WDR 2015
Mind, Society, and Behavior: Comments

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University of Tokyo
& JICA Research Institute
Outline

1. Why WDR on mind, society, and behavior?
2. Main messages
3. Comments/questions
   A. JICA’s contributions
   B. Usual criticisms on robustness
   C. Missing important pieces
   D. More fundamental issues
1. Why WDR on MIND, SOCIETY, AND BEHAVIOR ????

In other instances, however, the ranking is quite clear. The priestly caste (the Math-Econ) for example, is a higher “field” than either Micro or Macro, while the Devlops just as definitely rank lower. Second, we know that these caste-rankings (where they can be made) are not permanent but may change over time. There is evidence, for example, that both the high rank assigned to the Math-Econ and the low rank of the Devlops are, historically speaking, rather recent phenomena. The rise of the Math-Econ seems to be associated with the previously noted trend among all the Econ towards more ornate, ceremonial modls, while the low rank of the Devlops is due to the fact that this caste, in recent times, has not strictly enforced the taboos against association with the Polscis, Sociogs, and other tribes. Other Econ look upon this with considerable apprehension as endangering the moral fiber of the tribe and suspect the Devlops even of relinquishing modl-making.
~20th century


“Once upon a time there was a field called development economics”
21st century

• Esther Duflo (MIT)
  • Won John Bates Clark medal 2010 at age of 37
  • Distinguished herself through definitive contributions to the field of development economics

• Development economics as a major field in economics
  • Many academic papers appear in prestigious top journals such as *Econometrica*, *AER*, *JPE*, *RES*, ...as well as *PNAS*, *Science*, and etc..
  • Best PhD candidates in economics at MIT, Yale, Princeton, and Harvard specialize in development:
    • In 2013, 6 out of 18 (now 3/14) job candidates at MIT, and 5 out of 15 at Yale
Field Experiments!

• The **weird people** in the world? (Henrich, Heine, and Norenzayan, 2010) → **Real world relevance**

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<tr>
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- **Lab:** Lab experiment
- **PSM:** Propensity score estimation
- **IV:** Instrumental variables estimation
- **STR:** Structural modeling

**Fig. 1.** A field experiment bridge.
Field Experiments!

- The **weird people** in the world? (Henrich, Heine, and Norenzayan, 2010) → **Real world relevance**

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*Fig. 1. A field experiment bridge.*

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- **Lab**: Lab experiment
- **AFE**: Artefactual field experiment
- **FFE**: Framed field experiment
- **NFE**: Natural field experiment
- **NE**: Natural experiment
- **PSM**: Propensity score estimation
- **IV**: Instrumental variables estimation
- **STR**: Structural modeling

*Source: S.D. Levitt, J.A. List / European Economic Review 53 (2009) 1–18*
294 words “experiment” in 215 pages
MIND, SOCIETY, AND BEHAVIOR

2. Main Messages
Main Messages

1. Thinking automatically
   • “Choice architecture” & “nudge” to guide decisions

2. Thinking socially
   • (Monetary/non-monetary) interventions, institutions, and social norms to facilitate cooperation

3. Thinking with mental models or “culture”
   • Invoking positive identifies; “media”

• Psychological and social perspectives on policy (poverty, child development, HH finance, productivity, health, and climate change)

