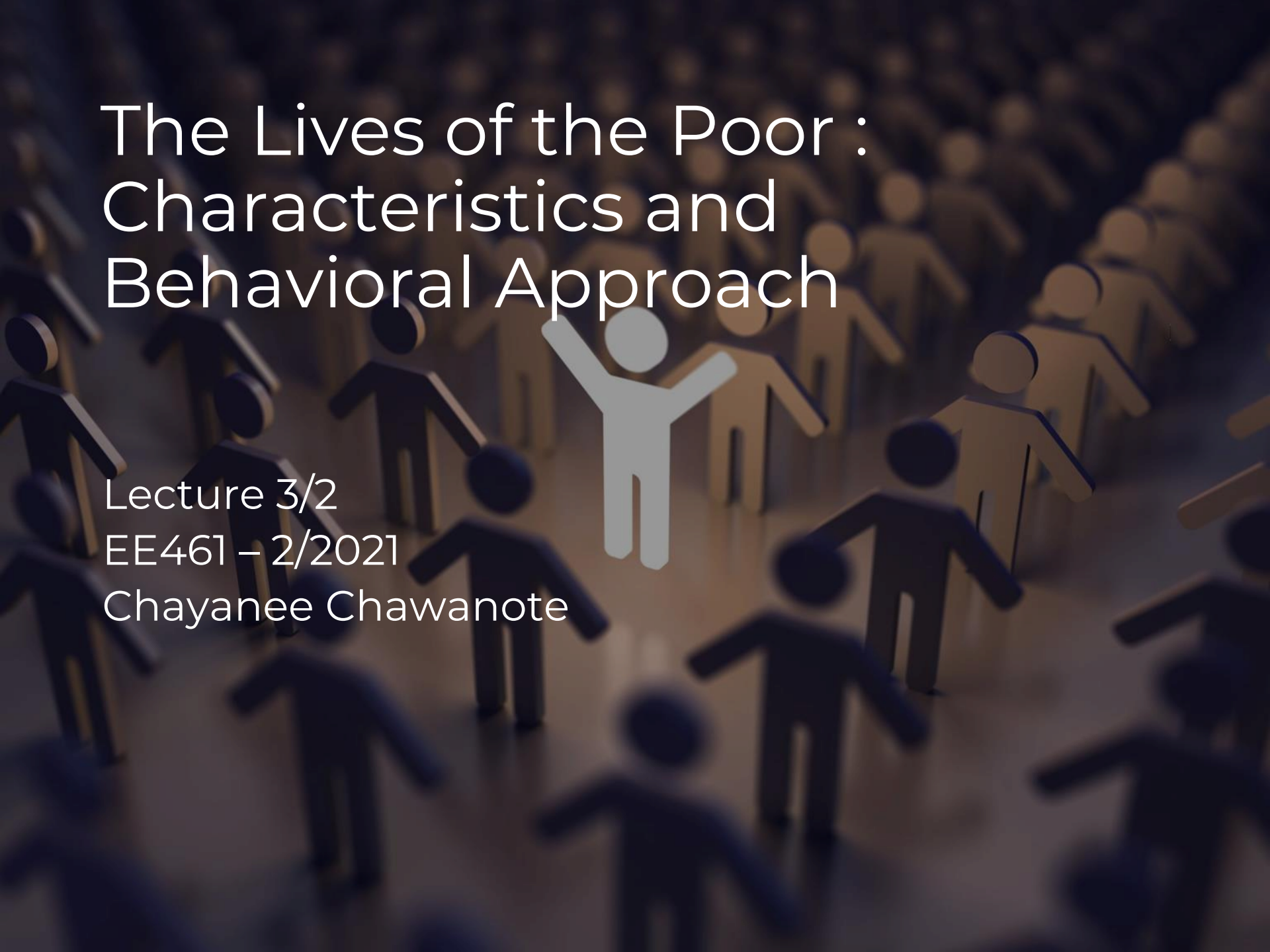
The Lives of the Poor : Characteristics and Behavioral Approach



