

The Making of Behavioral Development Economics

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The state of an emerging new field

Great strides in explanation and policy design

- Following social psychology and cognitive sociology, there is a movement away from an 'entity' view of culture to a 'cognitive toolkit' view of culture.
- **'Cognitive toolkit'** may explain important puzzles:
 - persistence: e.g., ancestral use of plough vs handheld tools affects gender roles today
 - sudden change: e.g., soap operas in Brazil reduce fertility rates starting one year later; political reservations for women as village heads in India reduce gender bias

Big questions remain

- How to bring BE and social psychology and cognitive sociology closer together to facilitate coherence in methods and models?
- How to improve our efforts to address dysfunctional organizations across the globe?

Outline and key ideas

I. 20th century BE (BE strand I) - the 'quasi-rational actor'

- Universal biases and framing influence decision-making
- Policy 'nudges'

II. 21st century BE (BE strand II) - the 'enculturated actor'

- Culturally-specific mental models influence problem representation
- Categories, identities, narratives shape preferences, cognition, & context activates them
- Mutual constitution of culture/institutions and selves

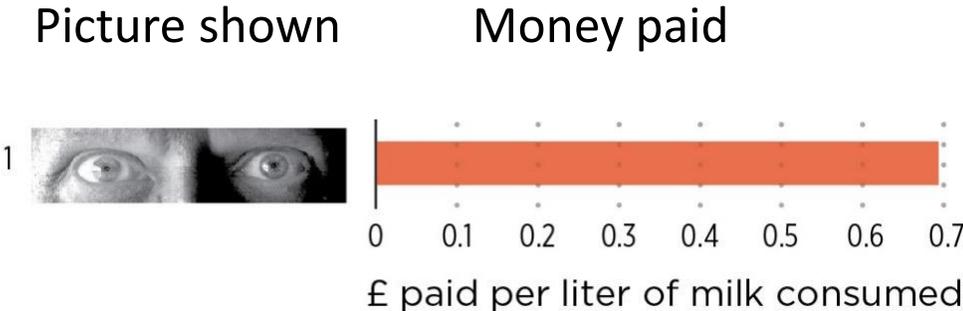
III. 21st century policies expand cognitive tools via experience & exposure

- Cognitive behavioral therapy to reduce crime
- Political reservations for women as village heads in India
- Soap operas, reality TV, other media

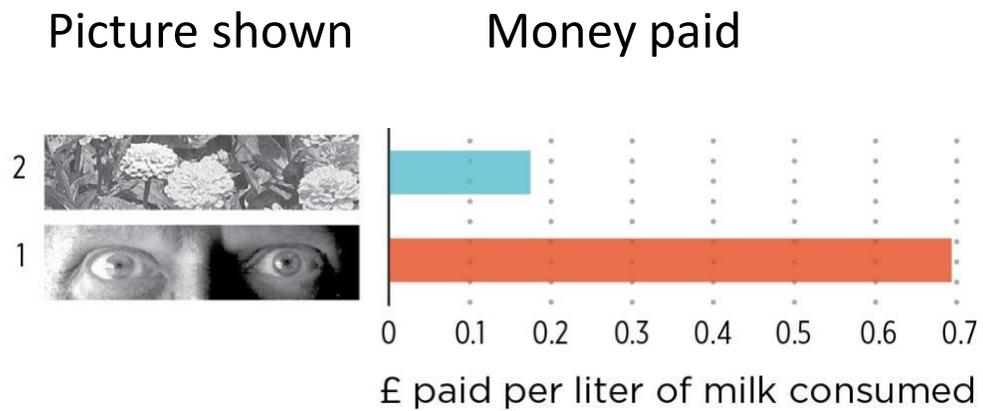
IV. Moving beyond the quasi-rational actor |

I. 20th century BE - the 'quasi-rational actor'

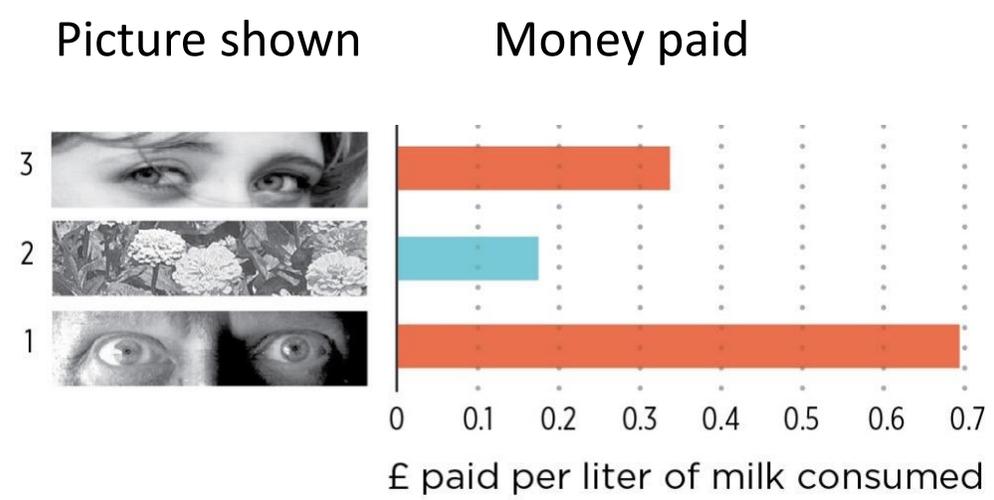
Nudging: Cues to being watched enhance honesty



Source: Adapted from Bateson, Nettle, and Roberts 2006.