• Development professionals are also subject to the biases and mistakes arising from these three factors
<table>
<thead>
<tr>
<th>Intervention</th>
<th>Description</th>
<th>Outcome</th>
</tr>
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<tbody>
<tr>
<td>Reminders</td>
<td>Weekly text messages to remind patients to take their HIV drugs in Kenya.</td>
<td>Adherence to a medical regimen</td>
</tr>
<tr>
<td></td>
<td>Weekly reminders improved the rate of drug adherence to 53% from a baseline of 40%.</td>
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<tr>
<td>Nonmonetary gifts</td>
<td>Small nonfinancial incentives and prizes—like lentils and metal dinner plates—were combined with a reliable immunization provider within the community in India.</td>
<td>Immunization rate</td>
</tr>
<tr>
<td></td>
<td>Among children aged 1–3, rates of full immunization were 39% with the lentils incentives compared to 18% in the group with only the reliable immunization provision. In areas with no intervention, the rate of full immunization was 6%.</td>
<td>Immunization rate</td>
</tr>
<tr>
<td>Public notices</td>
<td>Small stickers were placed in randomly selected buses encouraging passengers to “heckle and chide” reckless drivers in Kenya.</td>
<td>Traffic accidents</td>
</tr>
<tr>
<td></td>
<td>Annual insurance claims rates for accidents declined from 10% to 5%.</td>
<td>Traffic accidents</td>
</tr>
<tr>
<td>Making products</td>
<td>Chlorine dispensers were provided free of charge at local water sources, and promoters of chlorination to treat water were hired to visit houses in Kenya.</td>
<td>Take-up of chlorination</td>
</tr>
<tr>
<td>convenient</td>
<td>The take-up rate was 60% in households with dispensers, compared to 7% for the comparison group.</td>
<td>Take-up of chlorination</td>
</tr>
<tr>
<td>Inspirational</td>
<td>Poor households were shown videos about how people like them had escaped from poverty or improved their socioeconomic status in Ethiopia.</td>
<td>Aspirations and investment</td>
</tr>
<tr>
<td>messages</td>
<td>Aspirations for children increased. Total savings and investments in schooling were higher after six months.</td>
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<td>Timing of cash transfers</td>
<td>Part of a conditional cash transfer was automatically saved and given as a lump sum at the time when decisions about school enrollment were made in Colombia.</td>
<td>Enrollment in higher education</td>
</tr>
<tr>
<td></td>
<td>Enrollment increased in the next school year, without a decline in current attendance.</td>
<td>Enrollment increased in the next school year, without a decline in current attendance.</td>
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Sources: Pop-Eleches and others 2011; Banerjee and others 2010; Habyarimana and Jack 2011; Kremer and others 2009; Bernard and others 2014; Barrera-Osorio and others 2011.
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<tr>
<th>Type</th>
<th>Strength of the evidence</th>
<th>Examples</th>
</tr>
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<tr>
<td>Reminders</td>
<td>73 papers, appearing in 6 domains</td>
<td>A regular text-message reminder to save money increased savings balances by 6 percent (Karanl and others 2010).</td>
</tr>
<tr>
<td>Social influence</td>
<td>69 papers, appearing in all 8 domains</td>
<td>Homeowners received mailers that compared their electricity consumption with that of neighbors and rated their household as great, good, or below average. This led to a reduction in power consumption equivalent to what would have happened if energy prices had been raised 11-20 percent (Allcott 2011).</td>
</tr>
<tr>
<td>Feedback</td>
<td>60 papers, appearing in 5 domains</td>
<td>A field experiment provided individualized feedback about participation in a curbside recycling program. Households that were receiving feedback increased their participation by 7 percentage points, while participation among the control group members did not increase at all (Schultz 1999).</td>
</tr>
<tr>
<td>Channel and hassle factors</td>
<td>43 papers, appearing in 8 domains</td>
<td>Providing personalized assistance in completing the Free Application for Federal Student Aid (FAFSA) led to a 29 percent increase in two consecutive years of college enrollment among high school seniors in the program group of a randomized controlled trial, relative to the control group (Bettinger and others 2012).</td>
</tr>
<tr>
<td>Micro-incentives</td>
<td>41 papers, appearing in 5 domains</td>
<td>Small incentives to read books can have a stronger effect on grades than incentives to get high grades (Fryer Jr. 2010).</td>
</tr>
<tr>
<td>Identity cues and identity priming</td>
<td>31 papers, appearing in 5 domains</td>
<td>When a picture of a woman appeared on a math test, female students were reminded to recall their gender and performed worse on the test (Shih, Pittinsky, and Ambady 1999).</td>
</tr>
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<td>Social proof</td>
<td>26 papers, appearing in 5 domains</td>
<td>Phone calls to voters with a “high turnout” message—emphasizing how many people were voting and that the number was likely to increase—were more effective at increasing voter turnout than a “low turnout” message, which emphasized that election turnout was low last time and likely to be lower this time (Gerber and Rogers 2009).</td>
</tr>
<tr>
<td>Physical environment cues</td>
<td>25 papers, appearing in 5 domains</td>
<td>Individuals poured and consumed more juice when using short, wide glasses than when using tall, slender glasses. Cafeterias can increase fruit consumption by increasing the visibility of the fruit with more prominent displays or by making fruit easier to reach than unhealthful alternatives (Wansink and van Ittersum 2003).</td>
</tr>
<tr>
<td>Anchoring</td>
<td>24 papers, appearing in 3 domains</td>
<td>In New York City, credit card systems in taxis automatically suggested a 30, 25, or 20 percent tip. This caused passengers to think of 20 percent as the low tip—even though it was double the previous average. Since the installation of the credit card systems, average tips have risen to 22 percent (Gryna 2009).</td>
</tr>
<tr>
<td>Default rules and automation</td>
<td>18 papers, appearing in 7 domains</td>
<td>Automatically enrolling people in savings plans dramatically increased participation and retention (Thaler and Benartzi 2004).</td>
</tr>
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<td>Loss aversion</td>
<td>12 papers, appearing in 7 domains</td>
<td>In a randomized controlled experiment, half the sample received a free mug and half did not. The groups were then given the option of selling the mug or buying a mug, respectively, if a determined price was acceptable to them. Those who had received a free mug were willing to sell only at a price that was twice the amount the potential buyers were willing to pay (Kahneman, Knetsch, and Thaler 1990).</td>
</tr>
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<td>Public/private commitments</td>
<td>11 papers, appearing in 4 domains</td>
<td>When people promised to perform a task, they often completed it. People imagine themselves to be consistent and will go to lengths to keep up this appearance in public and private (Bryan, Karlan, and Nelson 2010).</td>
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3. Comments
A. JICA’s contributions

