SI 686 Lecture 4b. Social Identity Theory: Psychology and Economics

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SI 686/786, Fall 2008

Outline

- Social Identity Theory
  - Tajfel and Turner (1986)
- Economic Models of Social Identity
  - Preferences:
    Akerlof and Kranton (2000, 2005)
  - Beliefs:
    Benabou and Tirole (2006)

The social identity theory of intergroup behavior

Tajfel and Turner (1986)

Minimal group paradigm

- Randomly assigned groups on the basis of some trivial tasks
- No social interaction between subjects
- Group membership are anonymous
- Decision task requires no link between a chooser's self interest and her choices
  - Other-other allocation
  - Rating other participants

Main findings

- The trivial, ad hoc intergroup categorization leads to in-group favoritism and out-group discrimination
- Factors enhancing or mitigating group effects:
  - Category salience
  - Group status
  - Relevance of comparison dimensions

What social-psychological processes are involved in the development of positive group identity?

- Within the pattern of ingroup favoritism
  - Maximum difference (MD): more important
  - Maximum ingroup profit (MIP)

  They seem to be competing with out-group
- Social categorization as *cognitive* tools that segment, classify and order the social environment
- Social groups provide a system of orientation for self-reference: create and define an individual's place in society

SI 686/786: Public Goods

Social Identity and Social Comparisons

- Individuals strive to achieve or to maintain positive social identity
- Positive social identity is based on favorable *comparisons* between ingroup and some relevant outgroups
- When social identity is unsatisfactory, individuals will strive either to leave their existing group or to make their existing group more positively distinct

Summary

- Integration of the three processes
  - Social categorization
  - Self-evaluation through social identity
  - Intergroup social comparison
- A coherent and testable framework that explains various forms of intergroup behavior, social conflict and social change

Economics and Identity

Akerlof and Kranton (2000)

Identity expands economic analysis …

- Identity can explain behavior that appears detrimental
- Identity underlies a new type of externality
- Identity reveals a new way that preferences can be changed
- Choice of identity may be the most important "economic" decision people make

A utility function with identity

C : social category, Green and Red;

categories may have higher or lower social status

c_j : person j's own categories and those of all other people

ε_j : j's own characteristics

P : prescriptions, behavior appropriate for people in different categories

$U_j = U_j(a_j, a_{-j}, I_j)$

a_j : j's own actions, e.g., consumption of goods and services

a_{-j} : others' actions, i.e., externalities

A person j's identity : $I_j = I_j(a_j, a_{-j}; c_j, \varepsilon_j, P)$

Examples of identity related behavior

- Self-mutilation
- Gender and occupation
  - Female trial lawyer, male nurse, female Marine
- Alumni giving
- Mountaineering
  - enhances an individual’s sense of self

Example: Creation and manipulation of C and P

- Advertising
  - Marlboro
  - Virginia Slim
- Professionals and graduate schools
- Political identities
  - Fascist and populist leaders
  - Gandhi's Salt March
  - French Revolution

Identity and the Economics of Organizations

Akerlof and Kranton (2005)

Pitfalls of monetary incentive schemes: blunt instrument

- Can only be based on observables, often imperfect indicators of individual effort
- Create opportunities for workers to game the system
  - Most jobs involve multiple tasks
    - Outperfom on well-rewarded tasks
    - Underperform on poorly rewarded tasks
  - Tournaments: incentives to sabotage each other
- Crowd out non-monetary incentives
  - Gneezy and Rustichini (2002)

Apply identity to contract theory

- Bring Id into the economics of organization
- Id as supplement (substitute?) for monetary reward
- Id can flatten reward schedule
  - Employer pay less once id is induced
- Q: how far can id go?

A model of identity in organizations

- Standard principal-agent model
  - Utility depends on income and effort
- Add: identity as part of the organization
- Firm's objective: expected profit
- Worker: expected utility
  - High-effort action: A
    - High revenue with probability ½
    - Low revenue with probability 1/2
  - Low-effort action: B
    - Always lead to low revenue

Notations

A worker can take on two different identities: c = {N, O}

(1) N: an insider, if she identifies with the firm;

Prescription (ideal, norms): high-effort activity A

(2) O: an outsider, if she does not identify with the firm;

Prescription (ideal, norms): low-effort activity B

Effort: e, $e_A > e_B$

Ideal effort of each category: e*(c), $e^*(N) = e_A, e^*(O) = e_B$

Overall utility:

$u(y, e; c) = \ln y - e + I_c - t_c \,|\, e^*(c) - e \,|$

Setup and questions

- Principal can invest in "motivational capital" and change a worker's identity from O to N, at a cost q
  - Example: IIDF
    (intellectual integration and direction finding)
- When is it profitable to do so?
- Compare P's expected profits when worker is an O to that when she is N

