

Scarcity: Why Having Too Little Means So Much

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Princeton University

Two Dominant Views of Behavior under Poverty

Rational Choice view

- Consistency, Willpower, Well-defined preferences,..
- Behavior: calculated adaptation to prevailing circumstances

Pathology view

- Psychological pathologies specific to the poor
- Impatient, no planning, confused
- Behaviors endemic to “culture of poverty”

An alternative:

Neither rational nor pathological; just plain human...

Indian fruit vendors (debt traps...)

- Indian fruit vendors: Persistent borrowers
 - (70% borrow daily...; average: 9.5 years of taking daily loans!!)
- At very high rates (4.9% average daily interest rate)
- Stark implication: If saved a little (& borrowed less), in **50 days** will have doubled **income**
 - Significant foregone income





Adherence...

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

Weeding...

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



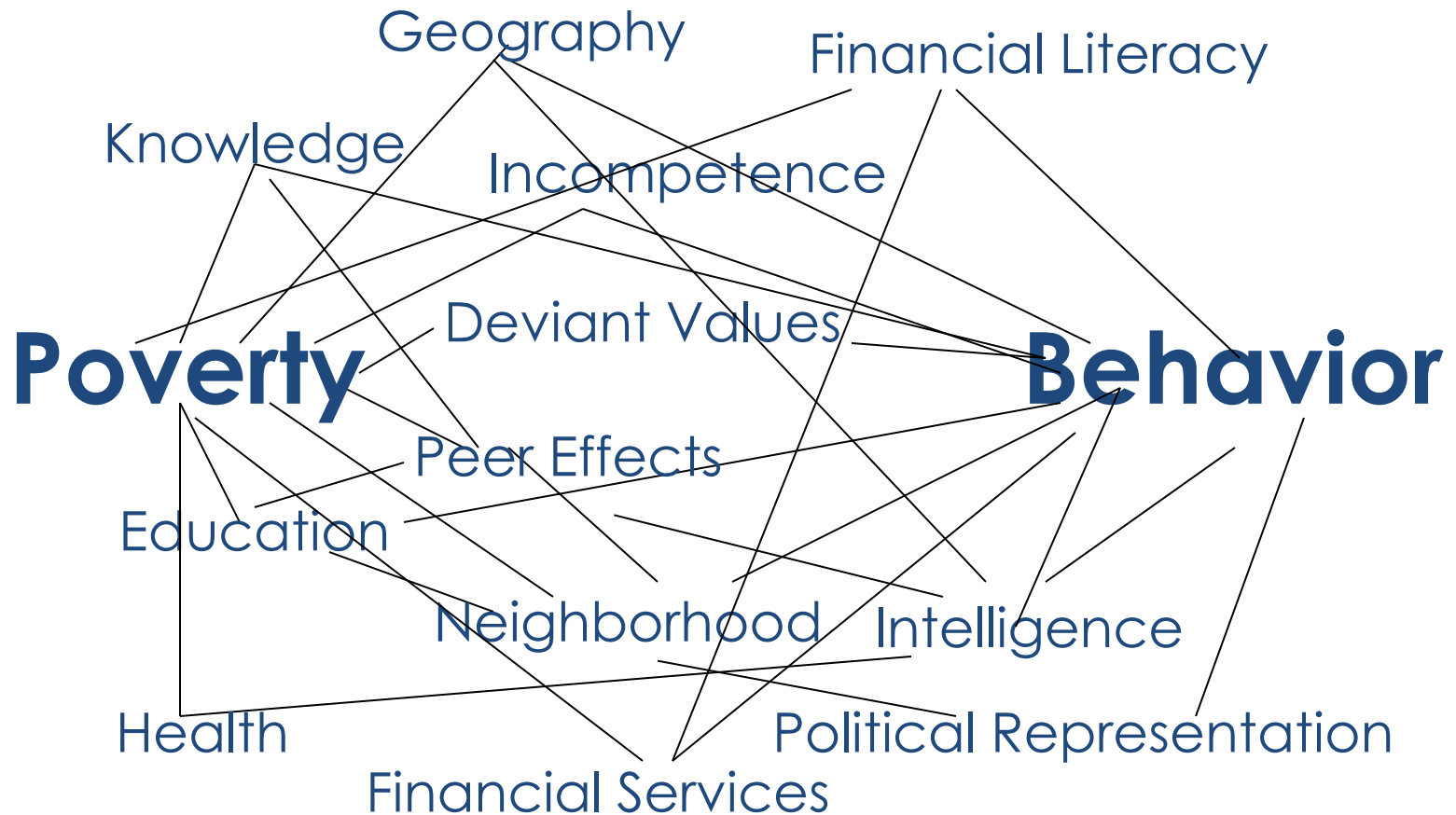
Parenting...

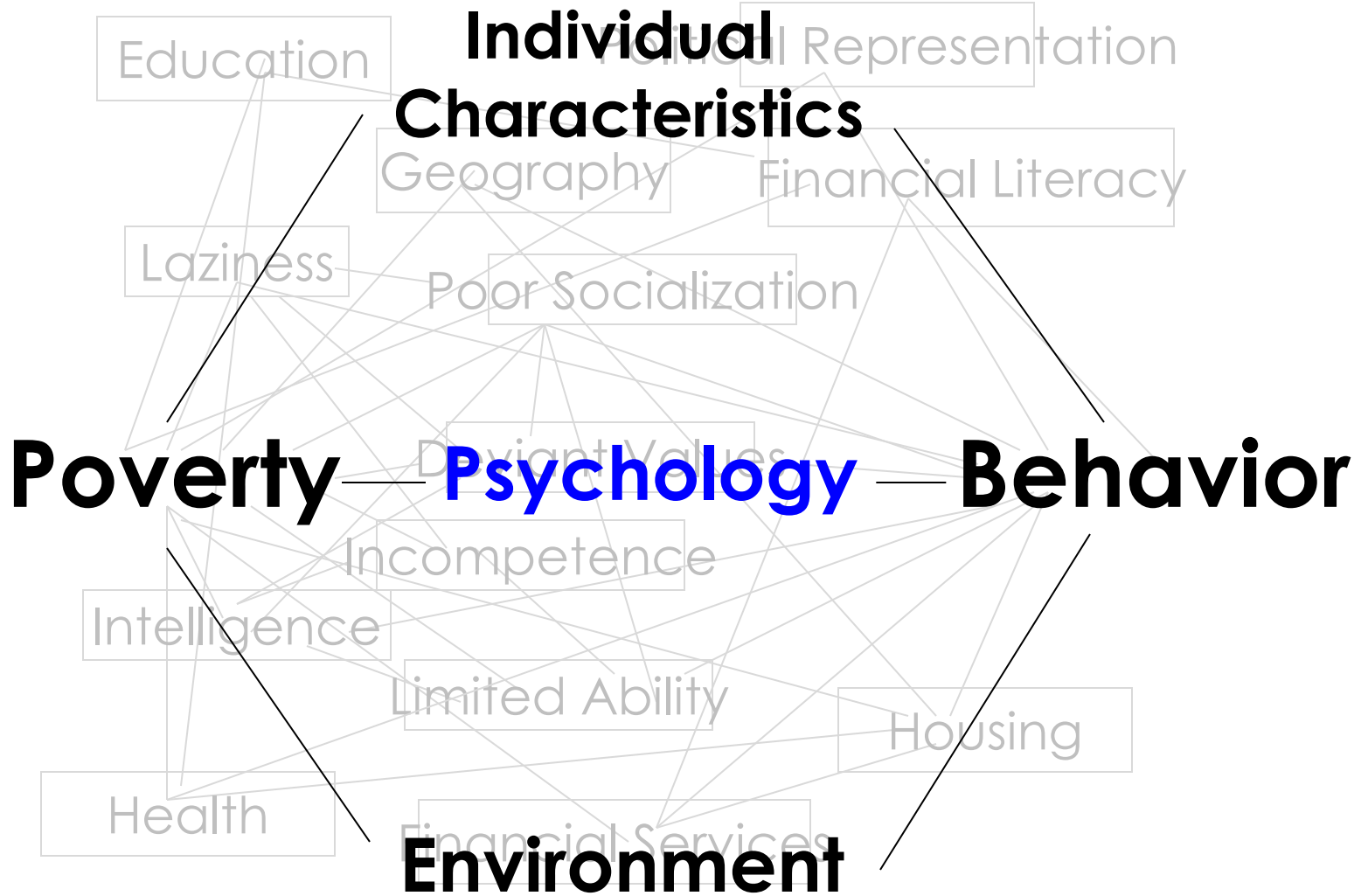
Attention, consistency, engagement,...
Consistent finding: Poor are worse parents

Payday Loans...

Short-term high (extremely high) interest loans...







Understanding Behavior in Poverty

Is there something intrinsic to poverty? (besides the many covariates..)

The psychology of scarcity...

Conditions of scarcity (in money, time...) produce their own psychology.

This psychology, in contexts of scarcity, produces characteristic behaviors.

