Exploring the Second Strand of Behavioral Economics

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World Bank

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Policy Research Talk

http://econ.worldbank.org/policyresearchtalks
Objective

To broaden the model in economics of how people think and make decisions

- To reduce the risk of misdiagnosing problems
- To discover new targets for policy.
Standard Economics

The rational actor
• Stable preferences

Guided by
• Incentives
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Source: Kahneman 2011
Priming effect: Cues to being watched enhance honesty

Source: Adapted from Bateson, Nettle, and Roberts 2006.
Priming effect: Cues to being watched enhance honesty
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![Bar chart showing the relationship between picture shown and money paid.](chart.png)

Source: Adapted from Bateson, Nettle, and Roberts 2006.
Primbing effect: Cues to being watched enhance honesty

![Bar chart showing the relationship between the picture shown and the money paid.](source: Adapted from Bateson, Nettle, and Roberts 2006.)
## Behavioral Economics

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<td><strong>The enculturated actor, with</strong></td>
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Source: Hoff and Stiglitz 2016
Culture as conceptualization

• DiMaggio (1997): Cultural mental models (schemas) “shape the way we attend to, interpret, remember, and respond emotionally to the information we encounter and possess.”
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• DiMaggio & Markus (1990): “People think and feel and act in culture-specific ways...shaped by ...particular patterns of historically derived meanings”

• Swidler (2001): Stories play a crucial role “in anchoring social attitudes.”
TRIAD TEST
Holistic thinking
Analytical thinking—
Pairing items that belong to the same abstract category
Farmland devoted to rice paddy

Source: Talhelm et al 2014
Holistic categorization is increasing in the percentage of cultivated area devoted to rice paddies (provinces in China)

Source: Talhelm et al. 2014
How we categorize (holistically or not) relates to how we focus (broadly or not).
Outline of the rest of the talk

-- 3 economic consequences of “enculturation”: i.e., social influences on “who we are”

• Inequality
• Corruption
• The ability to form a mutually beneficial social contract

-- An intervention to change mental models
Ex. 1 How a stigmatized identity amplifies inequality: the case of Indian caste

- No physical markings distinguish castes
- With very limited mobility for men in villages in North India, the villagers all know everyone’s caste
- Lowest castes were traditionally treated as “Untouchables” & denied opportunities for education or non-menial work
<table>
<thead>
<tr>
<th>Date of Birth</th>
<th>Caste (If Hindu) Otherwise religion</th>
<th>Schedul Caste/ S. Tribe OBC</th>
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<tbody>
<tr>
<td>17-11-97</td>
<td>जाट</td>
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<td>S.C.</td>
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<td>12-10-94</td>
<td>सूरा</td>
<td>S.C.</td>
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<td>OBC</td>
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Jeeps for Transporting Participants
Ex. 2  Prevalence of rule violations in a country shapes “who we are”
Cross-cultural experiment

- Same experimenter
- Similar subject pools (university undergrads, same age, upper middle class)

Source: Gaechter & Schultz 2016
Measuring intrinsic honesty: The die-in-a-cup task

- Throw a die **twice**
- Report the **first** roll
- Get paid according to report
  - Get 1€ if 1
  - Get 2€ if 2
  - ...
  - Get 5€ if 5
  - Get nothing if 6

Source: Gaechter & Schultz 2016
“Justified” dishonesty

• Many people want to maintain a self-image as an honest person, and so will not report a number they have not rolled.

• Rules stipulate to roll the die twice and to report the first roll.

• Reporting the higher of 2 rolls doesn’t imply reporting a counter-factual

Source: Gaechter & Schultz 2016
## “Justified” dishonesty

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<thead>
<tr>
<th>Claim (UK pounds)</th>
<th>Events</th>
<th>Probability</th>
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<tbody>
<tr>
<td>0</td>
<td>6&amp;6</td>
<td>1/36</td>
</tr>
<tr>
<td>1</td>
<td>1&amp;6 6&amp;1 1&amp;1</td>
<td>1/12</td>
</tr>
<tr>
<td>2</td>
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<td>5/36</td>
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<td>3</td>
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Benchmarks

Cumulative probability

Amount claimed

Full dishonesty
Benchmarks

- Cumulative probability
- Full honesty
- Full dishonesty

Amount claimed
Benchmarks

Cumulative probability

Amount claimed

Full honesty
Justified dishonesty
Full dishonesty
Summary of Ex. 2

- Corruption, tax evasion, political fraud etc are associated with “justifiable dishonesty,” but not categorical dishonesty.

- Is this robust to controls for GDP per capita, which is itself correlated with corruption?
  - Could low per capita income be driving dishonesty?
Ex. 3  Can all cultures form mutually beneficial conventions?

Standard view: it’s an information problem.