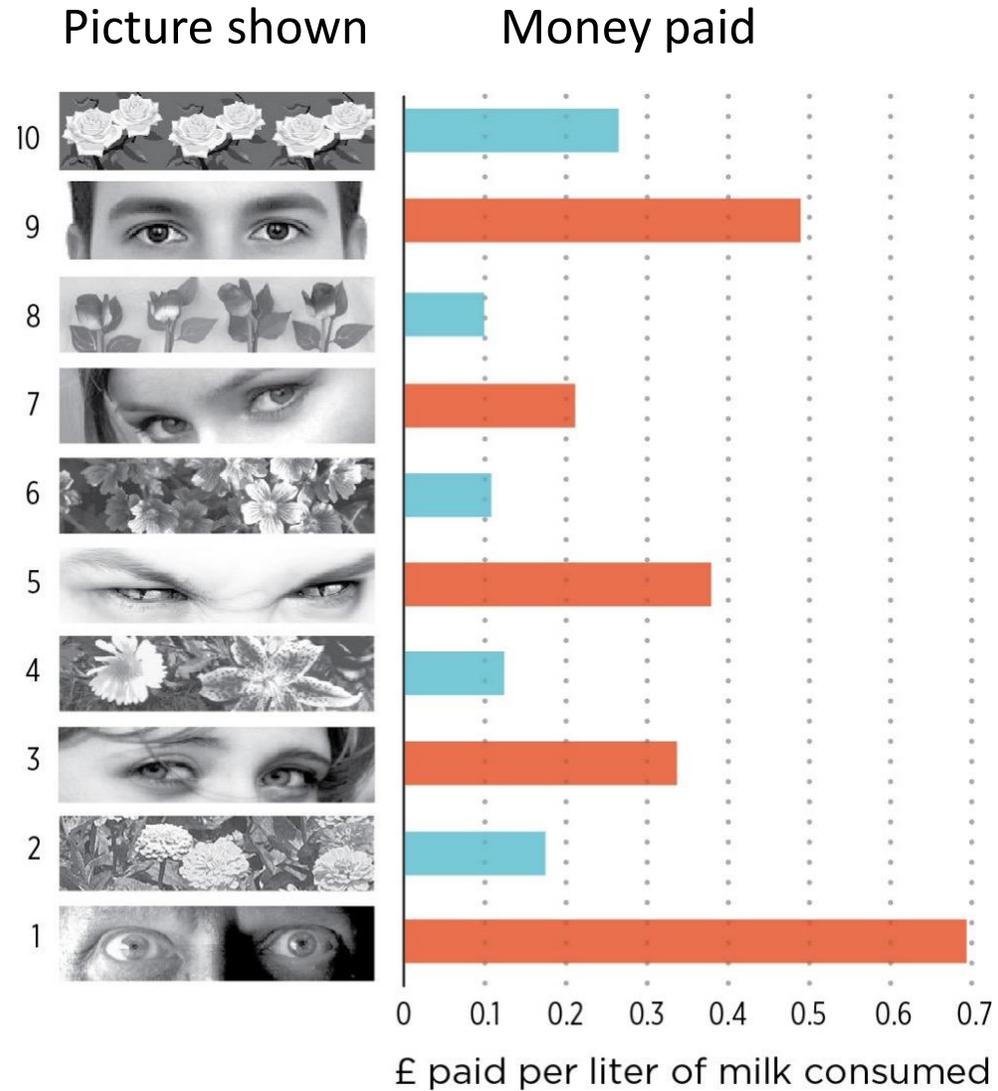


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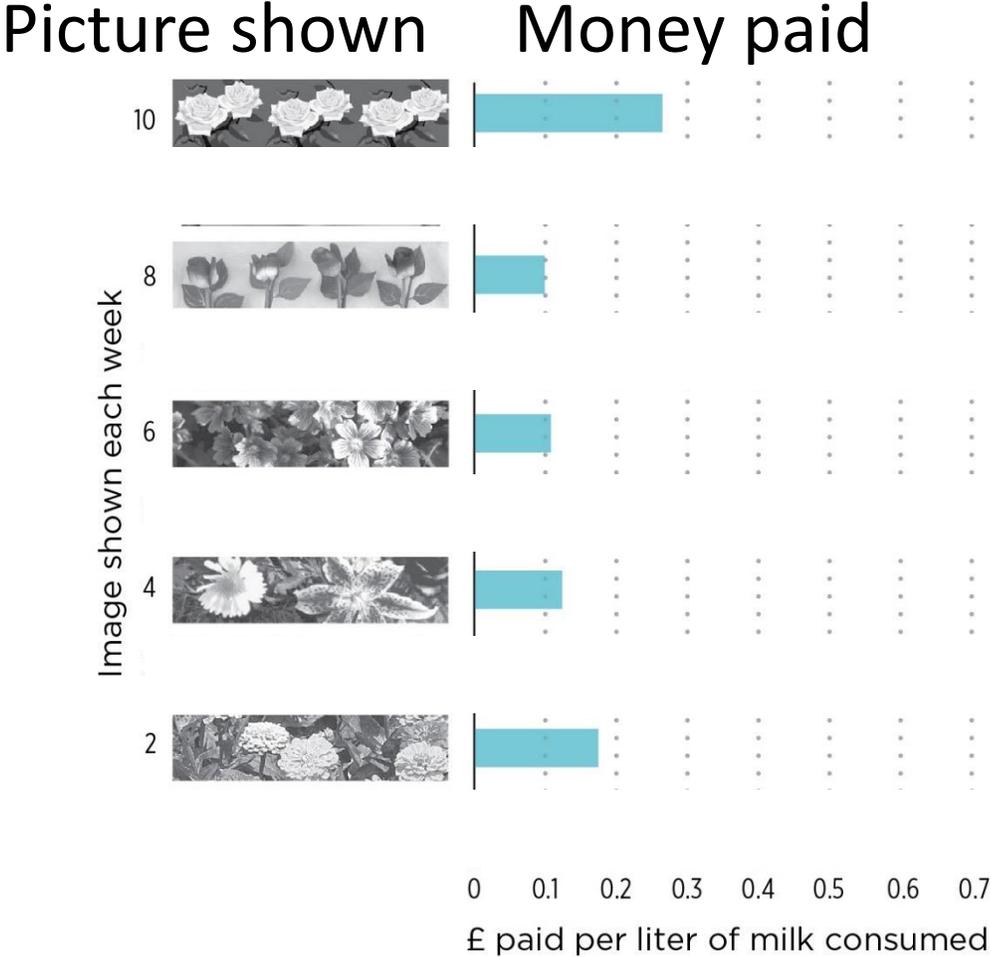
Source: Adapted from Bateson, Nettle, and Roberts 2006.

Contribution levels always increase with the transition from flowers to eyes



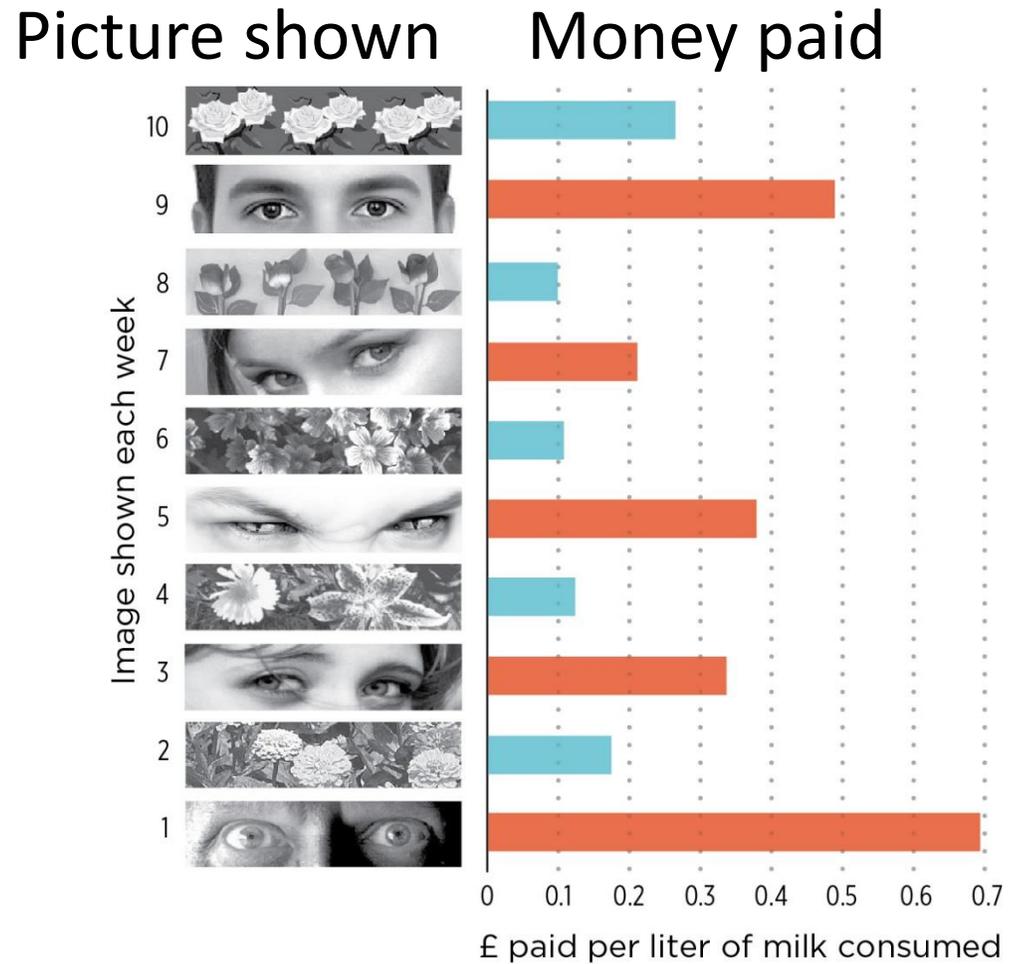
Source: Adapted from Bateson, Nettle, and Roberts 2006.