Set up optimal contract …

P chooses a high wage, w_H^c, when observing π_H,

a low wage, w_L^c, when observing π_L

P maximizes expected profit subject to IR and IC constraints:

(P always wants to induce e_A)

$$\max \Pi(c) = \frac{1}{2}[\pi_H + \pi_L] - \frac{1}{2}[w_H^c + w_L^c]$$

$$s.t. \frac{1}{2}\ln w_H^c + \frac{1}{2}\ln w_L^c - e_A + I_c - t_c \,|\, e^*(c) - e_A \,| \geq \bar{u}$$

$$\frac{1}{2}\ln w_H^c + \frac{1}{2}\ln w_L^c - e_A + I_c - t_c \,|\, e^*(c) - e_A \,| \geq \ln w_L^c - e_B + I_c - t_c \,|\, e^*(c) - e_B \,|$$

Optimal wages

Since $e^*(O) = e_B$ and $e^*(N) = e_A$,
when all constraints are binding,
(1) Optimal wages for an O worker are:
$w_L^O = \exp[\bar{u} - I_O + e_B]$
$w_H^O = \exp[\bar{u} - I_O + e_B + 2(1+t_O)(e_A - e_B)]$

(2) Optimal wages for an N worker when $t_N < 1$:
$w_L^N = \exp[\bar{u} - I_N + e_A - (1-t_N)(e_A - e_B)]$
$w_H^N = \exp[\bar{u} - I_N + e_A + (1-t_N)(e_A - e_B)]$
If $t_N > 1$, there is no difference between high and low wages

Implications

(1) Less variation in insider wages:

$$\ln \frac{w_H^O}{w_L^O} = 2(1+t_O)(e_A - e_B), \text{ and } \ln \frac{w_H^N}{w_L^N} = 2(1-t_N)(e_A - e_B)$$

$\ln \frac{w_H^O}{w_L^O} > \ln \frac{w_H^N}{w_L^N}$, when $t_N \to 1$, gap between w_H^N and w_L^N disappears.

(2) Pay less at the top:
$\ln w_H^O - \ln w_H^N = I_N - I_O + (2t_O + t_N)(e_A - e_B) > 0.$

(3) Pay less in expected wage: Taylor series expansion

Motivational capital of the firm

- Suppose a firm pays q to change workers from outsider to insiders
- Let r be the interest rate
- The benefit of investing in motivational capital is the discounted stream of the increased profits

The Potential of Social Identity

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The University of Michigan
2008

Outline

- What is social identity?
- Group identity and social preferences
  - Chen and Li (2009)
- The potential
- Social identity and equilibrium selection
  - Chen and Chen (2008)
- Social identity and public goods provision

What is social identity?

- A person's sense of self derived from group membership
- Multi-dimensional, dynamic
  - Race
  - Gender
  - Occupation
  - etc.

Social Identity Changes Behavior

- Method: Priming natural identities
- Derive self-esteem from group membership
- Conform to stereotypes
  - Shih, Pittinsky and Ambady (1999)
  - Benjamin, Choi and Strickland (2006)

Social Identity Theory (Tajfel and Turner 1979)

- The minimal group paradigm (MGP)

  (1) random assignment to groups based on trivial tasks
  (2) no social interaction
  (3) anonymous group membership
  (4) no link b/w self interest and choices

- MGP => **Ingroup favoritism, outgroup discrimination**
- Economic games: almost always violate (4)
- (1), (2), (3) => near-minimal

Why should economists care?
Identity expands economic analysis …

- Identity can explain behavior that appears detrimental or irrational
  - Gentlemanly terrorists (Ghosh 2005)
- Identity reveals a new way that preferences can be changed
- Choice of identity may be the most important “economic” decision people make
  - Education (Akerlof and Kranton 2002)
- Identity and mechanism design: limit of monetary incentives
  - Akerlof and Kranton (2005)

Models of social identity

- Beliefs
  - Benabou and Tirole (2006)
- Preferences
  - exogenous norm
    - Akerlof and Kranton (2000, 2002, 2005)
    - “The incorporation of such endogeneity is the next step.” (Akerlof 2007)
  - Preference classes: varying weight on social preference
    - Basu (2006)
    - McLeish and Oxoby (2006)
    - Chen and Li (*forthcoming*)

Group Identity and Social Preferences

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Research Questions

- Effects of identity on social preferences
  - Distribution preference
  - Reciprocity
  - Social welfare maximization

- What creates group effects
  - Categorization
  - Helping

Experimental Design

- Original treatment: 3 stages
  I. Group assignment
  II. Enhancing identity: problem solving
  III. Other-other allocation
  IV. 2-person sequential games (self-other allocation)
- Control: No group-identity induced
- Additional treatments: take out one component at a time

Experimental Design: Group Assignment

Two Methods:

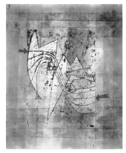
A. True preference:

1. Report painting preferences

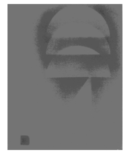
2. Assigned to Kandinsky or Klee group.

