# Litter Summit 2013

## Karsten Schmidt

13 November 2013
Mossley Mill
Newtownabbey

TIDY Northern Ireland

November 13, 2013 @ Keep Northern Ireland Tidy

# Nudging litter into the bin

## A behavioural perspective on littering - cases from Copenhagen

UNIVERSITAS ROSKILDENSIS · IN TRANQUILLO MORS · IN FLUCTU VITA

ISSP
THE INITIATIVE FOR SCIENCE, SOCIETY AND POLICY

DANSK NUDGING NETVÆRK

UNIVERSITY OF SOUTHERN DENMARK

# iNudgeyou

www.inudgeyou.com

guirilla

RESEARCH

ODENSE KOMMUNE

GreeNudge

Copenhagen Business School
HANDELSHØJSKOLEN

Sund By Netværket

FREDENSBORG KOMMUNE

HOLD DANMARK RENT
www.holddanmarkrent.dk

Miljøministeriet

FORBRUGERRÅDET

HORESTA

MIND LAB

PRIFYSGOL BANGOR UNIVERSITY

Copenhagen Airports CPH

FORSKNINGSCENTER FOR FOREBYGGELSE OG SUNDHED

CE

ROSKILDE FESTIVAL 2012
5-8 JULY

midt regionmidtjylland

AARHUS KOMMUNE

Kolding Kommune

VESTFORBRÆNDING

DANSK NUDGING NETVÆRK

NUDGE

POST

SAMMEN OM BYEN

KØBENHAVNS KOMMUNE
Teknik- og Miljøforvaltningen

KONKURRENCE- OG FORBRUGERSTYRELSEN

AALBORG UNIVERSITY COPENHAGEN

SYDDANSK UNIVERSITET

Ingeniøren

TrygFonden

ERHVERVSSTYRELSEN

