

Moving beyond simple experiments

Matthew J. Salganik
Department of Sociology
Princeton University

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Optimization experiments vs Understanding experiments

Optimization experiments + Understanding experiments

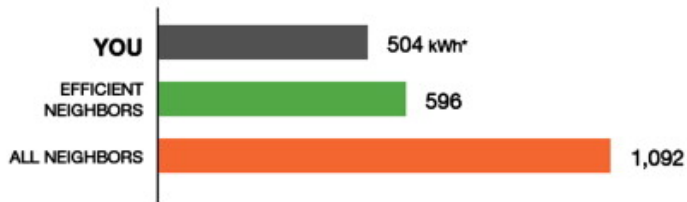
The Constructive, Destructive, and Reconstructive Power of Social Norms

P. Wesley Schultz,¹ Jessica M. Nolan,² Robert B. Cialdini,³ Noah J. Goldstein,³ and Vidas Griskevicius³

<http://dx.doi.org/10.1111/j.1467-9280.2007.01917.x>

Last Month Neighborhood Comparison

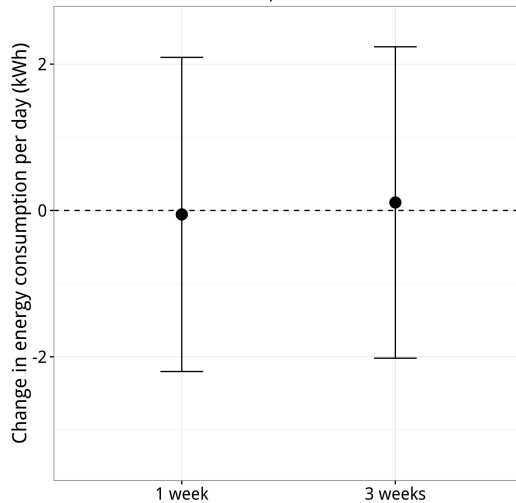
Last month you used **15% LESS** electricity than your efficient neighbors.

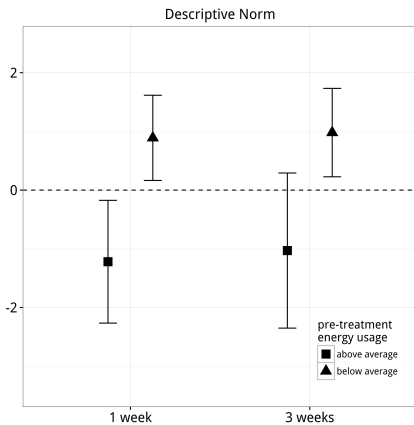
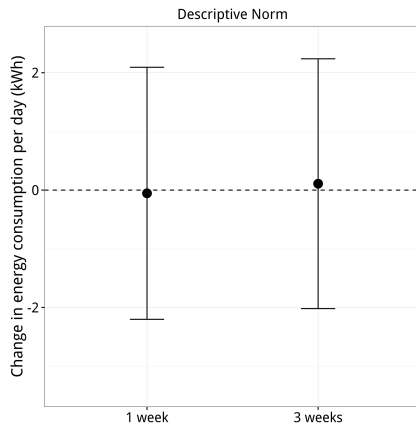


* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

Figures from Allcott (2011)

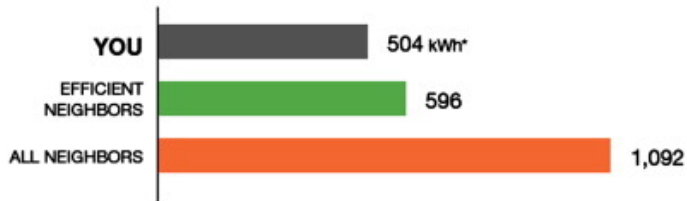
Descriptive Norm





Last Month Neighborhood Comparison

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YOUR EFFICIENCY STANDING:



GREAT



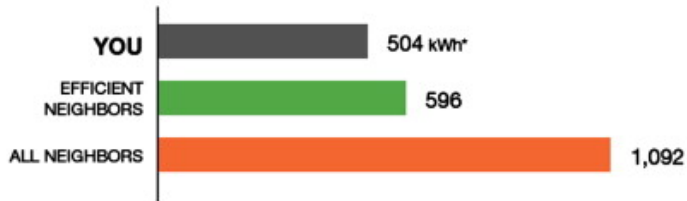
GOOD 😊

BELOW AVERAGE 😞

Figures from Allcott (2011)

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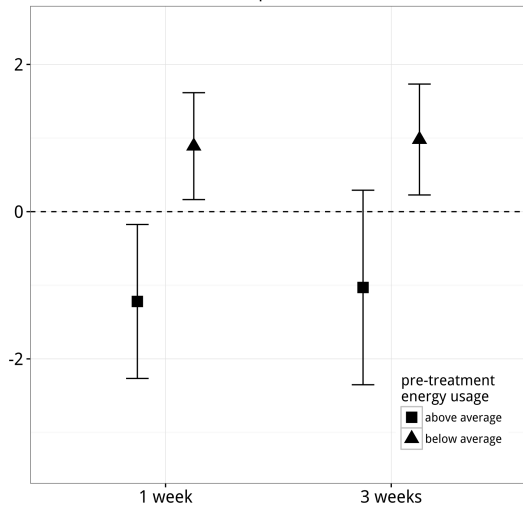
* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

YOUR EFFICIENCY STANDING:

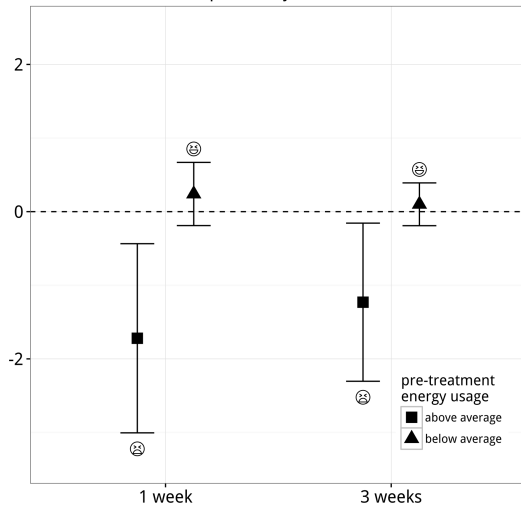


Figures from Allcott (2011)

Descriptive Norm



Descriptive + Injunctive Norm



If you want to move beyond simple experiments:

- ▶ Validity
- ▶ Heterogeneity of treatment effects
- ▶ Mechanisms

Validity

- ▶ statistical conclusion validity
- ▶ internal validity
- ▶ construct validity
- ▶ external validity

Heterogeneous treatment effects

- ▶ lots of people, lots of pre-treatment information: stop treating people like widgets

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- ▶ lots of people, lots of pre-treatment information: stop treating people like widgets
- ▶ beware of fishing
- ▶ Lots of new methods in this area

Mechanisms

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[Green et al \(2010\)](#)

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[Green et al \(2010\)](#)
- ▶ Experiments specifically designed to test mechanisms: [Ludwig et al \(2011\)](#), [Imai et al \(2012\)](#), [Pirlott and MacKinnon \(2016\)](#)

Optimization experiments + Understanding experiments

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This is particularly important if you want to partner with the powerful. But it is very hard.

Questions?