

Behavioral Economics for Energy Conservation

Dean S. Karlan

Yale University

Innovations for Poverty Action (IPA)

stickK.com



Behavioral Economics

- Violations of “rational” models of behavior
 1. Lack of fungibility/mental accounting
 2. Inconsistent preferences
 3. Losses loom larger than gains

Traditional Economics

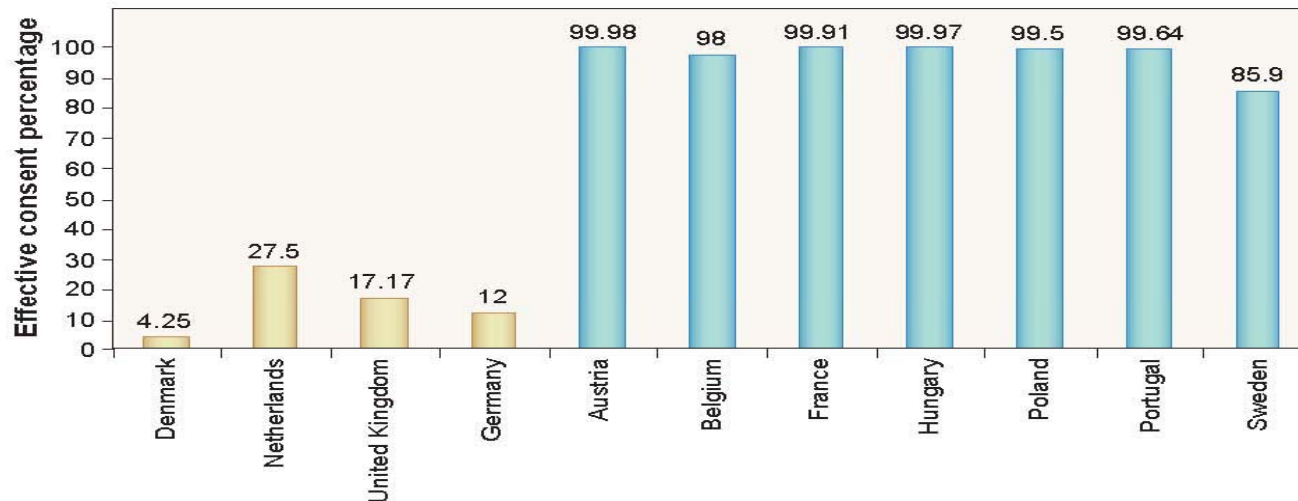
- Price
- Information
- Competition
- Social pressure, civic duty and costs

Two themes to low-hanging fruit

- Presenting information carefully to generate maximum social change
- Manipulating price wisely, through tokens and voluntary contracts

Nudges

- *Libertarian + Paternalism = Nudge*
- Richard Thaler and Cass Sunstein
- *The Simplest Nudge of Them All*



Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

The Simplest Nudge of Them All

- Existing customers:
 - maybe tough to do
 - switching defaults is akin to changing someone 's account without their permission.
- New customers though is a different story.
- Forced choice is another “better” default
 - Choi and Laibson find that this gets most of the way there for savings decisions, e.g.

Social Comparison: Charitable Fundraising Example

- Simplest manipulation Brey and Meier (AER, 2004)
 - Some told: 64% of your peers gave.
 - Others told: 46% of your peers gave.
 - And a control, not told anything
- “High” group 11.5% points more like to give than “low” group
- “Low” group same as control!
- **LESSON: Social reference points matter. But think Nudge. Any old comparison does not work.**

Social Comparison: Voting

- Todd Rogers research on voting
- Experts split 50/50:
 1. help, there is low turnout... come vote... your vote really counts (i.e., has more marginal impact; what is nice is here the low social action cell increases the impact of your personal action)
 2. high turnout, everyone is voting.....
- Rogers finds that 2 massively outworks 1

Price Elasticity Meets Political Reality

- Higher price → Lower Use
- Obviously not simple. Can't just raise price.
- What to do?
 - Tokens
 - uses mental accounting “nudge”
 - *Voluntary* price increases
 - Uses time inconsistency “nudge”

Combining the Behavioral and Traditional Economics

- Commitment contracts
- Can be “soft”
 - Competitions
 - Social contracts, neighbors, affinity groups
- Can be “hard”
 - Financial

Theory

- Time inconsistent preferences
 - What does this mean?
- You say you want to do something.
- But then you do not do it.
- And then you regret not having done it.

Vices and Virtues

- Vices:
 - Weight loss
 - Smoking
 - Using too much energy
- Virtues:
 - Exercise
 - Completing home or work projects
 - Recycling

Inconsistency, Applied to Energy

- Long term costs are looong term
- Short run benefits are minimal
 - “warm glow” in the economics literature, no pun intended
- KEY:
 - Bring the long term costs forward a bit
 - Make the short run benefits bigger
 - E.g., generating social contagion effects
 - Rebates tried, integrated in bill.... Effective?
 - Separate transactions → increase salience? Tokens?

