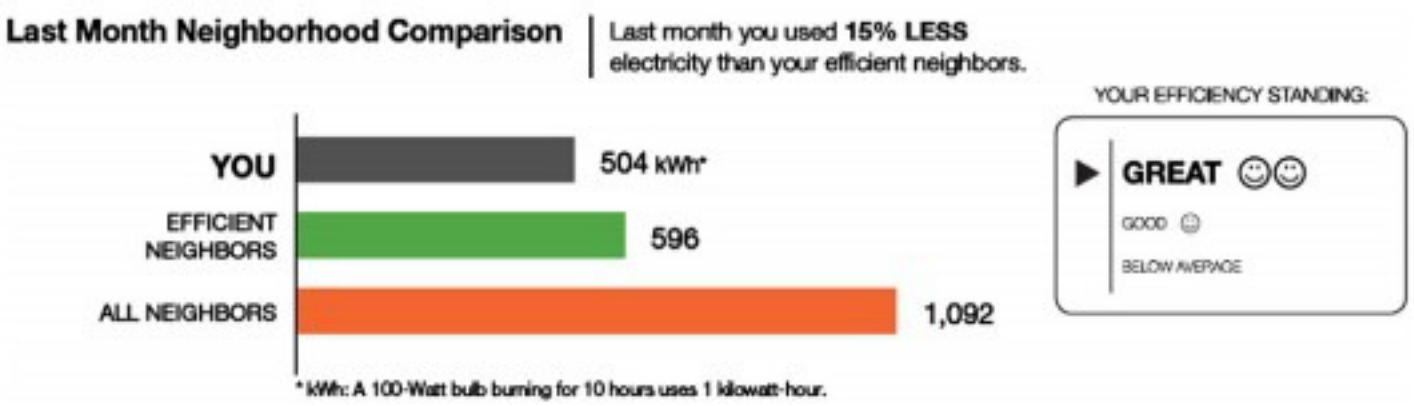


Energiedienst GmbH

→ Im Laborexperiment: weniger starke Effekte, aber immer noch stark

Energie - Stromrechnungen

- Vergleich des Stromverbrauchs
  - Eigener Haushalt, bester Nachbar und Durchschnitt



- Opower: 2-3% Stromeinsparung (in USA)
- Warum? → Soziale Normen

Nutrition - Menu Default

Catering for a conference

A conference experimented with their default menu options *: one year they offered meat as default, the next year vegetarian*

83% MEAT

Meat

80% VEGETARIAN

Vegetarian

Taken from Oliver Payne

Ernährung - Einkaufswagen

- Ziel: gesündere Ernährung
- Wie? Design des Wagens im Supermarkt
  - Trennband für 2 Bereiche
  - Hinweisschild

Bitte legen Sie Obst und Gemüse vor die Trennlinie und andere Produkte dahinter.

- ***Kauf von Obst und Gemüse um 102%* erhöht**

→ Framing durch Design des Wagens

→ Soziale Normen durch Sichtbarkeit

Reduce Littering: case of plastic bags

Introduce a 5 cent tax on plastic bags & customers have to ask for a bag.

- **in the US the littering with plastic bags was reduced by roughly 80%!**

Why?

→ publicity and marketing around the tax

→ salience of price change for the consumer

→ social norm & visibility

→ creating awareness

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Fazit

- **Kontext und Darstellung von Entscheidungssituationen beeinflussen Verhalten**
  - **Defaults, soziale Normen, kognitive Verzerrungen, Feedback, Wahrnehmung von Konsumoptionen**

→ **Bessere Entscheidungen durch Design solcher Situationen**

NUDGE **(Richard Thaler, Cass Sunstein)**

Nachhaltigere Entscheidungen durch Design solcher Situationen

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What is a Nudge?

- Is any attempt at influencing people's behavior in a predictable way without limiting choices

-make it easier for people to choose the option which is (mostly) in favour of the person´s own goal. → **or sustainability**

- using choice architecture to design better decisions

-Relies on insights from behavioral economics and cognitive psychology

- makes use of „irrational behavior" and errors in decison-making

- Is attractive because it works & does not rely on restricions, bans

PRINCIPLES OF NUDGE

i**N**centives

Understand mappings

Defaults

Give feedback

Expect errors

Structure complex choices

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NUDGE – WHEN?

COST-BENEFIT-DELAY

COMPLEX DECISIONS

HIGH NUMBER OF CHOICES

LACK OF FEEDBACK

INFREQUENT DECISIONS

NUDGE – WHEN?

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NUDGE – WHEN?

COST-BENEFIT-DELAY

COMPLEX DECISIONS

HIGH NUMBER OF CHOICES

LACK OF FEEDBACK

INFREQUENT


fotografeleen


edwin.11

?


L2F1

Which one is more sustainable?

NUDGE – WHEN?

Delicious?
Not Delicious?

COST-BENEFIT-DELAY

COMPLEX DECISIONS

HIGH NUMBER OF CHOICES

LACK OF FEEDBACK

INFREQUENT DECISIONS

NUDGE – WHEN?

COST-BENEFIT-DELAY

COMPLEX DECISIONS

HIGH NUMBER OF CHOICES

LACK OF FEEDBACK

INFREQUENT DECISION

Climate Change?

NUDGE – WHEN?

