Moving beyond simple experiments

Matthew J. Salganik
Department of Sociology
Princeton University

Summer Institute in Computational Social Science
June 23, 2018

The Summer Institute in Computational Social Science is supported by grants from the Russell Sage Foundation and the Alfred P. Sloan Foundation.

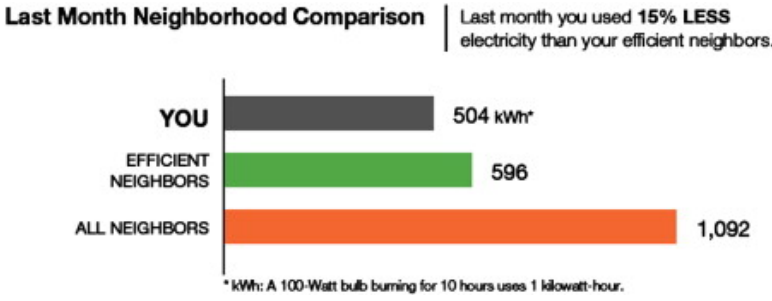
Optimization experiments vs Understanding experiments

Optimization experiments + Understanding experiments

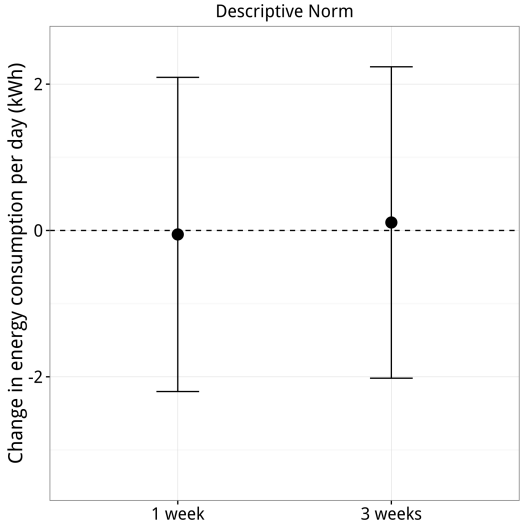
The Constructive, Destructive, and Reconstructive Power of Social Norms

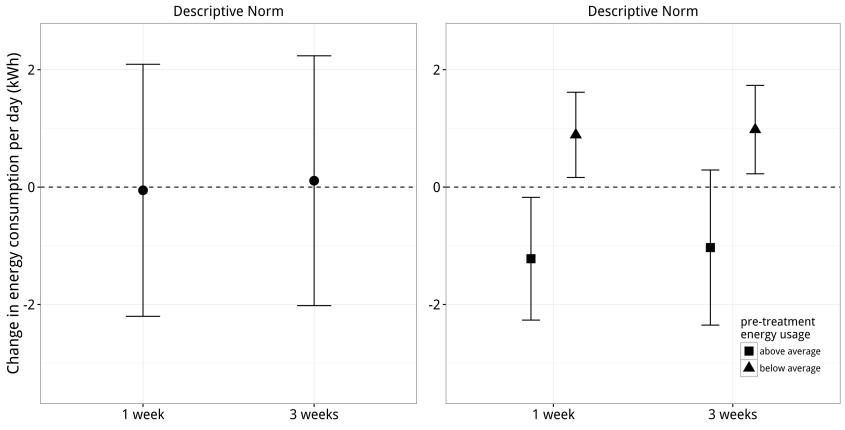
P. Wesley Schultz,[1] Jessica M. Nolan,[2] Robert B. Cialdini,[3] Noah J. Goldstein,[3] and Vladas Griskevicius[3]

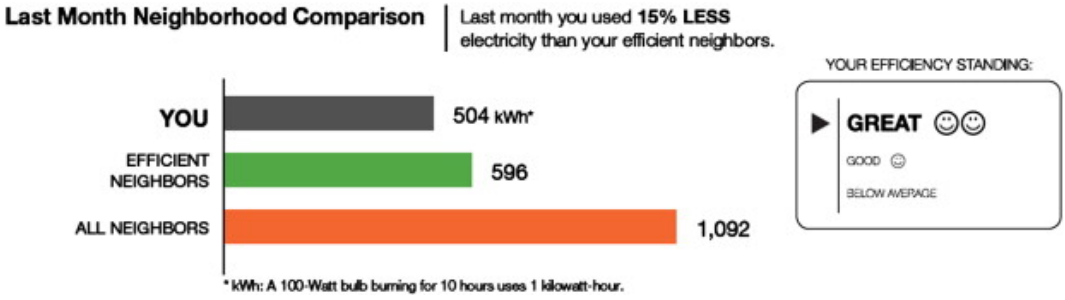
http://dx.doi.org/10.1111/j.1467-9280.2007.01917.x