Lecture 3/2
EE461 – 2/2021
Chayanee Chawanote

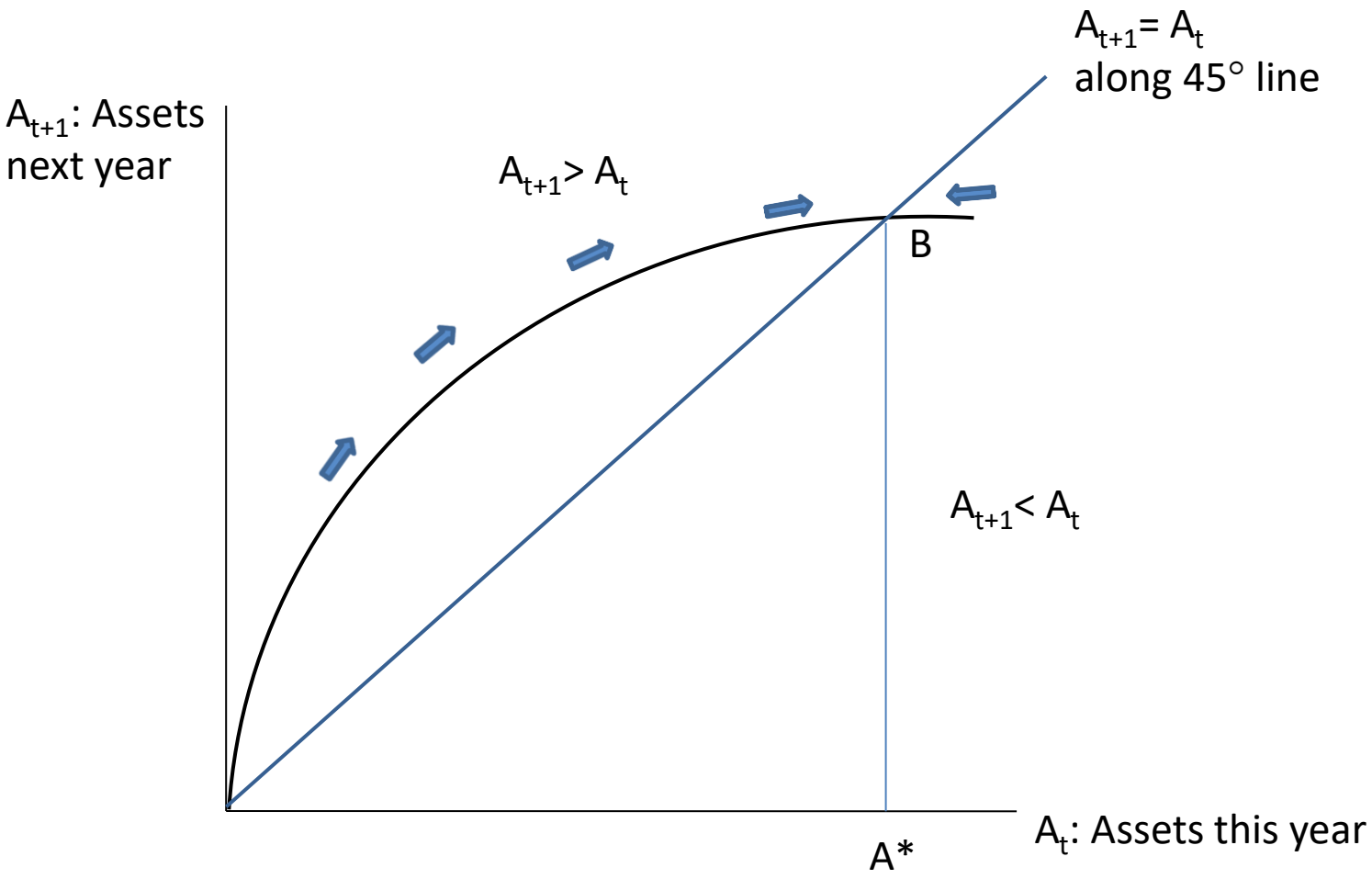
Outline

- Poverty trap
- The economic lives of the poor
- Poor but rational?
- Behavioral approach to understand the poor: Scarcity