COST-BENEFIT-DELAY

COMPLEX DECISIONS

HIGH NUMBER OF CHOICES

LACK OF FEEDBACK

INFREQUENT DECISIONS

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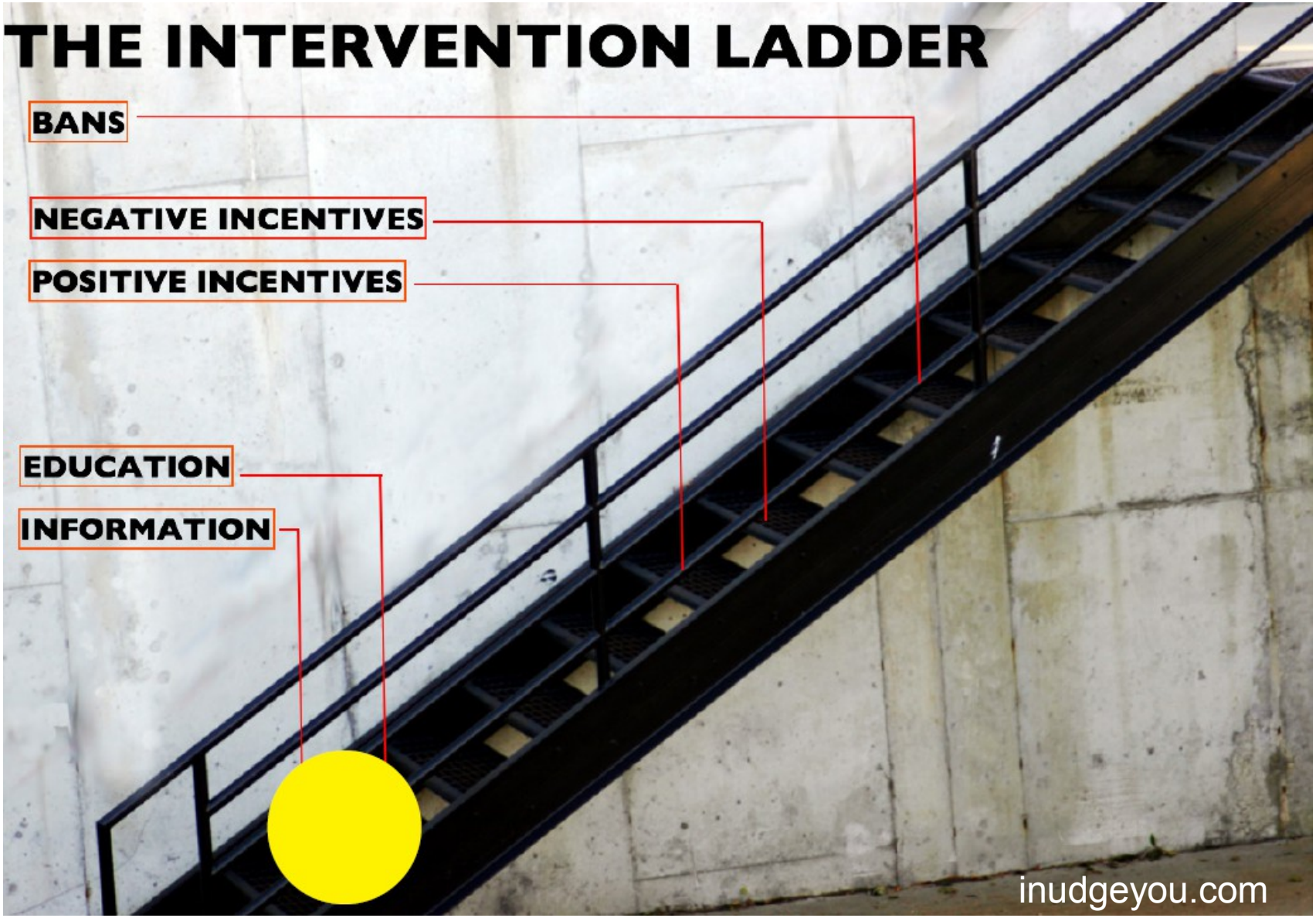
Political Consideration



Pro-Contra Libertarian Paternalism

Def.: Libertarian Paternalism (Thaler, Sunstein)

- **Claim to be a real third way between Liberalism and Paternalism**
- **One specific form of**

  Asymmetric Paternalism (Camerer et al.)

  - "A regulation is asymmetrically paternalistic if it creates large benefits for those who make errors, while imposing little or no harm on those who are fully rational."
- **Costs on sophisticated people should be close to 0**

Pro-Contra Libertarian Paternalism

- Following slides: arguments against Libertarian Paternalism are presented
- Response by Sunstein and Thaler follow

Pro-Contra Libertarian Paternalism

1) Slippery slope argument (for governments)

- slighty intrusive intervention will be followed by highly intrusive manipulations
- example: cigarettes
- **Response:**

a) ask whether proposals have merit in and of themselves

b) opt-out: freedom of choice is secured

c) often some kind of nudge is inevitable, no choice lacks a context

→ government is not able to not nudge people

Pro-Contra Libertarian Paternalism

2) Evil Nudgers and Bad Nudges (public and private)

- choice architects could design nudges that benefit themselves (e.g. politicians)

→ especially when decisions and products/ objects are complex

Response

- give nudge architects good incentives, employ control, monitoring and transparency
- RECAP proposals (record, evaluate, compare alternative prices) → especially for the environment domain

Pro-Contra Libertarian Paternalism

3) The right to be wrong

- Argument: making mistakes is helpful for the person´s process of learning

Response:

- Mistakes still possible with opt-out nudges
- Why not help people who may not learn from their mistakes?
- Especially if the decision is important or the consequences can be dangerous (pedestrians in London)

Pro-Contra Libertarian Paternalism

4) Of punishment, redistribution and choice

- argument 1 (Hardcore Liberals):

  → no intervention at all, no help at all, no redistribution should be implemented

Responses

- minimal costs of redistribution through nudges; help for those who need it, little harm for those who don´t
- some nudges might be more cost-effective than other interventions (e.g. health)
- more equal distribution strengthens a society

Pro-Contra Libertarian Paternalism

4) Of punishment, redistribution and choice

- argument 2: right to choose is most important, force people to choose, not nudging!

Response

- important, in many circumstances advantageous
- to be accompanied with information and education campaigns
  - caompaigns will never be neutral and might not be effective
- but: sometimes decisions are really hard to take or people want to decide not to choose (e.g. ask the waiter to choose a good wine for us)

Pro-Contra Libertarian Paternalism

5) Drawing Lines and the Publicity Principle

- What kind of unconscious subtle nudge is allowed, where is the border? (e.g. subtle messages)

Response

- Take Rawls “Publicity Principle”
  - Governments only put policies into practise which they are able and willing to defend publicly to its own citizens
- PP might be accompanied by monitoring principle (no nudges that you can´t see, feel...)

Pro-Contra Libertarian Paternalism

5) Drawing Lines and the Publicity Principle

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Pro-Contra Libertarian Paternalism

6) Neutrality

How neutral should the government be concerning basic right, freedom of vote, freedom of press?

Response:

- is a Nudger able to help a Nudgee being better of?
  - best potential if: Nudgees are fraught, Nudgers are experts, differences in individual preferences are either not important or can be easily estimated

Pro-Contra Libertarian Paternalism

7) Why stop at libertarian paternalism? Where is the limit?

