



STRIVING FOR MORE SUSTAINABLE CONSUMPTION

THE IMPORTANCE OF GOOD THEORIES AND DATA ANALYSIS TRICKS

Dr. Michael Puntiroli



2 PLAN FOR THE DAY

- Transition from Pure Unapplied Psychology («Blue Sky Science») to Applied Consumer Behavior (in between Psychology and Marketing)
- SCCER CREST as an Organization and Project
- Applied Research within SCCER CREST
- The power of data in my own personal transition
- How data analysis can open up doors for you in applied research



3 THE SPECIFIC GOAL

- Specifically, the goal is to
 - A. Appreciate importance of data techniques in getting concrete answers to concrete behavioral issues
 - B. Intelligent Interventions are usually based upon a tight link between Theory and Practice



4 THE WIDER GOAL

- I would like to inspire you
- Yes, we will speak about behavioral interventions, energy related behaviors and data...
 - But the real goal is for you to leave this talk slightly more aware of your possibilities
 - And slightly more inspired about the amount of possibilities you have, if you are just willing to sit down and explore them all



INTRODUCTIONS



YOU FIRST

- What are you studying?
- What would you like to do next?



QUICK FACTS ABOUT MYSELF

- PhD Michael Puntiroli
- Bachelor in Cognitive Psychology (Strathclyde University, Glasgow)
- Masters in Research Methods, focus placed on Statistics and Programming (University of Glasgow)
- Doctorate in Cognitive Psychology (University of Geneva)
- Published several scientific articles on Visual Perception and Selective Attention





RESEARCH ARTICLE

Perceptual enhancement prior to intended and involuntary saccades

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Prior to an eye movement, attention is gradually shifted toward the point where the saccade will land. Our goal was to better understand the allocation of attention in an oculomotor capture paradigm for saccades that go straight to the eye movement target and for saccades that go to a distractor and are followed by corrective saccades to the target (i.e., involuntary saccades). We also sought to test facilitation at the future retinotopic location of target and nontarget objects, with the principal aim of verifying whether the remapping process accounts for the retinal displacement caused by involuntary saccades. Two experiments were run employing a dual-task design, primarily requiring participants to perform saccades toward a target while discriminating an asymmetric cross presented briefly before saccade onset. The results clearly show perceptual facilitation at the target location for goal-directed saccades and at the distractor location when oculomotor capture occurred. Facilitation was observed at a location relating to the remapping of a future saccade landing point, in sequences of oculomotor capture. In contrast, performance remained unaffected at the remapped location of a salient distracting object,

Introduction

Vision science strives to determine how attention is distributed over objects in our surroundings, the relation this distribution has with upcoming eye movements, and the information that is extracted during the process. The allocation of covert attention to a competitive process jointly influenced by bottom-up and top-down factors (Cave & Wolfe, 1990; Wolfe, 1994), in which each perceived object is processed according to local salience-based features (e.g., brightness) and weighted by task relevance (H. J. Müller & Kruminenacher, 2006; Zehetleitner, Proulx, & Müller, 2009). Accordingly, when salient objects are displayed along with a search target, they compete for attentional resources and have been shown to cause substantial interference (Bacon & Egeth, 1994; S. I. Becker, 2007; Fecteau & Munoz, 2006; Folk & Remington, 1998; Folk, Remington, & Johnston, 1992; Lamy, Tsai, & Egeth, 2003; Theeuwes, 1991, 1992; Yantis & Hill-

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Abstract Hick's law states that increasing the number of response alternatives increases reaction time. Lawrence and colleagues report an exception to the law, whereby more alternatives lead to shorter saccadic reaction times (SRTs). Usher and McClelland (Psychol Rev 108(3):550–592, doi:10.1037/0033-295X.108.3.550, 2001) predict such an anti-Hick's effect when accuracy is not prioritized in a task, which should result in higher error rates with more response alternatives, and in turn to a shorter right tail of the SRT distribution. In the current study, we aim to replicate the original controversial findings and we compare them to these predictions by examining error rates and SRT distributions. Two experiments were conducted where participants made rapid eye movements to one of few or many alternatives. In Experiment 1, the saccade target was an onset and participants started either with few or many possible target locations and then alternated between conditions. An anti-Hick's effect emerged only when participants had started with a small set-size block. In Experiment 2, placeholders were displayed at the possible target locations and independent groups were used. A reliable anti-Hick's effect in SRTs was observed. However, results

conditions were not more pronounced at the slower end of the distributions. In line with Lawrence and colleagues, we speculate that initial motor preparation, and the subsequent inhibition to counteract a premature response, may induce the anti-Hick's effect.

Keywords Decision-making · Saccades · Movement planning · Trade-offs · Saccade distribution

Introduction

In typical choice reaction time tasks, a predominant finding is that reaction times increase linearly with the logarithm of the number of response alternatives, a regularity known as Hick's law (Hick 1952; Hyman 1953). From early on, Hick's law has been modelled with different computational approaches. A more recent example comes from Usher and colleagues (Usher and McClelland 2001; Usher et al. 2002) who developed an accumulator model, simulating the time it takes to reach a decision by assuming several competing units, each accumulating sensory evidence for one of

Placeholder objects shape spatial attention effects before eye movements

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In the time leading up to a saccade, the saccade target is perceptually enhanced compared to other objects in the visual field. This enhancement is attributed to a shift of spatial attention toward the target. We examined whether the presence of visual objects is critical for the perceptual enhancement at the saccade target to occur. We hypothesized that attention may need an object to focus on in order to be effective. We conducted four experiments using a dual-task design, where participants performed eye movements either to a location demarked by a placeholder or to an empty screen location where no object was displayed. At the same time, they discriminated a probe flashed at the location targeted by the eye movement or at one of two control locations. A strong perceptual advantage at the saccade target location was observed only when placeholders were displayed at the time of probe presentation. The complete absence of placeholders (Experiment 1), the presence of placeholders before but not during probe presentation (Experiment 3), and the presence of objects only around the saccade target (Experiments 3 and 4) led to a strong reduction in the saccade-target benefit. We conclude that placeholders may indeed be necessary to observe presaccadic enhancement at the saccade target. However, this is not because placeholders provide an object to focus attention on, but rather because they produce a masking (or crowding) effect. This detrimental effect is overcome by the presaccadic shift of attention, resulting in heightened perception only at the saccade target object.

Introduction

Forced by design of the visual system, we shift our gaze several times per second. Each time, we select a

visual element of interest from the low-resolution periphery and bring it into focus in order to obtain more fine-grained visual information. When an object or location from the periphery is selected over another as the target of the next gaze shift, it becomes perceptually enhanced compared to other objects in the visual field (e.g., Deubel & Schneider, 1996; Hoffman & Subramanian, 1995; Kowler, Anderson, Doherty, & Blaser, 1995; Shepherd, Findlay, & Hockey, 1986). The process underlying this enhancement is thought to be a shift of covert attention just before the eye movement is launched, allowing for some of the object's fine visual features to be obtained even before it is foveated. For instance, in the classic study by Deubel and Schneider (1996), participants executed eye movements toward a cued saccade target, presented among nontarget objects, while also discriminating an attentional probe (E or 2) briefly flashed before the eye movement. The probe could appear either at the saccade target or at one of the nontarget objects. The results showed that discrimination performance was much better at the saccade target compared to the other objects. This perceptual benefit was narrowly centered on the saccade target. Probes as close as 1.7° of visual angle (va) away from the designated landing point of the eye movement were not better discriminated than more distant ones. Virtually identical observations have been reported in other studies, with enhancement at the saccade target always confined within a small area (Baldau & Deubel, 2008; Godijn & Theeuwes, 2003; Kowler et al., 1995).

The enhancement at the saccade target is tightly linked to the execution of the saccade, suggesting an obligatory coupling between attention and gaze shifts:

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SCIENTIFIC
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OPEN

The spread of presaccadic attention depends on the spatial configuration of the visual scene

Martin Szinte^{1,2}, Michael Puntiroli¹ & Heiner Deubel¹

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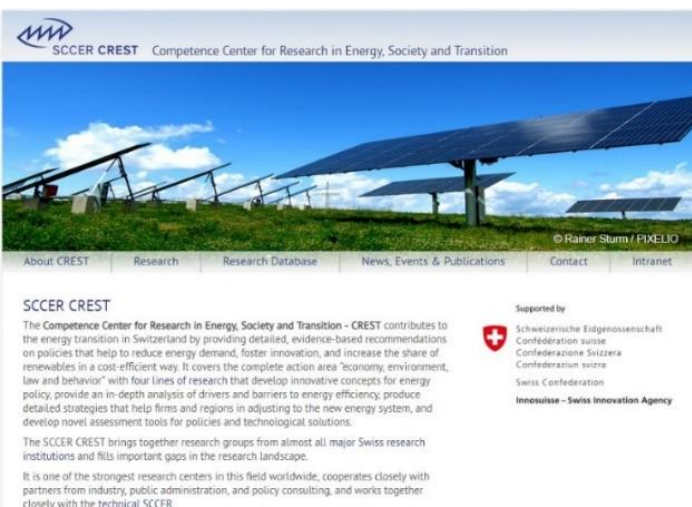
When preparing a saccade, attentional resources are focused at the saccade target and its immediate vicinity. Here we show that this does not hold true when saccades are prepared toward a recently extinguished target. We obtained detailed maps of orientation sensitivity when participants prepared a saccade toward a target that either remained on the screen or disappeared before the eyes moved. We found that attention was mainly focused on the immediate surround of the visible target and spread to more peripheral locations as a function of the distance from the cue and the delay between the target's disappearance and the saccade. Interestingly, this spread was not accompanied with a spread of the saccade endpoint. These results suggest that presaccadic attention and saccade programming are two distinct processes that can be dissociated as a function of their interaction with the spatial configuration of the visual scene.