BOJESEN

DEA
VI FREMMER VIDEN

SKATTEMINISTERIET

Kræftens Bekæmpelse

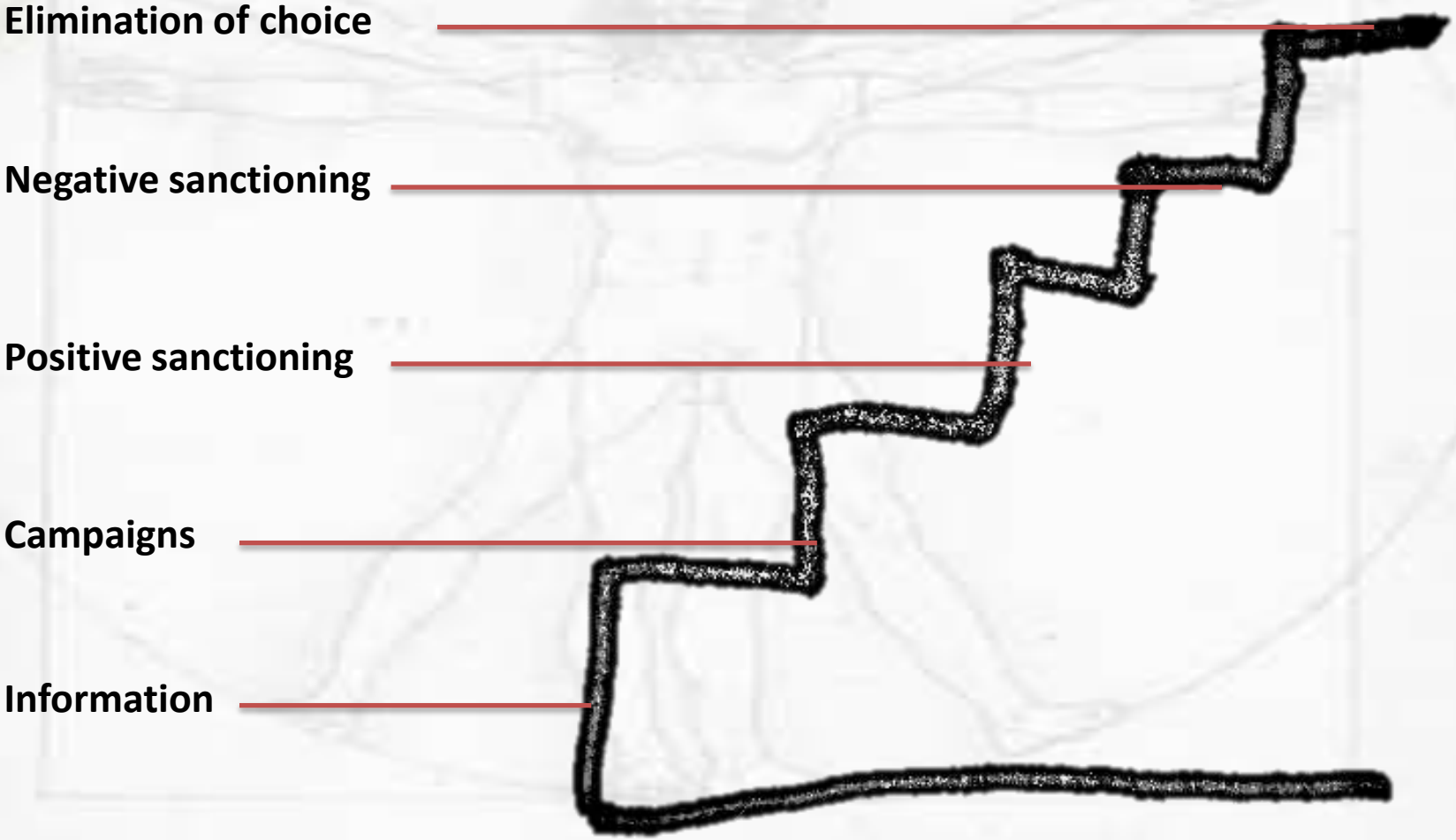
diabetes foreningen

# Accumulated behavior

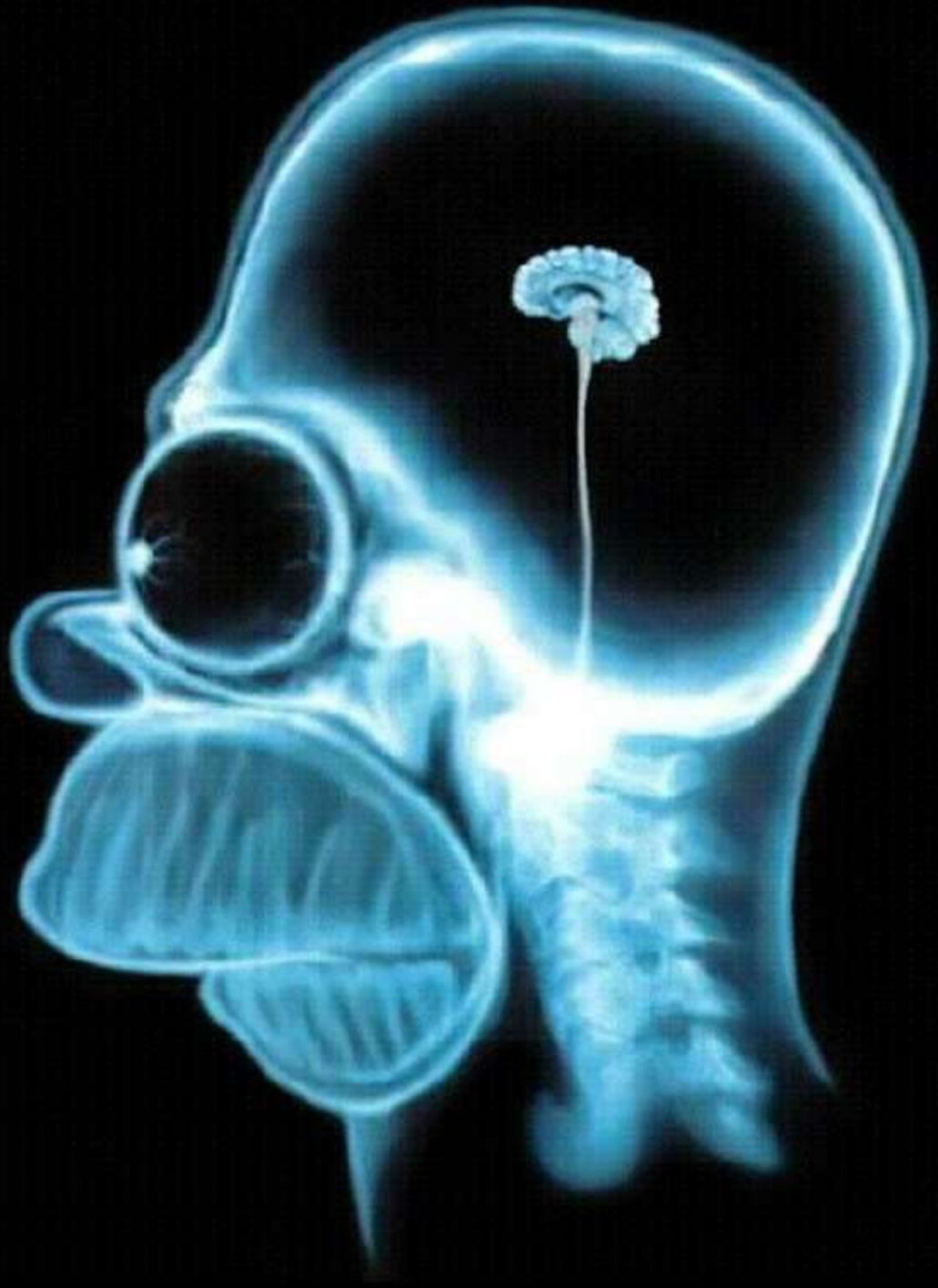
# Litter in its behavioural contexts


JOHN SNOW

# THE INTERVENTION LADDER




Adapted from Public Health: Ethical Issues Nuffield Council on Bioethics, (2007) Cambridge Publishers Ltd., p. 42



# BEHAVIOURAL INSIGHTS

# DUAL PROCESS THEORY


1. Sloman S.A. (1996) The empirical case for two systems of reasoning. *Psychological Bulletin*, *119*, 3-22.
2. Kahneman D. (2003) A perspective on judgement and choice. *American Psychologist*. *58*, 697-720.
3. Evans, J. (2003). "In two minds: dual-process accounts of reasoning". *TRENDS in Cognitive Sciences* **7** (10).
4. Stanovich, K E.; West, R F. (2000). "Individual difference in reasoning: implications for the rationality debate?". *Behavioural and Brain Sciences* **23**: 645–726.
5. Stupple, E.; Waterhouse (2009). "Negations In Syllogistic Reasoning: Evidence for a Heuristic - analytic Conflict". *The Quarterly Journal of Experimental Psychology* **62** (8).

