Social identity and preferences over redistribution

Esteban F. Klor, Moses Shayo (2009)
Introduction

• **Objective:**
  - Examine the trade-off between
    - social identity concerns
    - Maximization of monetary payoffs

• **Mechanism:**
  - Lab-experiment
  - Confront individuals with situations of conflict:
    - Four poor subjects within rich group
    - Four rich subjects within poor group
    - Choose a tax regime that is good for themselves or good for their group?
Set-up group-treatment

• Subjects divided into two distinct natural groups (based on their field of study) -> “rich” and “poor”

• Randomly assign gross incomes

• available information:  
  • Own gross income  
  • Overall mean income  
  • Mean income of each group  
  • No information about outcomes in previous rounds

• Vote over two redistributive tax regimes $\tau^h > \tau^l$
Set-up control-treatment

• Subjects are randomly assigned to groups they don’t know of
• Randomly assign gross incomes
• available information:
  • Own gross income
  • Overall mean income
  • No information about outcomes in previous rounds
• Vote over two redistributive tax regimes $\tau^h > \tau^l$
Income distribution and individual conflicts

Table 1
Gross income distributions.

<table>
<thead>
<tr>
<th></th>
<th>$x_1$</th>
<th>$x_2$</th>
<th>$z_1$</th>
<th>$z_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
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<tr>
<td>3</td>
<td>30</td>
<td>40</td>
<td>20</td>
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<tr>
<td>4</td>
<td>40</td>
<td>50</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>80</td>
<td>20</td>
<td>110</td>
</tr>
<tr>
<td>6</td>
<td>80</td>
<td>90</td>
<td>80</td>
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</tr>
<tr>
<td>7</td>
<td>90</td>
<td>100</td>
<td>90</td>
<td>110</td>
</tr>
<tr>
<td>8</td>
<td>100</td>
<td>110</td>
<td>100</td>
<td>110</td>
</tr>
<tr>
<td>9</td>
<td>110</td>
<td>150</td>
<td>110</td>
<td>150</td>
</tr>
<tr>
<td>Group Mean</td>
<td>58.9</td>
<td>74.4</td>
<td>52.2</td>
<td>81.1</td>
</tr>
<tr>
<td>Overall Mean</td>
<td>66.7</td>
<td>66.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Theoretical Framework

• $S_j(a) = S_j(\bar{\pi}_j(a), \bar{\pi}_{-j}(a))$

status of a group where $\bar{\pi}_j$ is the mean monetary payoff of individuals in the group and $\bar{\pi}_{-j}$ is the mean monetary payoff of the other group

• $U_i(a) = u(\pi_i(a)) + v(S_j(a))$

utility function of an individual with $u$ and $v$ strictly increasing

• $\pi_i(\tau) = (1 - \tau)y_i + \tau y$

individual monetary payoffs
with $\pi_i > \bar{\pi}$ rich
and $\pi_i < \bar{\pi}$ poor
poor individuals to support a high tax rate (panel (a) in Fig. 1).

Interest should lead rich individuals to support a low tax rate and in the standard approach of positive models of income identification with the poor group may vote for the high tax rate even if her income is below the mean, as long as the increase of the poor group's status is higher than her marginal utility of income decreases fast enough, then an individual identifying with the poor group votes for the high tax rate even if her income is below a threshold level (as in Akerlof and Kranton, 2000; Shayo, 2009).

Thus an action for individual \( i \) is a vote from \( i \) and for the low tax rate if her income is above the mean income. Furthermore, if the marginal utility of income decreases fast enough, then an individual identifying with the poor group votes for the high tax rate even if her income is below a threshold level. Therefore, the main message remains unchanged as Hamada, 1973; Romer, 1975; Roberts, 2008).

The basic intuition behind this claim is simple. Assuming that individuals do not play weakly dominated strategies with a poor group.

Assume that individuals do not play weakly dominated strategies with a poor group. Then:

Claim.

1. An individual who maximizes her own monetary payoffs votes for the high tax rate if her income is below the mean, as long as the increase of the poor group's status is higher than her marginal utility of income decreases fast enough, then an individual identifying with the poor group votes for the high tax rate even if her income is below a threshold level.

2. An individual who identifies with the rich group votes for the low tax rate if her income is above the mean income. Furthermore, if the marginal utility of income decreases fast enough, then an individual identifying with the rich group votes for the low tax rate.