Switching to more applied interventions in 2017...



- Conduct research for SCCER CREST
 - SCCER CREST is a governmental research network, spanning all major research institutions in Switzerland. SCCER CREST produces detailed, evidence-based insights on consumer's habits, behaviours and personality



The screenshot shows the SCCER CREST website. At the top left is the logo and the text "SCCER CREST Competence Center for Research in Energy, Society and Transition". Below this is a large image of solar panels in a field under a blue sky. A navigation menu is visible at the bottom of the page with links: "About CREST", "Research", "Research Database", "News, Events & Publications", "Contact", and "Intranet".

SCCER CREST

The Competence Center for Research in Energy, Society and Transition - CREST contributes to the energy transition in Switzerland by providing detailed, evidence-based recommendations on policies that help to reduce energy demand, foster innovation, and increase the share of renewables in a cost-efficient way. It covers the complete action area "economy, environment, law and behavior" with four lines of research that develop innovative concepts for energy policy, provide an in-depth analysis of drivers and barriers to energy efficiency, produce detailed strategies that help firms and regions in adjusting to the new energy system, and develop novel assessment tools for policies and technological solutions.

The SCCER CREST brings together research groups from almost all major Swiss research institutions and fills important gaps in the research landscape.

It is one of the strongest research centers in this field worldwide, cooperates closely with partners from industry, public administration, and policy consulting, and works together closely with the technical SCCER.

Supported by

- Schweizerische Eidgenossenschaft
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Confederaziun svizra
Swiss Confederation
- Innosuisse - Swiss Innovation Agency

Swiss Household Energy Demand Survey (SHEDS): Objectives, Design, and Implementation

Sylvain Weber
 Paul Burger
 Mehdi Farsi
 Adan L. Martinez-Cruz
 Michael Puntiroli
 Iljana Schubert
 Benjamin Volland

October 2017

Work Package 2: Change of Behavior
 SCCER CREST





-
- I also teach “Quantitative Methods in Management” and “Customer Relationship Management” at the Institute of Management (University of Neuchâtel)
 - I conduct research the links the University of Geneva, the University of Neuchâtel and SCCER CREST
 - Here are some examples:
 - **Cheating** and Lying in a Managerial Context
 - How to best Promote:
 - **Animal Causes** in order to increase donations
 - Environmental Causes in order to **increase engagement** by those who are less interested and more self-centred

-
- Have given various guest lectures on “**The Value of Data in Marketing**” and “**Segmentation**”
 - I **supervise** many Masters’ students in Marketing





- **What is SCCER CREST?**

- The Competence Center for Research in Energy, Society and Transition - CREST contributes to the energy transition in Switzerland by providing detailed, evidence-based recommendations on policies that help to reduce energy demand, foster innovation, and increase the share of renewables in a cost-efficient way.
- <https://www.sccer-crest.ch/>





ITS AIMS AND MERITS

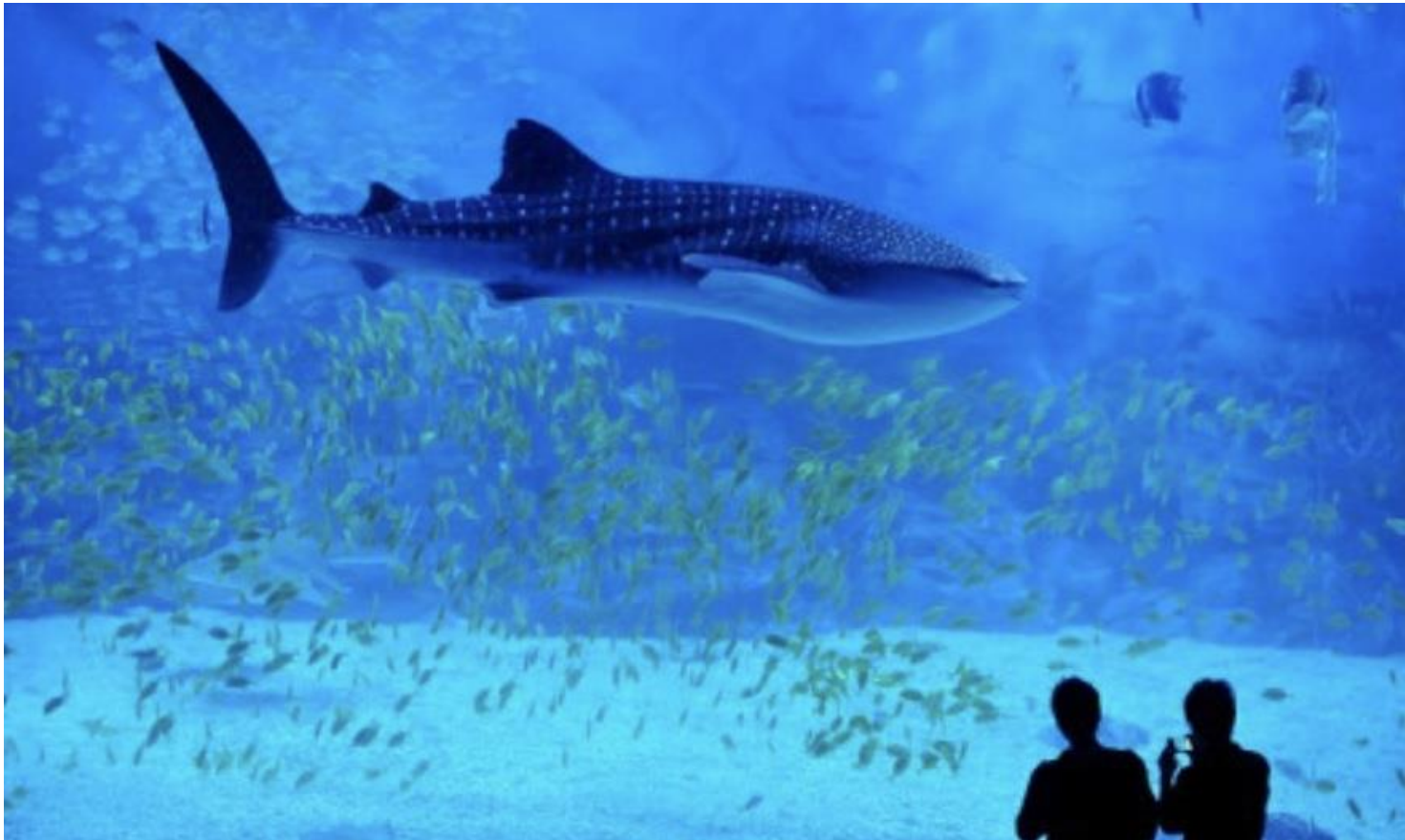
- The SCCER CREST brings together research groups from almost all major Swiss research institutions and fills important gaps in the research landscape.
- It is one of the strongest research centers in this field worldwide, cooperates closely with partners from industry, public administration, and policy consulting, and works together closely with the technical SCCER
- Funny story about Far Right Wing Swiss paper
- Soon exported to Germany



The SCCER CREST DATA

- Who the respondents are?
- How many are there?
- How long its been going on for?
- It also incorporates a small number of experiments
 - If you have a good idea for an experiment it can be added to the new “wave” so I would love to hear it, or you can write to me.
- Let’s have a look at the variables

BEHAVIOURAL INTERVENTION 1



EXAMINING WHETHER FEEDBACK DEVICES ACTUALLY WORK

- **Elaboration Likelihood Model**
 - **Central route**
 - Ad's argument persuades
 - Occurs when customers are highly involved with brand and motivated to process the ad
 - **Peripheral route**
 - Ad's peripheral cues persuade not argue
 - Attractiveness or credibility of endorser, style of ad, etc.
 - Occurs when customers are not involved with brand and not motivated to process
- SCCER CREST is a governmental project, spanning all major research institutions in Switzerland. SCCER CREST produces detailed, evidence-based insights on consumer's habits, behaviours and personality.
- *This research is part of the activities of SCCER CREST, which is financially supported by the Swiss Commission for Technology and Innovation (CTI).*