3. Informed of group membership and # in own group.

B. Random assignment

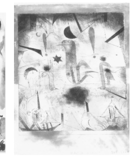


1A



1B

2A



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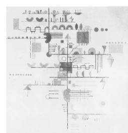
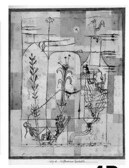
3A

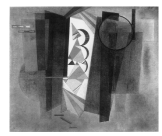
3B



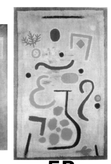
4A



4B



5A

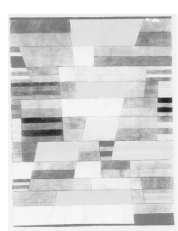


5B

Experimental Design: Online Chat

- In-group problem solving to enhance group identity:
- Questions: which artist made paintings #6 and #7
- Online chat: 10 minutes
- Each correct answer was rewarded 100 tokens

- No feedback was given until the end of the experiment.



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Experimental Design: Other-other allocation

- Token allocation to two other anonymous participants
- No tokens to self
- # tokens increased from 200 to 400 with an increment of 50 from round 1 to round 5
- Strategy method, 3 scenarios

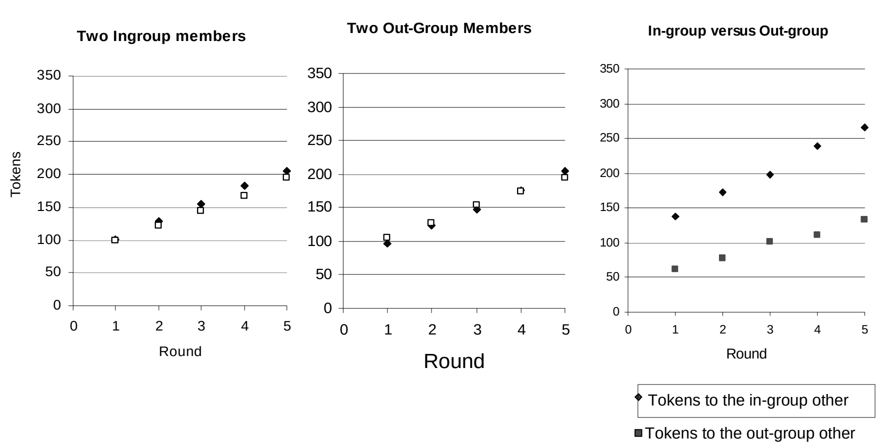
Example: Round 1

	A from your own group		B from your own group	
i)	( )	+	( )	= 200 tokens
	A from the other group		B from the other group	
ii)	( )	+	( )	= 200 tokens
	A from your own group		B from the other group	
iii)	( )	+	( )	= 200 tokens

- Findings:
- Scenario i) and ii): 50/50 allocations
- Scenario iii): twice as many tokens to ingroup as to outgroup member

Other-Other Allocation Results

•Replicated in-group favoritism and out-group discrimination.

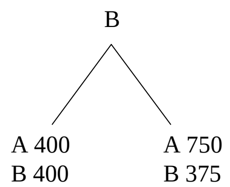


2-Person Sequential Games

- Randomly matched into pairs anonymously and assigned w/ role A or B
- Games selected from Charness and Rabin (2002) and extensions
- Strategy method

<u>5 dictator games</u>

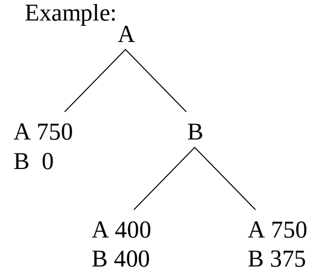
Example:



Decision
If person A is from my own group, I choose B1 or B2.
If person A is from the other group, I choose B1 or B2.

