

Lecture 10.3

Social engineering

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Social identity, norms & engineering: A political economy perspective

Nation-building

Behavioral modification

Social norm change

Research frontiers

Where has this literature gone and where is it going?

- ▶ Recent papers: Feasibility tests
 - ▷ Real and natural experiments establishing that identity and preferences can be shaped through policy or events
 - ▷ Often have not pinned down mechanisms, or mechanisms are suggestive
 - ▷ Don't have a good sense of why some campaigns succeed or fail more than others
 - ▷ Few null results published
 - ▶ Because it always works? Or publication bias?
- ▶ Where does this leave the frontier?

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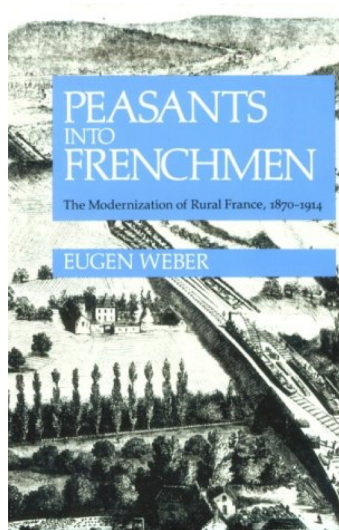
Social norm change

Research frontiers

State & nation building a gradual process of projecting power into periphery and people, reshaping society

The last miles of state building:

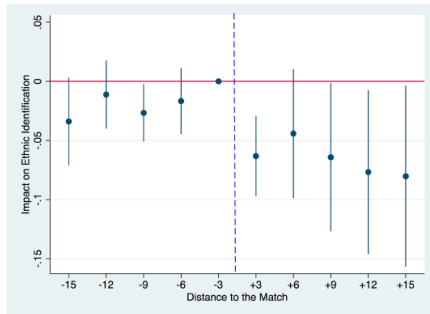
- ▶ In early 19th century, most villages have never seen agents of the national state
- ▶ Provincial loyalties often transcended national bonds of the nation
- ▶ 1870-1914, new forces penetrated the isolated countryside
 - ▷ Judicial and school systems
 - ▷ Army
 - ▷ Catholic Church
 - ▷ Rail & roads
 - ▷ Market economy



Depetris-Chauvin et al 2019: Building Nations Through Shared Experiences

Use existing multi-country survey data before and after international football matches

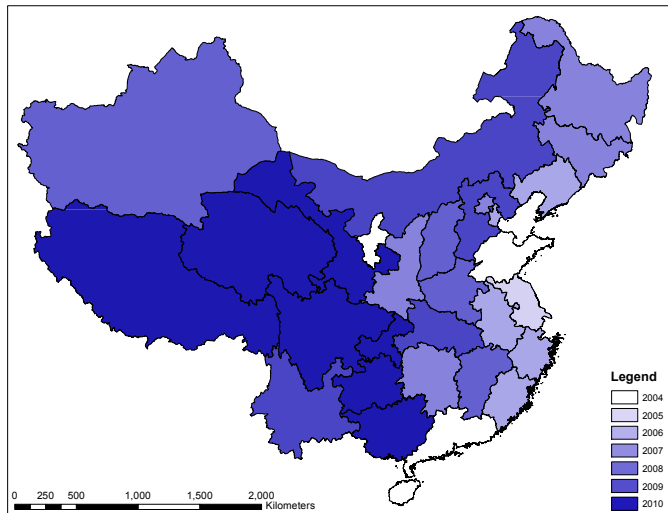
FIGURE 2: ETHNIC IDENTITY BEFORE AND AFTER NATIONAL TEAM'S VICTORIES



The figure plots the coefficients and the 95% confidence intervals for nine dummies indicating 3-day blocks from 15 days before to 15 days after a victory of the national football team. The coefficient for the period between 3 to 1 days before the match is normalized to zero. Confidence intervals are based on heteroskedasticity-robust standard errors clustered by country \times year. The coefficients are estimated from a unique regression in which we control for individual characteristics, seasonal dummies, country \times match and language group \times year fixed effects.