Flowers on wall



Source: Adapted from Bateson, Nettle, and Roberts 2006.

Or eyes on wall-- History didn't matter



Source: Adapted from Bateson, Nettle, and Roberts 2006.

20th century BE (BE strand I):

The mechanics of cognition lead to universal biases

- Contextual framing effects
- Heuristics & biases
- Psychology of poverty

II. 21st century BE –

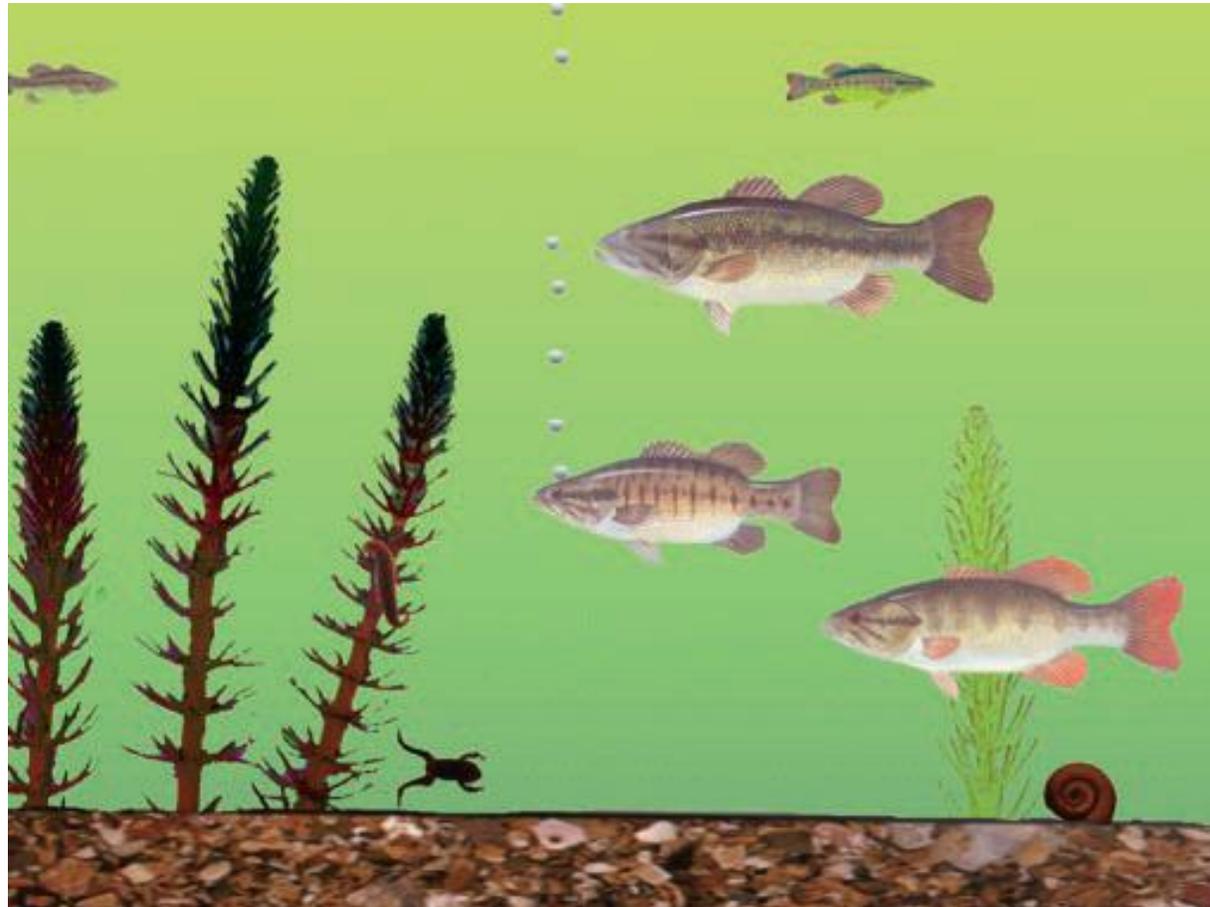
the ‘enculturated actor’

(for whom history matters)

Culture influences cognition

- We absorb culturally-specific mental models - concepts, categories, identities, narratives, worldviews
- We use mental models to decode situations and develop a response
- Thus, past experiences shape processes of attention, perception, emotion, motivation, and group relations, once considered universal
- A simple example:
 - Asians and Westerners presented with the same view of an aquarium 'see' different things

