



Applying nudging techniques to promote fuel efficient car purchases

#REMforum, June 1, 2018



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Project team



 Project
 Background

- Classic policy instruments are often accompanied by low public acceptance (e.g., taxes, bans) and/or high costs (e.g., subsidies).
- **Low-invasive (nudging) interventions find strong public support** (Reisch & Sunstein, 2016).



Low-invasive interventions

“Nudges are aspects of the choice architecture that alter people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives”

Thaler, R. & Sunstein C. (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, CT: Yale University Press.



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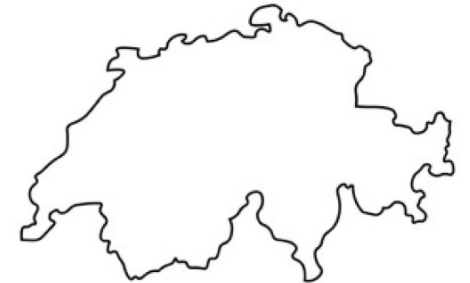


Nudging examples

- Using calorie labels in chain restaurants.
- Using traffic light indicators signaling healthiness of food.
- Using defaults to increase green energy tariffs.
- Requiring active choice regarding organ donation on obtaining the driver's license.
- Translating information into familiar units to increase purchases of energy efficient products.
- Providing social feedback to reduce energy consumption.



Applying nudges to the car sector in Switzerland





Project

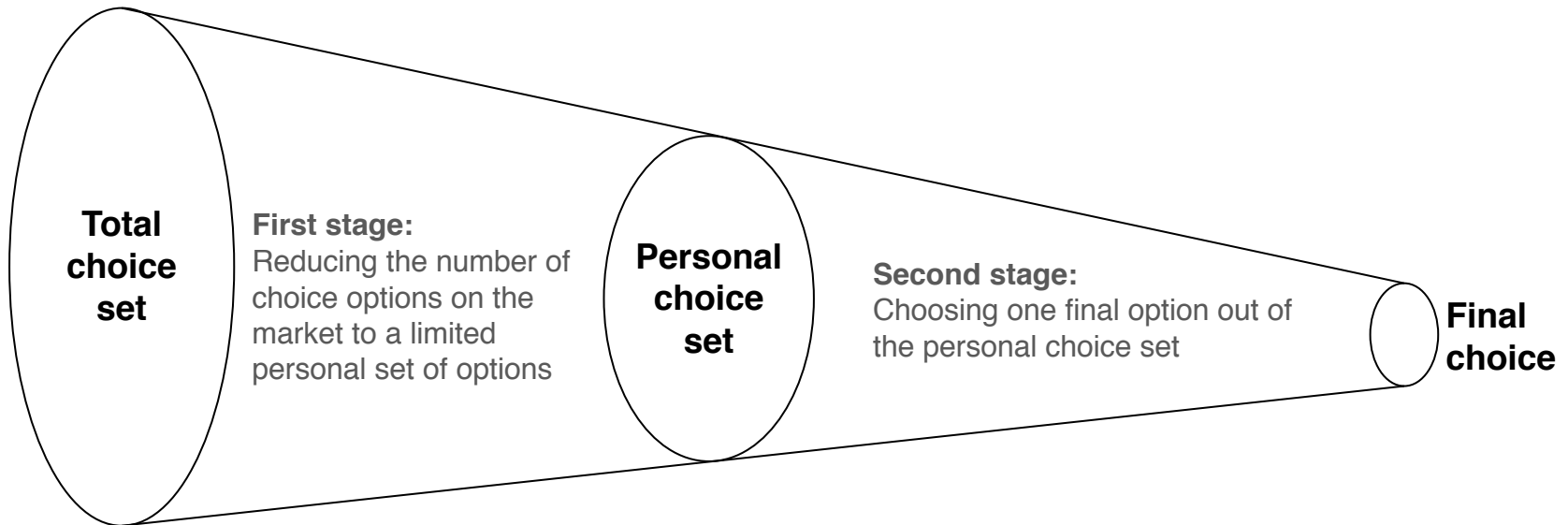
Research Question

- How can low-invasive interventions (nudges) be effectively leveraged to promote fuel-efficient car purchases in Switzerland?





Decision stages



Mueller, M. G., & de Haan, P. (2009). How much do incentives affect car purchase? Agent-based microsimulation of consumer choice of new cars—Part I. *Energy Policy*, 37, 1072-1082.