3. An individual who identifies with the rich group votes for a lower tax rate if her income is below a threshold level.

Implications of identification with the rich group. a. A monetary payoff maximizer (a) monetary payoff maximizer

(b) Individual that identifies with a rich group

(c) Individual that identifies with a poor group

Note that preferences for a more equal distribution of net income are influenced by their group membership when anonymity was guaranteed so that neither the other subjects nor the researchers knew each other. We did not allow participants to sign up together for a specific social sciences and the second field of study was from the field of studies from the humanities. For the recruitment of the participants, subjects on average earned more than 3 times the minimum wage.

Subjects were accordingly divided into two equal groups and were informed about the existence of groups, the size of the groups, and their group affiliation throughout the entire session. Naturally, subjects maintained their group affiliation, depicted in Fig. 1, are a vote from the pool of over 3000 students who had signed up to participate in the experiment. Each session lasted for an hour. Payoffs were denominated in over $15 USD at the time and were distributed privately and in cash. Note that preferences for a more equal distribution of net income are influenced by their group membership when anonymity was guaranteed so that neither the other subjects nor the researchers knew each other. We did not allow participants to sign up together for a specific social sciences and the second field of study was from the field of studies from the humanities.

Students at The Hebrew University can choose to have a double major. For the Faculty of Social Sciences and the Faculty of Humanities.

Faculty of Humanities.

Communication between subjects was not allowed throughout the session. Subjects' allocation of subjects to cubicles was independent of subjects' affiliations of other subjects. In fact, every social image motivation.
Overall Findings

- differentiating subjects according to relative income of their group
- relation between probability of voting for the high tax and the individuals gross income
- poor subjects display a higher probability of voting for the high tax for all gross incomes (and vice versa)
Possible Causes

• **Hypothesis 1**: different preferences

• Estimate econometric model for each subject

\[
E \left[ (\text{vote low})_{it} \mid y_{it}, y_{jt} \right] = \beta_1 (\text{rich})_{it} + \beta_2 (\text{rich group})_{it} + \beta_3 (\text{rich} \times \text{rich group})_{it}
\]

### Classification of subjects

<table>
<thead>
<tr>
<th></th>
<th>Group treatment</th>
<th>Control treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary Payoff Maximizer (MPM)</td>
<td>70(55.6%)</td>
<td>43(79.6%)</td>
</tr>
<tr>
<td>Inequality Averse (IA)</td>
<td>8(6.3%)</td>
<td>6(11.1%)</td>
</tr>
<tr>
<td>Social Identifier (SI)</td>
<td>42(33.3%)</td>
<td>1(1.9%)</td>
</tr>
<tr>
<td>None</td>
<td>6(4.8%)</td>
<td>4(7.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>54</td>
</tr>
</tbody>
</table>

three types:
- MPM
- IA
- SI
Possible Causes

- **Hypothesis 2:** different monetary costs of voting for one’s group

1. Effect of costs on prob. that SI’s vote for their group is negative, large and statistically significant

2. Probability that SI supports its group is significantly higher when that group is rich at any given cost/benefit ratio

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### Table 2
Support for ingroup among social identifiers (random effects probit estimates).

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cost/Benefit) of Voting for Ingroup</td>
<td>-0.301***</td>
<td>-0.751***</td>
<td>-0.592***</td>
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<tr>
<td></td>
<td>[0.021]</td>
<td>[0.062]</td>
<td>[0.091]</td>
</tr>
<tr>
<td>(Cost/Benefit)^2</td>
<td>0.090***</td>
<td>0.055***</td>
<td>[0.016]</td>
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<tr>
<td></td>
<td>[0.012]</td>
<td>[0.016]</td>
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<tr>
<td>Poor Ingroup</td>
<td></td>
<td>-0.400***</td>
<td>[0.132]</td>
</tr>
<tr>
<td></td>
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<td>[0.132]</td>
<td></td>
</tr>
<tr>
<td>(Poor Ingroup)*(Cost/Benefit)</td>
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<td>-0.399***</td>
<td>[0.129]</td>
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<tr>
<td></td>
<td></td>
<td>[0.129]</td>
<td></td>
</tr>
<tr>
<td>(Poor Ingroup)*(Cost/Benefit)^2</td>
<td></td>
<td>0.083***</td>
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<tr>
<td>Constant</td>
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<td>1.558***</td>
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<tr>
<td>Log Likelihood</td>
<td>-759.3</td>
<td>-728.5</td>
<td>-696.2</td>
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</table>
Conclusions

• Social identification matters for many individuals.

• The associated costs supporting the own group matter.

• When evaluating data, be careful of “lumping together” individuals that may have different objectives!