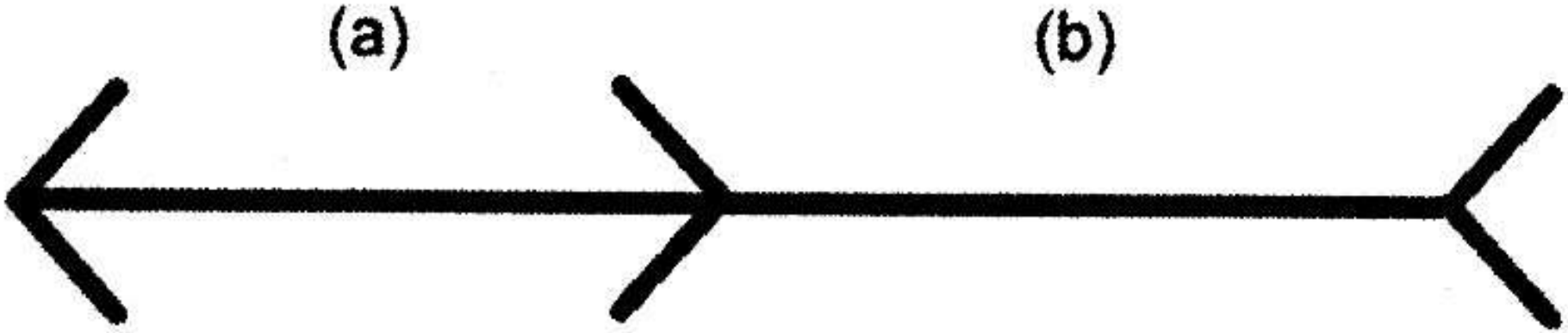
$$34 \times 52 = \underline{\quad\quad}$$

# Dual process theory

(Kahneman *Thinking, Fast and Slow*, 2011)

| *Automatic system* | *Reflective System* |
|---|---|
| Uncontrolled | Controlled |
| Effortless | Effortful |
| Associative | Reasoned |
| Fast | Slow |
| Unconscious | Self-aware |
| Skilled | Rule following |

| *Caused* | *Actions* |
|---|---|
| Behaviour | Choice |

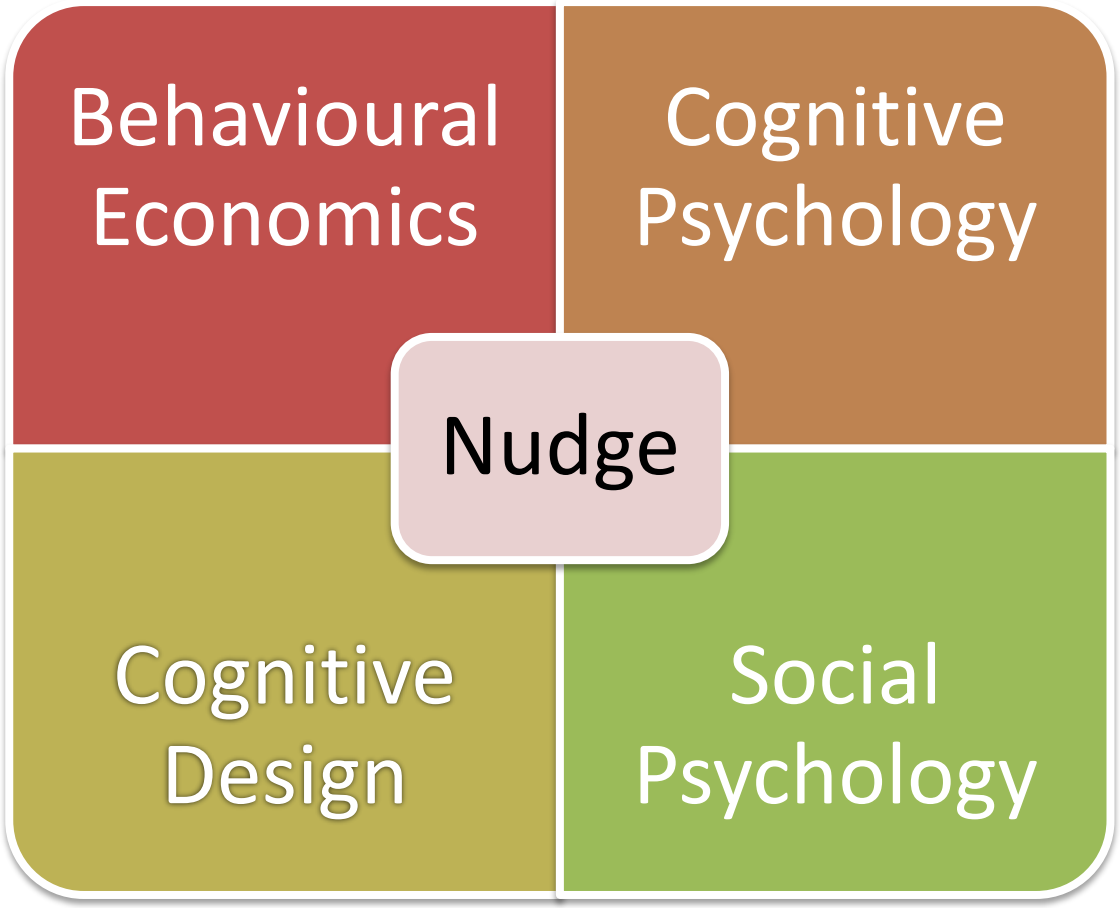

(a)
(b)

