Social norms: Heterogeneity and the cost of pressuring

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"Social norms as solutions"

Formal institutions, e.g., laws and treaties, have helped address issues like ozone depletion, lead pollution, and acid rain. However, formal institutions are not always able to enforce collectively desirable outcomes. In such cases, informal institutions, such as social norms, can be important. **If conditions are right**, policy can support social norm changes, helping address even global problems. [emphasis added]

— Nyborg et al. (2016, *Science*)

Social norms are effective when

- they are internalized (become moral/personal norms)
- **behavior is observed (social pressure)**

Examples
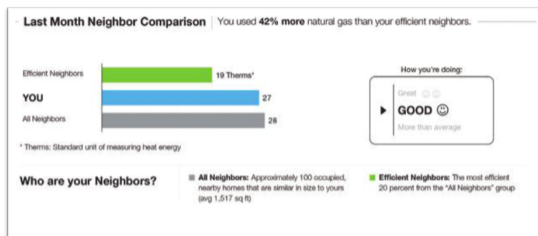
Social comparison example (Allcott & Kessler, 2019)

Social pressure example (Gerber, Green, and Larimer, 2008)

Research questions

Study 1 (unrecruited sample, mass emailing)

- How does social pressure and norm-updating vary by within-group relationships?
- How does social pressure to register affect actual voter turnout?

Study 2 (recruited sample)

- What is the cost of giving social pressure?
- What are the various sources of the cost?
- Is there a cost vs. effectiveness trade-off?
- How do the two previous items vary by the relationship between the sender and receiver?
- Do people know which social norms messaging is more effective?

A model of social pressure

Without social pressure

- $a_i \in {0, 1}$ is whether individual i has done some normatively good action a, and $\tilde{a}_i \in [0, 1]$ is i's personal norm regarding a
- Suppose there are benefits b_i and costs c_i of action a besides norms
- Doing the action gives personal norm utility $\pi_i \tilde{a}_i^p$, and not doing a costs $-\pi_i \tilde{a}_i^p$, where π_i is a scaling factor and p determines the curvature
- Then i does a iff

$$b_i - c_i + \pi_i \tilde{a}_i^p > -\pi_i \tilde{a}_i^p$$

A model of social pressure

With social pressure

- i perceives j's personal norm as $\tilde{a}_j^i$
- Then i's perceived *social* norm is $\sum_j w_{ij} \tilde{a}_j^i \equiv \bar{a}_i$ where w_{ij} are weights (i.e., how much i cares or is certain about j's norm) s.t. $\sum_j w_{ij} = 1$
- Doing the action gives *social* norm utility $\lambda_i \bar{a}_i{}^p$, and not doing a costs $-\lambda_i \bar{a}_i{}^p$, where λ_i is a scaling factor
- Now, i does a iff

$$b_i - c_i + \pi_i \tilde{a}_i^p + \lambda_i \bar{a}_i{}^p > -\pi_i \tilde{a}_i^p - \lambda_i \bar{a}_i{}^p$$

Setting: Voter registration for 2020 presidential election

Ballot Bowl Timeline:

Monday, August 17th, 2020 to Monday, October 23rd, 2020

Ballot Bowl Timeline:

Monday, August 17th, 2020: Registration for Ballot Bowl Begins.
Monday, October 23rd, 2020: Voter Registration Deadline (E-15) / Ballot Bowl Challenge Ends

Tuesday, November 3rd 2020: Election Day.

*Tentative Date: Monday, November 16th, 2020: Ballot Bowl Winners Presented with Award(s)

Experimental design (2x3)

	Arm	Campus/ postcode	Names	Registration statuses	Post-election update	
Identified	1	✓	✓	✓		← Norm-updating effect
	2	✓	✓		✓	← Social pressure effect
	3	✓	✓	✓	✓	← Both effects
Anonymous	1	✓		✓		Controls for other effects (e.g. competitiveness between campuses)
	2	✓			✓	
	3	✓		✓	✓	

Random assignment to teams induces exogenous variation in:

- Teammates' campuses/postcode (heterogeneity in within-group relationships)
- Number of teammates who have already registered

Also non-experimental variation in group composition of gender, major, class, and ethnicity can proxy for ties between teammates from the same campus

Arm 1

Subject: Your voter registration team

Dear [Name],

Election Day is coming up! Colleges across California, including yours, are participating in the **Ballot Bowl**.

To encourage students to register for voting, we've put college students in California into teams of three. ~~We'll be monitoring each team's score in number of registrations.~~ Your teammates in Team 2162 are:

Teammate	Campus	Registered (1/3)
W*** (Kim) (you)	UC Berkeley	
M*** (Lauletta)	UCLA	✔
E*** (Koepcke)	UC Berkeley	

~~To track your team's progress, we'll send you and your teammates an update of the table above with your team's final score after the registration deadline.~~

You can register to vote online at this link. To check whether you're registered, please click here. Register to vote by **Monday, October 23** and contribute to the Ballot Bowl!

Arm 2

Subject: Your voter registration team

Dear [Name],

Election Day is coming up! Colleges across California, including yours, are participating in the **Ballot Bowl**.

To encourage students to register for voting, we've put college students in California into teams of three. We'll be monitoring each team's score in number of registrations. Your teammates in Team 2162 are:

Teammate	Campus	Registered (?/3)
W*** (Kim) (you)	UC Berkeley	?
M*** (Lauletta)	UCLA	?
E*** (Koepcke)	UC Berkeley	?