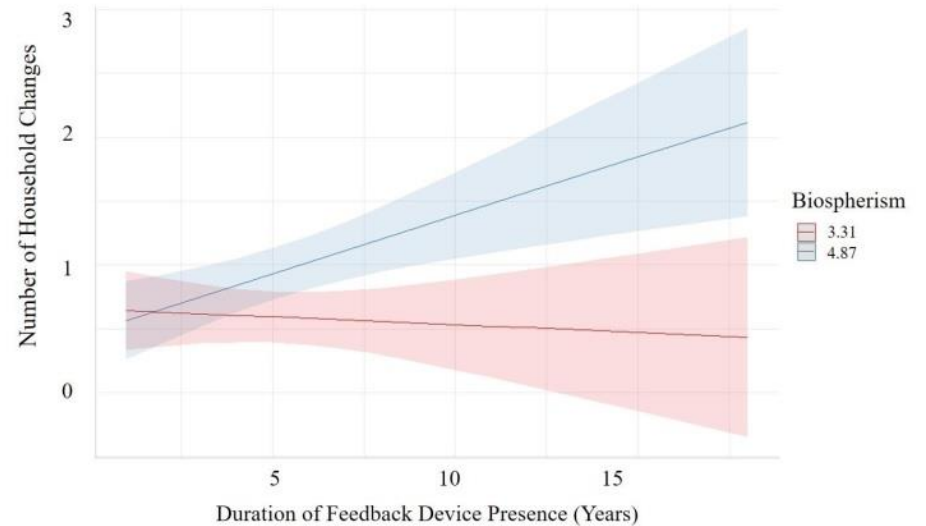
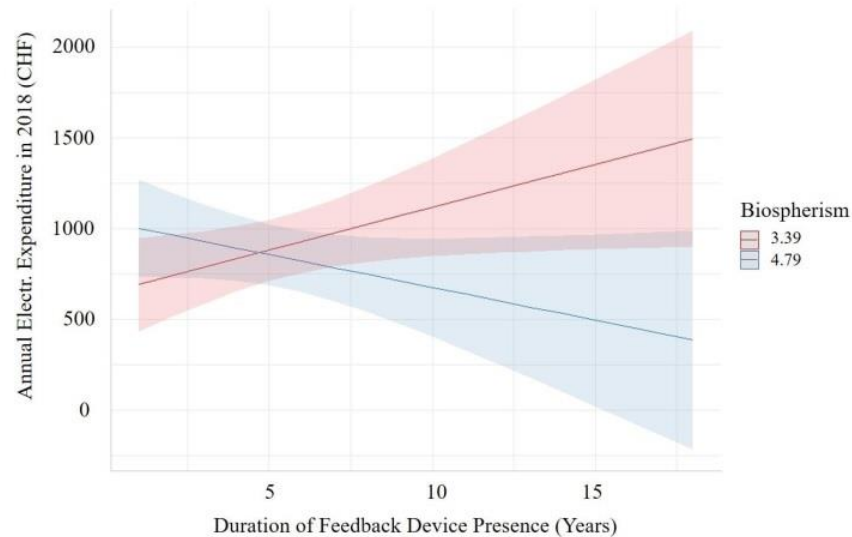
EXAMINING WHETHER FEEDBACK DEVICES ACTUALLY WORK

- Asking about Smart Meter Presence in the house
- When it was installed
- How often they check it
- What household changes they made after the installation



EXAMINING WHETHER FEEDBACK DEVICES ACTUALLY WORK

- Results: What do you think they mean?



EXAMINING WHETHER FEEDBACK DEVICES ACTUALLY WORK



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of Environmental Psychology

journal homepage: www.elsevier.com/locate/jep



Two concrete data tricks saved the project

- Robust Statistics
- Statistical Matching (most importantly)

Feedback devices help only environmentally concerned people act pro-environmentally over time

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ARTICLE INFO

Handling Editor: Sander van der Linden

Keywords:

Visual feedback
Energy expenditure
Environmental effects
Personal values
Conservation

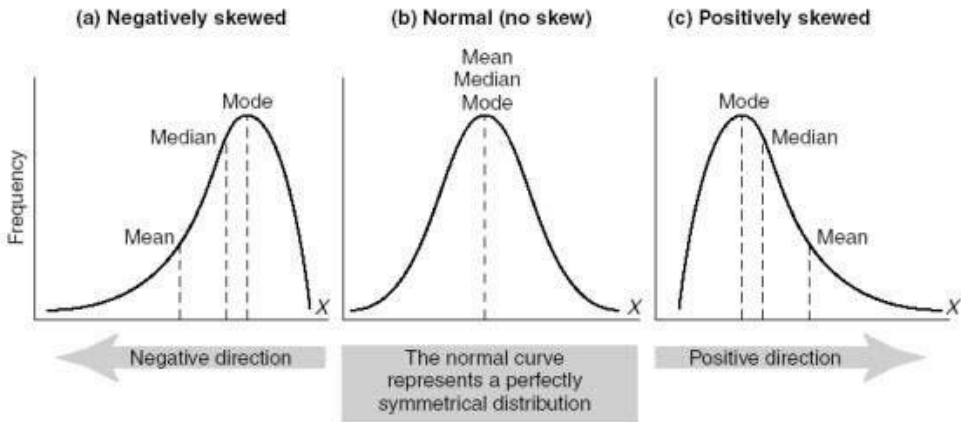
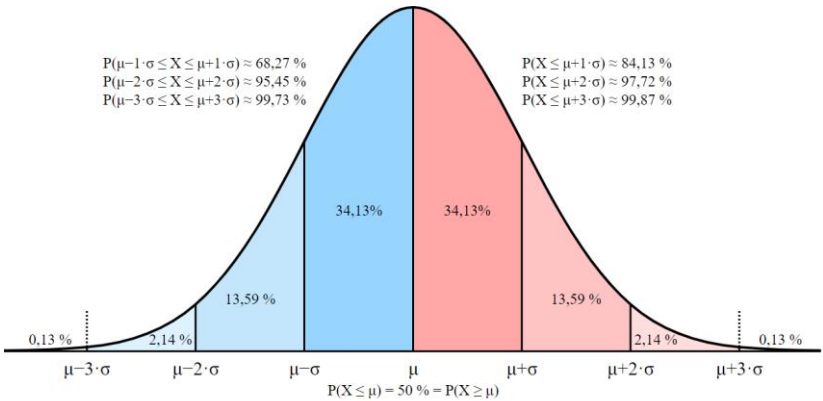
ABSTRACT

Technological advancements spawn products that tend to be useful when placed in the appropriate hands. Here we investigated whether potential benefits of owning a feedback device were driven by individual differences in environmental values (i.e. biosphericism), or whether the device alone is sufficient to reduce energy over time. We examined a total of 276 households, 138 equipped with a feedback device formed our treatment group, and 138 control households selected from a wider pool of households (+2000) based on their similarity to the treatment households, according to a statistical matching procedure. The results indicated that individuals with low biospheric values fail to decrease their electricity expenditure when paired with a feedback device. Conversely, highly biospheric individuals do engage in more pro-environmental behaviour when they receive feedback, but only when they have owned the device for about three years or more. We obtained additional insights, by focusing on differences within the treatment group that suggest, once again, that only highly biospheric individuals who owned the device for over three years successfully implement changes in the household. Overall, these results indicate that feedback devices such as smart meters can be important tools in achieving energy reductions only when paired with environmentally concerned individuals. Given the current trend towards increased feedback technology, policy implications for decision makers are discussed.



Robust Statistics

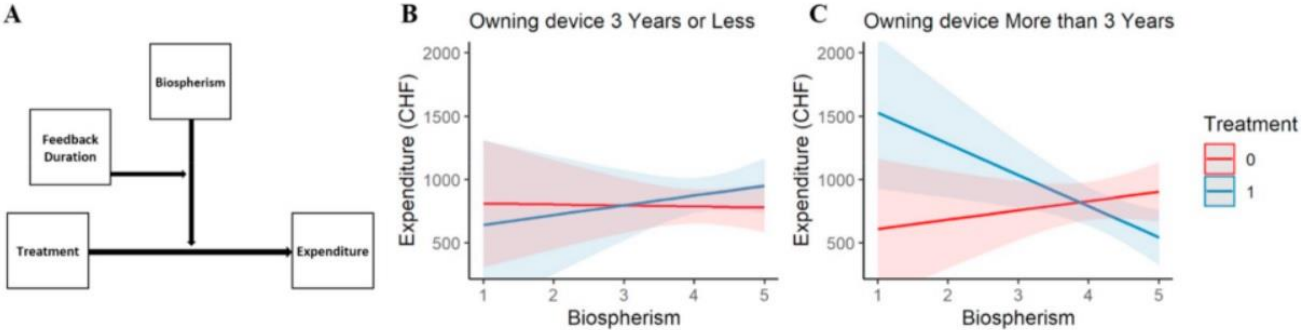
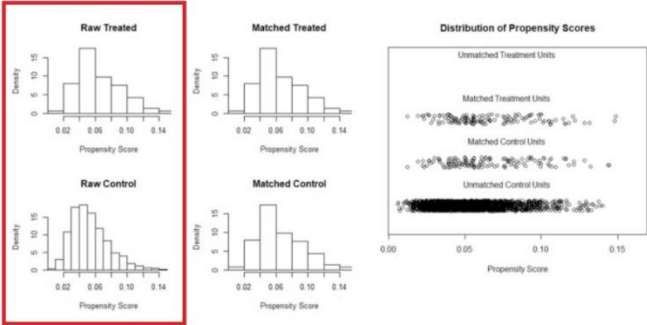
- **Trimming of the Mean:** A trimmed mean is computed by removing a certain percentage of the largest and smallest observations and averaging the values that remain.
- **Winsorizing of the Mean:** A winsorized mean is computed by identifying key values at the low and high end of the distribution (e.g. 5th and 95th percentiles) and fixing all extreme observations below and above the chosen cut-off points to the value of the cut-off points. Then we average the values with the new transformed «extremes».