In fixed pairs, nearly everyone will quickly settle on the efficient, cooperative convention

Van Huyck et al. 1990

A behavioral finding

A history of miscoordination is an “insult to honor” that can block the emergence of a convention

Brooks, Hoff, and Pandey 2015
Stag Hunt: “The exemplar of the social contract” –Skyrms 2003

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La chasse commence quand on dit "aller au landier".
Game box in the Stag Hunt

Note: Because we wanted to make the history in a pairing salient, the monitor gave the subjects a game box to use in each pairing. The cover was opaque so that the monitor never saw the decisions and thus could not indicate approval or disapproval of the player’s and his partner’s decisions. Each column of the box corresponds to a round. The player received an endowment of 6 blue tokens in each round. The experimenter explained the game to the subjects using neutral language: “invest 6 or 2 in the common pool.” The player indicated his decision by putting tokens in the lowest row of the box. He used the first column for round 1, the 2nd column for round 2, and so on. Hunting Stag corresponds to putting all 6 tokens of one’s endowment for a round into the box. Hunting Hare corresponds to putting just 2 in the box, and keeping 4 in one’s pocket. A messenger came by at the end of each round to show the player, by putting orange tokens in the top row of the appropriate column, the decision of the partner, and in the middle row, again using orange tokens, the gross return on the player’s investment. This figure shows that in round 1, the player chose 6 (i.e. Stag), the partner chose 2 (i.e. Hare), and so the player lost half his endowment. In round 2, the player and his partner both chose 6 (Stag), and the gross return to the player was 10. At the end of the session, the player exchanged his tokens (in the middle row and in his pocket) for rupees on a one-to-one basis.
Low-caste pairs establish a cooperative convention within 5 periods.
But high-caste pairs do not
When does high-caste behavior diverge from low-caste?

It occurs after a player gets the loser’s payoff.

Players who switch to Hare after getting the loser’s payoff:

- HH pairs: 68%
- LL pairs: 32%

The difference is robust to controls

Brooks, Hoff, and Pandey 2015
Hypothesis: The high caste retaliate to uphold their honor

“[Honor] has to be continually reaffirmed”

(Mandelbaum (1993))
Survey of attitudes to retaliation

- Respondents each get 2 vignettes and comment on the actions

- We find that if one man causes another man a loss,
  - High-caste men tend to think the right response is to retaliate
  - But many low-caste men say: “let it go”

Brooks, Hoff, and Pandey 2015
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A model that incorporates an angry one-period response to the loser’s payoff can explain the caste gap in the game & predict that even in an infinitely repeated game, the mutually beneficial convention cannot be sustained if the one-period anger is sufficiently great.

Brooks, Hoff, and Pandey 2015
A US police chief said of a community in his city,

“Maintaining one’s status and credibility and honor, if you will, within that peer community is literally a matter of life and death”

(New York Times 2015)
Behavioral Economics

Strand One

The quasi-rational actor

Stimulus → Response

Strand Two

The enculturated actor

Stimulus → Mental model → Response

Experience & exposure create the mental models, & context cues them
Can participatory theater in West Bengal “anchor new social attitudes”?

• The plays of *Jana Sanskriti* highlight oppressive social norms.

• In repetitions of scenes, a viewer can step onstage, play the role of a character, & construct a new response
Fraction of women who report abuse & restrictions from husbands

Hoff & Jalan, in progress, based on data from about 3000 households entered so far
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Hoff and Stiglitz 2016
For additional references of work in, or near the border of, what we are calling the second strand of behavioral economics, see the WDR 2015 & references on the next page.
Experience & exposure may affect perceptions, cognition, preferences, & outcomes

Experience
• Kotwal & colleagues (2014) on Maharashtra state—trust in government is greater in more oppressive villages
• Alesina, Giuliano, and Nunn (2013) on “On the origin of gender roles: Women and the plough”: history of gendered occupations fostered by plough technology predicts lower women’s labor force participation today
• Sanyal, Rao, & Majumdar (2016) on the self-help groups in the Indian state of Bihar that changed women’s autonomy
• Putnam & Guiso & colleagues on Italian medieval city state history that promotes rule of law today
• Wantchekon (work in progress) on greater social mobility of young people in Benin if their grandfathers (though unschooled) lived in villages that had schools
• Farfan, Holla and Vakis (work in progress) on Lima teachers’ biased processing of data on academic performance of poor vs. non-poor students
• Beaman et al. (2012) on shifts in aspirations of teenage girls after exposure to women village leaders under political reservations in India
• Iyer et al. (2011) on role model effects that made it possible to enforce laws against rape in Indian villages (victims reported more, police recorded the crimes more)

Exposure
• Bernard et al. (2015) on videos profiling people who escape from poverty in Ethiopia. Seeing the videos slightly raises savings and work effort and investment in education of children
• La Ferrara et al. (2012) on soap operas that featured small family size, which lowered fertility in Brazil. Replication in E. Germany.