Subjects watch 20-second videos of underwater scenes



Japanese need the original background to remember a fish; Americans do not



Fish with Original
Background



Fish with No
Background



Fish With
Novel Background

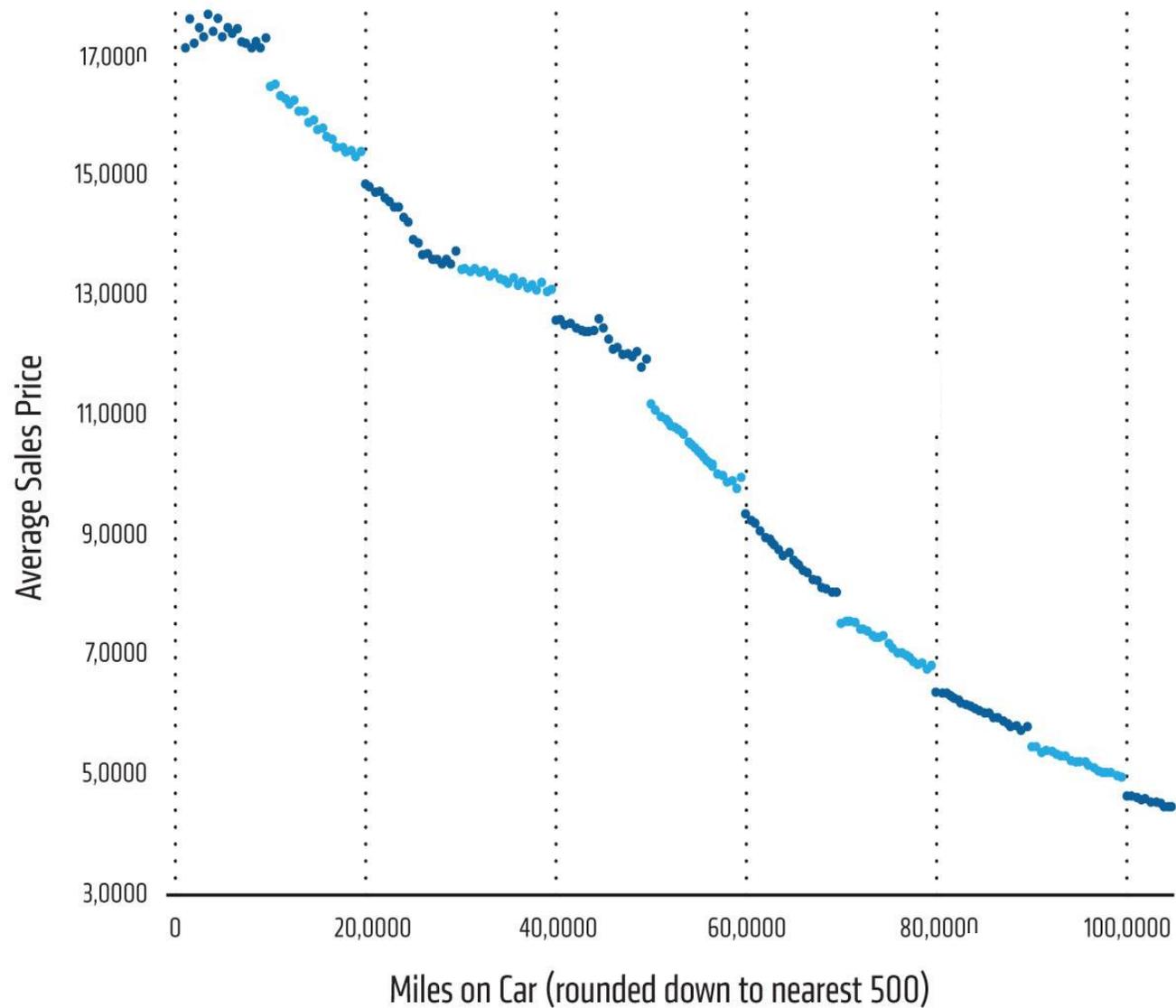


Fast thinking unconsciously uses mental models
("schemas")

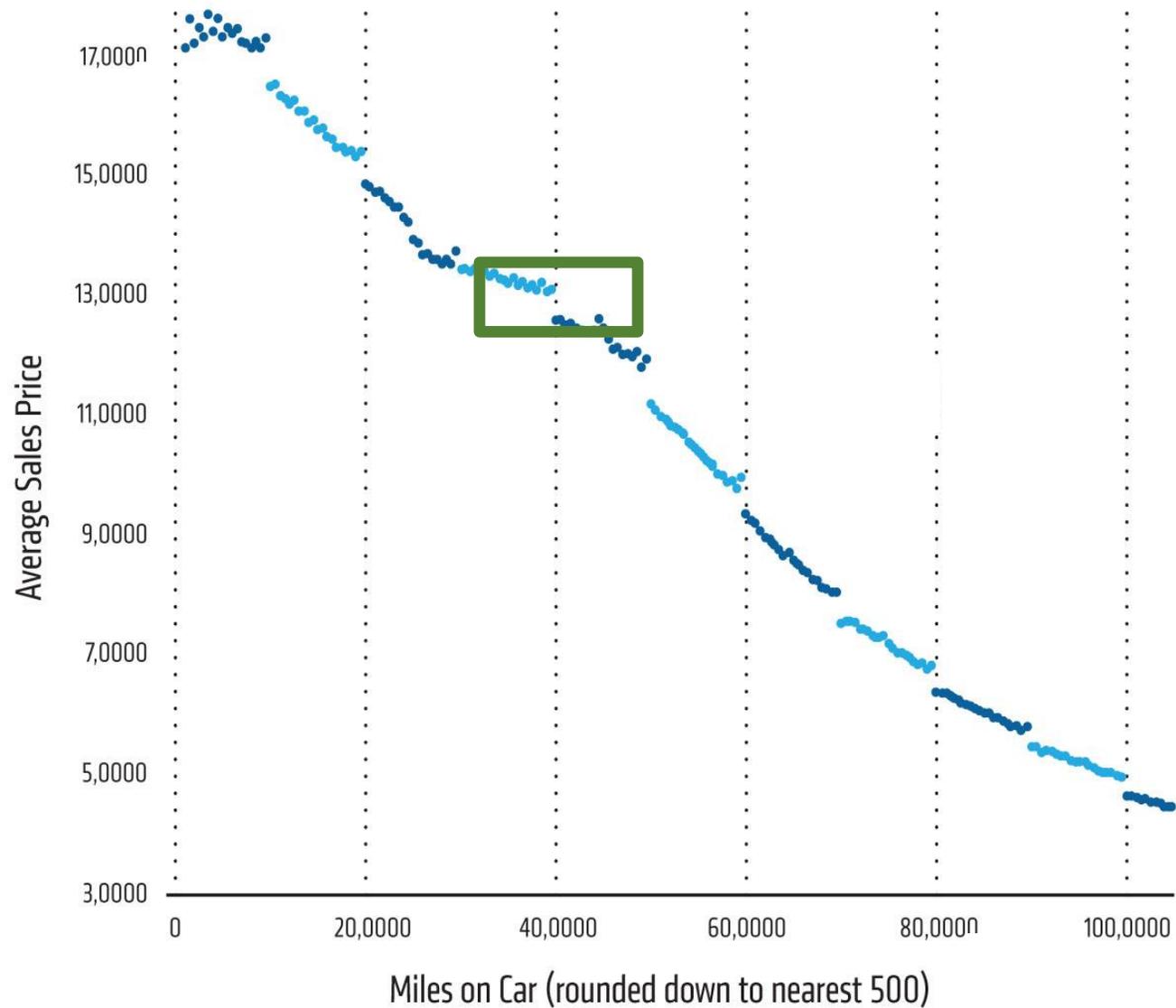
Simplest example of a mental model is a categorization system

An example of the impact on prices in the used car market as a
function of the car's mileage

Left-digit bias in the used car market



Left-digit bias in the used car market



Divergent paths of development

- Two sets of societies—e.g. villages in India or municipalities in Italy—with the same formal institutional framework may obtain very different outcomes if the people have different histories