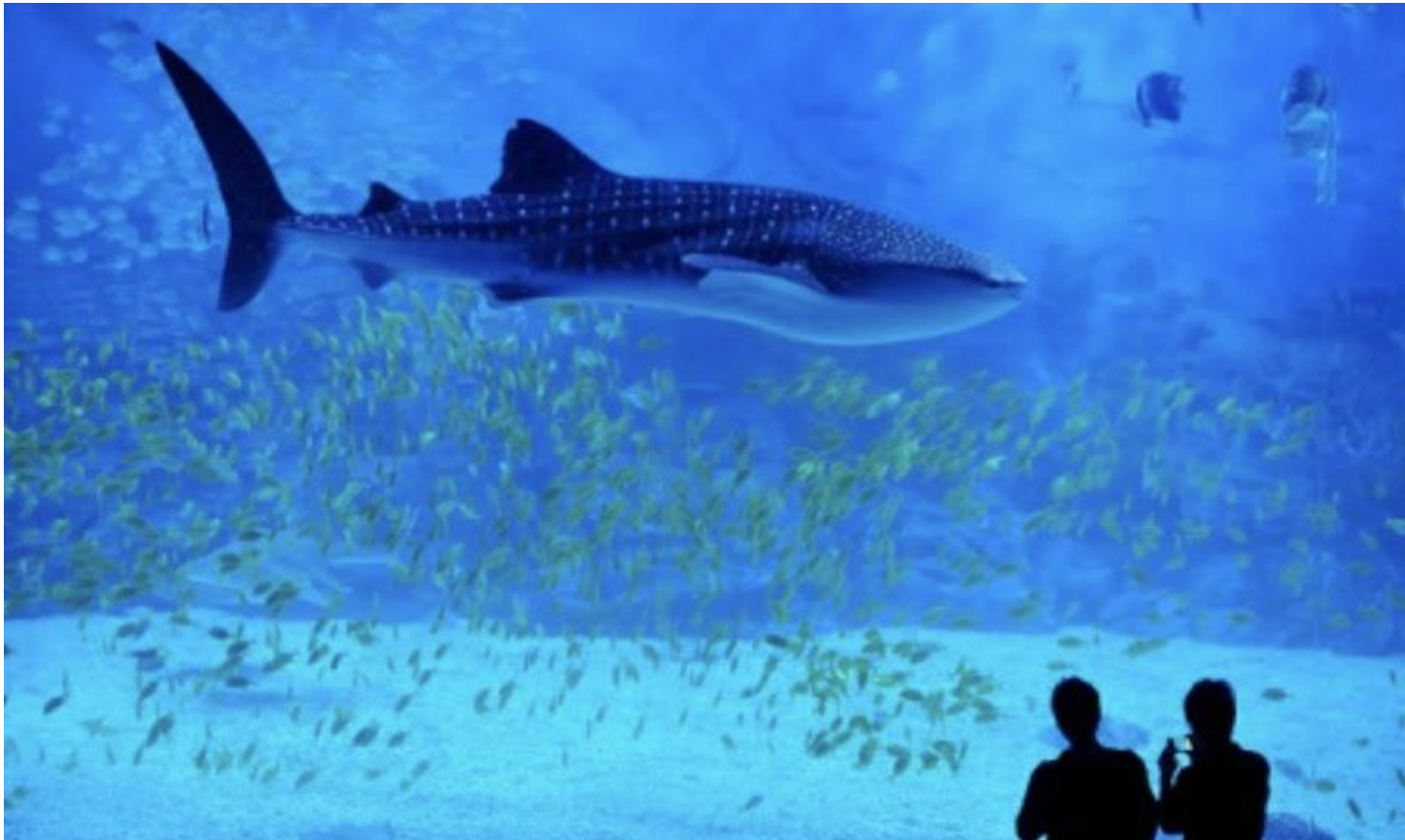
Statistical Matching

- This is applicable when you do not have an experimentally randomized design
- You can use statistical matching if you have data about a treatment group (e.g. feedback devices, life events, anything) and you have loads of data about random people not in the treatment group (at least 10 times more)
 - It is a way to reduce the effects of **selection bias**

Appendix A. Outcome of the Matching Procedure




BEHAVIOURAL INTERVENTION 2





In cooperation with the CTI

 **Energy funding programme**
Swiss Competence Centers for Energy Research

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation

Commission for Technology and Innovation CTI



Institut de l'entreprise

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THE IMPORTANCE OF MESSAGE FRAMING WHEN GETTING PEOPLE TO ACT SUSTAINABLY: THE ROLE OF REGULATORY FOCUS

Dr. Maria Lagomarsino
Prof. Dr. Linda Lemarié
Dr. Michael Puntiroli
University of Neuchâtel



Promotion-oriented individuals are motivated to achieve aspirations in life and sensitive to positive outcomes



**GAIN
FRAMED
messages**

Prevention-oriented individuals are motivated to achieve protection in life and sensitive to negative outcomes



**LOSS
FRAMED
messages**

- Research has shown that advertising campaigns that take into account the **Regulatory Focus** of the recipients are more effective (Higgins 2005).
- Papers using the Promotion-Prevention distinction and investigating **Regulatory Focus** have been cited 1000s of times.

Miniero, G., Codini, A., Bonera, M., Corvi, E., & Bertoli, G. (2014). Being green: from attitude to actual consumption. *International journal of consumer studies*, 38(5), 521-528.
Noblet, C. L., Teisl, M. F., Evans, K., Anderson, M. W., McCoy, S., & Cervone, E. (2015). Public preferences for investments in renewable energy production and energy efficiency. *Energy Policy*, 87, 177-186.
Kareklas, I., Carlson, J. R., & Muehling, D. D. (2012). The role of regulatory focus and self-view in "green" advertising message framing. *Journal of Advertising*, 41(4), 25-39.
Higgins, E. T. (2005). Value from regulatory fit. *Current directions in psychological science*, 14(4), 209-213.



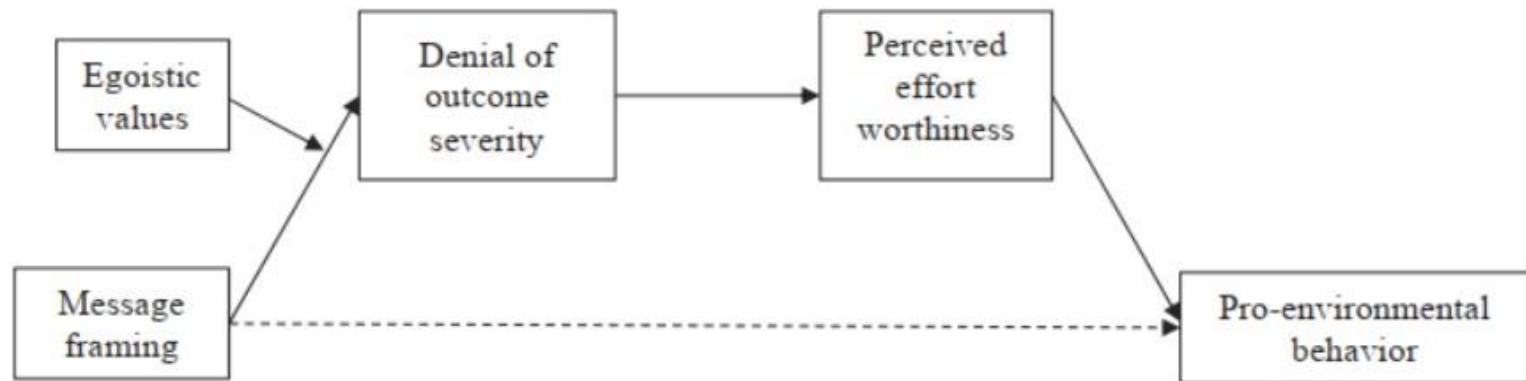
WHAT KINDS OF PEOPLE DO YOU THINK HAVE BEEN OVER-STUDIED IN THE SUSTAINABILITY DOMAIN?

- Interventions are often focused upon 1 group..



