A Behavioral Economics Approach to the Poor

Lecture 3/2

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Chayanee Chawanote

References: Mullainathan and Shafir, Scarcity: Why having too little means so much; and adapted from Udayan Roy, Behavioral Economics course

Scarcity: Introduction

- Scarcity: having less than you feel you need

- Scarcity can also make us more effective.
  - When scarcity captures the mind, it focuses our attention on using what we have most effectively
- However, scarcity has price and that usually ends in failure.
- Scarcity captures our attention and makes it difficult for us to think about anything other than the source of the scarcity

Poverty and Its Puzzles

- The poor tend to care less for their health
  - Use less preventive healthcare
  - Comply less with treatment regimes (Case et al *AER* 2004)
- The poor are less attentive parents
  - Better off parents read more to their kids, engage them in more conversations, take them to cultural/educational events more often, regulate the amount of TV that their kids watch more…
- The poor pass up on productive investment opportunities…
  - …despite having resources and knowledge to do so (Duflo et al 2010)

- Poverty is correlated with "bad" behavior. WHY ??

Possible Explanations

- Good things cost money
  - – Ex: drugs cost money

  Costs do not matter for many behaviors
- Factors *associated* with poverty
  - – Poor are less knowledgeable

  Doesn't quite explain many behaviors of the poor
- The poor are different people
  - – Care less about the future, less intelligent

  Care less maybe, but not less intelligent in normal situation

Poor are Worse Decision Makers

- One explanation for poverty:
  - (Bad) Decision-Making → Poverty

- Alternative Explanation:
  - Poverty → (Bad) Decision-Making

Something About *Scarcity*

- In the real world, the poor and the rich differ in many ways: diverse backgrounds and experiences lead to different personalities, abilities, health, education, and preferences.
- When they are seen to behave differently, scarcity may be one reason but any of several other differences maybe playing a role as well.
- However, the poor must manage sporadic income, juggle expenses, and make difficult financial tradeoffs.
- This is when scarcity comes in to play.
- Concerns about (financial) scarcity are taxing…
  - They capture our attention (mental bandwidth) and trigger intrusive thoughts…
  - … leaving less for other important, but less urgent tasks

Scarcity Focuses Our Minds

- In one study, the participants came to the lab around lunchtime, not having eaten for three to four hours
- Half of them were fed lunch (full), the other half wasn't (hungry)
- They were all then given word recognition tests
- The full and the hungry did equally well for neutral (not food-related) words
- The hungry did much *better* on food-related words

- Scarcity captures our minds and focuses on the scarcity
- This capture is involuntary (automatic)

Focus Dividend

- Scarcity captures our minds and makes us focus on the scarcity
- This helps us make *better* choices regarding the source of the scarcity
- Benefit of scarcity: focus dividend
  - Angry Blueberries game
- Scarcity makes us *more* efficient users of the thing that is scarce

More on the Focus Dividend

- Work meetings become more productive towards the end
- Fixed deadlines work better than flexible ones
- Coupons are less likely to be used if they have no expiration dates
- Sales people work hardest in the last weeks of the sales cycle

Cost of focus dividend

- Focusing on one thing means neglecting other things.
  - 79 percent of firefighter deaths from vehicle collisions, the firefighters were not wearing seat belts
- Scarcity causes us to tunnel: to focus single-mindedly on managing the scarcity at hand.
- Tunneling changes the way we choose.
- Focusing on something that matters to you makes you less able to think about other things you care about: goal inhibition
- Tunneling makes us ignore tasks that are crucial but do not appear urgent

Tunneling

- When we decide to forgo the gym for the deadline, our mind is not on that subtle cost-benefit problem (think whether it's worth to go; we just don't think)
- When scarcity captures our mind, we do not make trade-offs using a careful cost-benefit calculation. We tunnel on managing scarcity both to our benefit and to our detriment.
- Immediate scarcity looms large, and important things unrelated to it will be neglected. Scarcity alters how we look at things. It makes us choose differently

The Tunneling Tax

- Insurance: the poor do not insure as they think they cannot afford insurance (better spend money on food, rents, school fees, and other urgent expenses). Hence, the threats for health/low rainfall seem abstract, but if it actually occurs, it costs more than they can afford.
- Multitask to save time: eating while driving increase a chance of having an accident; listening a conference call while writing an email might result in a sloppy email.
- Things outside the tunnel are harder to see clearly, easier to undervalue, and more likely to get left out.