• Missing partly because of my behavioral problem (a naive hyperbolic discounter)....
A. JICA’s contributions

Election, Implementation, and Social Capital in School-Based Management: Evidence from COGES Project in Burkina Faso

Yasuyuki Sawada
JICA RI and Univ of Tokyo

with Takeshi Aida, Drew Griffen, Eiji Kozuka, Haruko Noguchi, and Yasuyuki Todo
Evaluation Strategy: A Hybrid of Artefactual & Natural Field Experiment

- **RCT:** Impact of COGES \((D) \rightarrow \text{Outcome (Y)}\)
  - Treatment \(D=1[COGES]\)
    - Main phase: Randomized roll-out
  - Outcomes \(Y\):
    - Students’ cognitive and non-cognitive achievements
    - School outcomes
    - Social capital (voluntary contribution to public goods)
    - Health and anthropometric outcomes
- **Public goods game (a game explained in WDR 2015):**
  - Standard laboratory experiments (Levitt and Fehr, 2004)
  - Voluntary cooperation among people
  - One of the measures of social capital (Anderson et al., 2004)
  - Multi-person PD game

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Voluntary Contribution to Local Public Goods
Based on the Public Goods Experiments

- **Election Effect**
  - Non-COGES
  - COGES
  - **Implementation Effect**
  - Non-COGES
  - COGES

- **Election Effect for Director, Teacher, and Parents**
  - Non-COGES
  - COGES
  - **Implementation Effect for Director, Teacher, and Parents**
  - Non-COGES
  - COGES

- **Implementation Effect**
  - Non-COGES
  - COGES

- **Implementation Effect for Director, Teacher, and Parents**
  - Non-COGES
  - COGES

**Graphs:**
- **Implementation Effect**
  - COGES: +9.1%
  - Non-COGES: (insignificant)

**Election Effect**
- COGES: +3.4%
- Non-COGES: +12.8%

**Election Effect for Director, Teacher, and Parents**
- COGES: +11.8%
- Non-COGES: +12.8%
Three Types of Social Capital

B. Usual criticisms

• External validity?
• Robust policy instruments?
• General equilibrium effects when scaled-up?
• Lack of a grand view?
  • To grasp “think socially,” PGG and trust games, i.e., Prisoner’s dilemma (PD) games, are used.
  • PD games are the ones of “market failures” where laissez-faire cannot achieve Pareto optimality.
  • The government also fails in correcting market failures
  • People’s “automatic, social, and mental” behaviors can be nudged to amend the trinity of market, state, and community a la Yujiro Hayami (2009)
A Grand View

- Feigenberg, Field and Pande (2013) RES
- Mobarak & Rosenzweig (2013) AEA-PP
- Karlan (2005) AER
- Angelucci and Giorgi (2009) AER

C. Missing important pieces

• The role of infrastructure to “nudge” people?
  • Sawada et al. (2013) on irrigation infrastructure in Sri Lanka to facilitate trust
    • Use of a hybrid method of artefacultual field experiments (trust game) and natural experiments of settlements

• The importance of new technologies and innovations
  • This report focused on the “last one mile” problem
  • Innovations themselves are indispensable

Ex 1) LLINs vs. simple nets with community-driven treatment

Ex 2) One of the NTDs, the African sleeping sickness and Nagana diseases caused by the TseTse fly are attributed to the current poor political economy in Africa (Alsan, 2015, AER). Prof. Kiyoshi Kita found significant effectiveness of ascofuranone.
D. More Fundamental Issues

1. Fundamental criticisms:
   • Parachute project vs ownership
   • Risks of victimization by a dictator through paternalistic policy interventions

2. Real-world difficulties in adopting experiments
   • Prejudice on field experiments: overconfidence, overloading, excessive (subjective) costs, and ethical concerns
   • IRB?
Thank you very much!