To track your team's progress, we'll send you and your teammates an update of the table above with your team's final score after the registration deadline.

You can register to vote online at this link. To check whether you're registered, please click here. Register to vote by **Monday, October 23** and contribute to the Ballot Bowl!

Arm 3

Subject: Your voter registration team

Dear [Name],

Election Day is coming up! Colleges across California, including yours, are participating in the **Ballot Bowl**.

To encourage students to register for voting, we've put college students in California into teams of three. We'll be monitoring each team's score in number of registrations. Your teammates in Team 2162 are:

Teammate	Campus	Registered (2/3)
W*** (Kim) (you)	UC Berkeley	
M*** (Lauletta)	UCLA	✔
E*** (Koepcke)	UC Berkeley	✔

To track your team's progress, we'll send you and your teammates an update of the table above with your team's final score after the registration deadline.

You can register to vote online at this link. To check whether you're registered, please click here. Register to vote by **Monday, October 23** and contribute to the Ballot Bowl!

Mechanisms

i does a iff

$$b_i - c_i + \pi_i \tilde{a}_i^p + \lambda_i \bar{a}_i{}^p > -\pi_i \tilde{a}_i^p - + \lambda_i \bar{a}_i{}^p$$

- Status only: informs $\tilde{a}_j^i$, but affects behavior through only $\tilde{a}_i$
- Update only: affects through only $\lambda_i \bar{a}_i{}^p$, where $\bar{a}_i{}^p$ is the baseline prior
- Status + update: both effects

Sender's problem

Terms that influence i's decision to pressue j

- Altruistic utility from effects to j's social image
- Inducing an extra registration
- Aversion to pressuring
- Social capital/influence budget constraint

Research questions

Study 1

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- **How does social pressure to register affect actual voter turnout?**

Study 2

- What is the cost of giving social pressure?
- What are the various sources of the cost?
- Is there a cost vs. effectiveness trade-off?
- How does the cost and the trade-off vary by the relationships between the sender and receivers?
- Do people know which social norms messaging is more effective?

Study 2: Experimental design

- List yours + 10 emails of eligible-to-vote friends
- Take survey on voter registration norms

Rank the following messages in how **effective** they would be in getting people to register (incentivized)

"Register to vote!...
1. *It's our civic duty."*
2. *X% of Cal students do."*
3. *Your team has been signed up for Ballot Bowl."*
   (Anonymous sender)
4. *I've signed our team up for Ballot Bowl."*
   (Identified sender)

Study 2: Experimental design

Random assignment into groups and sender/receiver roles

Sender
For each message, BDM elicitation of **WT-be-paid to send** it to randomly chosen friends/strangers

Receiver
For each message, BDM elicitation of **WTP to avoid receiving** it from randomly chosen friends/strangers
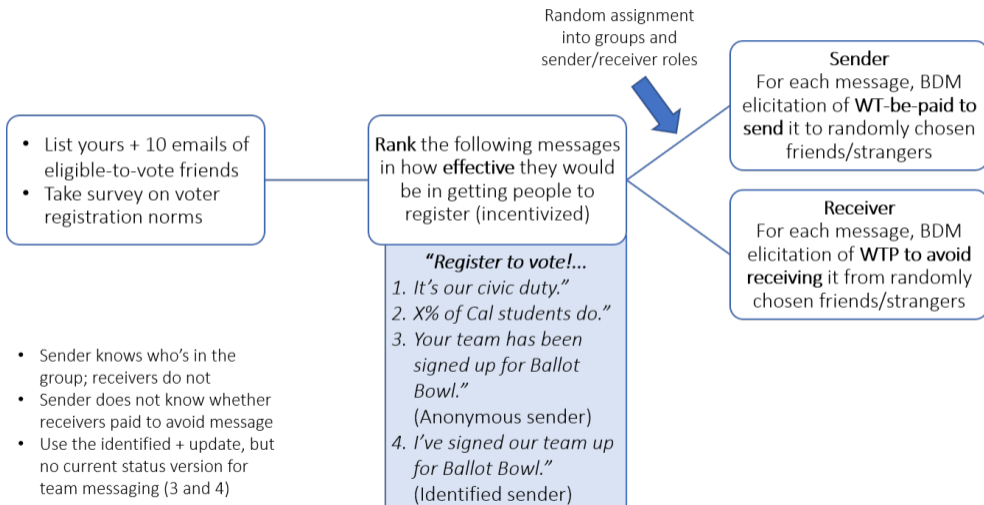
- List yours + 10 emails of eligible-to-vote friends
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   (Identified sender)

- Sender knows who's in the group; receivers do not
- Sender does not know whether receivers paid to avoid message
- Use the identified + update, but no current status version for team messaging (3 and 4)

Literature review

- Davenport et al. (2010): social pressure effects persist 1-2 years, or a couple of election cycles
  - Bigger effect for low-salience elections; null effects for presidential
- Nickerson (2008): inter-household effects of voting
- Nickerson (2015): voter registration drives increase registration by 4.4%, more so in poorer areas, of which 24% subsequently participate in the election, but more so among affluent neighborhoods
- Bennion and Nickerson (2016): college students increase registration by 6% (turnout 2.6%) after being shown a presentation in class
- Bennion and Nickerson (2011): emailing college students has a null/negative effect on registration