<u>19 response games</u>

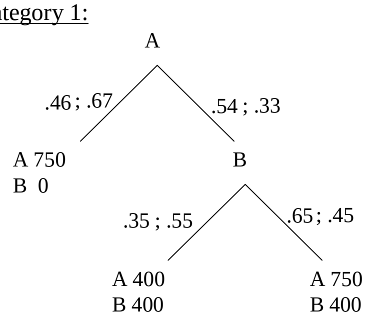
Example:



Three Categories of Response Games: 1

1. **Costless to B to help/punish A**
2. Costly to B to help A
3. Costly to B to penalize A

<u>Category 1:</u>

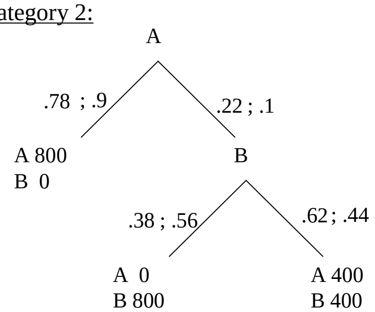


- A's entry shows *good* intention
- Costless to B to reward A
  - In-group match (Black number)
    .54 of A's enters to help B
    .65 of B's rewards A
  - Out-group match (Red number)
    .33 of A's enters to help B
    .45 of B's rewards A

Three Categories of Response Games: 2

1. Costless to B to help/punish A
2. **Costly to B to reward A**
3. Costly to B to penalize A

Category 2:

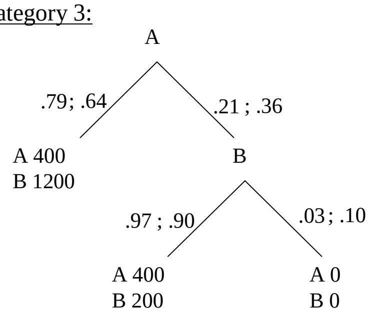


- A's entry shows *good* intention
- Costly to B to reward A
  - In-group match (Black number)
    .22 of A's enters to help B
    .62 of B's rewards A
  - Out-group match (Red number)
    .1 of A's enters to help B
    .44 of B's rewards A

Three Categories of Response Games: 3

1. Costless to B to help/punish A
2. Costly to B to reward A
3. **Costly to B to penalize A**

Category 3:



- A's entry shows *bad* intention
- Costly to B to penalize A
  - In-group match (Black number)
    .21 of A's enters to hurt B
    .03 of B's punishes A
  - Out-group match (Red number)
    .36 of A's enters to hurt B
    .10 of B's punishes A

Analysis: Distribution Preferences

- B's utility function:

$$U_B(\pi_A, \pi_B) \equiv \varpi_A^I \pi_A + (1-\varpi_A^I)\pi_B$$

where $\varpi_A^I = \rho(1+I\cdot a)r \quad + \sigma(1+I\cdot b)s$
(charity) (envy)

$r = 1$ if $\pi_B > \pi_A$; $s = 1$ if $\pi_B < \pi_A$; $I = 1$ if in-group matching

Parameter estimates:

	ρ	*σ*	*ρ(1+ a)*	*σ (1+ b)*	*a*	*b*
Control	0.427 (.022)***	-0.049 (.0250)**				
Treatment	0.323 (.021)***	-0.112 (.019)***	0.474 (.018)***	-0.008 (.021)	0.467 (.112)***	-0.931 (.192)***
	Out-gr charity	*Out-gr envy*	*In-gr charity*	*In-gr envy*		

Other functional form: CES model of Cox, Friedman and Gjerstad (2007)

Analysis: Distribution Preferences

- B's group-dependent utility function:

$$U_B(\pi_A, \pi_B) \equiv \varpi_A^I \pi_A + (1-\varpi_A^I)\pi_B$$

	Charity	Envy
Ingroup	$U_B = .474\pi_A + .526\pi_B$	$U_B = -.008\pi_A + 1.008\pi_B$
Outgroup	$U_B = .323\pi_A + .677\pi_B$	$U_B = -.112\pi_A + 1.112\pi_B$
Control	$U_B = .427\pi_A + .573\pi_B$	$U_B = -.049\pi_A + 1.049\pi_B$

Stronger charity to ingroup

Less envy to ingroup

Result 1: Distribution Preferences

- Charity
  - When getting a higher payoff than their match, participants show charity concerns
  - Charity concern is significantly greater towards an in-group match than towards an out-group match
- Envy
  - When getting a lower payoff than their match, participants exhibit envy
  - Envy is significantly less towards an in-group match than towards an out-group match

Analysis: Positive Reciprocity (logit)

Rewarding *good* behavior: ingroup > outgroup

	Prob(B rewards A)	
	Control	Treatment
Independent variables	(1)	(2)
Ingroup match		0.218
		(0.035)***
Benefit to B due to A’s entry	0.453	0.151
	(0.436)	(0.105)
B's cost to reward A	-0.328	-0.114
	(0.232)	(0.063)*
Benefit to A if B rewards	0.204	0.076
	(0.053)***	(0.032)**
How much B's payoff is behind A's if B rewards	-0.130	-0.077
	(0.047)***	(0.024)***
Constant	-2.148	-0.849
	(1.681)	(0.434)*
Observations	156	550
Pseudo R-square	0.12	0.06