Shiv, B. & A. Fedorikhin (1999) Heart and Mind in Conflict: the Interplay of Affect and Cognition in Consumer Decision Making, *Journal of Consumer Research*, Vol. 26, No. 3 (December 1999) (pp. 278-292)

**Decision-making and behavioral biases**

**Anchoring** – the common human tendency to rely too heavily, or "anchor," on one trait or piece of information when making decisions.
**Attentional Bias** – implicit cognitive bias defined as the tendency of emotionally dominant stimuli in one's environment to preferentially draw and hold attention.
**Backfire effect** - Evidence disconfirming our beliefs only strengthens them.
**Bandwagon effect** – the tendency to do (or believe) things because many other people do (or believe) the same. Related to groupthink and herd behavior.
**Bias blind spot** – the tendency to see oneself as less biased than other people.[2]
**Choice-supportive bias** – the tendency to remember one's choices as better than they actually were.[3]
**Confirmation bias** – the tendency to search for or interpret information in a way that confirms one's preconceptions.[4]
**Congruence bias** – the tendency to test hypotheses exclusively through direct testing, in contrast to tests of possible alternative hypotheses.
**Contrast effect** – the enhancement or diminishing of a weight or other measurement when compared with a recently observed contrasting object.[5]
**Denomination effect** – the tendency to spend more money when it is denominated in small amounts (e.g. coins) rather than large amounts (e.g. bills).[6]
**Distinction bias** – the tendency to view two options as more dissimilar when evaluating them simultaneously than when evaluating them separately.[7]
**Empathy gap** - the tendency to underestimate the influence or strength of feelings, in either oneself or others.
**Endowment effect** – "the fact that people often demand much more to give up an object than they would be willing to pay to acquire it".[8]
**Experimenter's or Expectation bias** – the tendency for experimenters to believe, certify, and publish data that agree with their expectations for the outcome of an experiment, and to disbelieve,

# Applied Behavioural Science




Hansen, PG (Forthcoming 2013) The New Policy ABC: Applied Behavioural sCience .

# nudge

A nudge is an umbrella term for any attempt at influencing choices and behaviour in a predictable way without

1) limiting the original choice set, or

1) making alternatives appreciable more costly in terms of time, trouble, social sanctions, and so forth.

Hansen, PG & Jespersen, AM (2013) Nudge & The Manipulation of Choice – A Framework for the Responsible Use of the Nudge Approach to Behaviour Change in Public Policy, *The European Journal of Risk Regulation,* Volume 1, 2013, 3-28

