A Behavioral Perspective on Decision Making and Policy

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June 29, 2017
The plan:

- The “behavioral” view of human nature
- The psychology of scarcity
- Some policy implications
  - Discussion…
Milgram’s Obedience Studies

“Teachers” punish “learners’” (confederates’) errors with a shock generator…
Voltage increased with each incorrect answer, from 15 volts ("mild shock"), to 375 volts ("Danger: severe shock"), to 450 volts ("XXX")

- 75 - 105 volts: grunts
- 150 volts: “Get me out of here! I told you I had heart trouble. My heart’s starting to bother me now. I refuse to go on!” …
- 270 volts: screams of agony …
- 330 volts: silence

Prods: “please continue”
“the experiment requires that you continue”
“it is absolutely essential that you continue”
“you must go on”…
At what point will the “teacher” refuse to obey?

Milgram asked psychiatrists, students, and other adults for their predictions:

- everyone predicted disobedience
- average prediction: 135 volts
- no one predicted they would go beyond 300 volts
- psychiatrists predicted 1/1000 would go to 450 volts

Instead:

Every participant obeyed up to 300 volts!
65% went all the way to 450 volts!
The Power of the Situation
The Tendency to Underestimate the Power of the Situation

A trivial but profound fact (‘‘construal’’):
Decisions are not about objective states of the world, but about our mental representations of those states.

Context and construal everywhere…
# The Pleasure of Driving a Nice Car

<table>
<thead>
<tr>
<th></th>
<th>BMW</th>
<th>Honda Accord</th>
<th>Ford Escort</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students predict</td>
<td>4.53</td>
<td>3.10</td>
<td>1.91</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>(cars mentioned)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Fac/staff report</td>
<td>4.99</td>
<td>4.21</td>
<td>3.38</td>
<td>&lt; .01</td>
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<tr>
<td>(cars mentioned)</td>
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<tr>
<td>Web Survey report</td>
<td>4.88</td>
<td>4.19</td>
<td>3.50</td>
<td>&lt; .01</td>
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<td>(cars mentioned)</td>
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<tr>
<td>Episodic reports</td>
<td>2.67</td>
<td>2.53</td>
<td>2.31</td>
<td>ns</td>
</tr>
<tr>
<td>Fac / Staff</td>
<td></td>
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<tr>
<td>(cars unmentioned)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Episodic reports</td>
<td>2.16</td>
<td>2.29</td>
<td>2.42</td>
<td>ns</td>
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<tr>
<td>Web Survey</td>
<td></td>
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<tr>
<td>(cars unmentioned)</td>
<td></td>
<td></td>
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</tbody>
</table>

Reported intensity of 10 (averaged) positive emotions (0=not at all; 6=very much); higher values indicate more positive feelings while driving. (Schwarz & Xu, 2011)
Because context plays such a key role:

**Intention-Action tension**

Actual prob. of behavior: often does not increase with intention strength

Manipulations designed to strengthen intention:

larger impact on self-predictions than on behavior ("misjudgment")

Manipulations that influence ease with which intentions are translated into behavior (e.g., access, reminders):

larger impact on behavior (increased welfare!)

(Koehler & Poon, 2006)
The Dinner Plate
In 1960 the average American dinner plate was 9” in diameter. In 2009 the average American dinner plate is 12” in diameter. See the difference? This could affect how much food you eat. The US Dept. of Agriculture now recommends a 9” plate for portion control.

Then

Now

TheGoodista.com
THE NEW (AB)NORMAL

Portion sizes have been growing. So have we. The average restaurant meal today is more than four times larger than in the 1950s. And adults are, on average, 36 pounds heavier. If we want to eat healthy, there are things we can do for ourselves and our community: Order the smaller meals on the menu, split a meal with a friend, or eat half and take the rest home. We can also ask the managers at our favorite restaurants to offer smaller meals.

For more information, visit MakingHealthEasier.org/NewNormal
Financial Literacy Update

March/April 2016

The Office of the Comptroller of the Currency (OCC)'s Financial Literacy Update is a bimonthly e-newsletter that reports upcoming financial literacy events, new initiatives, and related resources of the OCC and other government agencies and organizations.

Financial Literacy Update provides brief descriptions and Web links for events in chronological order. It lists new initiatives and resources (with Web links) in alphabetical order. We welcome your feedback.