Analysis: Negative Reciprocity (logit)

Punishing misbehavior: ingroup < outgroup

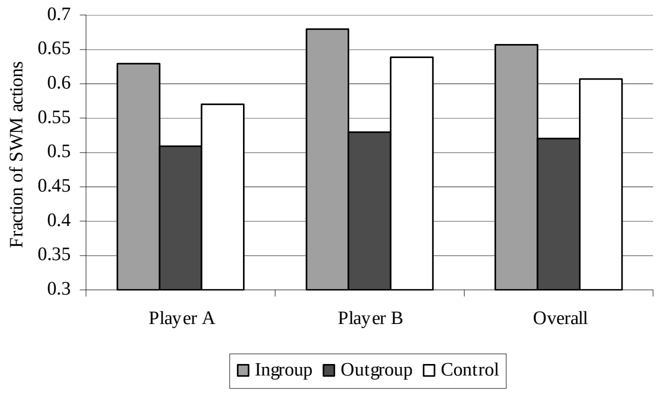
	Prob(B punishes A)	
	Control	Treatment
Independent variables	(1)	(2)
Ingroup match		-0.128
		(0.027)***
Damage to B	0.018	-0.001
due to A's entry	(0.018)	(0.009)
B's cost to punish A	-0.265	-0.316
	(0.071)***	(0.047)***
Damage to A if B punishes	0.040	0.042
	(0.019)**	(0.009)***
How much B's payoff	-0.171	-0.103
is ahead of A's if B punishes	(0.070)**	(0.029)***
Constant	-0.211	-0.049
	(0.100)**	(0.053)
Observations	250	874
Pseudo R-square	0.13	0.19

Result 2: Reciprocity

- Reciprocal preference is significantly different between in-group and out-group matches
- Good intention
  - Significantly more likely to reward an in-group than an out-group match for their good behavior
- Bad intention
  - Significantly more likely to forgive misbehaviors from an in-group match compared to an out-group match

Result 3: Social Welfare Maximization

- Fraction of SWM actions: Ingr > Control > Outgr



Summary

- When matched with in-group members, subjects
  - show more charity concerns
  - show *less* envy
  - more likely to reward good behaviors
  - *more* forgiving of unfair behaviors
  - more likely to choose SWM action
- Consistent with more altruism towards an in-group member
- What creates group effect? (see paper)

Social Identity Experiments in Economics

- Social Identity and social preference
  - Chen and Li (forthcoming)
  - McLeish and Oxoby (2006)

- Social identity and public goods (VCM)
  - Brown-Kruse and Hummels (1993)
  - Cadsby and Maynes (1998)
  - Solow and Kirkland (2002)
  - Eckel and Grossman (2005)

- Social identity and equilibrium selection
  - Cadsby and Maynes (1998)
  - Croson, Marks and Snyder (2003)
  - Charness, Rigotti and Rustichini (2007)
  - Chen and Chen (2008)

A Unifying Framework: the Potential

- Definition
  - Potential
  - Potential function

- Group identity changes the potential function
  - Games with a unique equilibrium: changes equilibrium prediction
  - Games with multiple equilibria: changes equilibrium selection

The Potential

$\Gamma(u^1,\ u^2,\ \ldots,\ u^n)$: a normal form game with n players

Y^i: strategy set of player i

(1) A function, $P:\ Y \to\ R$ is an ordinal potential for Γ,

if for every $i \in\ N$ and for every $y^{-i} \in Y^{-i}$

$u^i(y^{-i}, x) - u^i(y^{-i}, z) > 0$ iff $P^i(y^{-i}, x) - P^i(y^{-i}, z) > 0$

for every $x, z \in Y^i$.

(2) Suppose $u^i : Y^i \to\ R$ are continuously differentiable. Then P is a potential for Γ iff P is continuously differentiable, and

$$\frac{\partial u^i}{\partial y^i} = \frac{\partial P}{\partial y^i} \text{ for every } i \in\ N.$$

Potential Games

- A game that possesses a potential is a ***potential game***
- Properties
  - Every potential game has a pure-strategy equilibrium (Rosenthal 1973)
  - Better reply learning dynamics converges to equilibrium
    (Blume 1993, Monderer and Shapley 1996)
  - argmax set of potential function refines equilibrium set

The Potential of Social Identity for Equilibrium Selection

Roy Chen Yan Chen

How does social identity affect equilibrium selection?