Cantoni et al 2017: Impact of China's 8th textbook reform

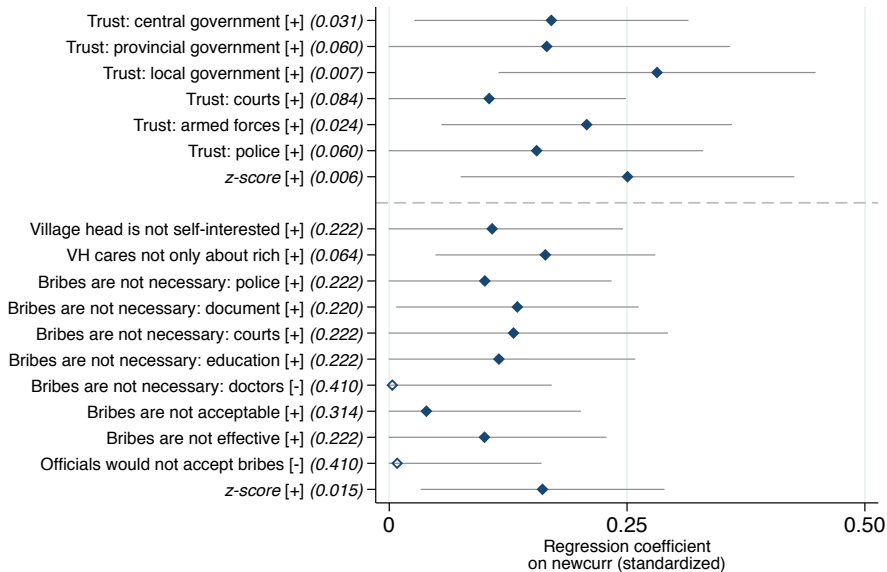
Staggered introduction of new curriculum, 2004–10



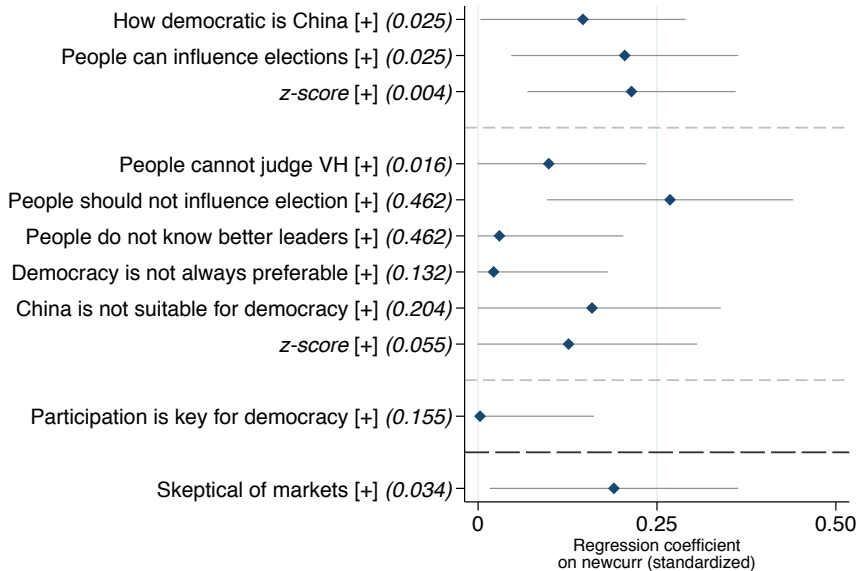
Test for an impact of new curriculum by analyzing survey conducted with Peking University undergraduates

- ▶ It is extremely difficult to find opportunities to (let alone causally) identify government actions on ideology, preferences, identity
- ▶ Using a diff-in-diff design, Cantoni et al find significant effects of the new curriculum on students' views of:
 - ▷ Chinese *governance*; e.g., greater trust in officials
 - ▷ China's *political institutions*; e.g., viewing China as more democratic
 - ▷ *Economic institutions*; greater skepticism toward markets
- ▶ On the other hand, no significant effects on students':
 - ▷ Ethnic or national *identity*
 - ▷ Attitudes toward the *environment*
- ▶ Effects on *behavior* mixed
 - ▷ e.g. Member of Communist Party, cooperation with minorities

e.g. Governance outcomes



e.g. Political and economic institutions outcomes



Some themes that will come up in every paper we see today

- ▶ How to deal with multiple outcomes?
 - ▷ The familywise error rate (FWER) is the probability of a false positive when testing m hypotheses
 - ▷ The simplest corrections are far too extreme to be useful
 - ▶ e..g. Bonferroni correction: For a desired significance level of α for individual hypothesis tests, this tests each hypothesis at α / m
- ▶ What was ex ante versus ex post analysis? Should we prespecify?
- ▶ How to deal with measurement error in self-reported data (especially experimenter demand)?
- ▶ How to deal with non-response and attrition, including ex-post sensitivity analysis