28 MODEL

- Selfish People have been understudied in the sustainability domain
- These people tend to focus heavily on themselves
- However, there is no reason to believe they have anything against the environment and sustainability, they simply care far more about themselves



A SERIES OF INTERVENTIONS

Prevention-focused



9 MILLION TONS OF PLASTIC WASTE END UP IN THE OCEAN EVERY YEAR.

LET'S PREVENT THE OCEANS FROM BECOMING EVEN MORE FILLED WITH PLASTIC, REDUCE SINGLE-USE PLASTIC IN YOUR DAILY LIFE.

BEFORE IT'S TOO LATE.
BEGIN YOUR PLEDGE.

Promotion-focused

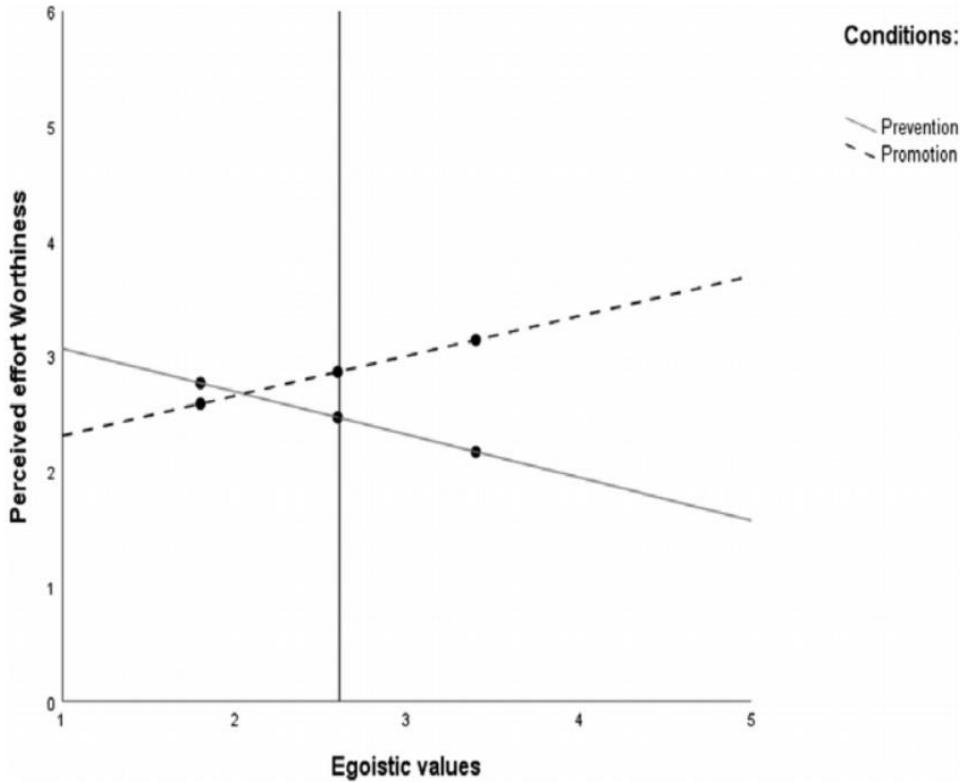


9 MILLION TONS OF PLASTIC WASTE END UP IN THE OCEAN EVERY YEAR.

LET'S WORK TO KEEP THE OCEANS CLEAN AND PLASTIC-FREE, INCREASE THE USE OF PLASTIC-FREE ALTERNATIVES IN YOUR DAILY LIFE.

DRIVE THE CHANGE NOW.
BEGIN YOUR PLEDGE.

RESULTS



OUTCOME

- It's a concrete intervention that actually works
- We wrote up the report and it was published earlier this year



When saving the planet is worth more than avoiding destruction. The importance of message framing when speaking to egoistic individuals



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Keywords:

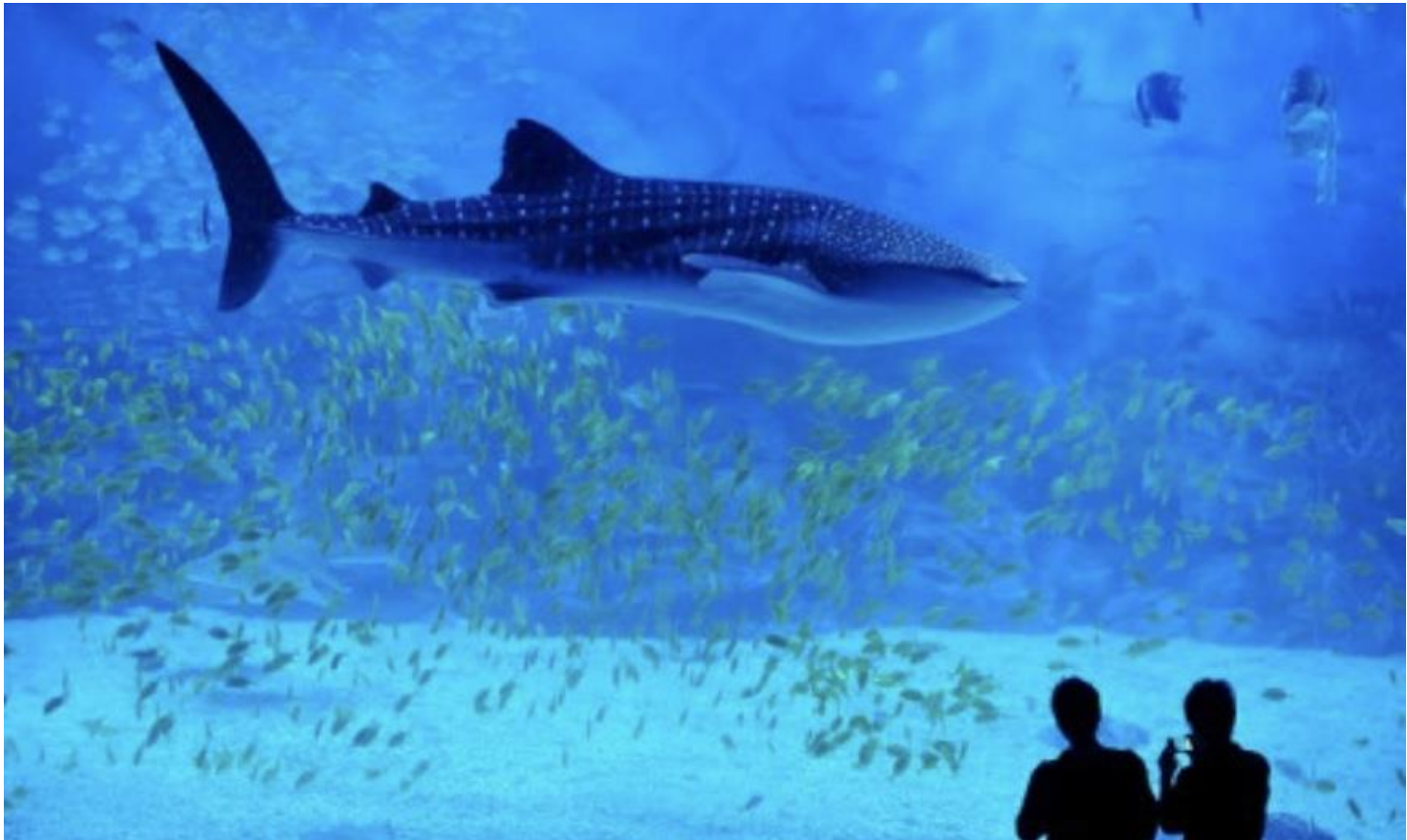
Pro-environmental behaviors
Egoistic values
Message framing
Regulatory focus
Effort worthiness

ABSTRACT

This paper sheds light on the reasons why conventional messages prove largely ineffective at fostering pro-environmental behaviors among individuals with high egoistic values. We conducted three experiments comparing the effectiveness of prevention-focused and promotion-focused messages at promoting pro-environmental behaviors. We found that egoistic individuals exposed to prevention-focused messages tended to perceive pro-environmental efforts as less worthy, compared to those exposed to promotion-focused messages. This effect, in turn, decreased their willingness to take environmental action. We also observed that the negative effect prevention-focused messages have on egoists is attributable to a defense mechanism. Egoistic people exposed to prevention-focused messages seem to deny the veracity of the message, which in turn decreases the perceived worthiness of the environmental effort and thus the intention to act. The findings highlight the best way to frame environmental communication to reach those who are least likely to adopt eco-responsible behavior, i.e., egoistic people.