Response

- → cost-benefit analysis (Asymmetric Pateralism) have to be considered

→ in general it is not easy to say where to stop

- Ethical consideration are important here

→ easier when using…

… actions that can be easily avoided by opting out → that is the border

… interventions that strengthen the reflective system: cooling-off-periods (for reflection) e.g. for door to door sales

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TEIL 1

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TEIL 2

Action Research in Designing Choices for Health and Sustainability

NUDGE PROJEKTTUTORIUM

PART 2

1. BEHAVIORAL DESIGN PROCESS
2. TEST THE NUDGE
3. OUTCOME OF PROJECT
   - Ampel – Nudge
   - Sticker – Nudge
   - Mülltrennungs – Nudge
   - Pfand – Nudge
   - Obst – Nudge

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NUDGE 2

Action Research in Designing Choices for Health and Sustainability

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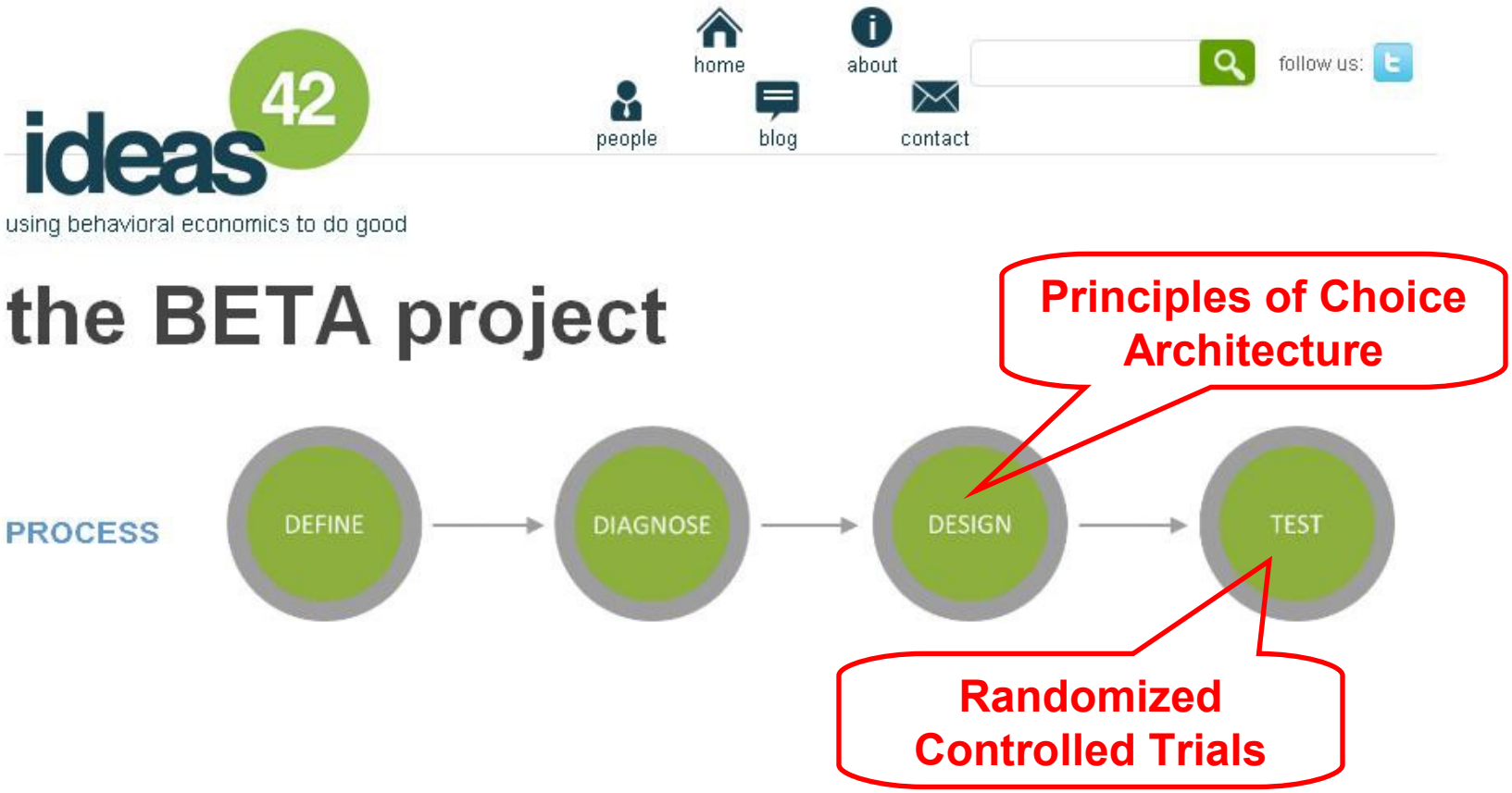
1. Behavioral Design Process



1.1. Define

(Action 1: Observation to define problem)	**Action in the Field**
Step 1: What is the problem? **Step 2: What are the boundaries of the actions & behavioural processes that lead to the problem? Who is involved?** **Step 3: Which observational data for diagnosis is valuable?**	**Planning Process**

1.2. Diagnose

Action 1: Observe and map the whole process **Action 2: Gather necessary background information (wh-questions)**	**Action in the Field**
Step 1: The Behaviour What´s the observed behavior? What could be a target behaviour? **Step 2: The Mental Process** What are the (behavioural) barriers between observed and target behavior? Which mental processes and cognitive biases are involved?	**Planning Process**

1.3. Design

Step 1: The Intervention Which interventions are possible? **Step 2: The Effects** What are the effects of these interventions? Which groups/organisations/individuals are affected negatively/positively? Think of the whole production chain! Who has financial benefits and what will be done with these financial means? **Step 3: The Implementation** Who is deciding about the implementation of the nudge? How costly are they and what ethical considerations have to be taken into account? Should the nudge be accompanied by e.g. information strategy or communication campaign?	**Planning Process**
Action 1: Make a prototype!	**Action in the Field**

1.4. Test

Step 1: Experimental Design How should the experiment to test the effectiveness be designed? **Step 2: Data Collection** Which data is necessary to obtain? Consider borders of the behavioural process and the intervention effect. How should the monitoring and data gathering be designed?	**Planning Process**
Action 1: Conduct a pre-test **Action 2: Conduct the experiment** **Action 3: Collect data**	**Action in the Field**