The Packing Problem: A Suitcase metaphor

Larger suitcase:

- pack everything important w. room to spare
- easy to leave slack, in case something comes up



Smaller suitcase:

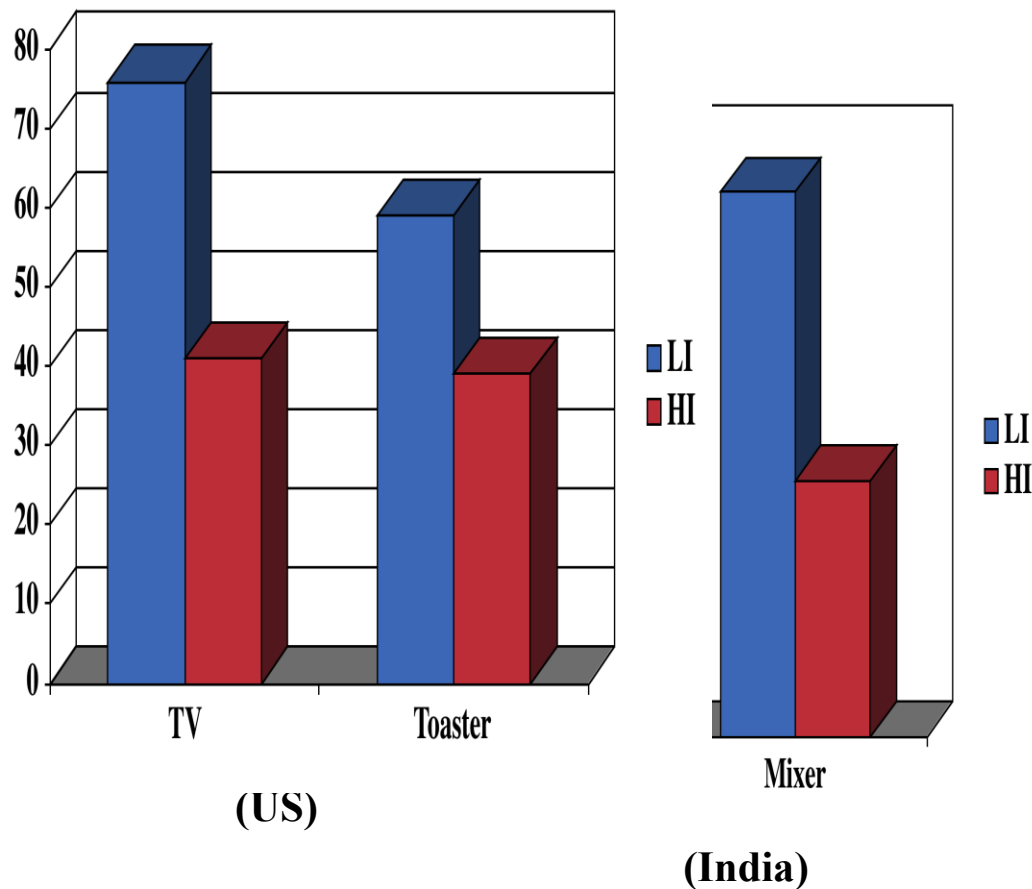
- pack the very essentials
- need to choose among important items that don't fit
- hard to maintain any slack



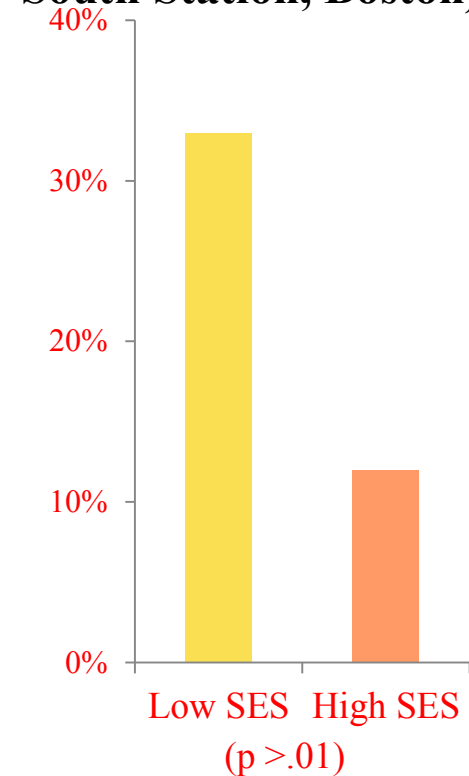
- Slack makes it easier to pack; Complexity higher when suitcase tight
 - Slack reduces cognitive cost: requires less focus, less vigilance
- Bigger suitcase means slack is “cheaper”
 - What you give up to maintain slack is (marginally) cheaper

Focus – quite successfully -- on immediate prices & tradeoffs..
(but less mind left for other things...)

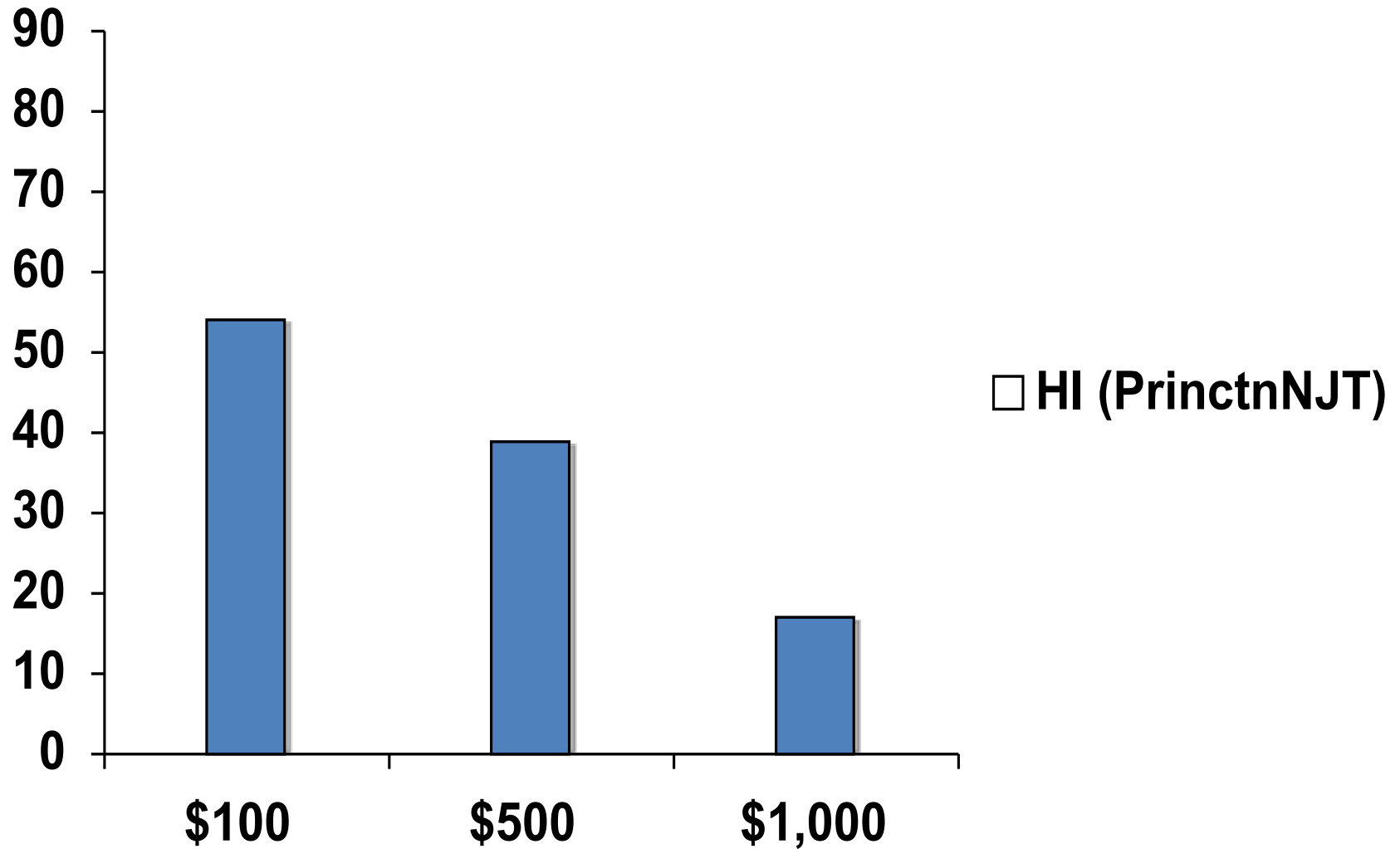
The poor: A greater focus on tradeoffs
(% who think about what they would not buy instead...)