BEHAVIOURAL INTERVENTION 3

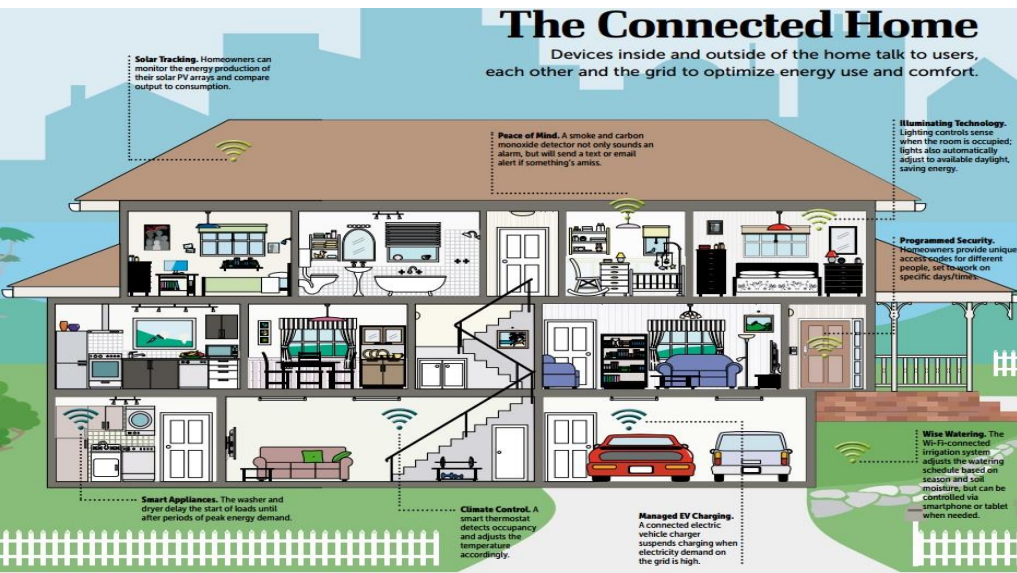


SCCER KINDLY SPONSORED RESEARCH INTO CONSUMER BEHAVIOUR WITH ENERGY-RELATED CONSEQUENCES...



When Technology Backfires and When it Succeeds: Positive and Negative Effects of Eco-efficient Automation on Consumers' Choices

Michael Puntiroli, Valéry Bezençon, Giovanni Pino, & Linda Lemarié



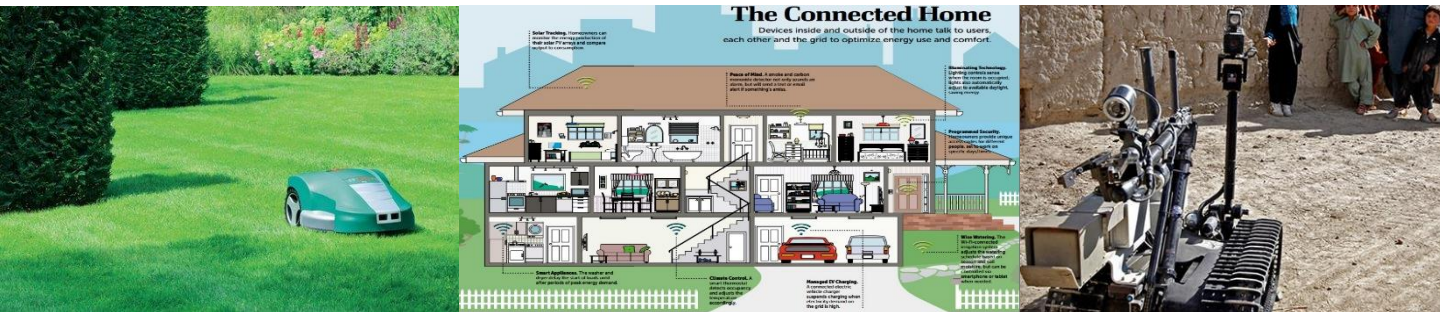
35 Automation

- Automation is defined as: “the execution, by means of an object or system, of tasks that previously belonged to a human” (Hengstler, Enkel, and Duelli 2016; Parasuraman and Riley 1997).
- Automation has been present since the Industrial Revolution
- Automation has been present in the household since at least the 50s



Automation

- “...new generations of more capable autonomous systems are appearing in environments ranging from autonomous vehicles on roads to automated check-outs in grocery stores.” (McKinsey Quarterly, 2018)
- Nowadays we have the Connected House as part of the Internet of Things (IoT)
- More and more products have a certain amount of autonomy
- Conference in 2018 in Geneva on the legality killing by means of Automation



New Type of Automation

- Automated products with eco-features (Sustainable Automation)
- Products that have the explicit goal of reducing consumption
 - Example: KNX automated shutters, self-driving vehicles, dishwashers with eco-modes and smart TVs.



- **What are the risks of overlying on the product's ability to self-manage?**

WHAT MAKES AN INTERESTING RESEARCH PROJECT?

That which produces something new:

- Answers new or old questions that have not yet received adequate answers
- Responds differently to questions raised in the literature
- Support the answers given by the literature with a new argument
- **Apply a theory to a new context**



HOW TO BEST EXPAND INTO CHINA ?
A SWISS RECREATIONAL AREA CASE STUDY

CONFIDENTIAL

Internship Master Thesis submitted to the Faculty of Economics and Business

Enterprise Institute
University of Neuchâtel

For the degree of Master of Science in International Business Development

Specific Donation Target Strategy (Restricted Funds) or Abstract Donation Target Strategy (Unrestricted Funds): which one is more effective when requesting donations from Major Donors? A study on Amnesty International Swiss Section.

CONFIDENTIAL

Digital health solutions on brand experience and customer journey in pharmaceutical industry

CONFIDENTIAL

Master internship thesis submitted to the Faculty of Economics and Business

Enterprise Institute



Theories about Responsibility

- When individuals feel less responsible for the outcomes of their behaviour, they more readily make socially irresponsible choices (Bandura 1986, 1991).
- The presence of others reduces sense of personal responsibility in real life group contexts (Bandura, 1990, 1991; Bandura et al., 1996) or online cooperation (Beyer et al., 2017)
- Bandura (1986, 1991) set the groundwork for a general framework of self-regulation called social cognitive theory, where reasoning is translated into purposeful action through self-regulatory mechanisms. These mechanisms include the ability to monitor oneself, to judge, and to react. Self-regulation can be activated or deactivated.



Literature on Automation

- Automation can threaten the identity of those individuals who feel the most connected to the particular activity that is being automated. (Leung, Paolacci, & Puntoni, 2018)
- Automation can lead to over-consumption (e.g. increase in calorie consumption) because it activates a need for some compensatory behaviours (Mende, Scott, van Doorn, Grewal, & Shanks, 2019)
- Overreliance on automation often leads to complacency, for example in aviation (Parasuraman, 1997 & 2010)
- Autonomous technologies can lead to an over-reliance on the product's precision and efficiency. It was observed that when participants **abdicated control** they increase their **consumption** (Murtagh, Gatersleben, Cowen, & Uzzell, 2015)



Research Question

- Will Automation influence consumers in making more indulgent product choices?



Overview of Methodology

- **4 Studies** were carried out using Mturk respondents
- We tested a variety of automated products
- All studies were-scenario based and all were between subjects designs
- All studies compared a regular VS automated product (**IV**) on Product Choice, which ranged from smaller less consuming to bigger more consuming (**DV**)
- All studies tested **Abdication of Responsibility**, using a modified version of the Murtagh et al. (2015) scale.



Purpose of Study 1

- A) Replicate the findings whereby Regular Automation leads to overreliance on the product's ability to self-manage (Parasuraman 1997 & 2010; Murtagh et al., 2015)
- B) Make sure that the relationship between Abdication and Indulgence (Murtagh et al., 2015) extends to Indulgent Product Choice





Study 1 Design

- A total of 233 MTurk respondents (Mean age: 40; 45% males)
- A brief scenario instructed participants to imagine that they were about to purchase a new TV at a local mono-brand electronics store.



50% of Respondents (Control):
Presented with a **standard TV**

50% of Respondents (Regular Automation):
Presented with an **automated TV** incorporating advanced sensors that allowed it to self-regulate the volume & brightness, based on viewing conditions, and even rotate the screen in direction of the viewers





Study 1 Design

- Respondents then stated their desired **Product Choice**

- All TVs have the same functionalities and quality. They differ only in screen size, shown in inches.
(the "W" in brackets = Watt)

24" (20W)	32" (35W)	40" (55W)	48" (75W)	55" (100W)	65" (150W)	70" (200W)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

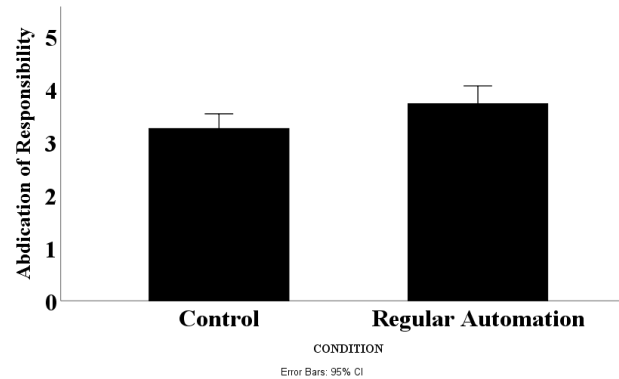
- Respondents then completed a three-item measure of **abdication of responsibility**