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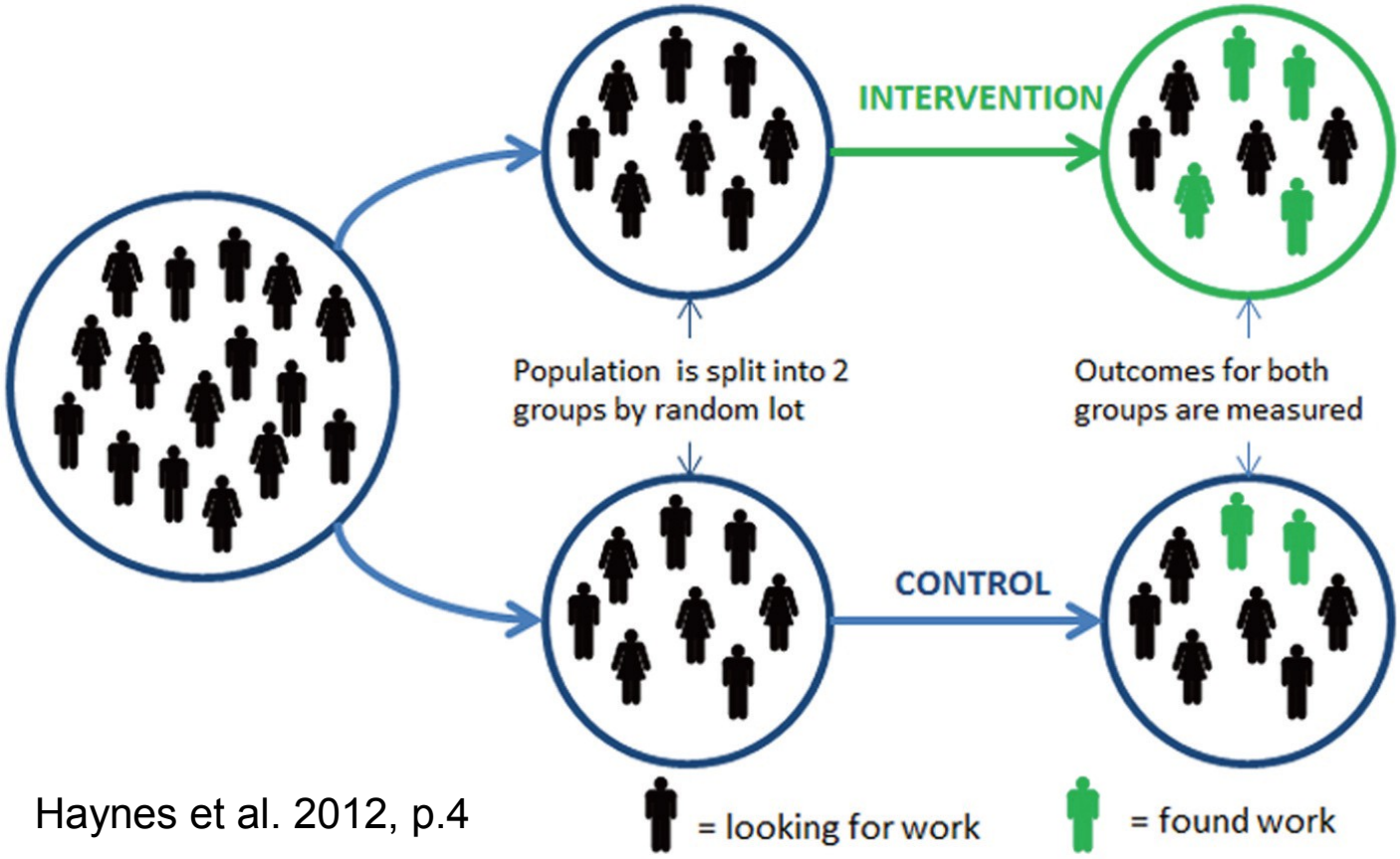
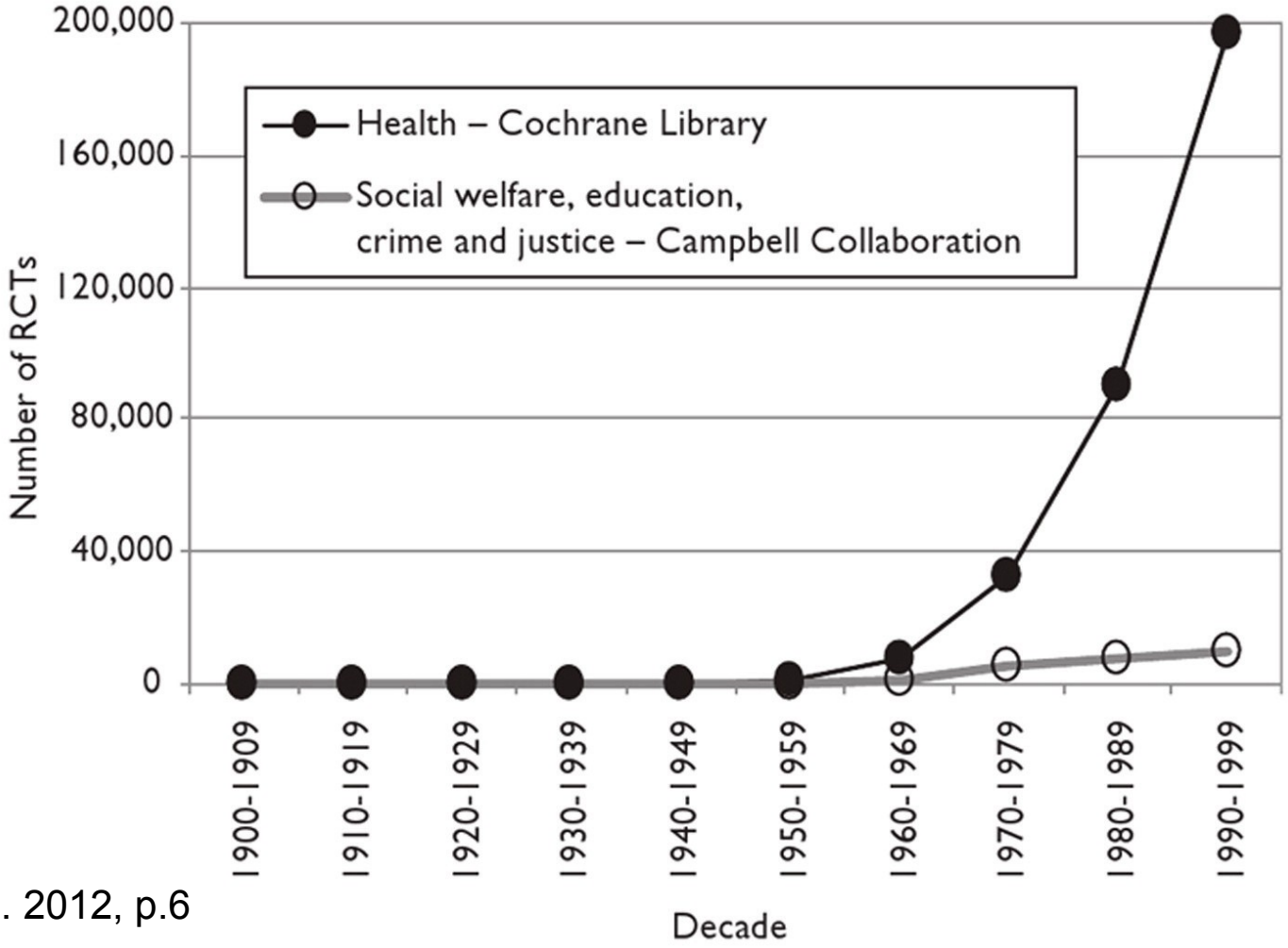
RANDOMIZED CONTROLLED TRIALS (Haynes et al. 2012)