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Blattman et al 2017: CBT as non-cognitive skills development and also identity change



Figure: A CBT session in Monrovia with street youth – homeless, drug users, petty criminals, drug dealers, embroiled in regular everyday violence

Cognitive behavior therapy

One of several methodologies used for re-socialization

- ▶ A method for treating problematic thoughts and behaviors
- ▶ Huge rigorous evidence base (mainly in US), especially for depression, anxiety, phobias, anger, PTSD, and (less successfully) addiction
- ▶ Unlike talk therapy or psychotherapy, sees a “two-way street” between thoughts and behaviors:
 1. Changing people's thinking changes behavior
 - ▶ Explicit discussion of problems and therapeutic method
 - ▶ Identify & challenge causes and consequences of harmful thoughts & behaviors
 2. But changing behaviors also changes cognitions
 - ▶ Role playing, practicing tasks
 - ▶ Expose to real situations
 - ▶ Processing experiences through discussion
 - ▶ Start easy, get more difficult

We are seeing more exploration in economics and related disciplines

- ▶ Reduced arrest rates temporarily among Chicago high school delinquents (Heller et al. 2017 QJE)
- ▶ Currently testing with highest risk shooters in Chicago gangs (Bertrand et al 20??)
- ▶ Improve savings and health behavior of Indian sex workers by improving self image (Ghosal et al 2020)

Can CBT shape adult self-image/identity?

- ▶ Hypotheses:
 - ▷ “Criminal outcasts” know the “regular people” norms, but those prescriptions do not apply to their social category
 - ▷ CBT a way for outcasts to practice a higher-status social category
- ▶ Key elements of the group therapy:
 - ▷ Start with appearance change, home cleanliness
 - ▷ Exposure (banks, supermarkets)
 - ▷ Success positively reinforced by family, friends
 - ▷ Process failures and setbacks with group
- ▶ A second treatment arm, cash grants, enabled another form of “practice”: starting a legitimate microenterprise



Another possible channel: Developing self control and emotional regulation as a skill

- ▶ “Noncognitive” form of human capital
 - ▷ A strong predictor of long run economic performance, including crime (Borghans et al. 2008, Heckman et al. 2006)
 - ▷ Evolves over life cycle and is affected by upbringing, self-investment, and interventions (Heckman & Kautz 2013)
 - ▷ Thought to be malleable in childhood and, to a lesser degree, adolescence
- ▶ Could affect productivity at tasks θ
- ▶ Could affect time preferences (to the extent they are a skill not a identity-driven preference)



Model of criminal occupational choice with financial market imperfections

With preferences σ over occupation, time preferences β and δ , and productive skills or traits θ

$$\begin{aligned}
 & \max_{c_t > 0, 0 \leq l_t \leq \bar{L}, L_t^b, L_t^c, K_{t+1}, a_{t+1}} U(c_t, l_t, \sigma L_t^c) + \beta \sum_{i=1}^{\infty} \delta^i U(c_{t+i}, l_{t+i}, \sigma L_{t+i}^c) \\
 & s.t. \quad c_t + a_{t+1} + K_{t+1} = F(\theta, L_t^b, K_t) + w_t L_t^c - \rho f L_{t-1}^c + (1+r)a_t \quad \text{for each } t \\
 & \quad \quad \quad a_0 \quad \quad \quad \text{given}
 \end{aligned}$$

where $L_t^b + L_t^c + l_t \equiv \bar{L}$.