	1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree
With that new TV, I would not need to be responsible for adjusting its settings and features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
That new TV will take responsibility for automatically controlling its settings and features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
With that new TV, I would not need to make the effort to control its settings and features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

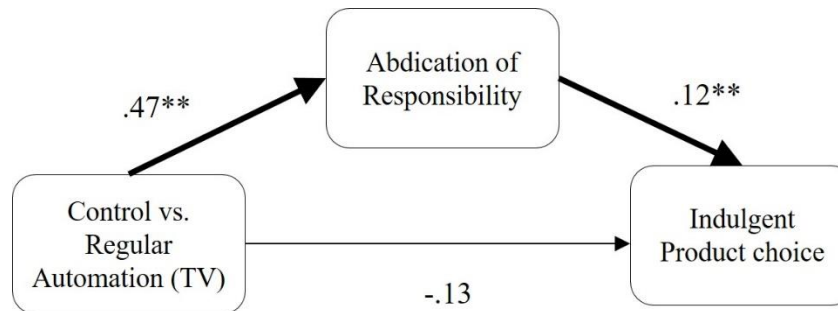


Study 1 Design

- Effect of Automation on Abdication of Responsibility



- Effect of Abdication of Responsibility on Indulgent Product Choice



Purpose of Study 2b

- A) Investigate whether Sustainable Automation leads to Abdication of Responsibility using a different product (i.e. Floodlight)
- B) Replicate the interesting negative effect of Sustainable Automation on Indulgence that appeared in the previous study





Study 2b Design

- 223 MTurk respondents (Mean age: 36; 61% males)
- A scenario instructed participants to imagine that they had a house with a garden and that they visited a local store to purchase a **floodlight** for their garden.



50% of Respondents (Control):

While you are in the store, you focus on **a model** that is available in seven different sizes.



50% of Respondents (Sustainable Automation):

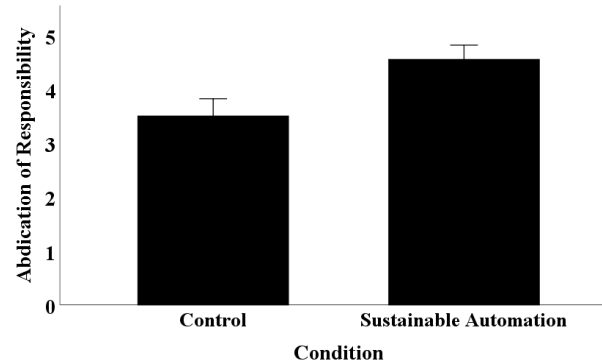
While you are in the store, you focus on **a model** that is available in seven different sizes.

You also notice that near that floodlight there is a sign that reads:

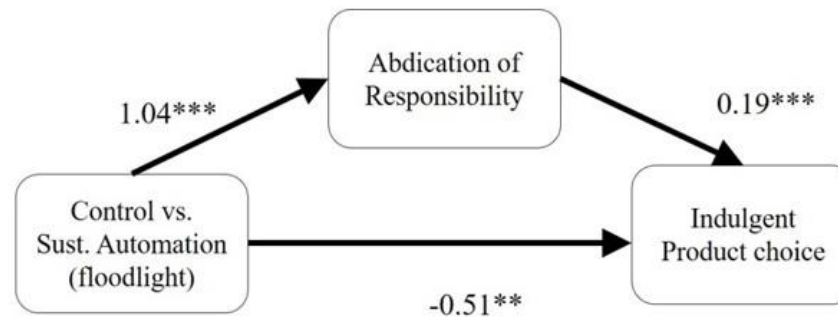
"This floodlight comes with the last eco-saving technology. Thanks to this technology, light automatically shines when someone is within range and the device turns off when nobody is around. This way energy consumption is significantly reduced."

Study 2b Results

- Effect of Automation on Abdication of Responsibility



- Effect of Abdication of Responsibility on Indulgent Product Choice



Investigated Behaviourally Online: Algorithm

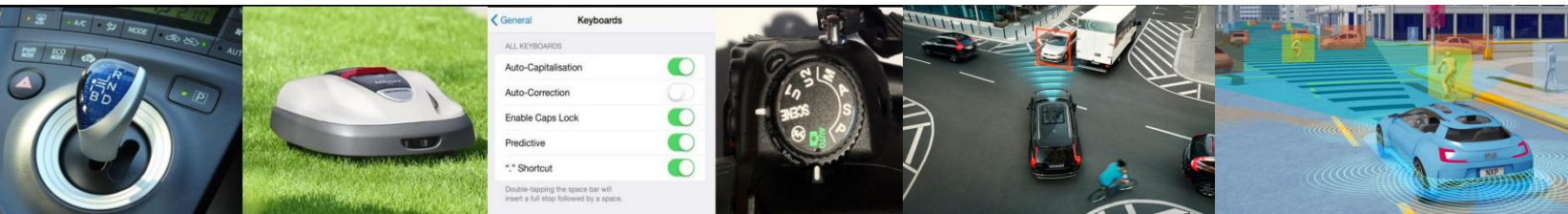
A

B

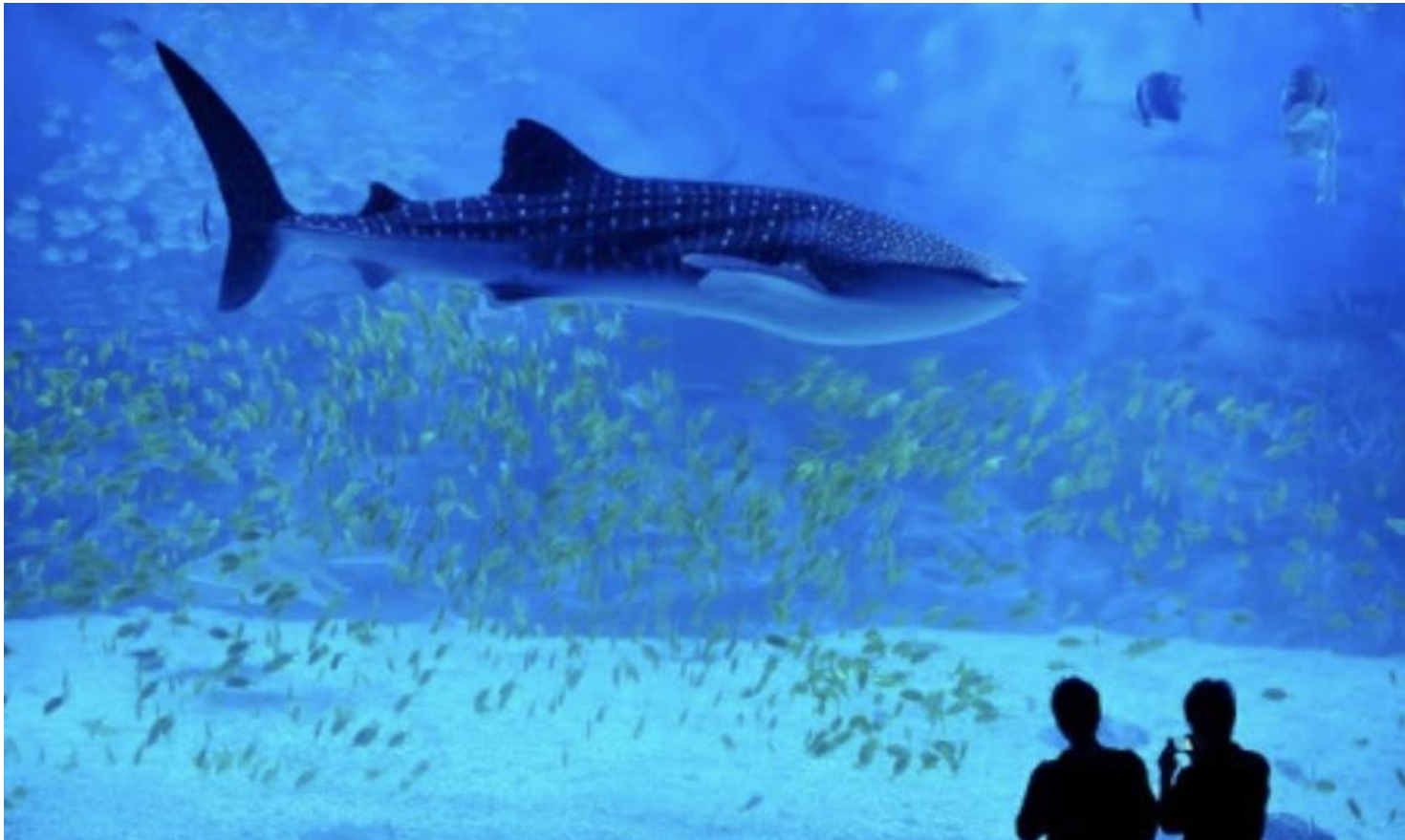


Initial Findings from Automation Research

- Evidence that Automation leads to Abdication of Responsibility, which leads to people choosing less sustainable options
- Initial evidence that automation can be framed as sustainable or regular, and this has repercussions on people's behaviour
- Sustainable automation leads to Indulgence through Abdication of Responsibility, and to Restraint through Prosocial Focus
- Regular Automation instead only leads to Indulgence, through Abdication of Responsibility.