Have an upcoming literacy event, new tool, or product? Please e-mail us at communityaffairs@occ.treas.gov. Online versions of Financial Literacy Update are available at www.occ.gov/flu.

EVENTS

Financial Coaching Fundamentals and Specialty Training
March–April 2016

FinLit300
March–April 2016 (New Hampshire)
The New Hampshire Jump$tart Program helps teachers apply classroom-based financial literacy lessons to their students.

Management Science
Publication details, including instructions for authors and subscription information:
http://pubsonline.informs.org

Financial Literacy, Financial Education, and Downstream Financial Behaviors
Daniel Fernandes, John G. Lynch Jr., Richard G. Netemeyer
Manipulations designed to influence ease with which intentions are translated into behavior

Retirement Savings

401(k) participation by tenure at firm: Company B

FAFSA forms

(Bettinger, Long, Oreopoulos & Sanbonmatsu, 2009)
Parenting...
Attention, consistency, engagement,…
Consistent finding: Poor are worse parents

Weeding...
High return: losses due to uncontrolled weed growth (>25%...)
Consistent finding: Poor less likely to weed

Adherence...
Low income: One of the most consistent correlates of low adherence

Payday Loans...
Short-term high (extremely high) interest loans...
The psychology of scarcity

With Sendhil Mullainathan
(also: Anuj Shah, Jiaying Zhao, Anandi Mani, Crystal Hall…)

Contexts of scarcity produce their own psychology.

Focus (“tunnel”) on what don’t have enough of.
Leaves less mind for other things...

This psychology, in contexts of scarcity, produces characteristic behaviors…
The Packing Problem:  
A Suitcase metaphor

Larger suitcase:
- pack everything important w. room to spare
- less need to focus, can afford to be careless
- easy (marginally cheaper) to leave slack, in case something comes up

Smaller suitcase:
- pack the very essentials
- need to choose among important items that don’t fit
- hard to maintain any slack, need to focus, be vigilant
Shop w. greater attention / care

Think more about tradeoffs

Know prices better

(p > .01)
URGENT
(Very!) Limited Bandwidth…

<table>
<thead>
<tr>
<th>Processing load</th>
<th>% choosing cake</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low</strong> (remember only 2 digits)</td>
<td>41%</td>
</tr>
<tr>
<td><strong>High</strong> (remember 7 digits)</td>
<td>63%</td>
</tr>
</tbody>
</table>

(Shiv and Fedorikhin, 1999)

(Strayer et al., *Human Factors*, 2006)

(Hyman et al., 2010)
<table>
<thead>
<tr>
<th></th>
<th>Money</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tradeoffs:</strong></td>
<td>If I buy this, what do I <em>not</em> buy instead?</td>
<td>If I do this, what do I <em>not</em> do instead?</td>
</tr>
<tr>
<td><strong>Temptations:</strong></td>
<td>Basic goods turn into “luxuries”</td>
<td>Basic activities turn into “luxuries”</td>
</tr>
<tr>
<td><strong>Indulgences:</strong></td>
<td>Given the money you owe, what are you doing spending?!</td>
<td>Given time you owe, what are you doing having fun?!..</td>
</tr>
<tr>
<td><strong>More consequential:</strong></td>
<td>When there’s lack of slack, every error is more consequential!...</td>
<td></td>
</tr>
</tbody>
</table>
SCARCITY

A source of demand on cognitive capacity…
Cognitive Capacity
(a limited resource)

Is Captured by Scarcity
(we focus...)

Automatically
(our mind has a life of its own...)
SCARCITY IS TOP OF MIND

(Aarts, Dijksterhuis, & de Vries, 2001)
Search times – *for neutral targets* – by condition and group

(Bryan, Mullainathan, & Shafir, 2010)
Financial inhibition scale (FIS) used to assess respondents’ degree of retirement-linked financial fears and worries.

Words in threat category:
401K, elderly, finances, investing, nest egg, pension, poverty, retirement, and saving.

Words in the neutral category:
aluminum, elevator, lemonade, nephew, rose, sailboat, trumpet, and waltz.

(Gutierrez & Hershey, 2013)
FINANCIAL CHALLENGES

(in a NJ mall...)