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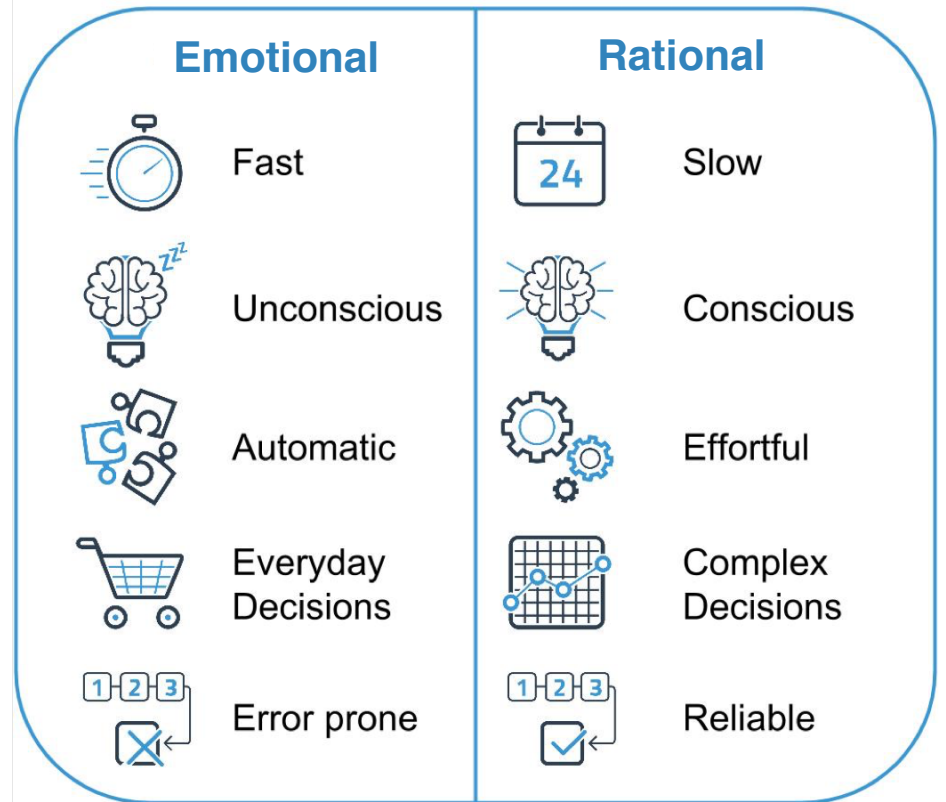
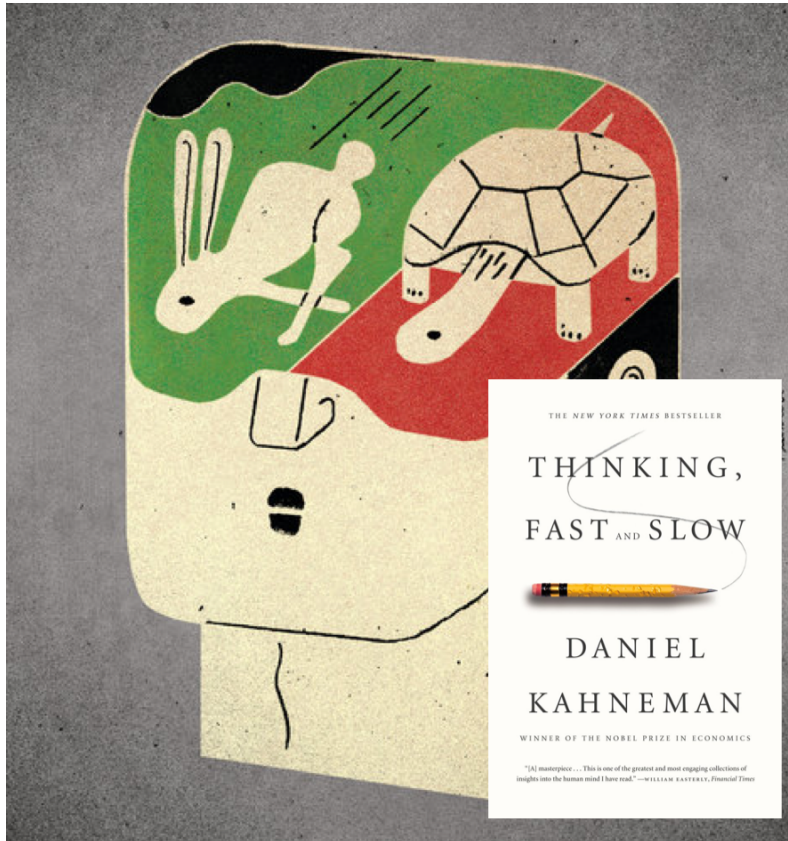
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Decision modes





System 1 processing

Gas?
Where we're going,
we don't need gas.