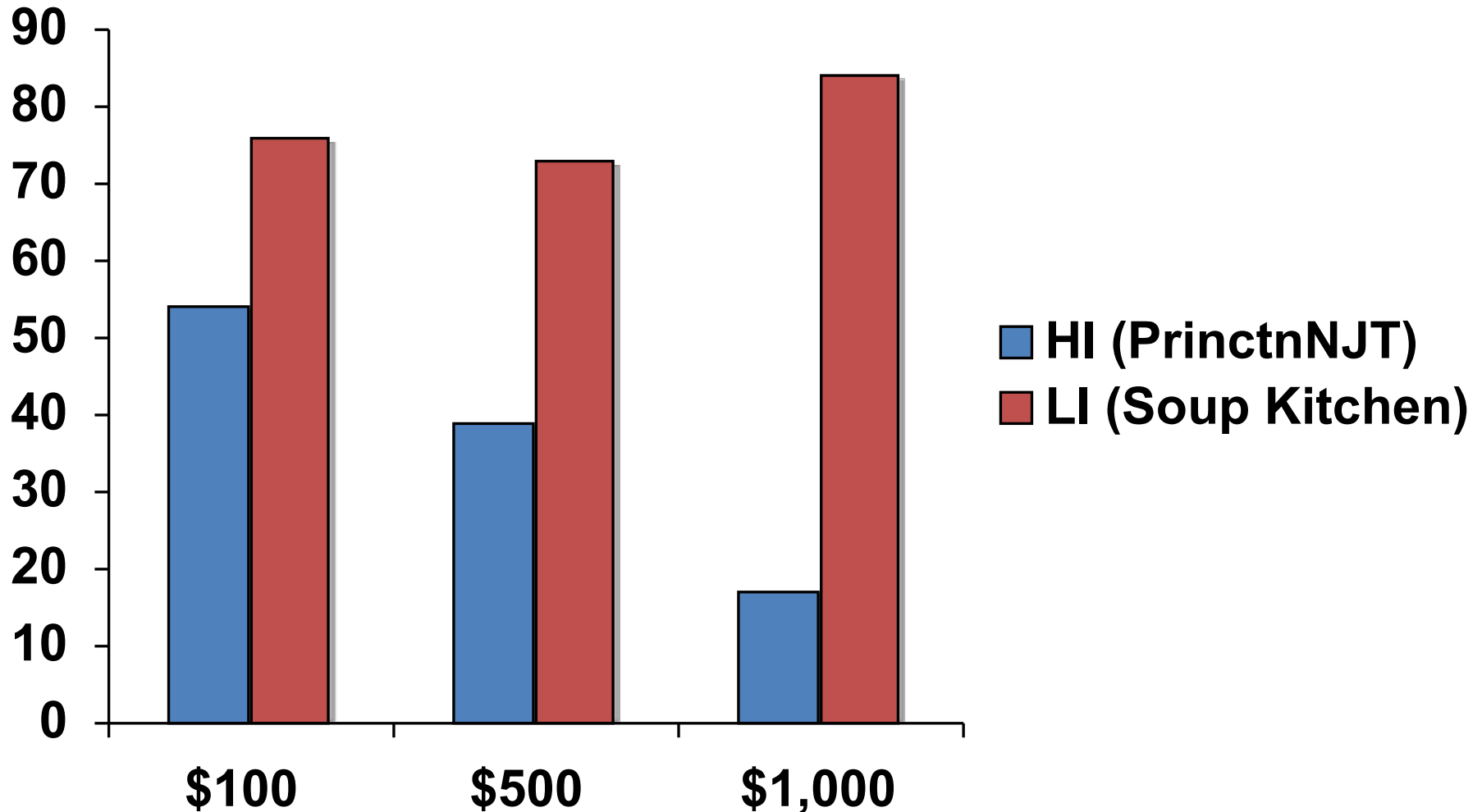
The poor: Know prices better
(Taxi fare when you first get in?
South Station, Boston)



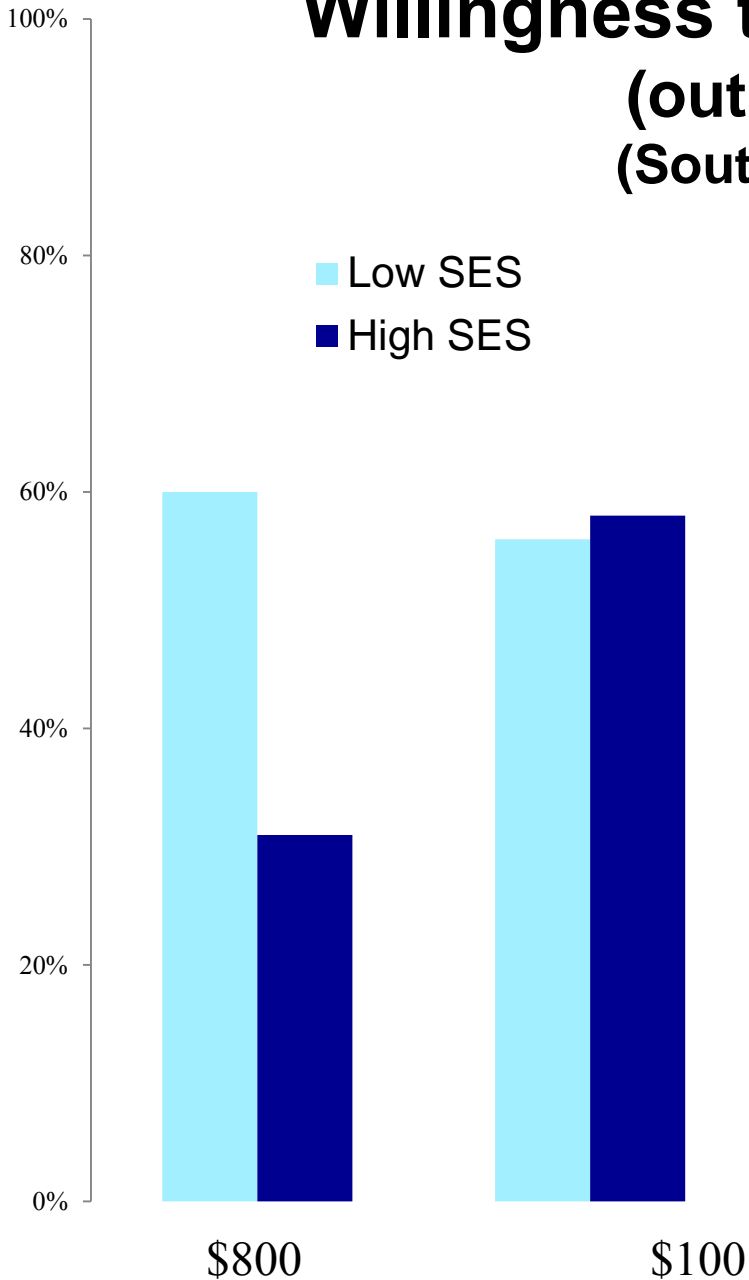
Percent willing to travel 45 mins to save \$50:



Percent willing to travel 45 mins to save \$50:



Willingness to travel to save \$25... (out of \$800 / \$100) (South Station, Boston)



Across a wide set of classic behavioral findings...

The poor's assessment of price and value: more robust; less affected by context and "frame"...

Heritage Foundation, 2011 Report: the poor in America “have air conditioning, cable TV, and a host of other modern amenities.”

“This report proves that poor people are just not living down to our expectations. If you still have the strength to brush the flies off your eyeballs, you’re not really poor.”

Stephen Colbert

“I'd never realized that poor people in this country had it so good. No wonder the middle class is pouring into their ranks in droves!”

Jon Stewart

"A linen shirt, for example, is...not a necessity of life. The Greeks and Romans lived...very comfortably though they had no linen. But in the present times, through the greater part of Europe, a creditable day-labourer would be ashamed to appear in public without a linen shirt. ...”

Adam Smith, *Wealth of Nations*

Poor in...

Money

Time

Tradeoffs:

If I buy this, what do I *not* buy instead?

If I do this, what do I not do instead?

Temptations:

Basic goods turn into “luxuries”

Basic activities turn into “luxuries”

Indulgences:

Given what you owe, what are you doing spending?!

Given what you owe, what are you doing here schmoozing?!..

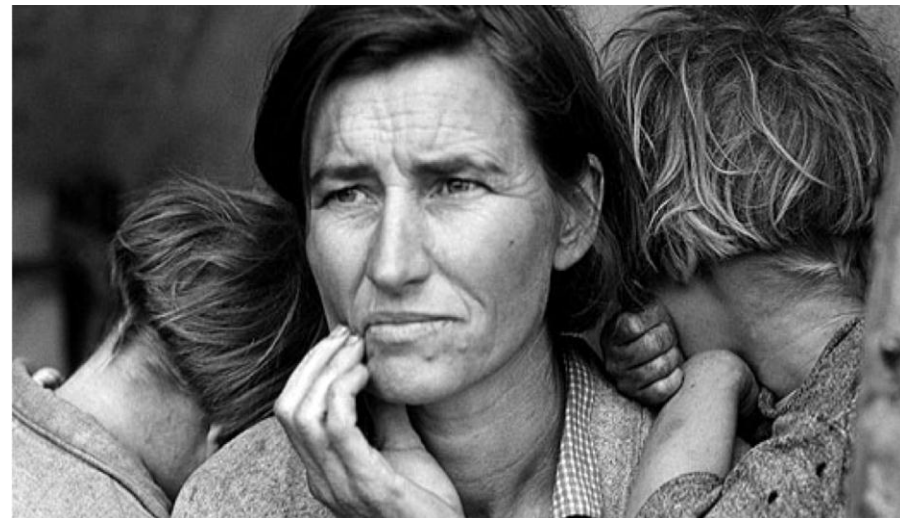
More consequential:

When there's lack of slack, bad tradeoffs, giving into temptation / indulging - all more consequential!...