[Image of a mall with people shopping]
**COGNITIVE CONTROL TASK**

Press the same side as the heart
Press the opposite side as the flower

Measures cognitive control & executive function…

“Driving test”…

**RAVEN’S PROGRESSIVE MATRICES**

“Measures high-level observation skills, clear thinking ability, and intellectual capacity.”

“Intelligence test”…
COGNITIVE CONTROL

RAVEN’S MATRICES

(Mani, Mullainathan, Shafir, & Zhao, Science, 2013)
Expenditures

(pre-harvest) vs. (post-harvest)

Raven's Matrices

Cognitive Control

Errors

(Mani, Mullainathan, Shafir, & Zhao, Science, 2013)
So...

Scarcity is demanding of attention (intentionally and automatically)

It focuses us on immediate problems of scarcity, often at the expense of other things; distracting us and shortening our horizons...

*And this is not about the poor – it’s about being in poverty.*
Multiple rounds
“Rich”: 50 sec / round
“Poor”: 15 sec / round
No borrowing vs. High Interest Borrowing

“The poor” take myopic loans? People in scarcity do!

Shah, Mullainathan, & Shafir, Science, 2012
"The poor" are negligent parents?
People in scarcity are!

Table 2
Results of Multiple Regressions Predicting Day-To-Day Changes in Air Traffic Controllers' (ATCs') Marital Behavior From Daily Workload

<table>
<thead>
<tr>
<th>Workload predictors</th>
<th>Subjective measures</th>
<th>Objective measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Difficult conditions ($\beta^*$)</td>
<td>Busy day ($\beta^*$)</td>
</tr>
<tr>
<td>ATCs' marital behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital withdrawal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATC reports</td>
<td>.22**</td>
<td>.28***</td>
</tr>
<tr>
<td>Wife reports</td>
<td>.28*</td>
<td>.01</td>
</tr>
<tr>
<td>Marital anger</td>
<td>-.41***</td>
<td>-.37***</td>
</tr>
<tr>
<td>ATC reports</td>
<td>-.39**</td>
<td>.03</td>
</tr>
<tr>
<td>Wife reports</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Average observer ratings of parent behaviors on days with high and low perceived workload.
Scarcity: a function of one’s environment (not just income)!
  buffer savings, insurance to deal w. shocks, family/friends, can mean less scarcity at same level of income. (*Portfolios of the Poor*…)

Institutions/contexts can impact ease of packing
  Predictability (work hours, salary); Accounting ease; Defaults; Transportation, child care, Insurance, Regulation; Consumer Protection, low-interest loans

Bad design of programs; psychic taxes, in/outside the tunnel…
  • “Character obstacles” - time, self-presentation, planning…
  • Lifetime welfare limits (SNAP); Penalize but fail to motivate
What’s Advertising Content Worth? Evidence from a Consumer Credit Marketing Field Experiment (Bertrand, Karlan, Mullainathan, Shafir, Zinman; *Quarterly Journal of Economics*, 2010)

**Behavioral (“Marketing”) Manipulations:**

- # of loan examples shown
- subtle peripheral cues; photos

Some results:

1 vs. 4 examples: ~ 2.3 percent. points

For males: female picture = ~ 4.5 points
• Scarcity (poverty) is always there, creating cognitive / emotional load, demanding attention, distracting, and lowering performance

• It not only gets no respect – it get disrespected!

• Instead of (standard) help – it gets sabotaged!
The economist [policy analyst, activist, anybody..] may attempt to ignore psychology, but it is sheer impossibility for him to ignore human nature… If the economist [policy analyst, activist,..] borrows his conception of man from the psychologist, his constructive work may have some chance... But if he does not, he will not thereby avoid psychology. Rather, he will force himself to make his own, and it will be bad psychology.

John Maurice Clark, *Journal of Political Economy*, 1918
Attitude towards management of homeless patients in emergency departments...

Frequent visits & high dissatisfaction

Common concern: If experience quality is high, will return for all wrong reasons

Other possibility: Have disturbing problems; will stop coming if satisfied...

# of subsequent visits: ~1/3 lower for Compassionate rather than Conventional care (~2.5 visits / patient / year; p. < .02)

Design life’s cockpit with scarcity & bandwidth in mind…

Because it’s the only bandwidth we’ve got!…

(vis a vis evaluation…)

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Thank you!