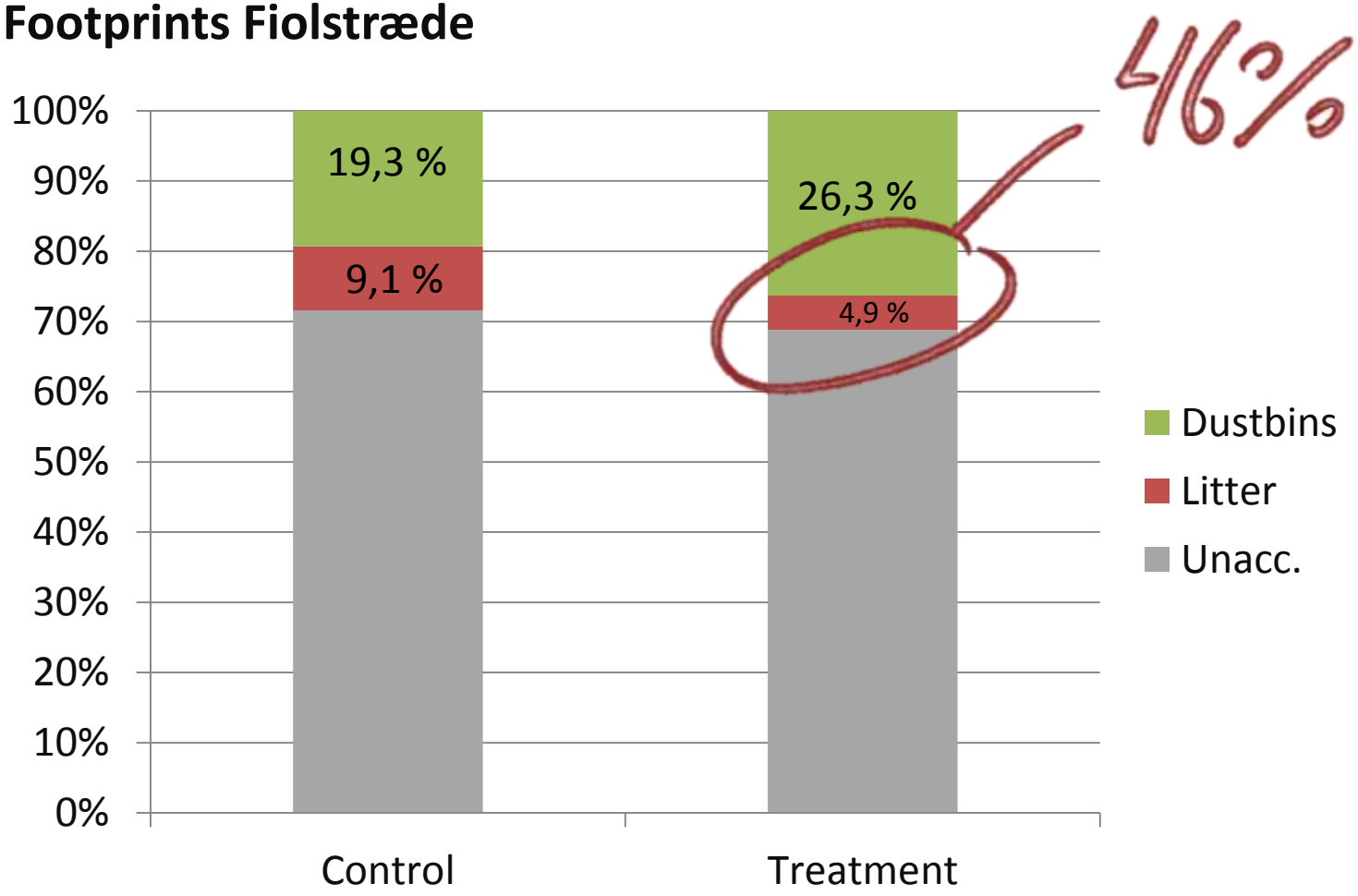

2011 - 2013

# Green Footprints

Hansen, PG; Jespersen, AM (2012) Nudge, adfærdsøkonomi og 'økonomisk psykologi' – fra