SCARCITY

A source of demand on cognitive capacity...







FOOD



WATER

ATTENTION!



ATTENTION!



ATTENTION!

MONEY



FRIENDS



ATTENTION!



SCARCITY IS TOP OF MIND



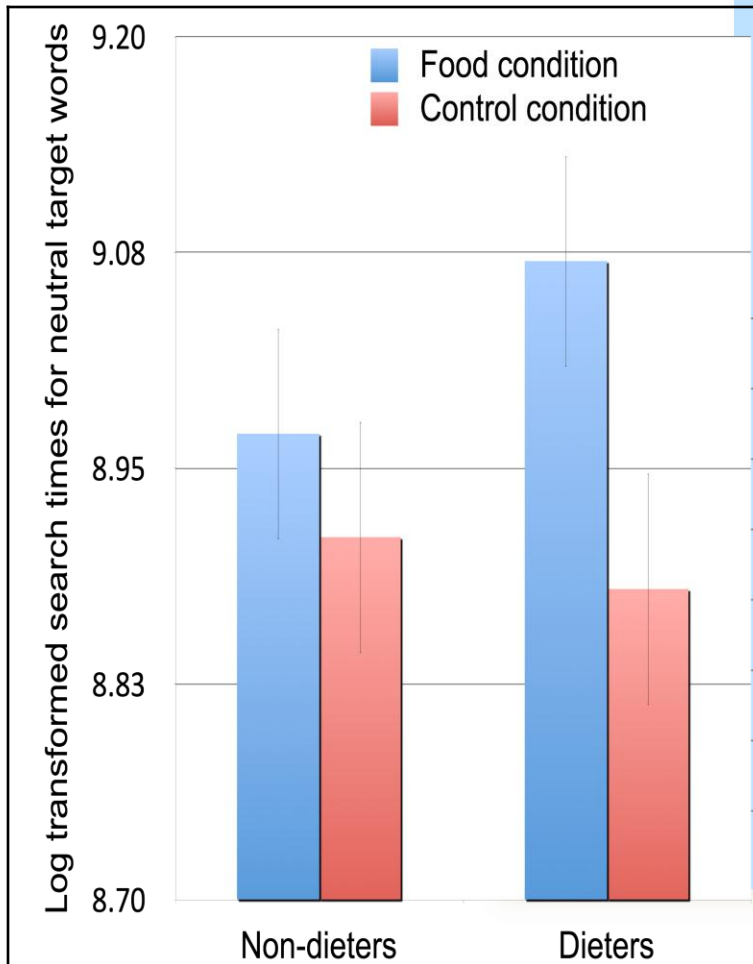
WATER
JUICE
SODA
THIRST



CHAIR
FRIENDS
TREES
TALKING

and SCARCITY IS DISTRACTING...

Search times – *for neutral targets* – by condition and group



A word search puzzle interface with a light blue background. At the top, the words 'Word Search' are written in a stylized, bubbly font. Below this is a 10x10 grid of letters. A red oval highlights the letters 'E', 'E', 'R', 'T', 'S' in the first column of the grid. To the right of the grid is a vertical list of words to be found: CAKE, TREE, DONUT, CLOUD, SWEETS, LAMP, INDULGE, RAIN, DESSERT, and DOOR. Below the grid, the words 'STREET', TREE, PICTURE, CLOUD, CARPET, LAMP, DAYTIME, RAIN, VACUUM, and DOOR are listed. The words 'STREET' and 'DOOR' are highlighted with dark blue bars.

G	P	P	O	F
T	R	R	C	Q
E	C	H	Q	L
E	D	O	V	V
R	T	F	Z	A
T	F	V	G	A
S	C	R	F	P

STREET
TREE
PICTURE
CLOUD
CARPET
LAMP
DAYTIME
RAIN
VACUUM
DOOR

CAKE
TREE
DONUT
CLOUD
SWEETS
LAMP
INDULGE
RAIN
DESSERT
DOOR

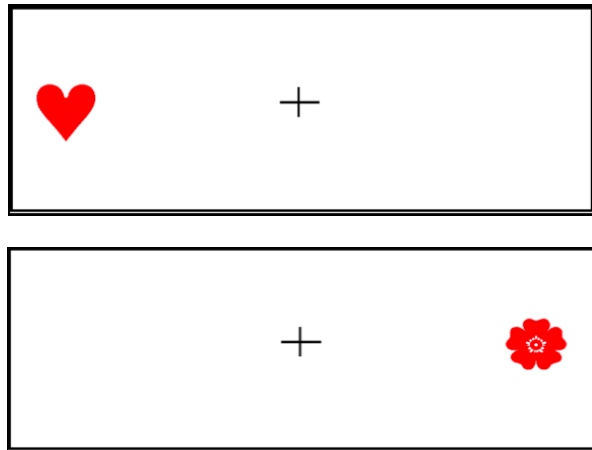
FINANCIAL CHALLENGES

(in a NJ mall...)



COGNITIVE CONTROL TASK

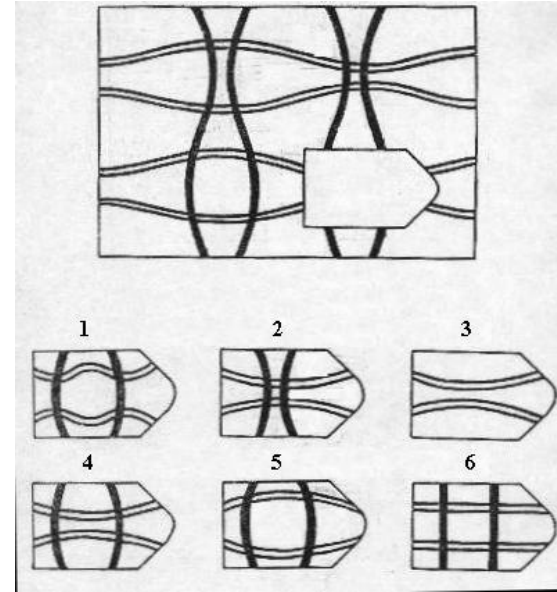
press the same side as the heart
press the opposite side as the flower



Measures cognitive control & executive function...

“Driving test”...

