

# I see what you're doing: information, gender and cooperation

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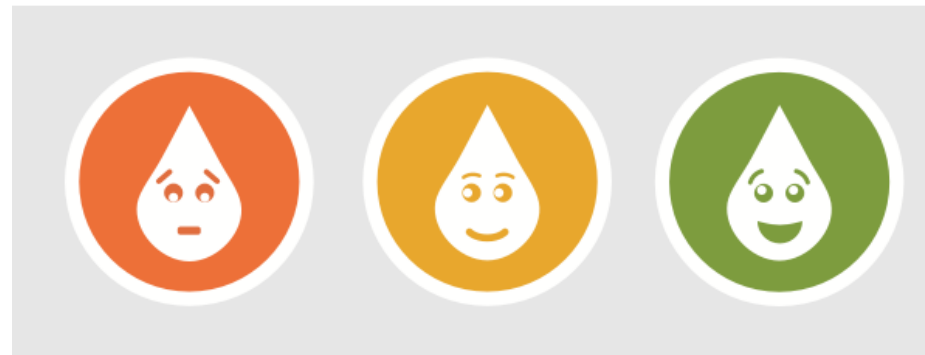
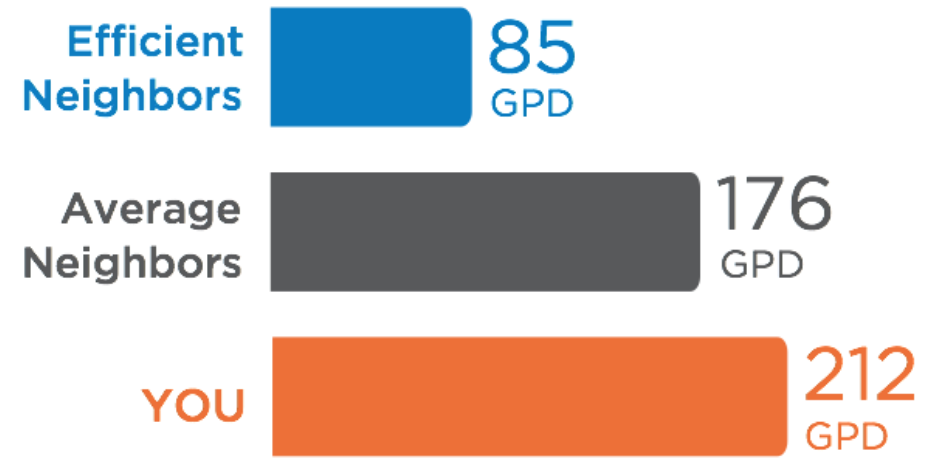
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# The dilemma

- Common pool – or open access – goods such as groundwater, fisheries, the atmosphere (carbon), etc. can be over-exploited
- It would be nice if everyone would restrain themselves, but they don't. Recall that Hardin's "Tragedy of the Commons" is directed at over-population
- A key barrier to securing the commons is potential *cooperators'* fear that *free-riders* will take what's been left behind
- One solution to this dilemma is an environment where of people can observe and *reciprocate* others (non-) cooperative choices

*For example...*

# When you can't use prices, use motivation...



# How does information impact choices?

Number of people in your group -- including you	5
Your current investment in the Group Exchange	45
Current TOTAL investment in Group Exchange	133
Enter a new investment or press OK to confirm your old investment	<input type="text" value="45"/>

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Number of people in your group -- including you	5
Your current investment in the Group Exchange	45
Current TOTAL investment in Group Exchange	133
Average contribution of OTHERS	22
Enter a new investment or press OK to confirm your old investment	<input type="text" value="45"/>