- Battle of Sexes
  - Charness, Rigotti and Rustichini (2007)
  - Salient group identity: better coordination
- Provision point mechanism
  - Cadsby and Maynes (1998): priming
  - Croson, Marks and Snyder (2003)
  - Women: increase coordination and efficiency
- Minimum effort game

The Minimum Effort Game

- Van Huyck, Battalio and Beil (1990) and many other studies
- Payoff function
  $\pi_i(e_i,e_{-i}) = A \min\{e_i,e_{-i}\} - C\, e_i + B$
- Pareto-ranked Nash equilibria:
  all agents choose the same effort level
- Convergence to highest/lowest effort depends on
  - A, C, n

The Minimum Effort Game is a Potential Game

Potential function for minimum effort game

(Monderer and Shapley 1996)

$$P = A \cdot \min(e_1, e_2, \ldots, e_n) - C \cdot \sum_{i=1}^{n} e_i$$

Chosen equilibrium maximizes potential:

$$C^* = \frac{A}{n}$$

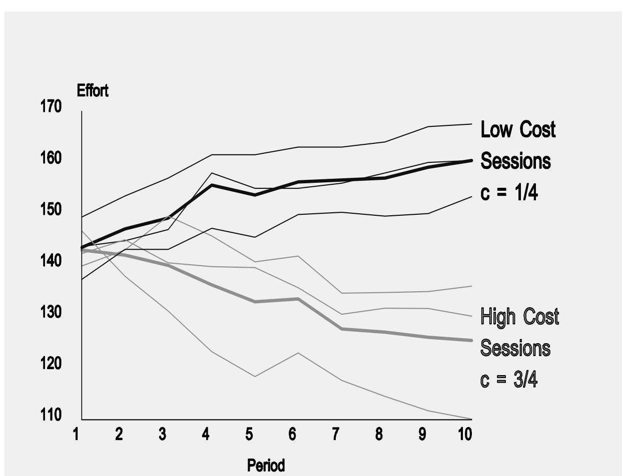
$C < C^* \;\Rightarrow$ highest effort equilibrium

$C > C^* \;\Rightarrow$ lowest effort equilibrium

Goeree and Holt (2005)

- Continuous effort from [110, 170]
- A = 1, B = 0, n = 2
- C* = 0.5
- For low C (0.25), converged to highest effort
- For high C (0.75), converged to low effort
- Maximizing stochastic potential

Goeree and Holt (2005)



How Does Social Identity Affect Potential Function?

Using social preference model:

$u_i(\pi_i, \pi_j) = \alpha_i \pi_j + (1-\alpha_i)\pi_i,$

where group effect may be captured in α_i :

(1) Ingroup vs. outgroup: $\alpha_i^I > \alpha_i^O$;

(2) Strength of group identity $\uparrow \Rightarrow \alpha_i^I \uparrow$

Potential function for minimum effort game:

$P = A \cdot \min(e_1, e_2) - C \cdot [(1-\alpha_1)e_1 + (1-\alpha_2)e_2]$

How Does Social Identity Affect Potential Function?

Potential function for minimum effort game:

$P = A \cdot \min(e_1, e_2) - C \cdot [(1-\alpha_1)e_1 + (1-\alpha_2)e_2]$

Chosen equilibrium maximizes potential:

$$C^* = \frac{A}{(2-\alpha_1-\alpha_2)}$$

(1) Ingroup matching: $\alpha_i \uparrow \Rightarrow C^* \uparrow$

(2) Outgroup matching: $\alpha_i \downarrow \Rightarrow C^* \downarrow$

(3) Increased strength: $\alpha_i \uparrow \Rightarrow C^* \uparrow$

Experimental Design

- **Near-minimal groups**
  - Random assignment (red or green)
  - Minimum effort game
- **Enhanced groups**
  - Random assignment (red or green)
  - Problem-solving stage
    - Klee and Kandinsky paintings
    - online chat with group members
  - Minimum effort game
- Control

Experimental Design: 2*3 Factorial Design

	Ingroup	Outgroup	Control
Near-Minimal Groups	3	3	3
Enhanced Groups	3	3	3

- **Between-subject design**
- **12 subject per session: random rematching into pairs**
- **50 rounds**
- **Feedback: given after every round**
- **Effort: [110, 170]**