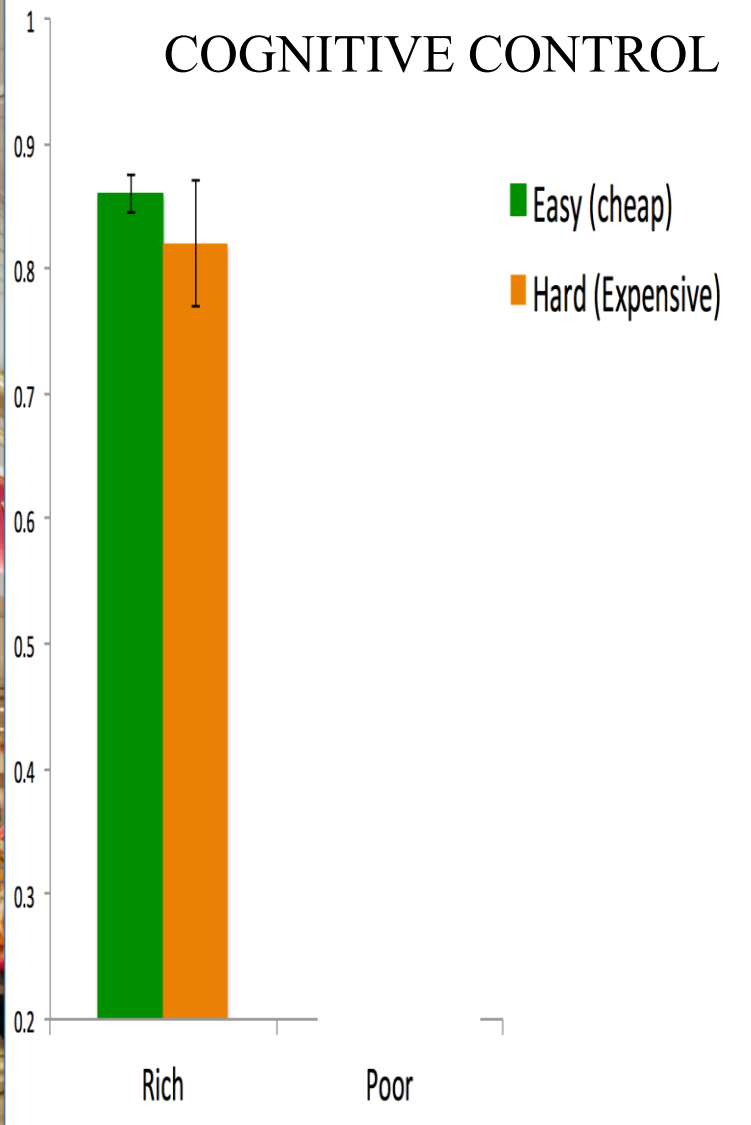
RAVEN’S PROGRESSIVE MATRICES



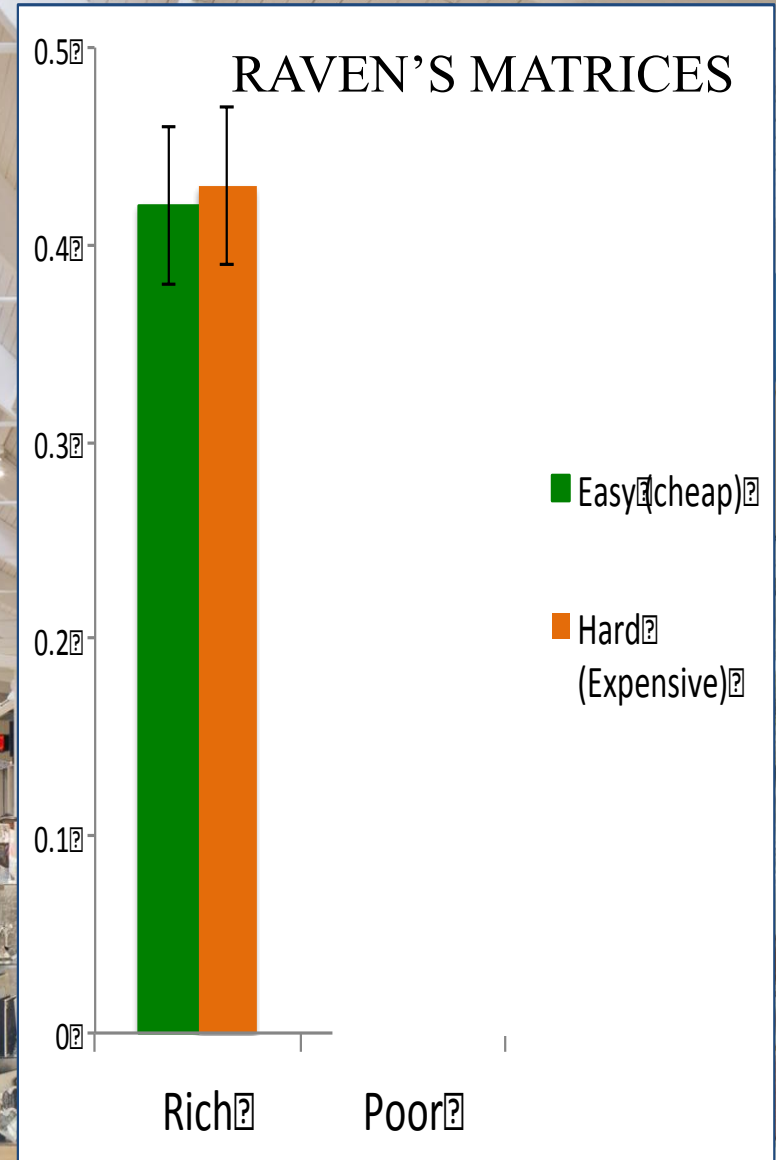
“Measures high-level observation skills, clear thinking ability, and intellectual capacity.”

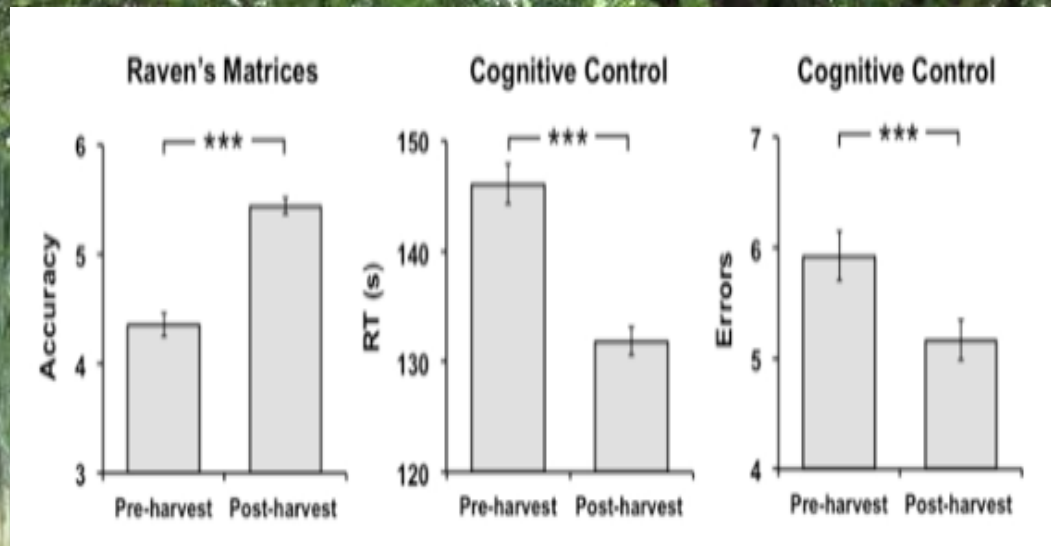
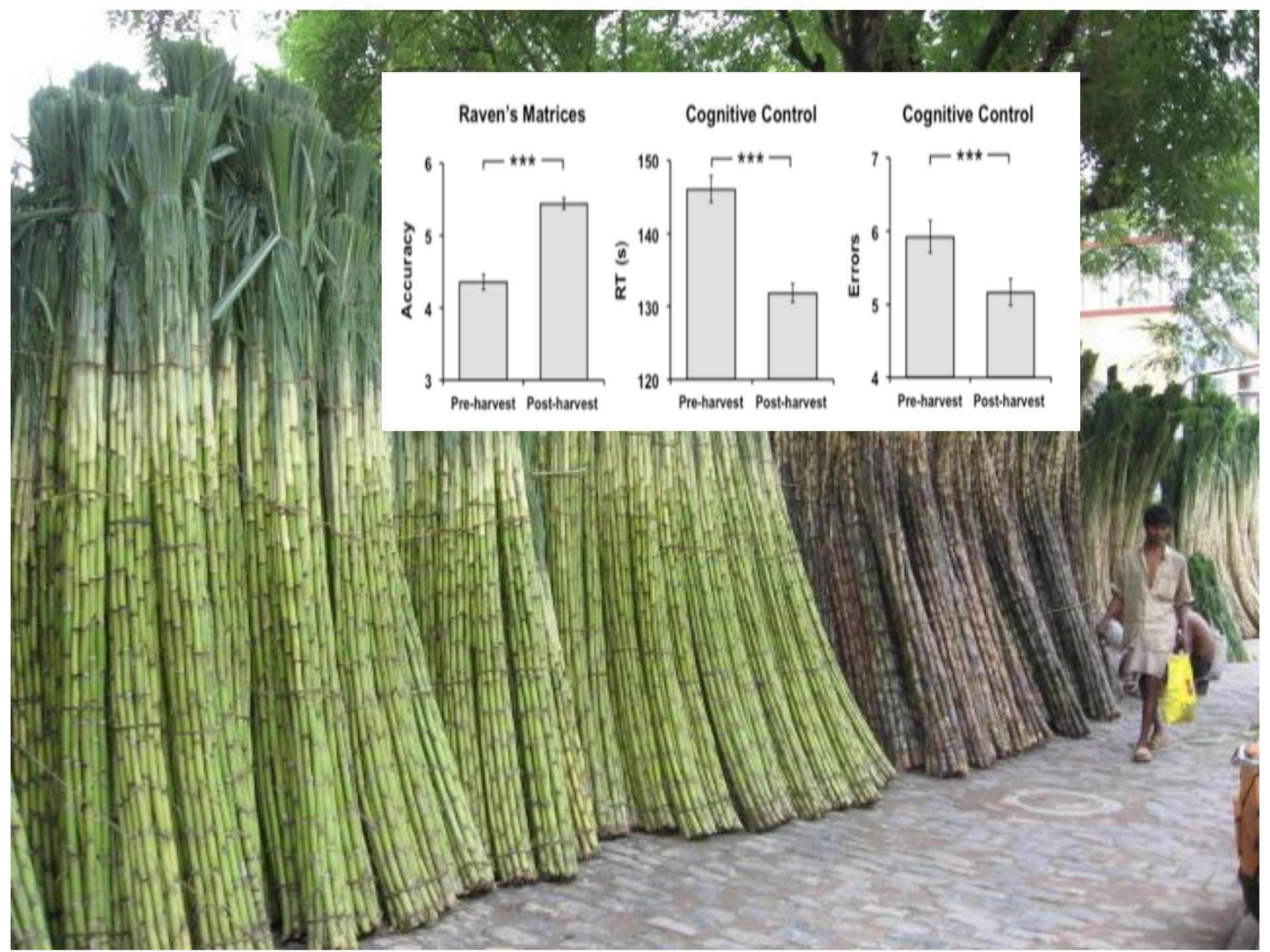
“Intelligence test”...