How CBT interventions might map to the Akerlof-Kranton framework

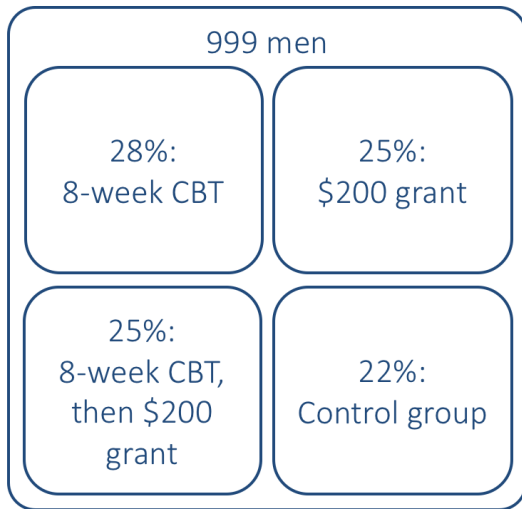
Tries to shape your attachment to an identity and, within that identity, your internalization of appropriate actions – automaticity

$$U_j(a_j, a_{-j}, y_J, \kappa_J, I_j \mid \psi_j)$$

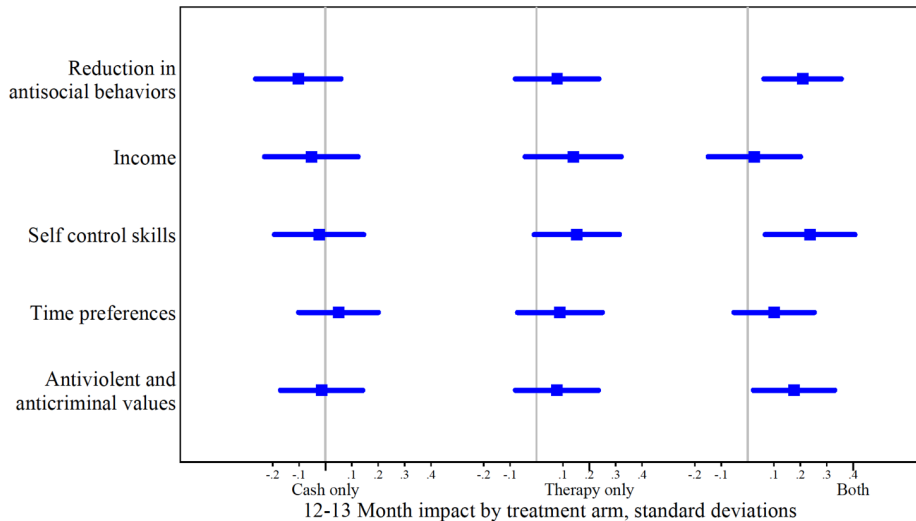
$$I_j(a_j, a_{-j}; c_j, \epsilon_j, P_J).$$

- ▶ Others' observed action a_{-j}
- ▶ Group status y_J
- ▶ Group salience κ_J
- ▶ **Internalized values/preferences of group J , ψ_j**
- ▶ **Own assignment/association with group c_j**
- ▶ Own characteristics ϵ_j
- ▶ Prescriptions of group P_J
- ▶ Existence of identity group I with prescriptions P