Haynes et al. 2012, p.4

→ representative of the population the nudge is targeting
→ no demographic biases or self-selection problems

RANDOMIZED CONTROLLED TRIALS (Haynes et al. 2012)



Haynes et al. 2012, p.6

Example 1: plate size Nudge (Kallbekken & Sælen [2013])

- Field experiment; observational study
- 52 hotels in 3 groups

control group	plate size group	salient sign group
Natural differences in plate size: 15-28cm	Changed from 24 to 21 cm	„Welcome back! Again! And again! Visit our buffet many times. That´s better than taking a lot once“
38 hotels	7 hotels	7 hotels

- observation for 2,5 months in total
- pre-and post-treatment measurement of waste
- control for: number of guests; food sales revenue

Example 1: plate size Nudge (Kallbekken & Sælen [2013])

Table 1

Average amount of food waste (kg) per hotel in the control group (38 hotels) and test groups (7 hotels in each group), before and after the treatment was introduced. Standard deviations in brackets.

Group	Pre-treatment food waste (kg, average per hotel)	Post-treatment food waste (kg, average per hotel)	
Control	35.07 (34.63)	32.98 (30.77)	
Reduced plate size	36.88 (51.06)	25.84 (27.15)	**19.5% reduction** ($p < 0.001$)
Salient sign	47.76 (38.88)	34.25 (25.84)	**20.5% reduction** ($p < 0.001$)

Example 1: plate size Nudge (Kallbekken & Sælen [2013])

Table 2
Estimated coefficients (and the associated standard errors) from the difference-in-difference analysis.

	Plate size	Salient sign
Guests	0.033 0.004	0.038 0.005
Food sales	0.138 0.015	0.171 0.016
Time trend	−4.317 0.754	−4.428 0.749
Treatment effect	−7.179 1.825	−9.772 1.848

→ Control for other factors that could induce the difference

Example 1: plate size Nudge (Kallbekken & Sælen [2013])

Table 3
Estimated coefficients, standard errors and *p*-values for the observational analysis.

Plate size	2.515 0.917 0.006
Guests	0.033 0.005 0.000
Food sales	0.172 0.016 0.000
Intercept	−35.188 22.045 0.110

1 cm reduction in plate size → 2,5kg reduction of food waste (7.4%)

RANDOMIZED CONTROLLED TRIALS (Haynes et al. 2012)

TEST

1. Identify two or more policy interventions to compare (e.g. old vs. new policy, different variations of a policy).
2. Determine the outcome that the policy is intended to influence and how it will be measured in the trial.
3. Decide on the randomization unit: whether to randomize to *[sic]* intervention and control groups at the level of individuals, institutions (e.g. schools), or geographical areas (e.g. local authorities).
4. Determine how many units (people, institutions, or areas) are required for robust results.
5. Assign each unit to one of the policy interventions, using a robust randomization method.
6. Introduce the policy interventions to the assigned groups.

LEARN

7. Measure the results and determine the impact of the policy interventions.

ADAPT

8. Adapt your policy intervention to reflect your findings.
9. Return to Step 1 to continually improve your understanding of what works.

Excerpt From: Test, Learn, Adapt: Developing Public Policy with Randomized Control Trials

2. the outcome

- Which outcome to measure?

→ Importance vs. Feasibility (e.g. sticker)

→ Additional data to adress differences within a group

3. the randomization unit

- What is feasible? (e.g. deworming)

→ diminish mutual interaction towards outcome

4. group size

- How many units given a certain level of „power“, „level of significance“ and an assumed „effect size“

→ feasibility vs. statistical validity

5. assort through randomization

- How can the groups be equivalent with respect to all key factors?

→ avoid „manipulation“ through researcher

→ Use random e.g. number generator (e.g. sticker)

sample size (power analysis)

Minimum sample size depends on:

- **Power** (the probability that the test will reject the null hypothesis when the alternative hypothesis is true) → often 0.8
- **Alpha** (the probability of rejecting the null hypothesis when it is true) → often 5%
- **proportions** in the different populations

→ For 2 independent samples:
http://www.stat.ubc.ca/~rollin/stats/ssize/b2.html

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NUDGE 2

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Ampel – Nudge

Define & Diagnose

- Was ist das Problem
  - zu viele Fahrradfahrer in Berlin missachten die Fahrrad Ampeln und überfahren sie bei rot
  - Gründe:
    - Eile
    - Selbstüberschätzung
    - Gewohnheit etc.
- Behavioural Process
  - Radfahrer fährt auf Ampel zu, sie ist grün, wird gerade rot, ist bereits rot…
    - Radfahrer hält an
    - Radfahrer fährt bei rot
    - Radfahrer hält kurz and und fährt bei rot

Welche Daten werden gebraucht?
• wie viele Fahrradfahrer fahren bei rot, wie viele bei grün?
• Zusätzlich interessant:
• Geschlecht
• Helm/kein Helm

Ampel – Nudge

DESIGN

- Schilder zur Verdeutlichung der möglichen Gefahr bei dem Überfahren von roten Ampeln
- platziert 20m und 5m vor der Ampel

Ampel – Nudge

TEST

Lehrter Str Gr. 1	Ohne	Mit
g	92%	47%
r	8%	53%

Lehrter Str. Gr. 2	Ohne	Mit
g	57%	83%
r	43%	17%

Eberswalder Str.	Ohne	Mit
g	43%	66%
r	57%	34%

- Ergebnis gesamt
- 90 Fahrradfahrer an 3 verschiedenen Ampeln
- 31 bei rot
- 59 bei grün

→ unterschiedliche Ergebnisse in Nudge (mit)- und Kontrollgruppe (ohne)

Ampel – Nudge

Fazit

- Es konnten keine statistisch signifikanten Aussagen getroffen werden
- Experiment sollte im Sommer wiederholt werden, wenn die Wetterlage fahrradfreundlicher ist
  - Anzahl der Fahrradfahrer im Winter zu gering
- Es sollte unterschieden werden, ob die Ampel bereits grün ist, oder ob die Ampel rot ist und gewartet wird

STICKER – Nudge

Probleme

- Pro Jahr 30 kg nicht adressierte Werbung im Briefkasten, in ganz Deutschland also 1.3 Tonnen (WWF 2011: Wald steckt da, wo wir ihn nicht erwarten. Papierverbrauch in Deutschland. Hintergrundinformationen)
- Ressourcenverbrauch direkt durch Papier und indirekt durch Aufforderung zu unnötigem Konsum
- Nerven, Aufwand und Zeit der Briefkastenleerenden

Warum?