COGNITIVE CONTROL



RAVEN'S MATRICES





So far...

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* poor...

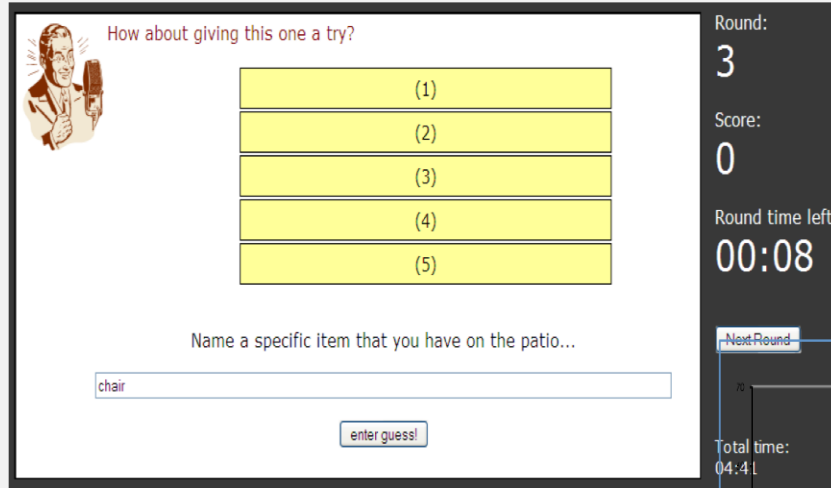


20 rounds

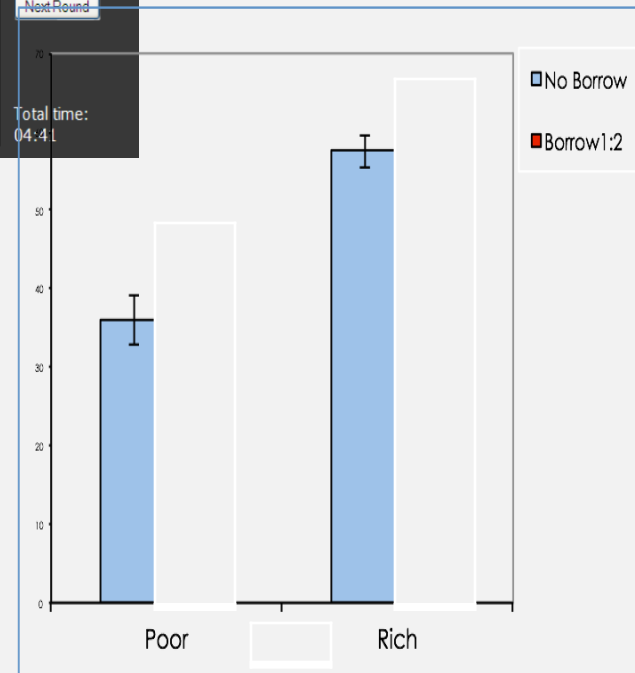
“Rich”: 50 sec / rnd (1000 sec total)

“Poor”: 15 sec / rnd (300 sec total)

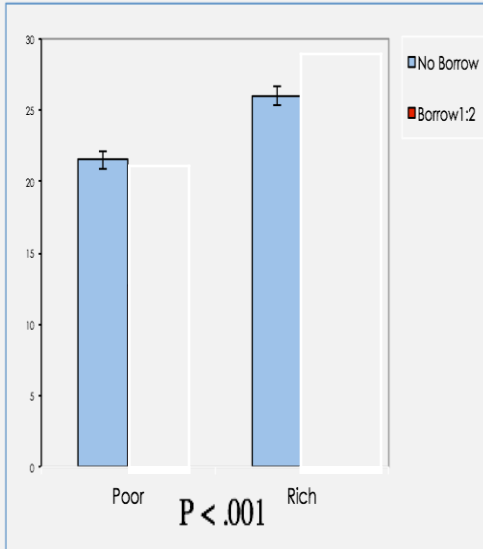
No borrowing vs. High Interest Borrowing



Points Earned

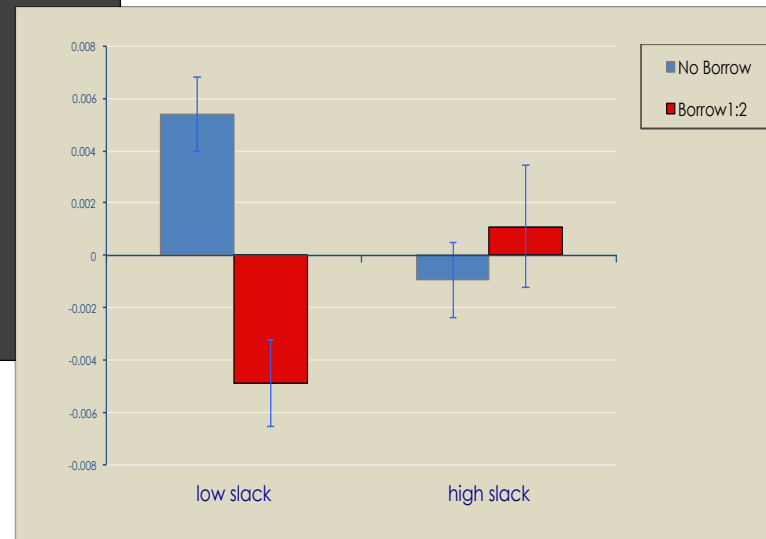
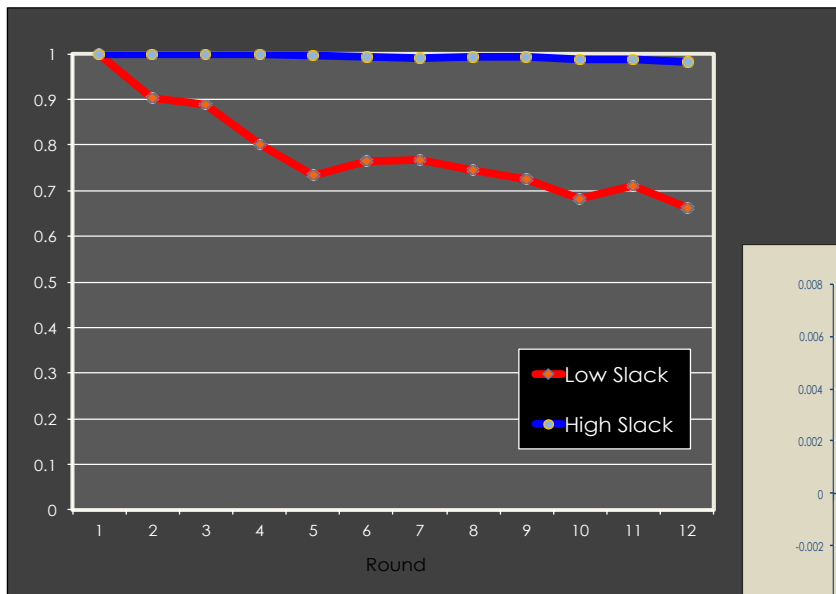


Rounds Completed

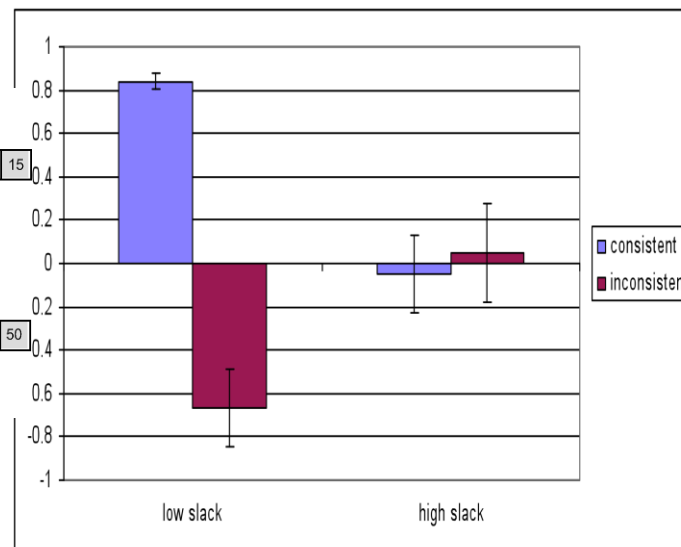
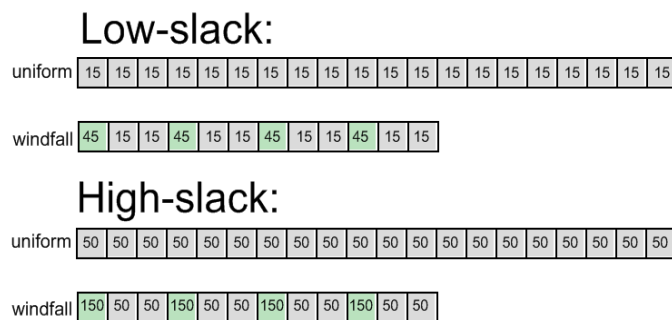