Go boldly into the future.

Introducing a car so advanced it sets a new standard for premium performance. The powertrain, tucked between the rear wheels, uses energy three times more efficiently than a gas-burning engine. With no tailpipe to spew harmful emissions, Tesla vehicles liberate their owners from the petroleum-burning paradigm. They are the only cars to get more efficient from the moment they're first driven.



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System 1 processing



LEAD THE CHARGE.

SOME FEAR CHANGE.
OTHERS DRIVE IT.



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System 2 processing

Technische Daten der Vergleichsfahrzeuge

	Golf VI 1,2 TSI	Golf VII 1,2 TSI	Golf VI 1,6 TDI	Golf VII 1,6 TDI
Hubraum [cm ³]	1197	1197	1598	1598
Leistung [kW]	63	63	77	77
Getriebe	5-Gang-manuell	5-Gang-manuell	5-Gang-manuell	5-Gang-manuell
Kraftstoff	Benzin (Super)	Benzin (Super)	Diesel	Diesel
Emissionsklasse	Euro 5	Euro 5	Euro 5	Euro 5
Höchstgeschwindigkeit [km/h]	178	179	189	192
Beschleunigung 0-100 km/h [s]	12,3	11,9	11,3	10,7
Max. Drehmoment [Nm] bei 1/min	160/ 1500 - 3500	160/1400-3500	250/1500-2500	250/1500-2750
Leergewicht [kg] ^a	1.229	1.205	1.314	1.295
Kraftstoffbehältervolumen [l]	ca. 55	ca. 50	ca. 55	ca. 50





Energieetikette 2017

Marke VW
Typ 1.4 TSI Comfortline DSG

Treibstoff Benzin
Getriebe Manuell automatisiert, 7 Gänge
Leergewicht 1466 kg
Emissionsvorschrift EURO6

Energieverbrauch 5.0 l / 100 km

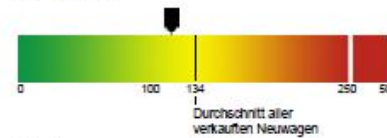
EU-Normverbrauch

CO₂-Emissionen

CO₂ ist das für die Erdenwärmung hauptverantwortliche Treibhausgas.

CO₂-Emissionen aus der Treibstoff- und/oder der Strombereitstellung

116 g/km

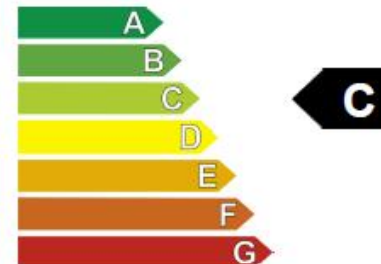


25 g/km

Energieeffizienz

Für die Einteilung in die Kategorien der Etikette sind zwei Grössen massgebend: Energieverbrauch und Gewicht.

Der Energieverbrauch und damit die CO₂-Emissionen eines Fahrzeugs sind auch vom Fahrstil und anderen nichttechnischen Faktoren abhängig.



Informationen zum Energieverbrauch und zu den CO₂-Emissionen, inklusive einer Auflistung aller angebotenen Neuwagen, sind kostenlos an allen Verkaufsstellen erhältlich oder im Internet unter www.energieetikette.ch abrufbar.

Gültig bis 31.12.2017 / 1VF617 (m7a)



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Examples of possible nudges

- **Example 2 (policy):** Presenting total costs of ownership (TCO, i.e. maintenance/fuel costs, taxes) on CO₂ labels displayed on advertisements. TCO for low carbon cars will be potentially lower than those of conventional cars in the near future (BEUC, 2016).



Examples of possible nudges

- **Example 1 (industry):** Displaying low carbon cars as default options on taxi (e.g. Uber Green), car renting and car-sharing platforms or using defaults in online car configurators to stimulate low carbon car purchases.



Methodology

Phase 1 (10 months)

Top-down approach *UniGE*

Development of nudges based on theory from psychology & behavioral economics taking into account the impact of individual differences.

Bottom-up approach *UniSG*

Identification and improvement of existing nudges applied in the transport domain.

Phase 2 (20 months)

Empirical testing of nudges

Examining nudges for policy and industry by means of:

- Lab studies
- Online studies
- Field study



Phase 3 (6 months)

Theoretical contr.

Research insights for:

- Psychology & behavioral economics *UniGE*
- Marketing & interdisciplinary sciences *UniSG*

Practical contr. *UniSG/GE*

Effective nudges for:

- Policy
- Industry
- Marketing & advertising

Thank you for your attention!

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