Diagnose durch Vorgängerexperiment, Briefkästen angucken, explorative Interviews (Leitfaden rechts).

Oft Unmut über Werbung, aus verschiedenen Gründen aber kein Aufkleber:

- inertia: lack of impetus and activism
- time constraints: perceived or factual lack of time
- confidence: lack of confidence in the effectiveness of a sticker
- exceptions: wish to still receive certain advertising
- social norm: conformity with neighbours/visitors

STICKER – Nudge

Was tun? Sticker und Flyer

- inertia, time constraints: Aufkleber verteilen
- confidence/legal doubts: “rechtsverbindlich”
- aesthetics: zwei verschiedene Aufkleber –

  Verbraucherzentrale und Baum - zur Auswahl (choice)
- social norm: “Viele BerlinerInnen nutzen diesen [Aufleber] bereits…” (Herdentrieb, vgl. Dolan and Metcalfe 2013: Neighbors, knowledge, and nuggets: two natural field experiments on the role of incentives on energy conservation), Kontrolle, Dankeschön (feedback, crowding out?)

- persönliche Ansprache: Flyer, “Liebe Nachbarn…”, Handschrift (vgl. Garner: Post-It® Note Persuasion: A Sticky Influence), Foto, auch auf türkisch

- framing: Umweltbezug

  Dringlichkeit/Terminierbarkeit: “Kleben auch Sie JETZT…”

STICKER – Nudge

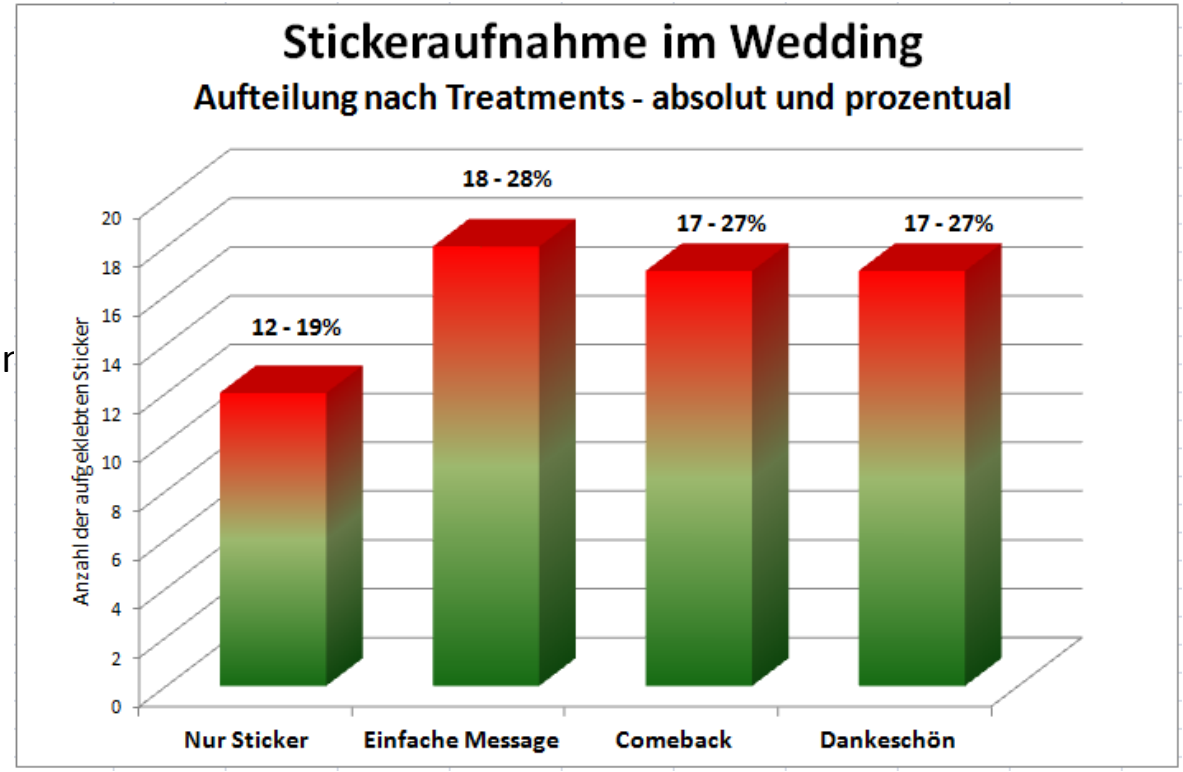
TEST

Treatments

- Nur Aufkleber
- Aufkleber mit Flyer
- Aufkleber mit Flyer und Kontroll-Ankündigung
- Aufkleber mit Flyer, Kontroll- und Dankeschön Ankündigung

Verteilung:

3 Gebiete, je eine Straße (Kreuzberg, Wedding, Neukölln)



STICKER – Nudge

FAZIT

Knapp ¼ der Menschen kleben den Sticker auf

Wohl- und Bildungstand haben einen Einfluss

Noch kein sichtbarer Einflus von unterschiedlichen Textformulierungen – Daten anderer Bezirke abwarten

Flyer an sich führt schon zum höheren uptake

„Lächelnder Baum“ -Sticker ist beliebter, vor allem in der etwas mehr Umweltbewusster Gegend

Statistische Auswertung zusammen mit anderen Bezirken folgt → wir freuen uns auf mehr Einsichten

Mülltrennungs – Nudge

Define

1. Mülltrennung klappt nicht @HU
   Hr. Thielecke: zu viel Papier im Restmüll
   besonders auf Fluren
2. Unachtsamkeit, -klarheit; Studierende (Flur)
3. Daten:
   objektiv: m [kg] Müll
   subjektiv: Müllqualität
   Für Diagnose: Umfrage

Hast du schon einmal gesehen, dass Menschen Müll nicht / falsch trennen?
Warum tun sie das?
Gab es Situationen, wo du Müll nicht getrennt entsorgt hast?
Was könnte sie dazu bewegen Müll ordnungsgemäß/"richtig" zu trennen?
Was müsste geändert werden, damit du Müll auch zukünftig trennst?