2 × 2 factorial design

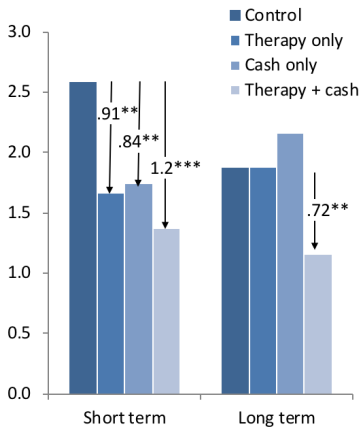


ATEs on primary outcomes and channels

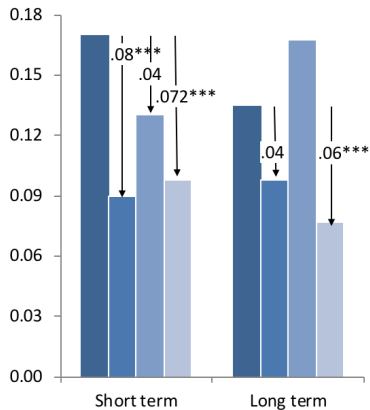


ATEs on crime outcomes

Thefts/robberies in past 2 weeks



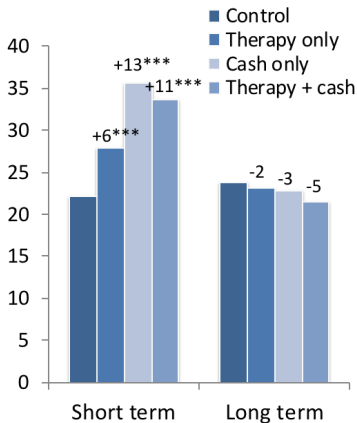
Sold drugs in past two weeks



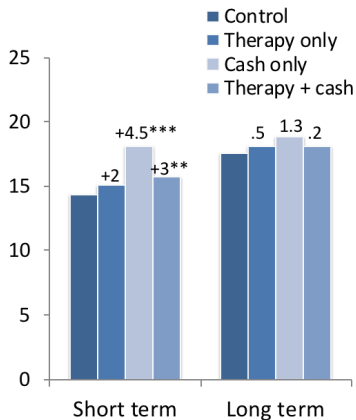
ATEs on income

Why was identity and preference change persistent with income change was not? Cash = Extra months of "practice"?

Weekly consumption (USD)



Weekly earnings (USD)



Thoughts on the paper?

- ▶ Novelty
- ▶ How does this advance the field?
- ▶ Generalizability / External validity
- ▶ Adequacy and appropriateness of theory
- ▶ Data and measurement
- ▶ Empirical strategy and internal validity
- ▶ Consistency and robustness of results

How did we deal with these issues?

- ▶ How to deal with multiple outcomes?
- ▶ What was ex ante versus ex post analysis? How much to prespecify?
- ▶ How to deal with measurement error in self-reported data (especially experimenter demand)?
- ▶ How to deal with non-response and attrition, including ex-post sensitivity analysis?

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Social norm change is often changing prescriptions P

- ▶ **Norms:** Informal, unwritten rules enforced by social praise and sanctions.
- ▶ **Descriptive norms:** What you believe others in group J do
- ▶ **Prescriptive norms:** What you believe others in group J believe J 's ought to do
- ▶ **Personal attitude & preferences:** Internalized social norms?
- ▶ **Culture:** A body of persistent social norms/prescriptions?

- ▶ Examples of norms
 - ▷ Shake hands and make eye contact
 - ▷ Stand right, walk left
 - ▷ Allow a presenter to present without interruption (or not)

Norm change usually takes identities, status & salience as given

But tries to shape prescriptions, often through information campaigns or affecting actions of influential members

$$U_j(a_j, a_{-j}, y_J, \kappa_J, I_j \mid \psi_j)$$

$$I_j(a_j, a_{-j}; c_j, \epsilon_j, P_J).$$

- ▶ **Others' observed action** a_{-j}
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- ▶ **Prescriptions of group** P_J
- ▶ Existence of identity group I with prescriptions P

Examples of social norm change by influencing perceived prescriptions

► Example

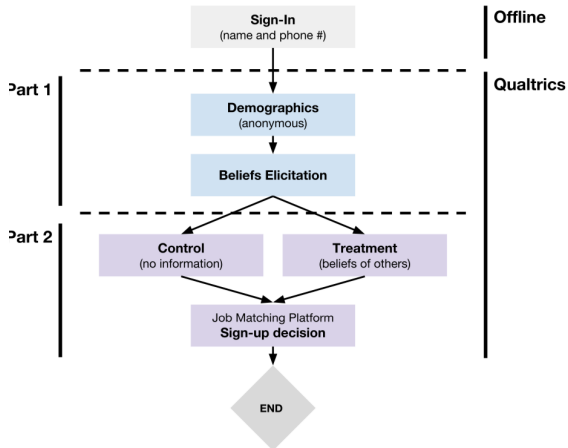
- ▷ Campaigns against female footbinding in China, female genital cutting in MENA/SSA, slavery in 19th century successfully change prescriptive norms associated with moral uprightness and respectability
- ▷ Introduction of cable TV changes women's status in India (Jensen and Oster 2009)
- ▷ Promoting more peace dispute resolution practices in land disputes (Blattman et al 2014)

► Common features

- ▷ Introduce new descriptive or prescriptive norms
- ▷ Try to change common knowledge about these norms through mass communication
- ▷ Rely partly of community enforcement through social sanctions and esteem
- ▷ Also rely on our internalized desire to conform to norms

How is the Bursztyn et al study different?