eksperiment til skraldespand, *Pyskologisk Set*, p. 15-23.

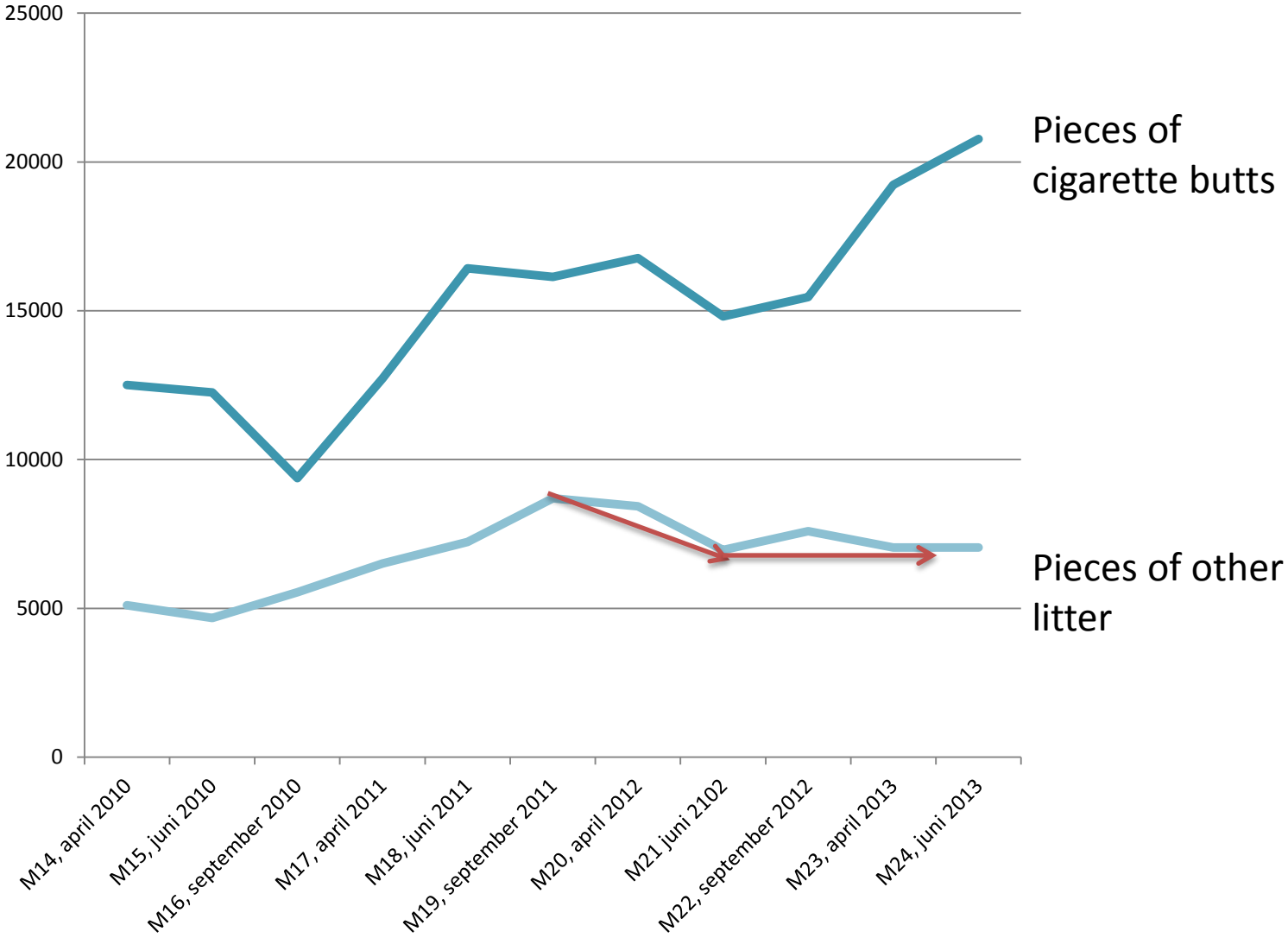
# Salience
# Spotlight effect
# Signalling of intent