BEHAVIOURAL INTERVENTION 4



53 CONSUMER BEHAVIOUR APPLIED TO ADVERTISING: COMPASSION FADE IN HUMANS

- In relation to the art of increasing donations there is an effect called **Compassion fade**
- “The **identified single victim** elicited considerably more contributions than the non-identified single victim” (Kogut & Ritov, 2005).
- Stimuli that evoke more immediate **emotional response** may take precedence over less-affect-rich stimuli, even if the latter have more important consequences (Kogut & Ritov, 2005).
- **Vividness** exerts great influence on feelings, although it does **not necessarily reflect the severity** of the problem (Rottenstreich & Hsee, 2001)
- Willingness to contribute to help a victim, is directly related to aroused empathic emotion. A necessary precondition for the arousal of empathic emotions is the adoption of the **other’s perspective** (Highberger, & Shaw, 1995)
- A decline in compassion may begin with the second endangered life (Västfjäll, Slovic, Mayorga, & Peters, 2014)
 - Experiment



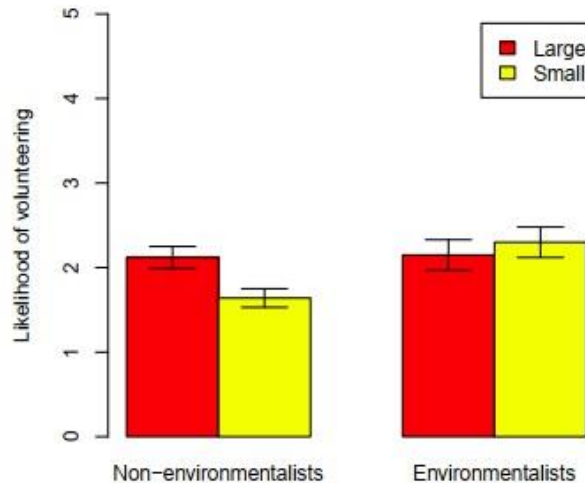
54 CONSUMER BEHAVIOUR APPLIED TO ADVERTISING: COMPASSION FADE IN ANIMALS

- The effect seems to work better when the victim is a human
- Perrault et al. (2015) tested animals against humans and found that the **animal message elicited greater distress and empathy** than the human message
 - However adding more or less animals to the message did not persuade the receiver of the ad in different ways
- Another paper found **no compassion fading effect in animal** advertising campaigns as subjects did not donate more when presented with single identifiable beneficiaries rather than groups of beneficiaries (Thomas-Walters & Raihani, 2017)
 - However, flagship species increased donation amounts relative to appeals featuring non-flagship species.
 - So no effect of compassion fade, but it seems important to use specific animals



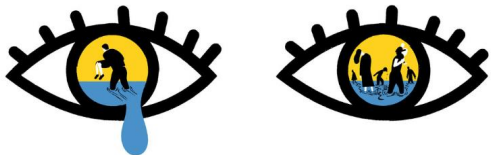
55 CONSUMER BEHAVIOUR APPLIED TO ADVERTISING: COMPASSION FADE IN ANIMALS

- Designing an Intervention to try to increase donations for animal causes
- A student of mine is working for WWF

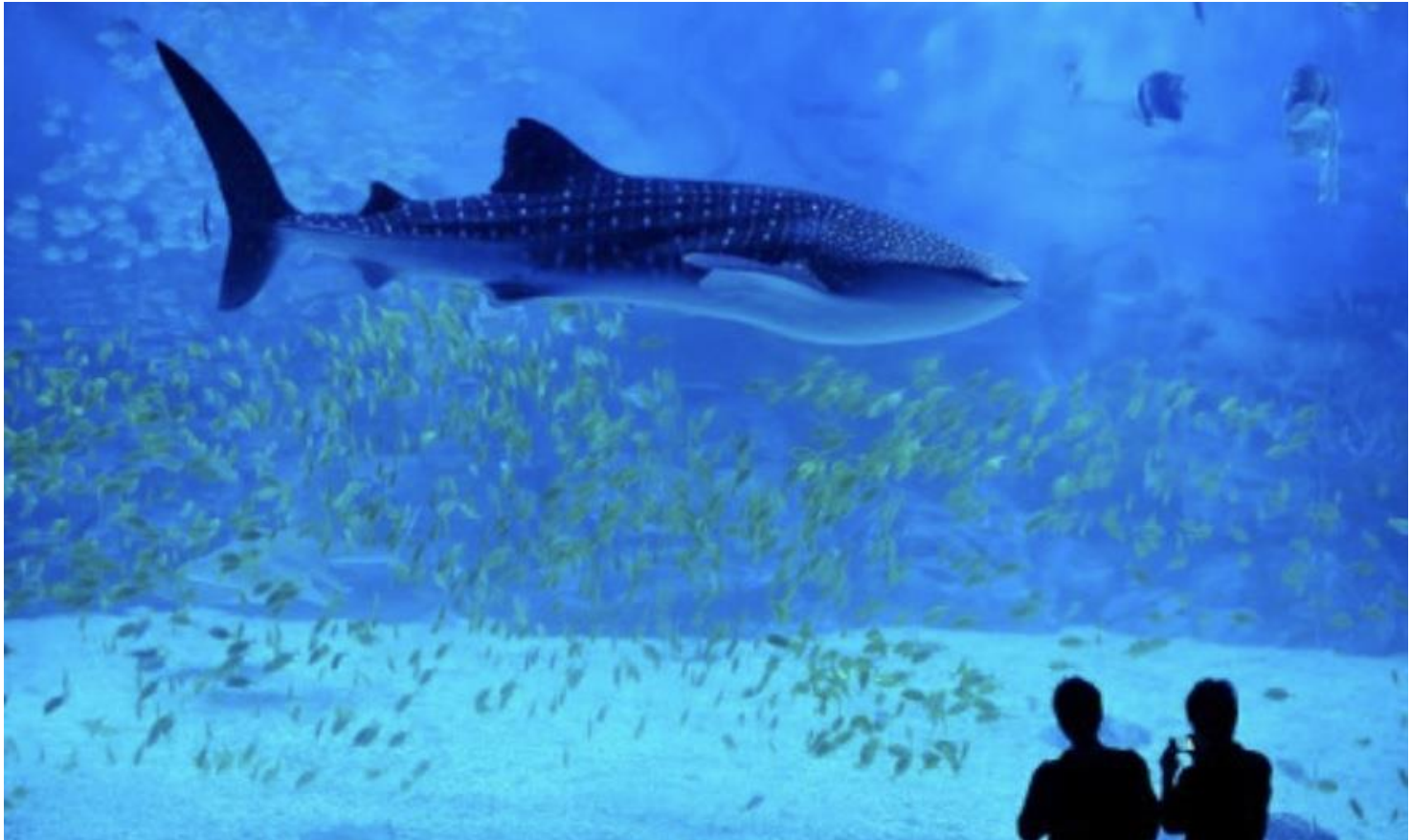


Circus scenario: space for the animals, better life conditions, or circus at all.

- o 1 identified animal
- o 2 identified animals
- o 5-6 identified animals



NEXT: YOUR INTERVENTION



57 THEORY

- A lot of the most successful interventions start from a good theory
- In little groups, please select your favourite theory psychology (max 15 mins)



58 THEORY

- Which Theory did you choose?
- All kinds of theories (even apparently disconnected ones) have been applied to create effective behavioral interventions
 - Theories of attention, from vision science
 - For ads, images and appeals
 - Theories of perception, from cognitive science
 - For consumer behavior
 - Personality and Values Theories
 - For Individual difference interventions
 - Memory Theories
 - For information retrieval, such as linguistic info or visual attributes



59 THEORY

- Apply that theory to create an intervention that addresses behavior change (25 mins) after we will discuss them together
- If you try really hard you can think of something smart
- Here are some examples of behavior change
 - energy consumption
 - reducing smoking
 - driving slower
 - not drink driving
 - choosing the bike rather than the car
 - Not flying as much for frivolous reasons



60 LET'S HEAR THE IDEAS

- Some important aspects to consider together
 - Do you think it could work?
 - Do you think people will change behavior?
 - What are the barriers to it working?
 - Do we think it sounds cost-effective?
 - Do you think the government should try it?





6 | THE REAL GOAL

- The goal was to teach you something about behavioral interventions aimed at increasing sustainable consumption
 - The real goal is for you to leave the talk being slightly more aware of your psychology knowledge to solve real world problems
 - The huge overlap between psychology, marketing, consumer behavior and energy policy
 - The data analysis you already know, and that you can develop further, can open up many doors for you in governmental projects and business
 - Knowing theories and having a small number of them that you are passionate about is a great asset



Thank You