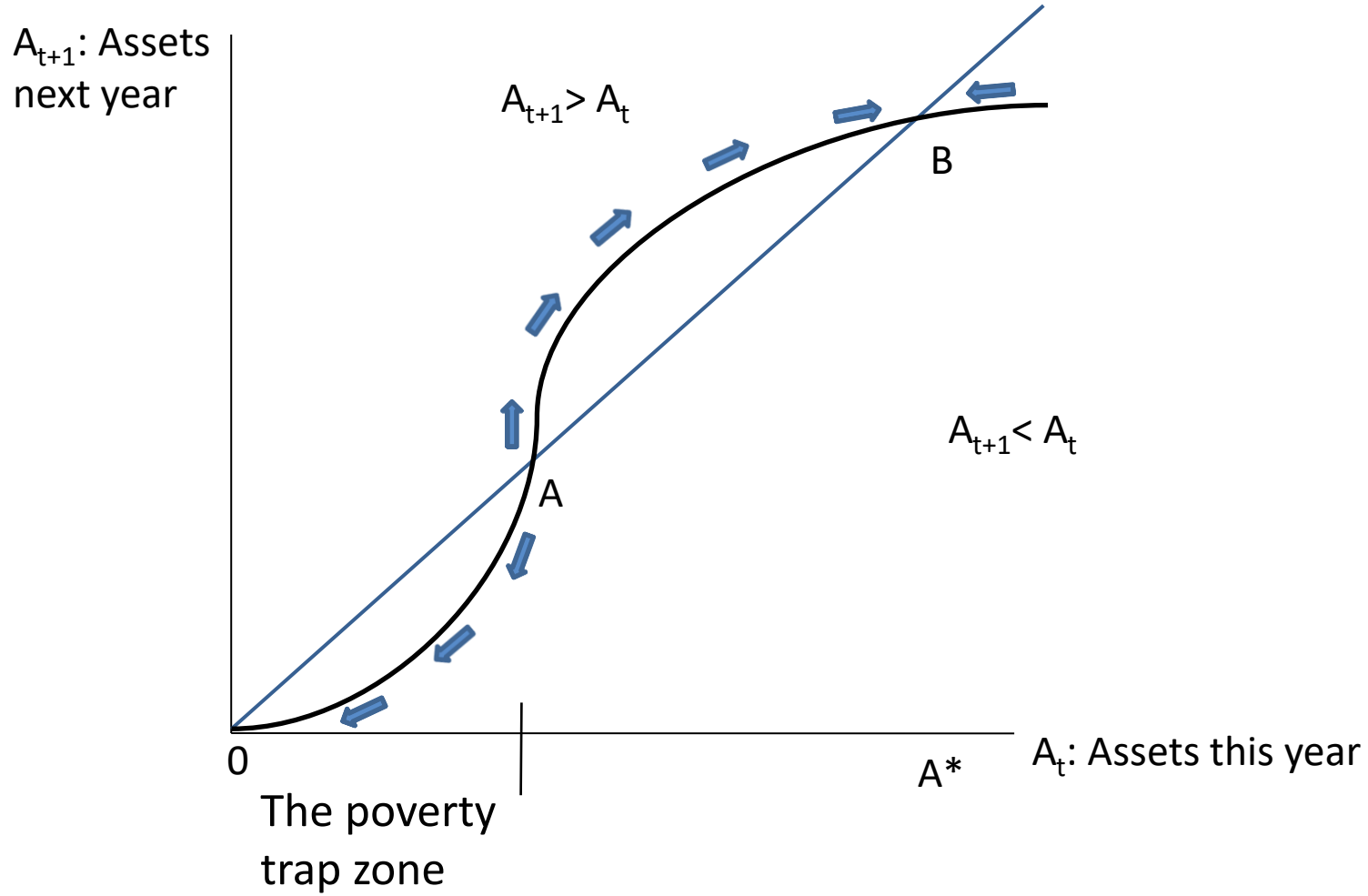
- https://www.youtube.com/watch?v=KxjW-HU1BCM

- What do you observe the poor from the clip?

Convex Asset Growth Curve with Steady-state at B



Non-convex Asset Growth and the Poverty Trap (Steady-states at B & 0)



Characteristics of the poor

Read: The economic lives of the poor (Banerjee and Duflo, 2007)

- Households with larger family size, high ratio of dependent members (often children)
  - The burden of poverty often falls on the young (child labor)
- Live in rural areas
- Lack of ownership of productive assets
- Most reside in the informal sector, small scale (self-employment: vendors, small traders, tea-stall owners, etc.), multiple occupations, lack of specialization
- Temporary migration to work, e.g., off-farming-season
- Few poor households have saving accounts or get loans from a formal lending source
  - High interest rate from informal loan due to high costs of contract enforcement
- High illiteracy rates, low education expenditure
- Undernutrition

Poverty and nutrition

- Relationship between poverty and undernutrition in low-income countries
- Results: muscle wastage, stunting, underweight, increased susceptibility to illness and infection, low cognitive skill, lower capacity to do productive work
- But, the relationship between increases in income and increases in nutrition may or may not be strong.
- Look at elasticities: what is the percentage change in the consumption of calories when household budgets change by one percentage point? ε = 0.6-0.8 => consider strongly related [Read: Debraj Ray Ch. 8.3.4]
  - Food supply in the harvest season (low ε) vs. the slack season (high ε)
  - Food in harvest is more abundant, a change in budget does not translate into higher nutrient consumption.
- Why don't the poor eat more?
  - Eating more might not help them much; lack of self-control (temptation to entertainment expenses)

Poor but rational?