Mülltrennungs – Nudge

Diagnose

Umfrage @HU Hauptgebäude:

Gründe für die falsche Entsorgung:

Unverständnis (wozu?) Trotz (nur D)	Achtlosigkeit Bequemlichkeit Faulheit	uneind. Beschriftung Unklarheit (was worein)	fehlende Mögl.keit	Zeitdruck (t-aufwand+Nähe)

Lösungsansätze/ Verbesserungsvorschläge:

Ansprechen (Zivilcourage) @Wand = Platzsparend	Geldanreiz (Rückgabe: Flaschen, Becher) *trendige*, einladende Form	verbesserte Ausschilderung >2 Sprachen & eindeutige, klare Zeichen	Mögl. bieten für Trennung Platz zentral gut sicht- & erreichbar	anderes Trennsystem (Ch→ kein ●) Herstellung (Vereinfachung -meidung)

4

Umfrage @HU Hauptgebäude Fazit:

- Verhalten: zu wenig Trennung - multifaktorielle & individuelle Gründe

Cognitive Biases

- Herd Mentality (Müll sichtbar) & Status quo bias (Lerneffekt)

Mülltrennungs – Nudge

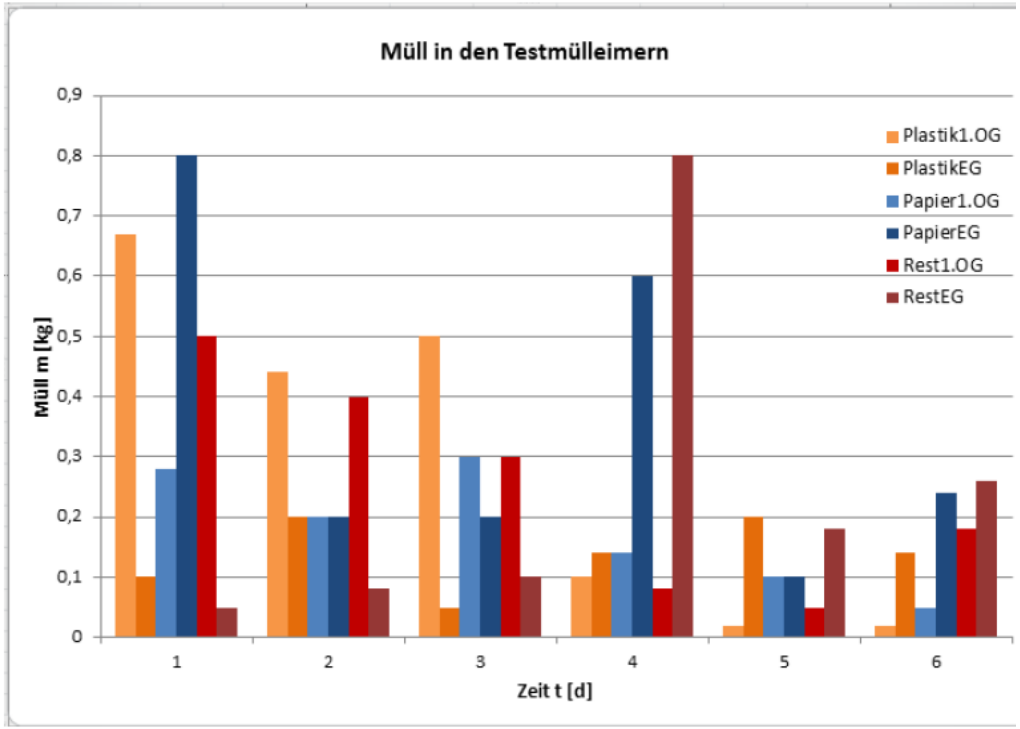
DESIGN

1. Interventions:
Schilder, neuer Mülleimer, Aufkläung / Erziehung
2. Effects:
größere Aufmerksamkeit, Klarheit, mehr Achtsamkeit
Studierende beeinflusst
Finanzielle Gewinne (Papierrecycling) HU
3. Implementation:
Kosten durch: Holz, Drucken (Papier), Mülltüten
Experiment bewusst ohne zusäzl. Infokampagne / Kommunikation

Mülltrennungs – Nudge

Ergebnisse - $m_{Müll}$

- **Plastik** EG ähnl.; 1.OG „sinkt“
- **Papier** im EG schwankt mehr; meist EG ≥ 1. OG
- **Rest** EG↑; 1. OG↓ Do EG Glasflasche
- ab Mi Wrkg **Pappbecherschilder**
- Mi Abend (Tag?) hing Pbs falsch!!!
- Mo (6) schon 15 Uhr wiegen, statt >18 Uhr
- Mo (1&6) ähnl.



Qualitative Einschätzung Reinigungspersonal zu Testmülleimern

- meist gut—sehr gut getrennt

- aber ab und zu Papier (u.a. Pappbecher) / Plastik im Rest
- Tendenz, wie schon zuvor beschrieben (Hr. Thielecke)

Mülltrennungs – Nudge

Fazit

- Trotz mühsamer Absprache mit „allen“ Beteiligten – nicht Informierte stören Experiment
- Hauptgebäude
  - qualitative Angaben sinnlos, weil zu kurz & Fehlen der Schilder
- Testmülleimer
  - 12-40% **genutzt**
  - qualitativ sehr gut getrennt (immer Plastik & Papier, Rest meist)
  - längeren Zeitraum beobachten & abgestimmte/klare Parameter
  - Versuchspersonen Anzahl konstant halten

    (länger: Wochentag spezifische Faktoren?)

- Versuchsdauer i.a. zu kurz

21

Pfand – Nudge

Define & Diagnose

Problem: Menschen, die am Wochenende auf dem Weg zum Feiern sind, schmeißen Flaschen aufgrund verschiedener Faktoren in den Mülleimer

Menschen mit sehr geringem Verdienst haben eine Nische im Pfandsammeln gefunden

diese müssen oft unter unwürdigen Umständen im Müll nach Flaschen wühlen

Problem beginnt bei der Frage: Wo stelle ich meine Flasche ab?

PFAND GEHÖRT DANEBEN

verschiede Gründe

Nichtwissen / kein Bewusstsein

Unachtsamkeit

Bequemlichkeit

Gewohnheit

Ignoranz

keine Aufforderung/Hinweise

Pfand – Nudge

Design

Effects:

Pfandflaschen-Sammler_innen können die Flaschen direkt sehen und mitnehmen, ohne im Müll zu wühlen

Menschen allen Alters setzen sich mit der Thematik auseinander

The Implementation:

Aufkleber auf Mülleimern sind keine Seltenheit, allerdings Nachfrage bei der BVG ratsam. Sticker, Plakate und Flyer können kostenlos bezogen werden. Kampagnenmaterial ist schon vorhanden