Three types of people

- Three types:
 - Consistent
 - Not consistent, but self-aware
 - Not consistent, but *not* self-aware
- Deep issue: lack actionable information
 - I'm consistent, but I think pizza has zero calories.
 - I'm inconsistent, but I have no mechanism to stick to my plan to change my future behavior (i.e., “actionable” ideas)

What to do about each type?

- Person Type #1: Consistent
 - Externalities taken into account?
 - Shift preferences for common good
 - Ideas (discussed earlier): Information, Peer influence
- Person Type #2: Not consistent, but self-aware
 - Idea: Commitment contracts
 - These people want **fewer** choices, or want to **raise** the price of vices.
- Person Type #3: Not consistent, and not self-aware
 - How to make them self-aware?
 - Idea: Timely information? Mere attention? Peer education?

Commitment Contract

Basic Premise

- Sign contract to conserve less energy
 - Could be time specific (i.e., less energy when out of the home)
 - Could be compared to prior years
 - Could be compared to peers, or others in the neighborhood
- “Contract” can be thought of as a strong word, but can be weak and still work

“Refereeing”

- Refereeing = how are contracts enforced?
- Smart metering is one way
 - Contracts can get quite specific
 - Time of day (manage peak usage)
 - Floor or region in the home
 - Even specific appliances

Consequences

- Key idea behind stickK:
 - **Voluntarily increase the price of failure**
 - If one fails contract, consequences can be
 - Public shame
 - Financial loss:
 - Money to those who succeed in the contract (group contracts)
 - Money to charity
 - Money to one's "anti-charity"

Gains, not just Losses

- Rewards:
 - Pain of losing \$2 greater in intensity than pleasure of earning \$2
 - But gains could be needed to get **widest participation**
 - Pooled contracts:
 - Winner win the forfeited funds of those who fail
 - Tragedy of the commons solved best with **small** groups

Core Design

- Individuals choose a goal
- Individuals post a bond to commit to their goal (ideally, e.g., individuals post the money they would spend on cigarettes to the program)
- Bonds are “pooled”, and those who achieve their goal earn a pro-rata share of the pool
- The program can be revenue neutral for the government or can include government matching
- The “winners” can be chosen via “lottery” to increase attention to the program and heighten its effectiveness in changing behaviors

Example of “Monitoring” page for Neighborhood or Community Group

stickK Help | Logout

Home Campaigns Contract Manager Manage Users Reports Financials Messages Rewards Groups Portal Settings Partners

▼ Manage Contracts
▶ My Contract Library
▶ StickK Contract Library
▶ Manage Referees
▶ Custom Goal Settings

Contracts & Challenges
Manage Contracts > Manage Referee

Add A Referee

Search

Displaying results 1 of 8

Referee Name	# of contracts refereeing			
Jordan Goldberg	12	View	Edit	Delete
Jon Whitticom	2	View	Edit	Delete
Turab Here	14	View	Edit	Delete
Darren Azman	15	View	Edit	Delete
Sam Espinosa	1	View	Edit	Delete

Campaign Statistics Homepage

stickK

Help | Logout

Home | Campaigns | Contract Manager | Manage Users | Reports | Financials | Messages | Rewards | Groups | Portal Settings

Reporting Center
Custom Reports

Reporting Dashboard

Contracts by Geography

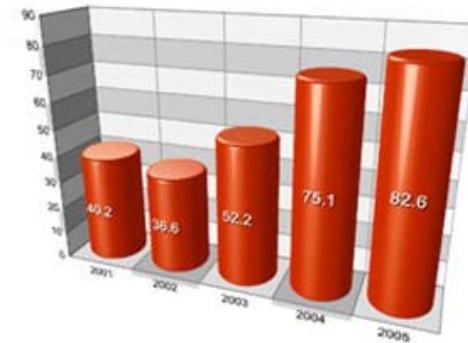


Activity Overview

- # of messages sent: 63
- # of photos uploaded: 102
- # of videos uploaded: 2
- # of blogs posted: 328
- # of Journal entries made: 250
- # of connections made (friends): 782
- # of updates/reports by user: 60
- # of updates/reports by referee: 35
- # of comments by supporters: 101

Contracts by Time

by day



Contracts by Type



item # 1 item # 2
item # 3 item # 4

Download Your Campaign Statistics



Help | Logout

- Home
- Campaigns
- Contract Manager
- Manage Users
- Reports
- Financials
- Messages
- Rewards
- Groups
- Portal Settings

- Reporting Center
- Custom Reports

 Reports
 Reporting Center

Report

- Campaign Metrics
- Contracts
- Groups and Teams
- Summary
- User Trends
- Flags
- Ratings

Export as

- | | |
|---|---|
| Microsoft Excel  | Adobe PDF  |
| Microsoft Excel  | Adobe PDF  |
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Thank you!