(Duflo, 2003)

- Asset market failures and preferences towards risk are sufficient to explain why asset ownership matters, why worthwhile transactions and investments may not always take place, and why the poor may remain poor as a result.
- The task of empirical economics shifted to providing evidence for market inefficiencies, and the potential of economic policies to alleviate them.
- While the poor (and the rich) are all perfectly rational, the markets left to themselves may not produce an efficient outcome.

- Morduch (1993 and 1995) documents that poor farmers are less likely than richer farmers to use the high yielding varieties of seeds. They will prefer a safe strategy with a low return to a riskier strategy with a higher return.
- This means that the poor will tend to remain poor, while those who start with enough wealth will be able to accumulate more of it.

Poor but rational?

(Duflo, 2003)

- Poverty **changes the set of options available to individuals.** Accordingly, **poverty affects behavior**, even if the decision maker is neoclassical.
- Being neoclassical means being unboundedly rational, forward-looking, and internally consistent.

- The household therefore seems to keep separate "mental accounts" (Thaler, 1994), treating different types of income differently.
- Different sources of income are allocated to different uses depending on their origins.
- The fact that these accounts respond differently to observable shocks in income is difficult to reconcile with imperfect observability, moral hazard, or limits on self-enforcing insurance schemes.
- The complexity of intra-household sharing arrangements seems to resist explanations based only on information and incentives.

Poor are Worse Decision Makers?

One explanation for poverty

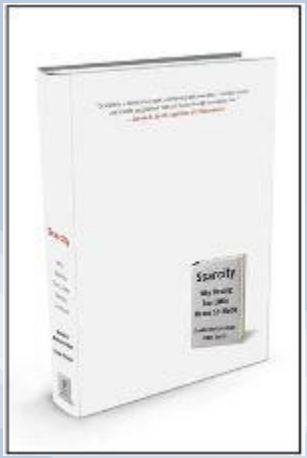
- (Bad) Decision-Making ➔ Poverty

Alternative Explanation

- Poverty ➔ (Bad) Decision-Making

Behavioral economists have argued that three main ways in which humans deviate from the standard economic model need to be incorporated into economic reasoning.

- Their ability to analyze information, compute, and remember is limited.
- Their willpower is also bounded: They do not always make choices that are in their best interest in the long run.
- They are not purely self-interested.



Scarcity: Why Having Too Little Means So Much
Sendhil Mullainathan, Eldar Shafir (2013)

Slide 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.

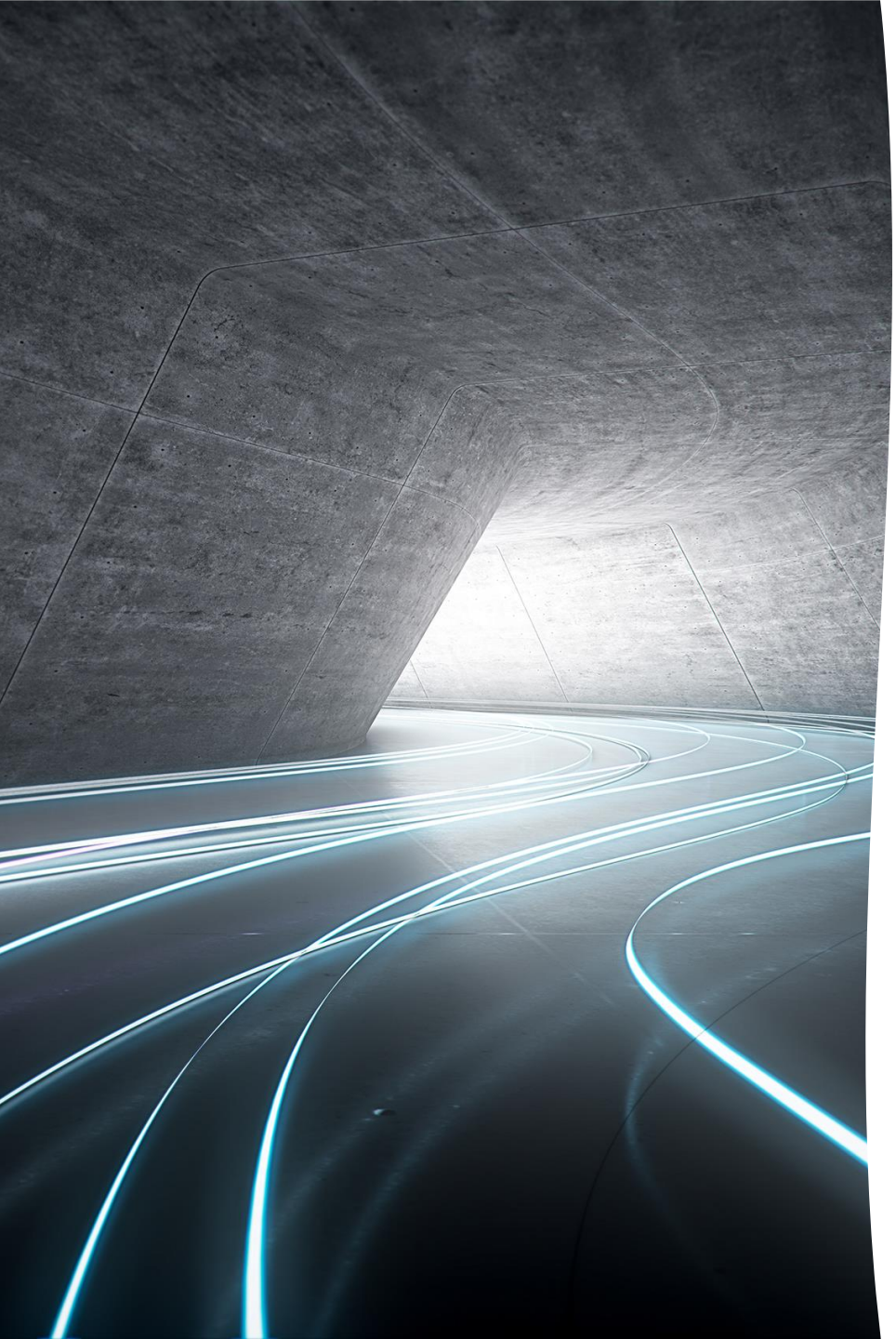
https://behavioralscientist.org/scarcity-excerpt-mullainathan-shafir/