Picture 1: Sign attached to the garbage can

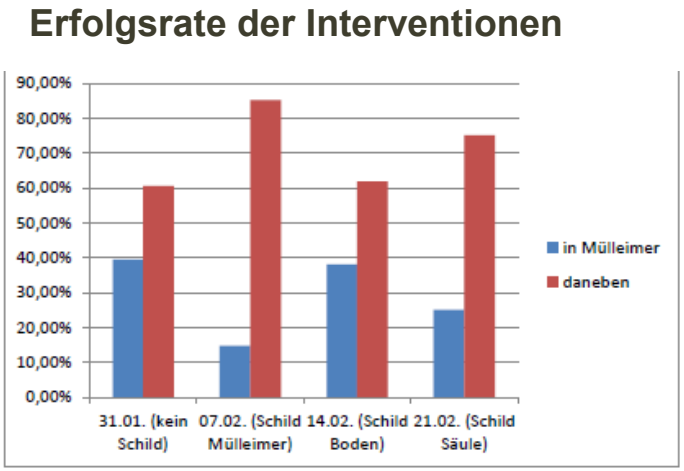
Picture 2: Sign attached to a pillar

Picture 3 and 4: Sign attached to the floor

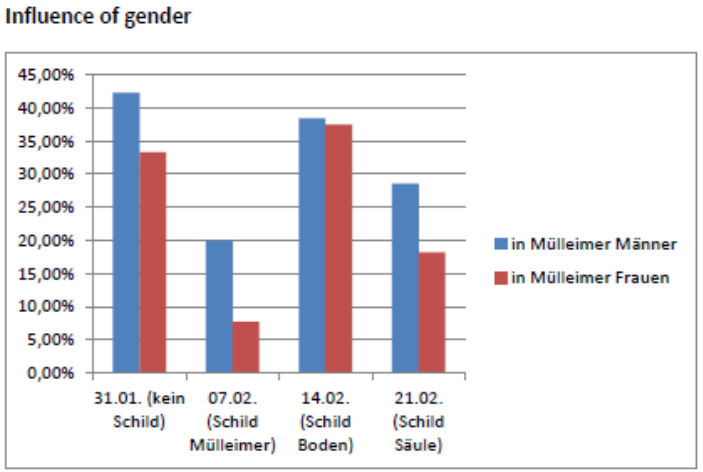
Pfand – Nudge

TEST

Situationen: ohne Plakat vs. mit Plakat
Ergebnis: Anzahl Pfandflaschen im Mülleimer
Messung durch: Zählung der Flaschen v
Ort, jeweils Freitag, im Zeitraum 21 bis 1
Uhr
Potentiell interessante Daten:
In Mülleimer oder daneben?
Geschlecht & Alter
Welche Art Pfandflaschen
Randomisierung: durch natürliche Durchmischung am U-Bahnhof
Between-Design
n(min) für robuste Ergebnisse: 74
Warum Kottbusser Tor?
zentral, viele Bars und Kneipen, eher jüngeres Publikum, eher linksalternativ



Graphic 1: Overall results



Graphic 2: Percentage of bottles thrown into the garbage can among women and men

Obst – Nudge

DEFINE

- Frisches Obst wird direkt nach dem Mensa-Eingang
- Weit entfernt von anderen weniger gesunden Dessertoptionen
- Preiskennzeichnung sehr klein und relativ weit oben
- **Beobachtetes Verhalten:** Tablett nehmen → (Vor- und) Hauptspeise wählen → evtl. Nachspeise → Kasse

→ viele Besucher nehmen das Obstangebot nicht wahr!

Denkvorgang beeinflusst durch:

„Cost-benefit delay, lack of feedback, status quo bias“, vermutlich „hot sate“ der Mensa-Bes

- **Zielverhalten:**
- Obstangebot wahrnehmen und kaufen

Obst – Nudge

DESIGN

2. Wie kann das Obstangebot attraktiver gestaltet werden um den Obstverkauf positiv zu beeinflussen?

- Süßigkeiten werden in Vitrinen an den Kassen angeboten
- Nicht wahrgenommenes Potential für gesunde Dessertoptionen an „prime locations“ vor den Kassen
- ausreichend Platz für Obstkörbe an den Kassen
- Kooperation mit der Mensa Nord

→ Verbesserung möglich ohne Mehrkosten!

Obst – Nudge

TEST

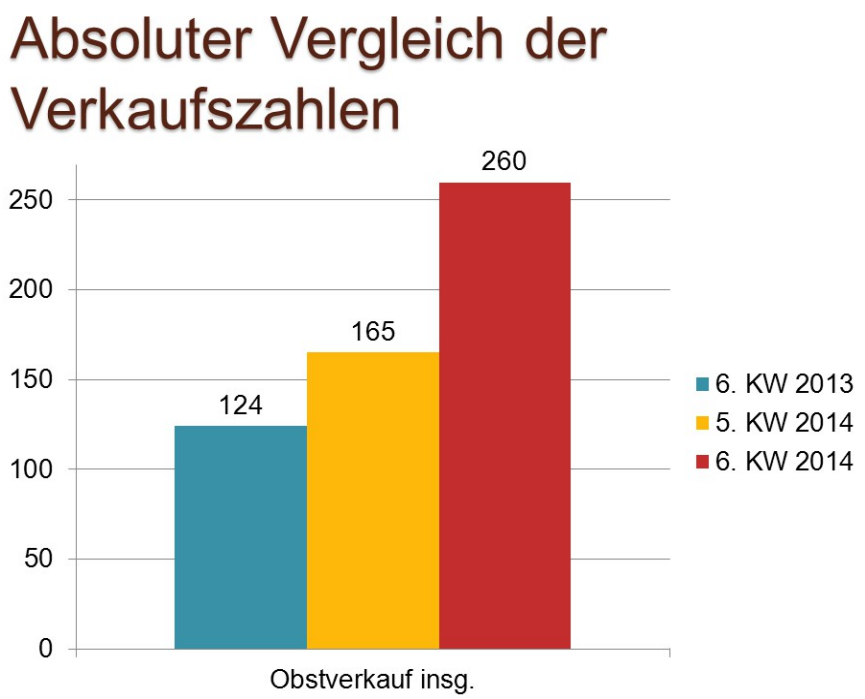
Vier Obstkörbe an den mittleren 6 Kassen

2 verschiedene Hinweis-Schilder: „Obst hält dich gesund ☺“ mit Preisindikation und „Frisches Obst ab sofort an den Kassen“ an der vorherigen Stelle der Obstkörbe

5 Obstsorten pro Korb, Obst bequem zu greifen

Notwendige Daten: Verkaufszahlen

Kontrollwoche (5. KW 2014 bzw. 6. KW 2013); Testwoche (6. KW 2014)



- Gesamtverkaufszahlen von Obst im Vergleich zum Vorjahr wurden mehr als verdoppelt!

→ Zuwachs von **109,7%**

- Gesamtverkaufszahlen im Vergleich von 5. KW und 6. KW 2014

→Zuwachs von 57,6%

NUDGE - PROJEKTTUTORIUM

WE THANK THE

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