Experimental Design: Parameter Selection

Payoff function:

$$\pi_i = \min(e_i, e_j) - 0.75 \cdot e_i$$

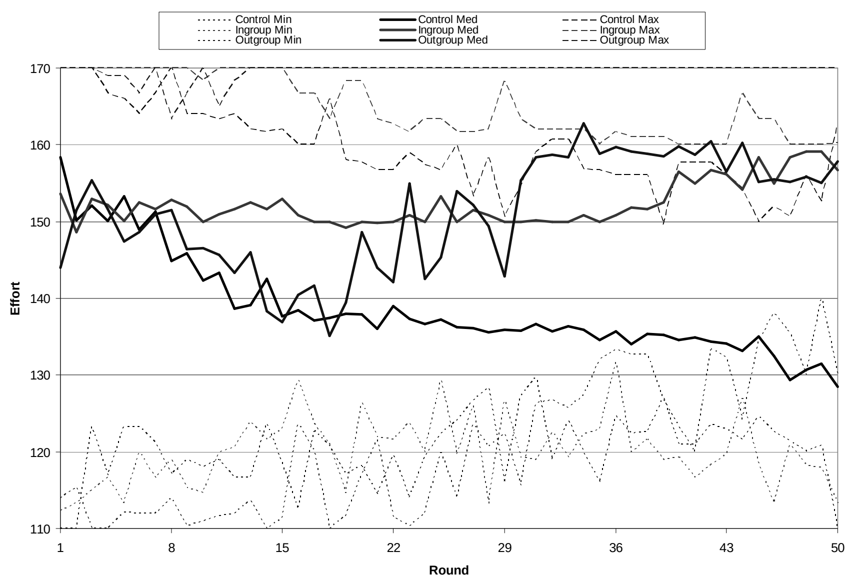
Chosen equilibrium maximizes potential:

$$C^* = \frac{A}{(2 - \alpha_1 - \alpha_2)}$$

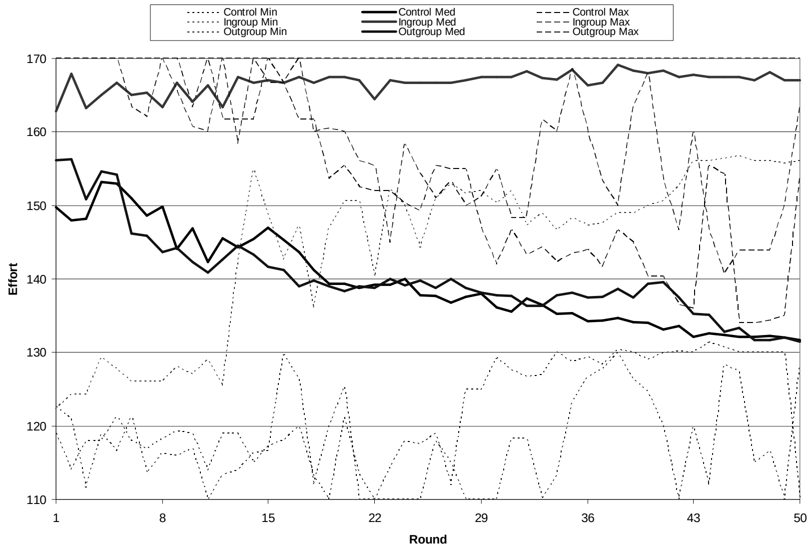
(1) $\alpha_i = 0$: converge to 110

(2) $\alpha_i > \frac{1}{3}$: converge to 170

Near-Minimal Groups: Effort



Enhanced Groups: Effort



Reduced Form Regression

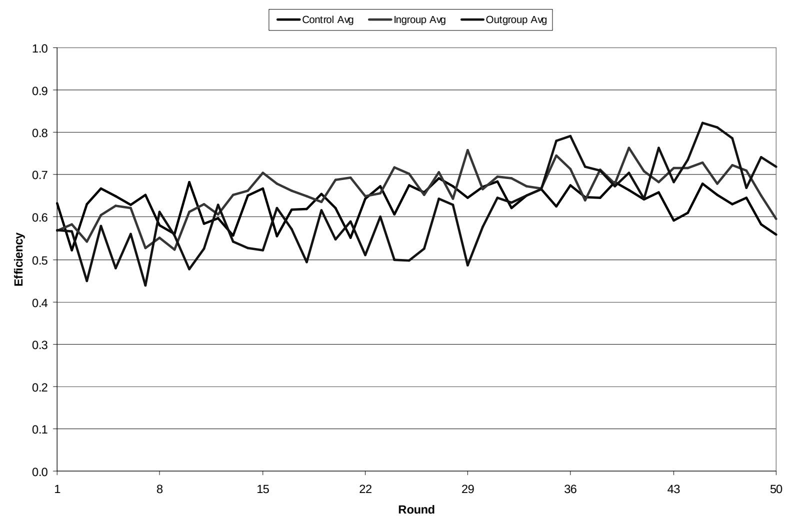
$$e_{it} = \beta_0 + \beta_1 \text{ Ingroup}_\text{i} + \beta_2 \text{ Outgroup}_\text{i} + \beta_3 \text{lnRound}_\text{t} + \eta_i + \delta_t + \varepsilon_{it}$$