Figure 1: Experimental Design
(*Main Experiment*)



Thoughts on the paper?

- ▶ Novelty
- ▶ How does this advance the field?
- ▶ Generalizability / External validity
- ▶ Adequacy and appropriateness of theory
- ▶ Data and measurement
- ▶ Empirical strategy and internal validity
- ▶ Consistency and robustness of results

How did Bursztyn et al deal with these issues?

- ▶ How to deal with multiple outcomes?
- ▶ What was ex ante versus ex post analysis? How much to prespecify?
- ▶ How to deal with measurement error in self-reported data (especially experimenter demand)?
- ▶ How to deal with non-response and attrition, including ex-post sensitivity analysis?

How did Bursztyn et al deal with these issues?

- ▶ How to deal with multiple outcomes?
 - ▷ Index of outcomes (What are some common/conceptual issues with this—not this paper but any paper)?
 - ▷ p-value adjustment
- ▶ What was ex ante versus ex post analysis? How much to prespecify?
 - ▷ Trend towards more sparse pre-reg
- ▶ How to deal with measurement error in self-reported data (especially experimenter demand)?
 - ▷ Revealed preference decision, giving up funds for a job matching service
 - ▷ Plus self reported labor market outcomes months later
 - ▷ List experiment in online survey (though are these ever powered?)
- ▶ How to deal with non-response and attrition, including ex-post sensitivity analysis?
 - ▷ Lee bounds – pros and cons

What are we learning from this study that we did not know before?

- ▶ What do we think might be the drivers of misperceived social norms?
- ▶ How is this situation different from the other kinds of social engineering we have seen?

What are we learning from this study that we did not know before?

- ▶ What do we think might be the drivers of misperceived social norms?
- ▶ How is this situation different from the other kinds of social engineering we have seen?
 - ▷ Are these the “easy” cases? Basically an informational problem that relies on norm compliance
 - ▷ How much of men’s attitudes to women globally is about misperceived social norms versus deeply rooted identities and norms?
 - ▷ What might this imply for external validity?

Some new/ongoing attempts to change gender norms at IRC

Annan et al. 20??

► Real Man Challenge (Liberia, Peru)

- ▷ WhatsApp messaging campaign engaging men
- ▷ 30d of behavioral and skill building challenges from a trusted host to a group of 10-15 men
- ▷ Promotes an aspirational masculine identity
- ▷ CBT-informed
- ▷ Used iterative design to develop pilot model
- ▷ Pilot: Men eager to engage irrespective of financial incentives, generated 30-40% of online content
- ▷ Early signs of sustained behavioral change, but independent measures important for scale-up

► Becoming One (Uganda)

- ▷ Counseling program for 2000 couples that works through 144 local faith leaders
- ▷ Uses scripture to change information and perceived social norms
- ▷ Focuses on finances, communication, sexual pleasure
- ▷ Also CBT-informed
- ▷ Early signs of sustained norm change & violence reduction, mainly among progressive faith leaders

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Various research frontiers

Wide open and so difficult to predict directions

- ▶ What is the effect of identity on motivated reasoning and information processing/avoidance?
- ▶ Nationalism and other imagined communities
 - ▷ Demonstration of purposive identity change
 - ▷ Understanding effectiveness of techniques and reasons for this
- ▶ Huge amount of behavior change research ongoing (especially CBT)
 - ▷ Little of it so far exploring mechanisms, interactions, persistence of effects
 - ▷ Little focused on identity change
- ▶ “Military sociology” and socialization into armed groups is much asserted but never convincingly demonstrated
- ▶ Have minimal groups been over-interpreted?
 - ▷ Is this a focal point that dissipates in normal contexts?
 - ▷ How powerful is parochial altruism or out-group antipathy in the “field”
 - ▷ Understanding “dehumanization” and other techniques
- ▶ What is propaganda and why does it work?