Figures from Allcott (2011)


Descriptive Norm
Change in energy consumption per day (kWh)
2
0
-2
1 week
3 weeks


Descriptive Norm
Descriptive Norm
Change in energy consumption per day (kWh)
2
0
-2
1 week
3 weeks
pre-treatment
energy usage
above average
below average



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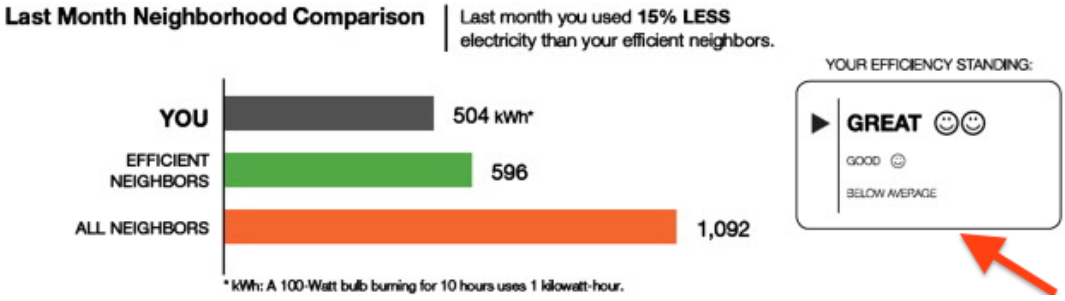

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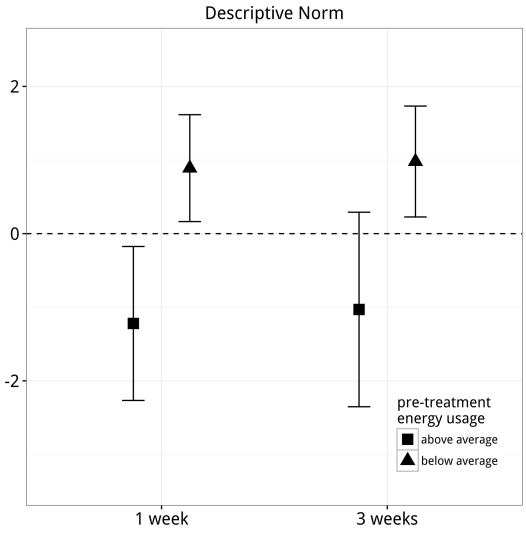
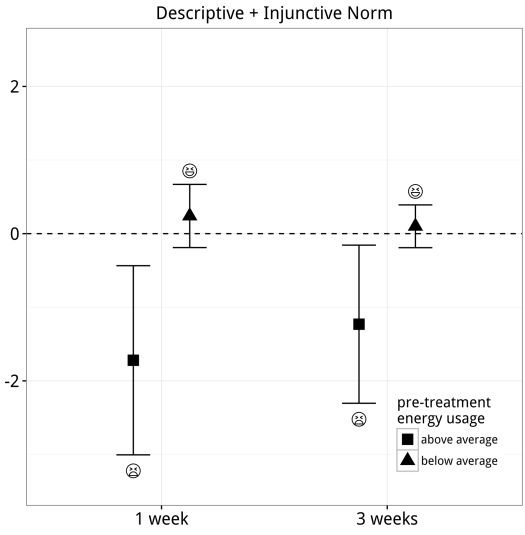

Descriptive Norm
2
0
-2
1 week
3 weeks
pre-treatment
energy usage
above average
below average


Descriptive + Injunctive Norm
2
0
-2
1 week
3 weeks
pre-treatment
energy usage
above average
below average

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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- beware of fishing

Heterogeneous treatment effects

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

Mechanisms

- Not as easy as scurry and limes, “Enough already about black box experiments” Green et al (2010)

Mechanisms

- Not as easy as scurry and limes, "Enough already about black box experiments" 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

Questions?