## Footprints Fiolstræde




REN
KBH

# Pieces of litter collected in test areas




Copenhagen 2013-2014

# Cigarette Butts

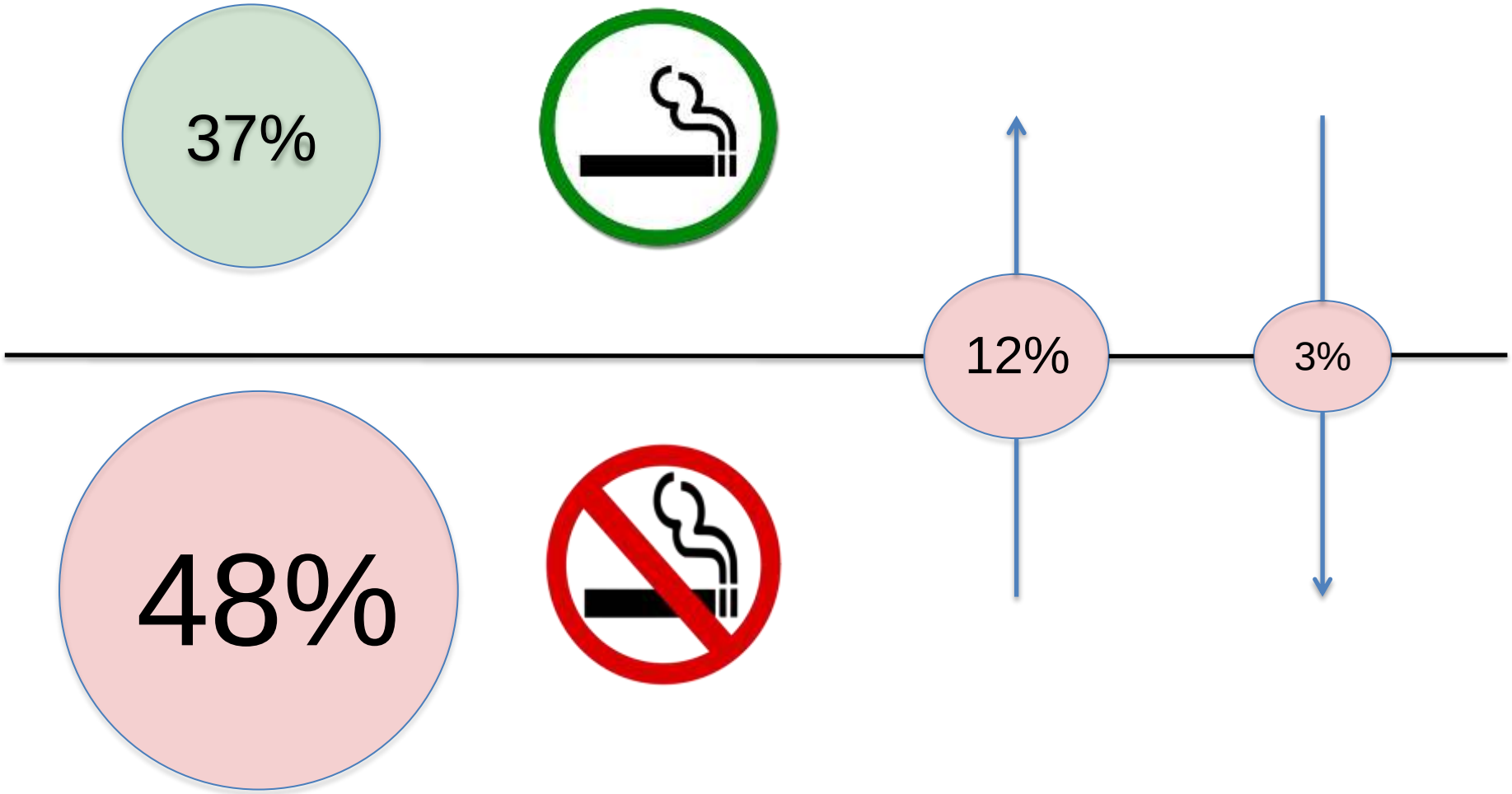

2013

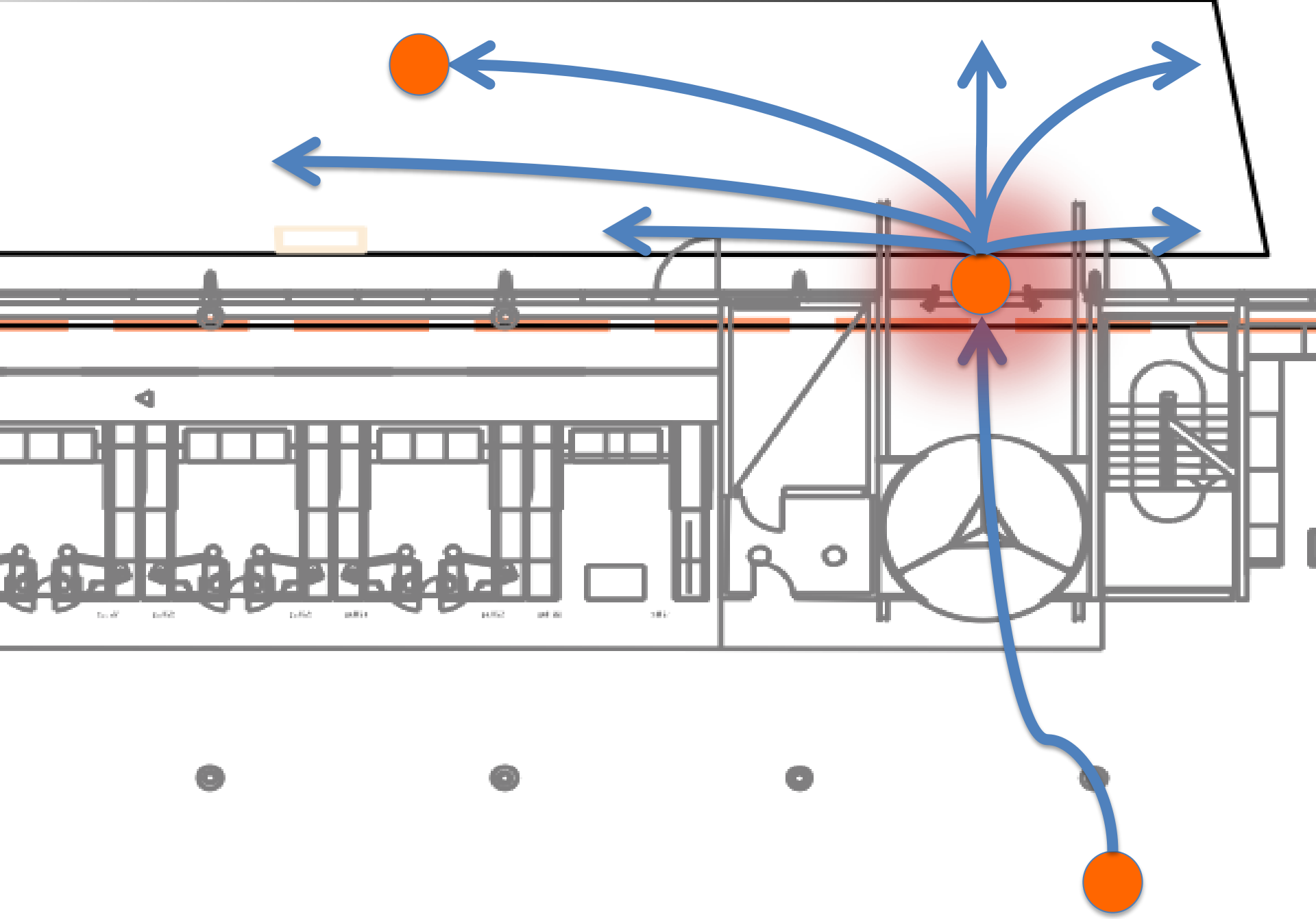
# Smokeless Terminals

Smokeless Terminals
Hansen PG; Schmidt K; Skov KL (2013)