Shah, Mullainathan, & Shafir, *Science*, 2012

Debt Traps



Smoothing consumption



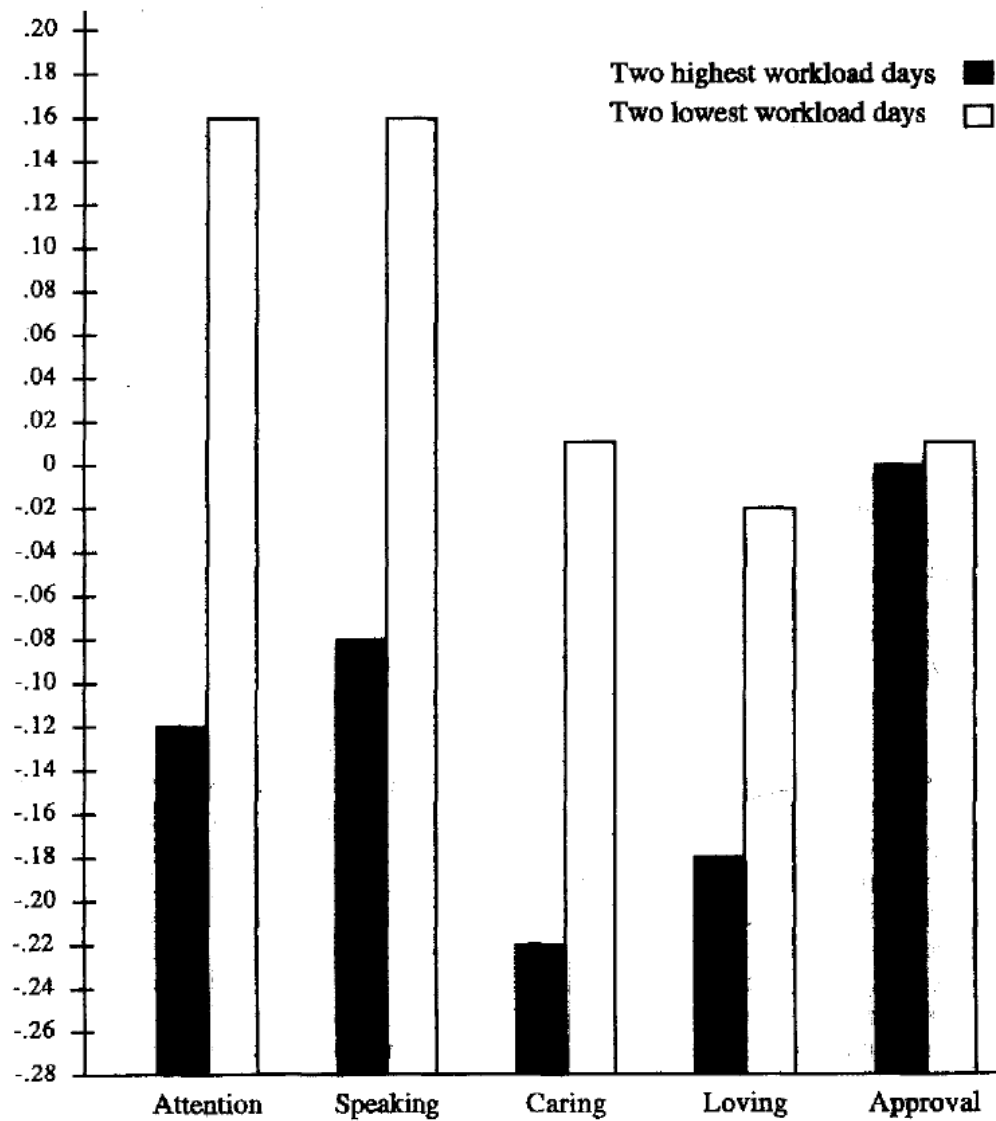


Figure 2. Average observer ratings of parent behavior on days with high and low perceived workload.

Irony of Poverty

- Poor must make higher quality decisions
 - Greater packing challenges under scarcity
 - Greater attention consumed under scarcity
 - More temptations under scarcity
 - Can't afford mistakes under scarcity
- Poor are in worse position to make high quality decisions
 - Distracted by stressors/decisions/conditions
 - Depleted by challenges/temptations/load
 - Hampered by context/culture/stereotype
 - Unappreciated! (Both they and their packing problems...)

POLICY MAKERS NEED TO CARE ABOUT BANDWIDTH



Scarcity (e.g., in money) causes scarcity in bandwidth. (regressive tax).

Scarcity: 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; Nudges (defaults), Channel-factors (in vs out of the “tunnel”); Insurance
- Dodd-Frank, Consumer Protection, Qualified mortgages,...

Bad design of programs; psychic taxes, in/outside the tunnel...

- Relief payments (flood disaster), EIC, are paid in lump sum
- “Character obstacles” - time, self-presentation, planning...
- Lifetime welfare limits (SNAP); Penalize but fail to motivate
- Recertification (SNAP), long forms...

FAFSA 2010-2011

Section 1: Student Information

FAFSA Form 2010-2011 Page 1

Section 2: Family Information

FAFSA Form 2010-2011 Page 2

Section 3: Assets

FAFSA Form 2010-2011 Page 3

Section 4: Income

FAFSA Form 2010-2011 Page 4

Section 5: Expenses

FAFSA Form 2010-2011 Page 5

Section 6: Review and Signatures

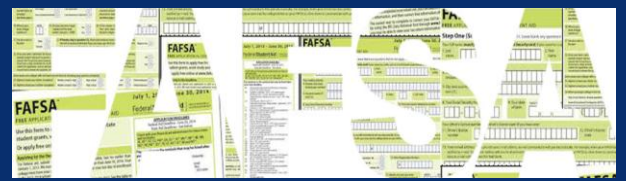
FAFSA Form 2010-2011 Page 6

Section 7: Additional Information

FAFSA Form 2010-2011 Page 7

Section 8: Student Aid History

FAFSA Form 2010-2011 Page 8



Section 9: Review and Signatures

FAFSA Form 2010-2011 Page 9

Section 10: Review and Signatures

FAFSA Form 2010-2011 Page 10

Section 11: Review and Signatures

FAFSA Form 2010-2011 Page 11

Section 12: Review and Signatures

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Section 13: Review and Signatures

FAFSA Form 2010-2011 Page 13

Section 14: Review and Signatures

FAFSA Form 2010-2011 Page 14

Section 15: Review and Signatures

FAFSA Form 2010-2011 Page 15

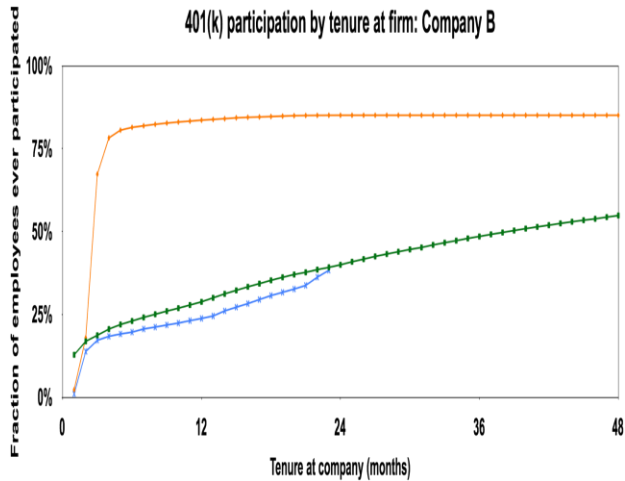
Section 16: Review and Signatures

FAFSA Form 2010-2011 Page 16

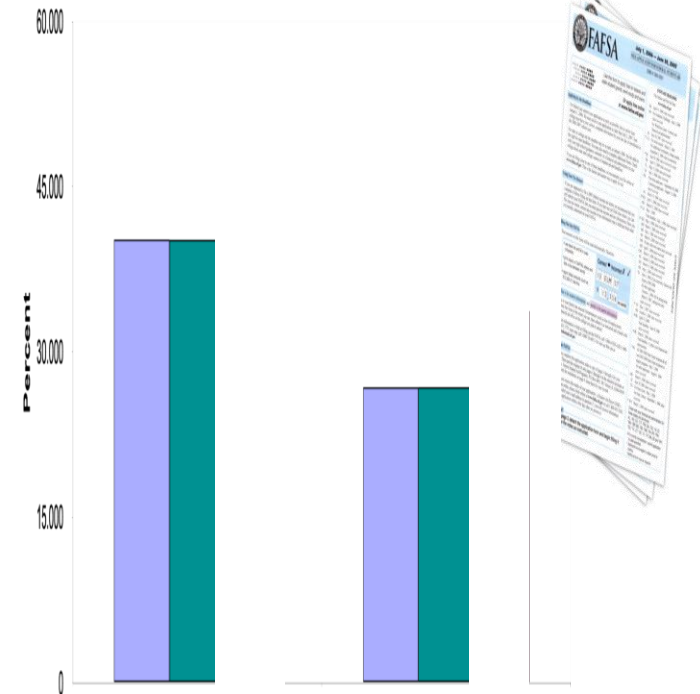
POLICY MAKERS NEED TO CARE ABOUT BANDWIDTH



Retirement Savings



FAFSA forms



(Bettinger, Long, Oreopoulos & Sanbonmatsu, 2009)

PUT A LOCK ON MARKET GAINS

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Leland O'Brien Rubinstein (LOR) originated portfolio insurance programs more than five years ago with the introduction of Dynamic Asset Allocation.* But we aren't resting on our laurels.