Putnam (1993) posits role of 'civic community'

2 distinct histories in Italy during the 12th century--

1. Norman invaders established hierarchical rule based on divine right and religious authority
2. The demise of the Holy Roman Empire led to free city-states that self-governed via dense horizontal networks

A region's history correlates with development progress today

Guiso et al. (2016) investigate civic capital and self-efficacy

- Modern civic capital (*organ donation program, number of non-profit organizations, little cheating by 5th graders*) increases with a region's experience as a free city-state during the Middle Ages
- 8th -graders from towns that were free city-states demonstrate greater self-efficacy than those living elsewhere

BE Strand II Explanation

- Early history of self-government → Access to new narratives of self-determination, greater self-efficacy → Socialization of children → Actions

Hoff and Stiglitz (2016) suggest that actions depend on:

$$a_t = H(p_t; P(a_{t-1}, S))$$

where

a - actions of adult members of generation t or t-1

p - prices

P - perception

S - social stimulus

Review: Standard economics vs. BE

Standard economics view:

Stimulus → objective observation → response

Behavioral economics view:

Stimulus → construction of a mental representation → response

Strand I:

The universal mechanisms of cognition produce systematic distortions (even by doctors, judges, teachers, ...)

Thinking, Fast and Slow & Predictably Irrational:

We have preferences over 'framed' options; ephemeral effects

Phishing for Phools

Examines some of the market consequences

... and strand II

Cultural mental models have persistent effects on ‘who we are’ and how we think

Social scientists “have not come to grips with the *subjective mental constructs* by which individuals process information”

Douglass North 1990

“People think and feel and act in culture-specific ways...shaped by ...particular patterns of historically derived meanings.”

DiMaggio and Markus

Example: A shift in mental models and reporting of violent crime against women in India

- A problem in India is violence against women: kidnapping, rapes, murder.
- Laws are in place, yet not effective
- Natural experiment : 73rd amendment of the Constitution of India created in a randomly chosen 1/3rd of villages a political reservation for women as village head.
- Strange result: Reported rapes against women jumped

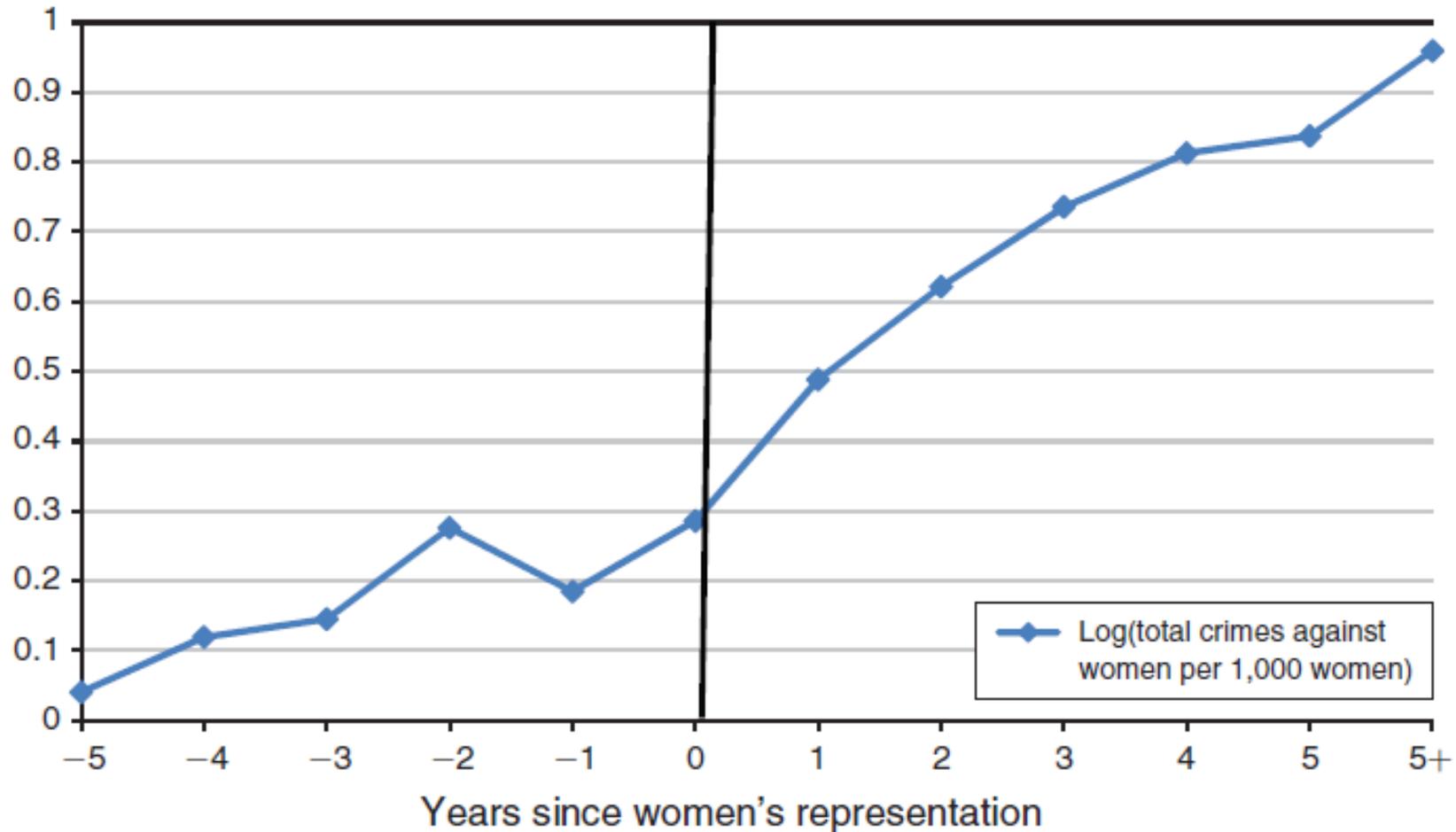


FIGURE 2. YEAR-BY-YEAR EFFECTS OF WOMEN'S EMPOWERMENT

- After the implementation of women's political reservation, the number of documented crimes against women considerably increased.
- Is it part of an overall surge in crimes? The next slides show NO surge in crime.

Puzzle resolved—an increase in the willingness to report and record violent crimes against women

Evidence that not actual crimes, but victim reporting and police recording jumped, since

- (a) No jump in rapes reported in surveys
- (b) No jump in recorded murders and suicides of women, which can't easily be underreported
- (c) No jump in crimes against men
- (d) Jump (in surveys of women) in willingness to report violent crime against them

Experimental examples of the effect of history on institution-building

Do people who have been exposed to different conditions view the same situation differently? E.g.

Do high taxes

- Offer opportunities for better public services

OR

- Are they always a burden?