Near-minimal	Estimate	SE	p-value
Ingroup	8.28	7.03	0.24
Outgroup	10.22	7.58	0.18
ln(round)	-0.42	1.52	0.78

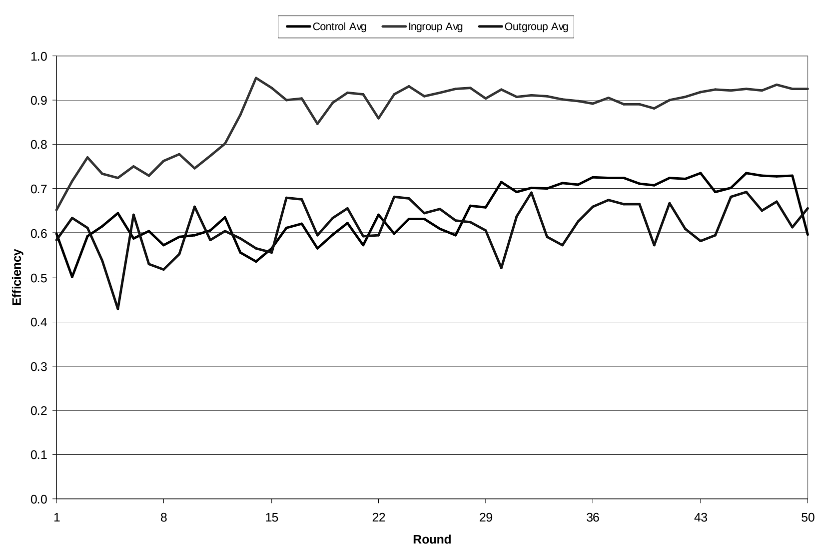
Enhanced	Estimate	SE	p-value
Ingroup	24.74	10.58	**0.02**
Outgroup	0.89	14.97	0.95
ln(round)	-2.46	2.43	0.31

- **Random effects model**
- **Cluster at session level**

Near-Minimal Groups: Efficiency



Enhanced Groups: Efficiency



Summary

- Near-minimal groups: no group effect
- Enhanced groups
  - Significant ingroup favoritism
  - No outgroup discrimination
  - Brewer (1999): asymmetry
- Group identity changes the potential function and potential maximizing strategies, if the induced or primed identity is strong enough

More on Groups and Equilibrium Selection

- Bornstein, Gneezy and Nagel (2002)
  - $A=20$, $C=10$, $n=7$: $C^* = 3$
  - Group competition
  - Some groups converged to highest effort
- Weber (2006)
  - $A=0.2$, $C=0.1$, $n = 2$ to 12: $C^*=0.1$ to 0.017
  - Group initiation
  - Convergence to 5 with slow growth
- These can be seen as increasing group identity

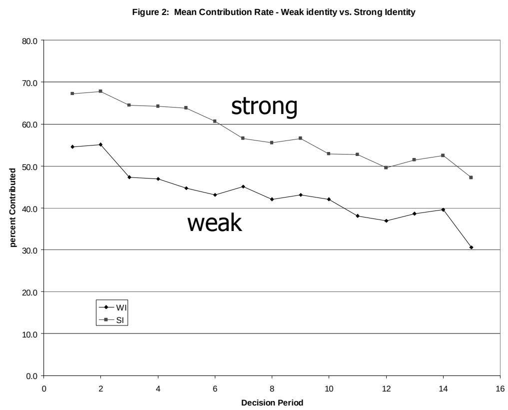
The Potential of Social Identity for Public Goods Provision

Effect of Group Identity on Contribution in VCM

- Primed natural identity
  - Solow and Kirkwood (2002)
- Induced identity
  - Eckel and Grossman (2005)
- Real social groups
  - Goette, Huffman and Meier (2006)
  - Bernhard, Fehr and Fischbacher (2006)
- Findings
  - Sometimes: no effect
  - Ingroup: more cooperative
  - Stronger identity increases contribution

Eckel and Grossman (2005)

Mean contribution rate: strong ID leads to significantly higher levels of contribution



VCM is a Potential Game

Payoff function for VCM: $\pi_i = \sum_{i=1}^{n} e_i + C(\omega_i - e_i)$

Potential function: $P = \sum_{i=1}^{n} e_i - C \cdot \sum_{i=1}^{n} e_i$

With group identity, potential becomes

$P = (e_1 + e_2) - C \cdot [(1-\alpha_1)e_1 + (1-\alpha_2)e_2]$

Contribute if $\frac{\alpha_1 + \alpha_2}{2} > 1 - \frac{1}{C}$

Summary and Open Questions

- Group identity influences social preference
  - More altruistic towards ingroup members
- Changes potential function
- Changes potential maximizing equilibrium
- Implications for organization design