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We are now offering four major enhancements to give pension funds even more flexibility at lower cost:

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- **TRADING OPTIMIZER** generates trading "rules" that reduce turnover while meeting investment objectives.
- **OPTIONS INTEGRATION** employs index options as well as index futures to minimize required trading and reduce potential costs.

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BEA Associates, Inc.
Andras Canavest Hetherington Ltd.
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Webster Capital Management
Wells Fargo Investment Advisors
Western Asset Management Company

For further information, call Larry Edwards, President, (213) 614-3173.



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\$75,000	72M

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System Design & Implementation
E-mail Hosting & Web Design
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The Urban Development Corporation has residential and commercial serviced lots for sale in Davis Town on the Main Road from Lydford to Steer Town in the parish of St. Ann

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Lot sizes range from 290 Sqm to 488 Sqm
Prices range from J\$ 636,020.00 to J\$ 843,700.00

• Commercial

Lot sizes range from 298 Sqm to 793 Sqm
Prices range from J\$778,800.00 to \$1,687,400.00

- Paved Roadways
- Water and Electrical Supply available

Interested persons may contact:

Davis Town Sales Office

Shop #5
Ocean Village Shopping Centre, Ocho Rios
Tel: 974-8803

or

Marketing and Property Development Department



making development happen...

Source: Institutional Investor, January 1987, p. 88.

winning through diversity

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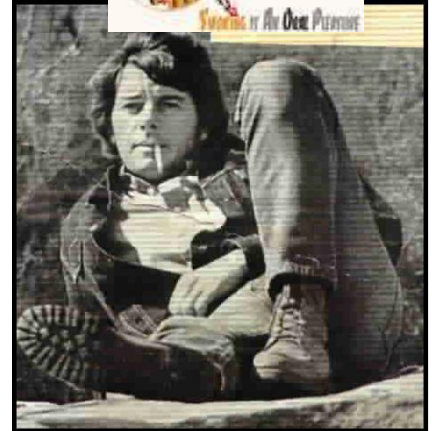




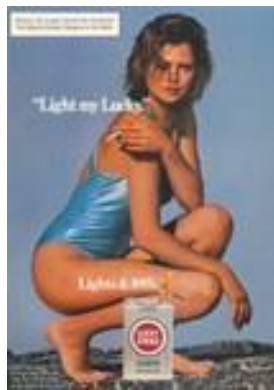
"My kind of cigarette - no taste or stinky smell," says "America's most popular" Cowboy Duke Brown going along: "Taste good, smells mild." Today more people smoke Camel than any other brand! The best tobacco makes the best smoke.



Smoking is An Oral Pleasure



"From the classic exciting new 'LAWMAN' on ABC-TV"



What's Advertising Content Worth? Evidence from a Consumer Credit Marketing Field Experiment (Bertrand, Karlan, Mullainathan, Shafir, Zinman; *Quarterly Journal of Economics*, 2010)

Account Number 105349191

BUSINESS HOURS
MON - FRI 08:00 - 18:00
SAT 08:00 - 12:00

SIYAKHULUMA ISIZULU

A special rate for you.

Congratulations! As a valued client, you are eligible for a special interest rate on your next cash loan from [REDACTED]. This is a limited time offer so please come in by 31 October 2003 to take advantage of this offer. You can use this cash to pay off a more expensive debt, repair your home, buy an appliance, pay for school or for anything else you want.

Enjoy low monthly repayments with this offer! For example:

Interest Rate	Loan Amount	Loan Term	Monthly Repayment
10.50%	R2000.00	4 Months	R710.00

LOAN AVAILABILITY SUBJECT TO TERMS & CONDITIONS

Loans available in other amounts. There are no hidden costs. What you see is what you pay.
If you borrow elsewhere you will pay 10% more in interest payments on a R2000, 4 month loan!

How to apply:
Bring your ID book and latest payslip to your usual branch, by 31 October 2003 and ask for
To extend your deadline, call 0860 333 0004 or SMS 0860 222 334.

WIN
10 CELLPHONES UP FOR GRABS EACH MONTH!

PS: Unfortunately, if you have already taken a loan since the date this letter was issued, you do not qualify for this offer

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

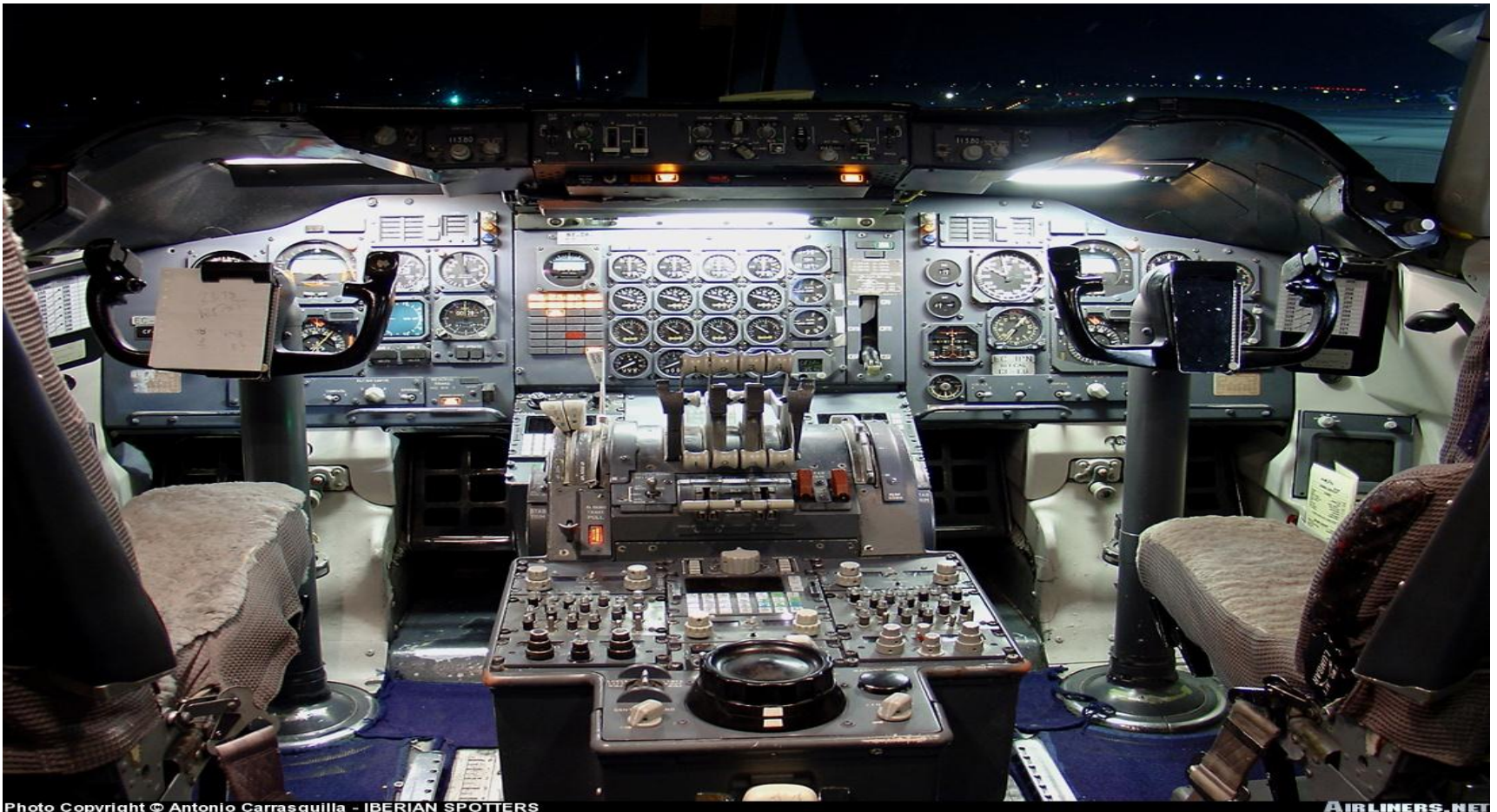


Photo Copyright © Antonio Carrasquilla - IBERIAN SPOTTERS

AIRLINERS.NET

Design life's cockpit with scarcity & bandwidth in mind...

Aim to provide more bandwidth (pay day, work shifts, child care, transportation)

Aim to demand less bandwidth (reminders, flex demands, Financ. literacy?!?)

Create more scarcity-proofing... (e.g., prof. training, consumer protection)

Because it's the only bandwidth we got...

Thank you!