I explore this in a game in 24 villages in North India

RESULT: Past experience with

- * trust,
- * inclusiveness, and
- * government schemes

influences the ability to recognize/ the willingness to adopt efficient rules

The public gift game

- In a group of 3 players, each has an endowment E
- Each player decides privately on a public gift g
- Each gift is doubled & transferred to each of the other players
 - ▶ Payoffs to a player i are: $E - g_i + g_j + g_k$
- Unique Nash equilibrium for self-interested individuals: 0 gifts

The social contracting game (SC game)

- Default level of 1 rupee for a required contribution
- The 3 people in a group each vote to raise or lower the rule by one rupee or keep it unchanged.
- Majority rule
- Then each player decides what to 'gift'

Game board

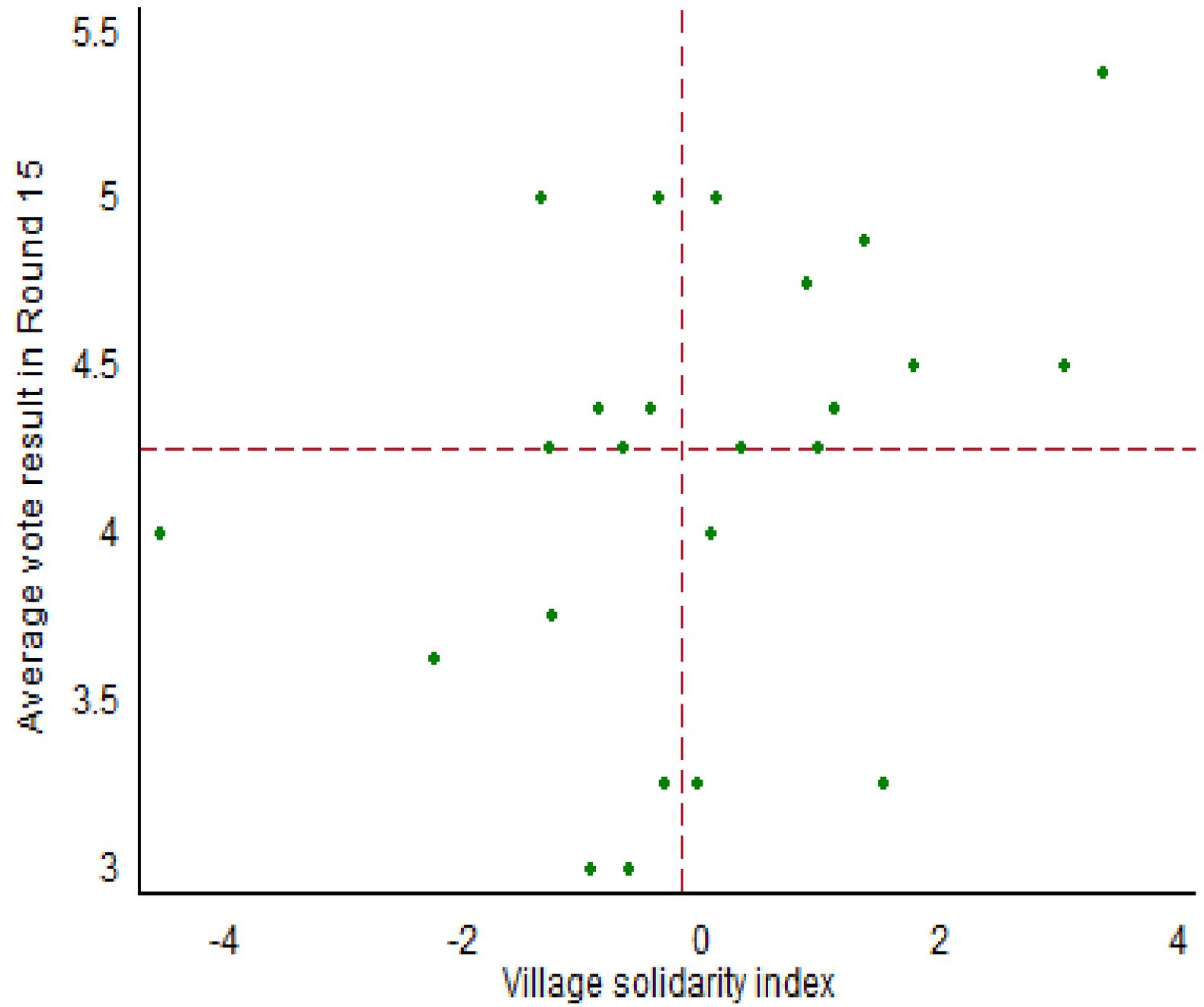


- white coins indicate rule in SC game
- All contributions in left column
- gifts received from other players under 1 and 2

The field study and chronology



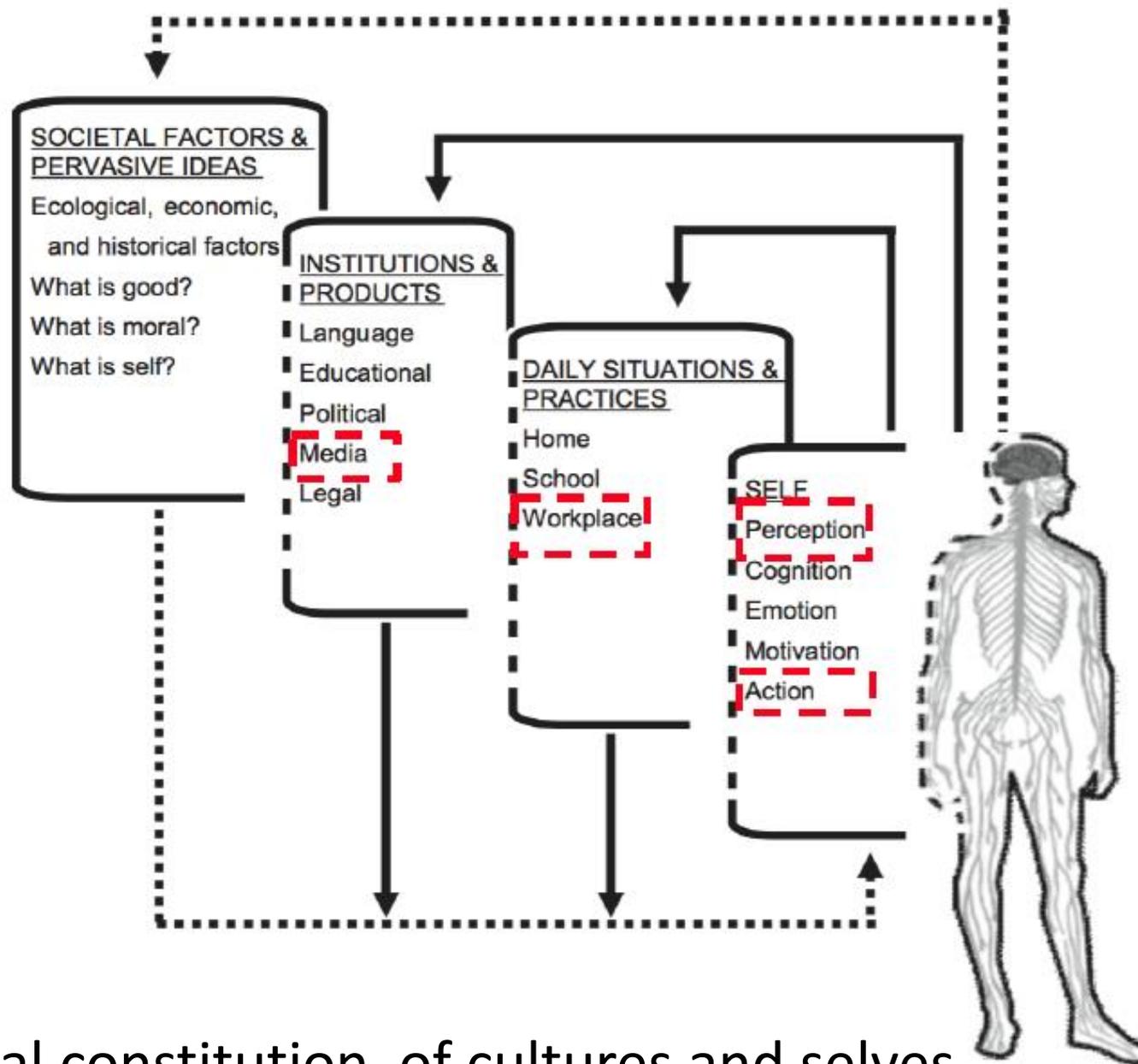
- 24 villages surrounding the town of Najibabad
- August 2010: experiment using PGft and SC games
 - 24 villages & 480 total players
 - 16 villages with 2 sessions & 8 villages with 1 session
 - 12 men per session
 - 21 rounds, so 10,080 observations