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

Benefit of Scarcity: 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
- Scarcity makes us *more* efficient users of the thing that is scarce
- Examples:
  - 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.

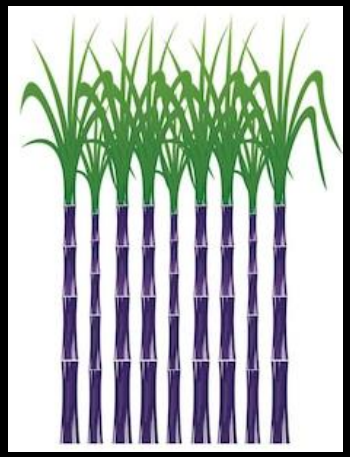
Study in a NJ Mall

- 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.

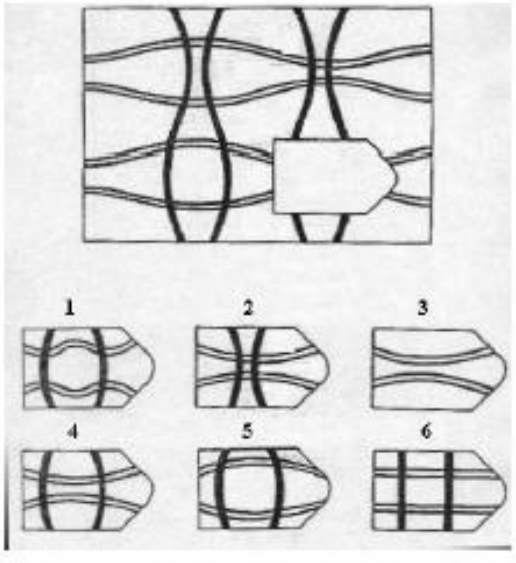
Study in India with sugarcane farmers



- 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
- 66666
- 22
- 11
- 4

Measures cognitive control and executive function

https://psycho-tests.com/test/raven-matrixes-test

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, saving bank accounts
  - Simplify forms, application procedures
  - Set up commitment devices
  - Target on the basis of bandwidth
  - Reduce economic volatility and improving infrastructure

- Behavioral science to social problems: http://www.ideas42.org/learn/

Figure 4.4 Targeting on the basis of bandwidth may help people make better decisions

Bandwidth may be especially low at certain times, such as periods of higher expenditures during festivals, or when a mother is about to give birth. Key decisions, such as whether to enroll a child in school or whether to go to the hospital for a baby's birth, would ideally be moved out of these periods. Some decisions, such as choosing a health insurance plan or applying to a university, may require high levels of bandwidth no matter when they fall. Policies that make these decisions easier could be targeted at the time of decision making.

During a moment of bandwidth need, policies should try to

move decisions to another time or

target assistance to the time of the decision.

Source: WDR 2015 team.