The Bandwidth Tax

- Bandwidth measures our computational capacity, our ability to pay attention, to make good decisions, to stick with our plans, and to resist temptations
- Scarcity taxes our bandwidth, as a result, inhibits our most fundamental capacities.
- Scarcity directly reduces bandwidth: By constantly loading the mind with other processes, it leaves less 'mind' for the task at hand. Less capacity is currently available for use.
- What is bandwidth?
  - Cognitive capacity and executive control

Cognitive capacity

- Cognitive capacity: the ability to think, reason abstractly, solve problems, and retain information.
- The same person has fewer IQ points when she is preoccupied by scarcity than when she is not.
- NJ mall experiment:
  - Trigger thoughts about financial concerns by presenting hypothetical scenarios to mall shoppers …
  - Give them IQ tests as they're thinking about how they would deal with the scenario
- The poor appear worse because some of their bandwidth is being used elsewhere.

Study in a NJ Mall

- Scenario: *Your car breaks down and requires **$300** to be fixed. You can pay in full, take a loan, or take a chance and forego the service at the moment... How would you go about making this decision? Financially, would it be an easy or a difficult decision for you to make?*
- This was followed by Raven's Matrices tests for IQ
- The rich and the poor did equally well
- The experiment was then repeated, but the repair cost was given as **$3,000**
- The rich subjects now did as well as before, but the poor did *significantly worse*

Executive control

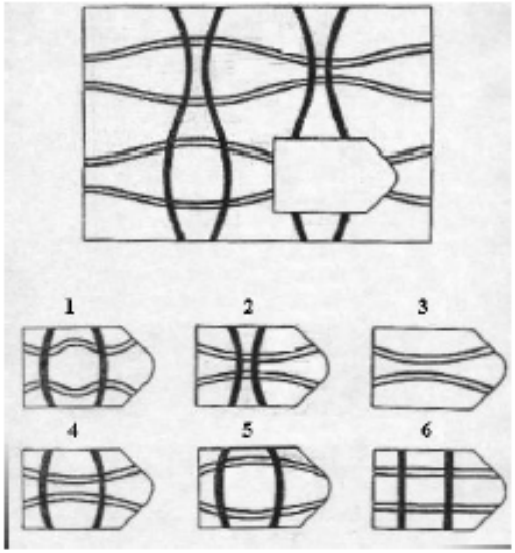
- Executive control: the ability to manage the cognitive activities, including planning, attention, initiating and inhibiting actions, and controlling impulses.
- Marshmallow test (Mischel's test) on 'the intimate contest of self-command'
  - Immediate rewards (a marshmallow now) are salient and receive a heavy weight. Rewards in the distant future (two marshmallows later) are less salient and receive lower weight. Two is better than one, but one in front of now beats two.
  - Those children who waited to eat the second marshmallow according to rules are more successful in their life.

Study in India with sugarcane farmers

- Farmer pre- and post-harvest has different financial scarcity. Poor before, rich after.
- 78 percent of sugarcane farmer in India had pawned something in the month before harvest, but only 4 percent pawned something after harvest.
- Then, give farmers a Raven's Matrices task (cognitive test) and a Stroop task (executive control test).
- Farmers performed much worse on these tests before harvest than after harvest.

Cognitive and Executive Control Tests

RAVEN'S PROGRESSIVE MATRICES



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

Number Stroop Tests

Respondents shown a string of (identical) numbers; Task is to count the number of digits, not the number itself

- 333
- 666666
- 22
- 11
- 4

Measures cognitive control and executive funtion

Executive Control in the context of the poor and the rich

- The poor spend most of their lives being tempted by things that cannot afford.
- This exhausts their self-control.
- As a result, when a really big temptation comes along, they may not have any self-control left to resist it.
- The rich are less likely to face this problem.
- Poverty taxes their mind. It reduces cognitive ability and executive control.
- The poor have lower effective capacity than the rich, not because they are less capable, but because part of their mind is captured by scarcity.

Back to Scarcity

- Scarcity makes people preoccupied. When they are preoccupied with money or with time, they rarely let go with monetary concerns or time concerns.
  - A waiter, lost in thought about how to make rent this month, overlooks the order from customers.
  - A student tries to focus on the exam, but is constantly interrupted by thoughts of the looming tuition bill.
- These people are not uncaring or unskilled. They just heavily taxed. The problem is the context of scarcity.

Summary

- The poor exhibited diminished cognitive abilities when financial problems were challenging, but were comparable to the rich when problems were benign
- Field and lab evidence suggests that financial scarcity presents challenges that consume cognitive resources, leaving less for other tasks, hence impeding other basic cognitive functions

Conclusions and Policy Implications

- A new explanation for why the poor appear less capable: The s*tate of poverty* hurts mental capacity
- Policies should be created in a way to reduce the cognitive demand in the poor
  - Set up the right default in retirement plans, health insurance, bank accounts
  - Simplify forms, application procedures
  - Set up commitment devices