Individual desires and standards of behavior don't exist in social isolation as "consumer preferences."

Much of our behavior is conditioned by the experiences of others in our "cognitive neighborhood."

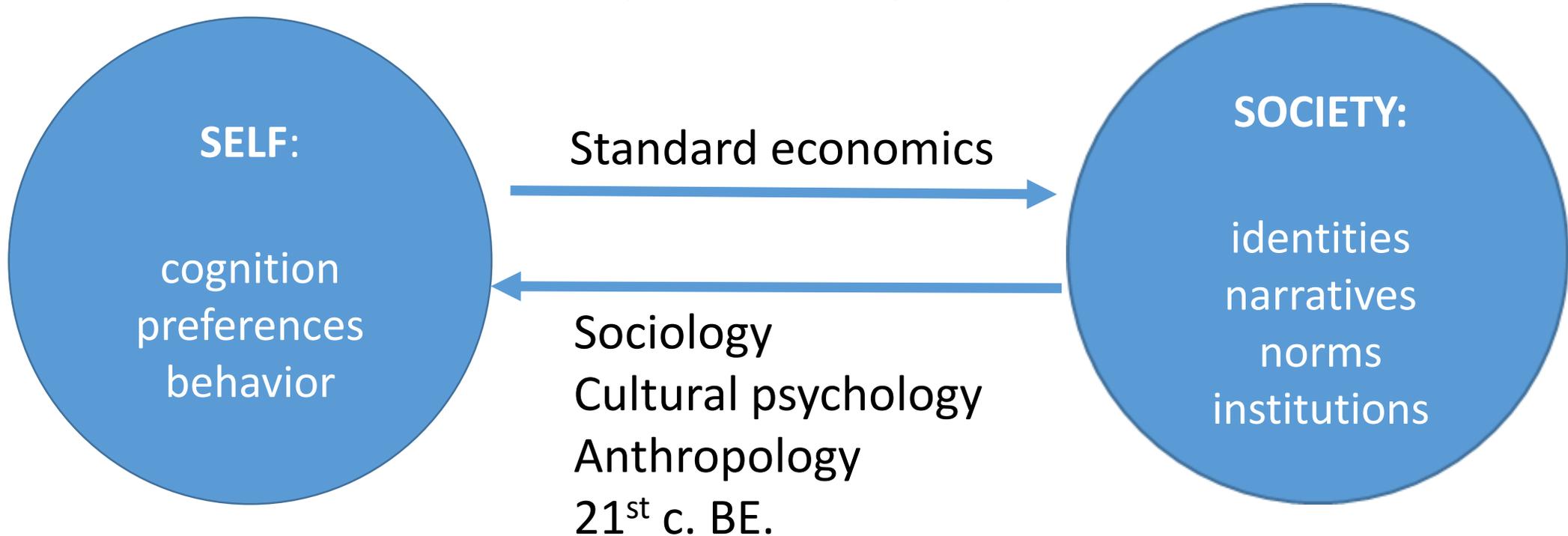
(Debraj Ray 2006)



A cycle of mutual constitution of cultures and selves

21st c. BE: The 'enculturated actor' with endogenous preferences

- Individuals create society, but society shapes who individuals are



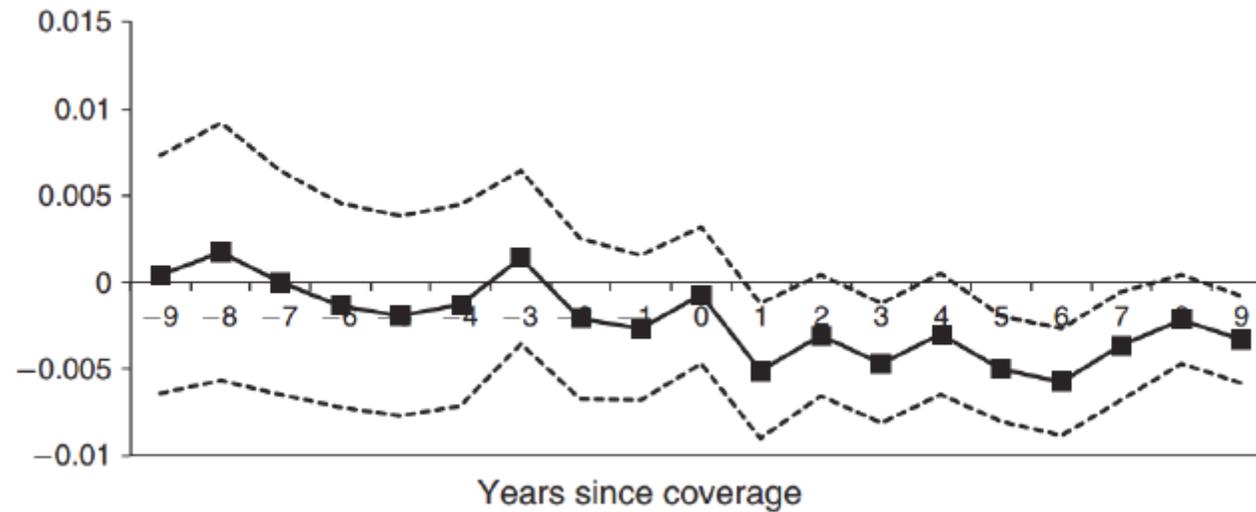
III. 21st century policies - experience & exposure