# Where do smokers come from?

# Types and distribution of transgressions



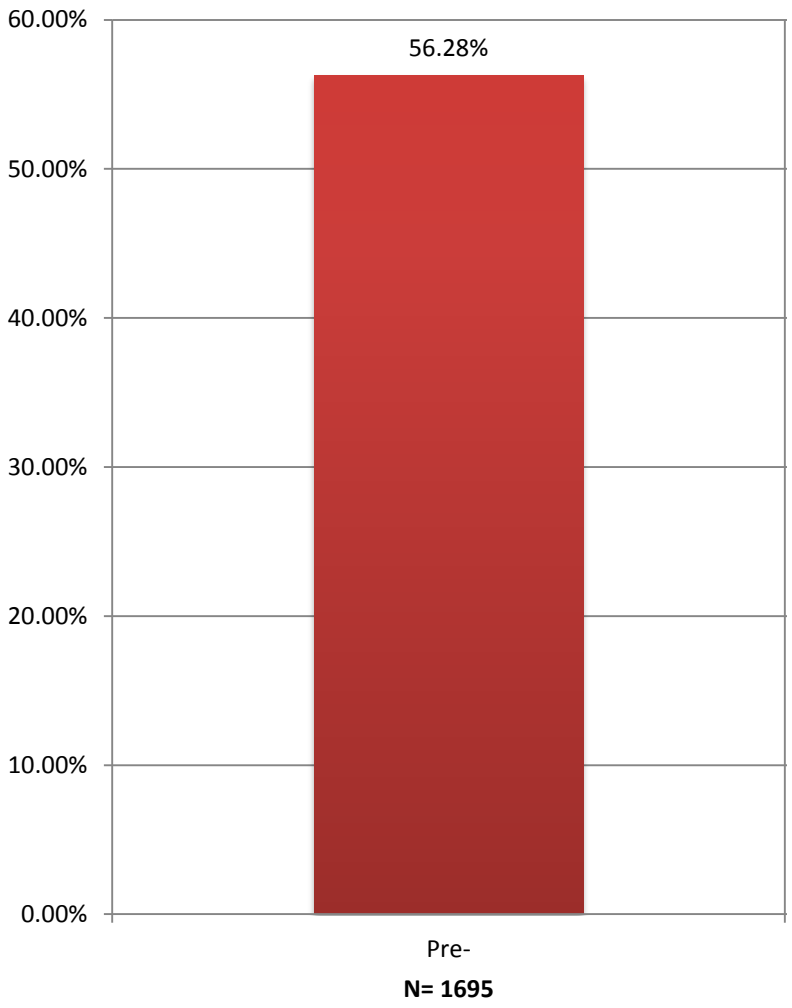



# Priming / intention implementation


# Physical affordances

# Visual attraction / Salience

# Main effect: total shares of transgressions, pre- and post intervention



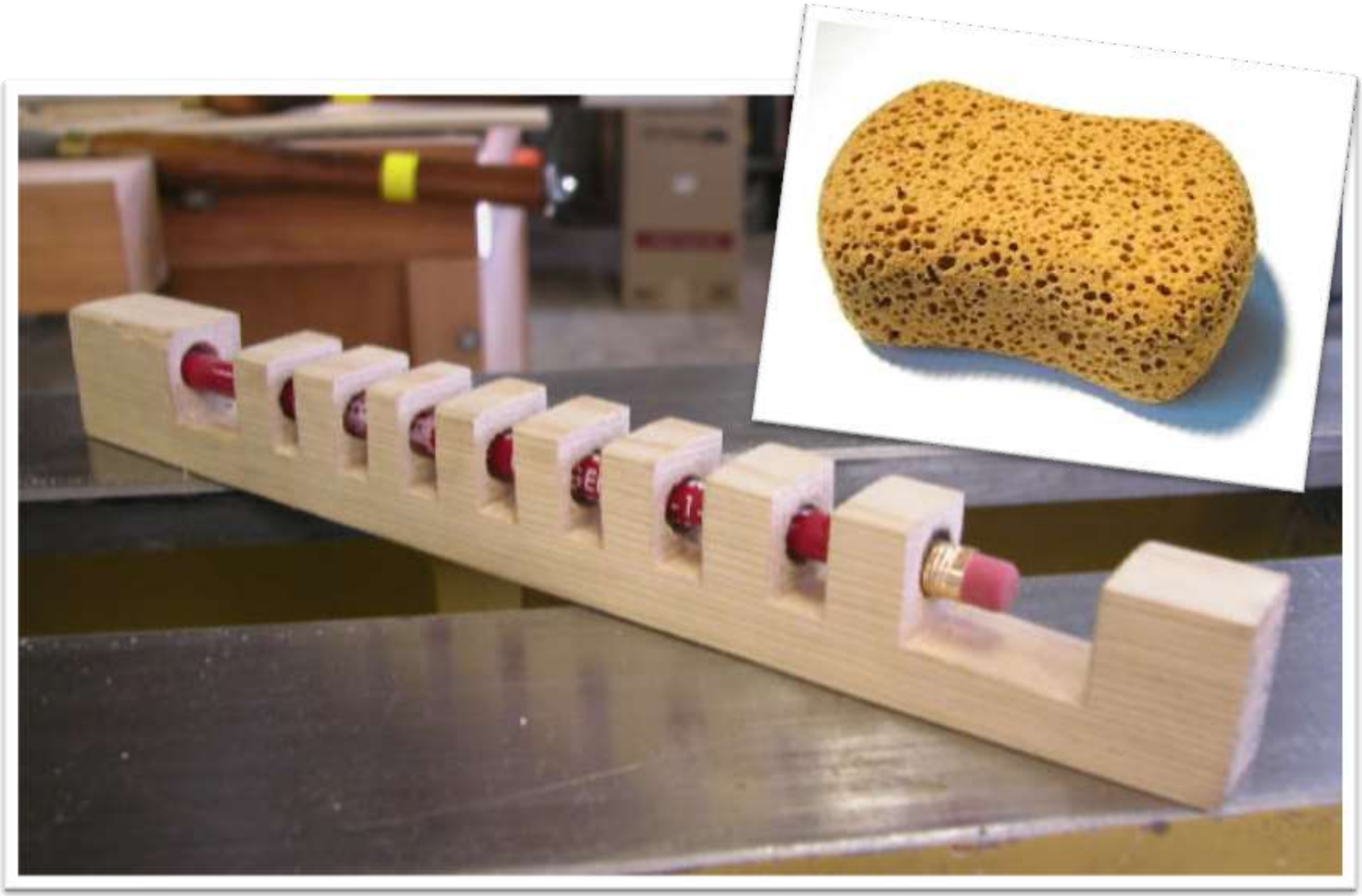

The main effect pursued in the intervention was the reduction of smoking activity in the no-smoking zones directly outside the door areas of the Airport. As total shares of transgressions pre- and post intervention show the intervention succeeded in reducing this by more than 50%. In particular, the intervention has caused a change from transgressors being the *majority* group to being the *minority* group.


P6
D
1


-230.000 in Oktober


-1.200.000 since June

# No easy solutions



Thanks to Rani Saad Ideas42





# iNudgeyou

www.inudgeyou.com

**karsten@inudgeyou.com**

# Litter Summit 2013

## Karsten Schmidt

13 November 2013
Mossley Mill
Newtownabbey

TIDY Northern Ireland