A new kind of policy intervention

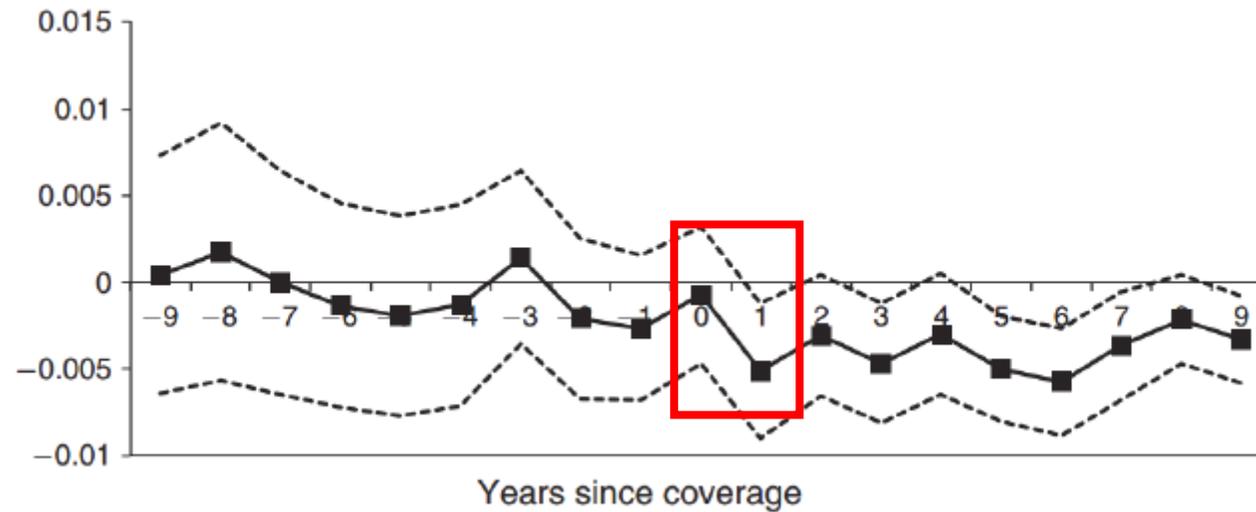
Exposure to new social patterns, even in fiction, may:

- Change mental models & behavior
- As others' behavior changes, alternative mental models are activated or are constructed
- & so a short-term stimulus may lead to sustained change.

Example of a rapid change: Fertility decline after exposure to Globo soap operas in Brazil



Example of a rapid change: Fertility decline after exposure to Globo soap operas in Brazil



Example of an intervention to induce rapid change

As with the soap opera study, the mechanism of change is to expand the cognitive toolkit

Impact evaluation of RCTs in “Becoming a Man”--Chicago

- Disadvantaged youths face high situational variability—
 - Need to act tough in the ghetto
 - Need to be peaceable and obedient in schools and workplaces

Adaptive response to assertions of authority

	<u>Street life</u>	<u>School life</u>
Disadvantaged youth	Act tough	Comply
Middle-class youth	Comply	Comply

Hypothesis

Automatic thinking can drive disparities in youth outcomes

An intervention that makes youth think more slowly –about how they are representing the situation to themselves—can reduce the disparities

Hypothesis about responses to assertions of authority

	<u>Street life</u>	<u>School life</u>
Disadvantaged youth	Act tough	<u>Act tough</u>
Middle-class youth	Comply	Comply

3 RCTs

- RCTs of program that try to teach disadvantaged youths how to be less automatic in their responses
 - The programs don't teach that a behavior is in general good or bad, but that the right behavior is situation-contingent

First exercise in “Becoming a Man” program

- Students are divided into pairs
- In each pair, one is given a ball
- The other is told he has 30 seconds to get the ball from him
- Almost all boys use physical force; no one simply asks for the ball
- The leader asks the other boy: Would you have given it to him if he'd asked nicely?

Impact of one BAM program on 7th to 10th grade boys

- Participation reduces arrests over the program year for violent crime by 44%
- Estimated impact on high school graduation:
7-22%

Impact of one program in a juvenile jail

- RCT with 5,000 admissions to program
- Reduced return rates to jail by 21%

What the programs are NOT

- No academic training
- No job training
- No paid jobs
- No transfers of money or gifts

What the programs are—
a way to reduce reliance on automatic thinking

No perception by participants that their self-control has increased, or that an adult in school is there to help them

but,

In an iterated dictator game in which a partner behaves unfairly, BAM almost doubles the time a player spends thinking before he acts

<i>Stimulus</i>	<i>Change in behavior</i>	<i>Source</i>
Political reservations for women in West Bengal	Women report violent crimes against them	Iyer et al.
Brazilian soap operas	Fertility declines	La Ferrara et al. 2012
Role models in CCTs	Adults' investment in children increases	Macours-Vakis 2017
Rwandan radio soap opera	Individuals question authority more	Green and Paluck 2009
Aspirational videos in Ethiopia	Savings increase	Bernard et al. 2014
Reality TV in the US	Teen pregnancy declines	Kearney and Levine 2014

IV. Moving beyond the quasi-rational actor

How should we talk about culture and its effects?

- Culture is sometimes reduced to a ‘heuristic’, ‘rule-of-thumb’, or ‘constraint’
- This is misleading, because it implies the only ‘problem’ is in the selection of a rule or removing of a constraint. Yet we now know that:
 - a) We use cultural tools to decode situations
 - b) There is often a gap between ‘objective reality’ and our perception and mental representation of it
 - c) Social history may constrain the development of future social arrangements because it shapes what seems appropriate, legitimate, commonsense, correct
 - d) Experience and exposure – rather than incentives – may be needed

How can we best promote incorporation of an ‘enculturated’ actor in explanation and policy design?

V. Open Questions

Open questions

- How can we reconnect ordinary economics to the idea that history matters (e.g. historical experiences of the rule of law)?
 - Acemoglu and others have created a whole literature on how history matters.
 - If it does matter, probably BE strand II matters, too. Striking evidence of the effect of culture on cognition is the Tahelm et al. Science paper on the cognition of rice vs. wheat-growing areas of China.
- Parsimony would suggest that if you can explain the institutional persistence in Acemoglu by standard economics, then you should.
- But maybe you can't.
- Guiso: the same legal framework (though different Institutions) and N and S Italy used the framework in different ways.
 - There is an element in standard theory that is about institutional self-perpetuation.
 - The 2nd strand of BE might be another mechanism.
- The challenge is to clearly delineate the conditions in which you need the 2nd strand.
- What examples are most compelling in experimental and microeconomic work?.
- Is it also useful to explain macro historical events that can't be explained by the Institutional approach?
- Maybe the answer is that there are many examples, e.g. like soap operas in La Ferrara. All of a sudden, after exposure to the soap opera, the institution of high fertility rates doesn't perpetuate itself.
- The focus of work in BE has been on the micro (though with important exceptions:- financial instability and narratives; savings and default options; political reservations for women in village India and the protection of women's rights.
- A big question is how to do policy interventions that change attitudes of a whole group of people at once—e.g. on corruption or toilet use or wife-beating?