# Method

Kurzban-Houser (2005) sequential contribution PG game

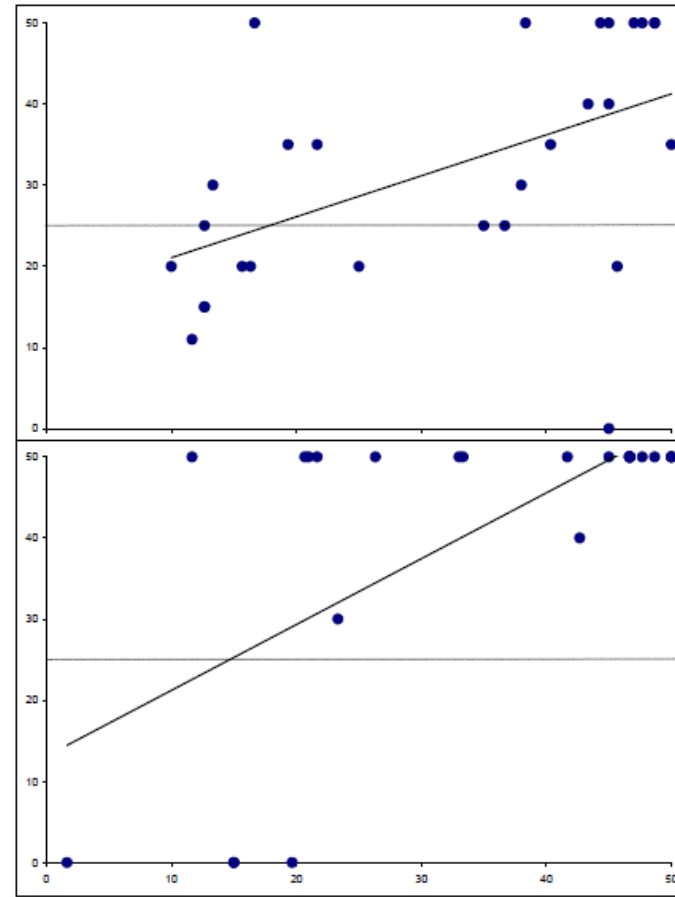
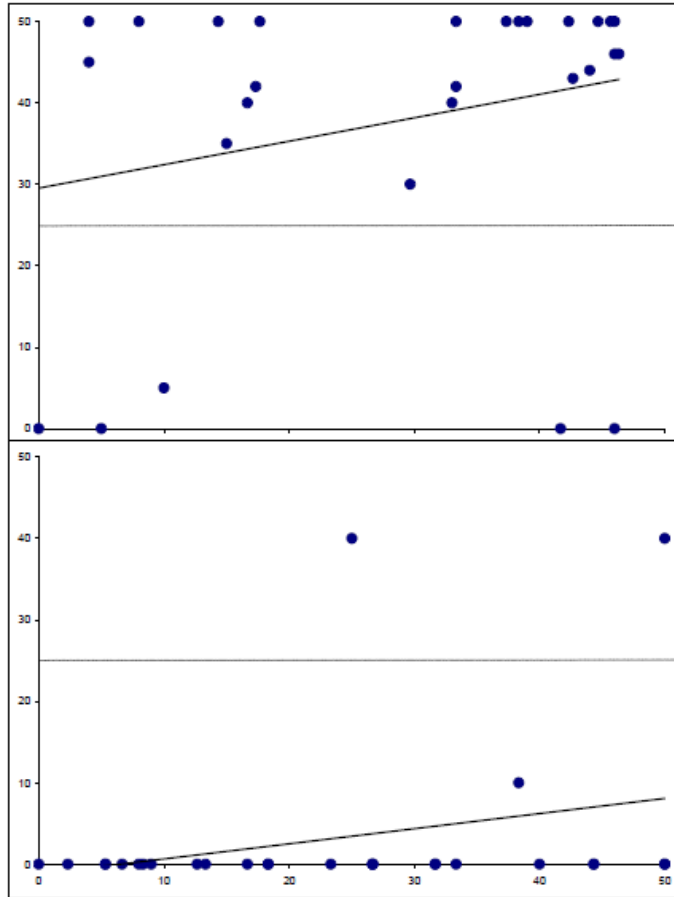
**Initial:** Players have 50 token endowments in groups of 4 or 5

**Period 0:** Players make simultaneous contributions

**Periods 1+:** Each player sees group total and changes/confirms own contribution. Group total updates, and next player moves

**Ending:** At a random point all contributions are final, and players reshuffle into new groups

# Cooperator, defector or reciprocator?



# MLOGIT-adjusted results

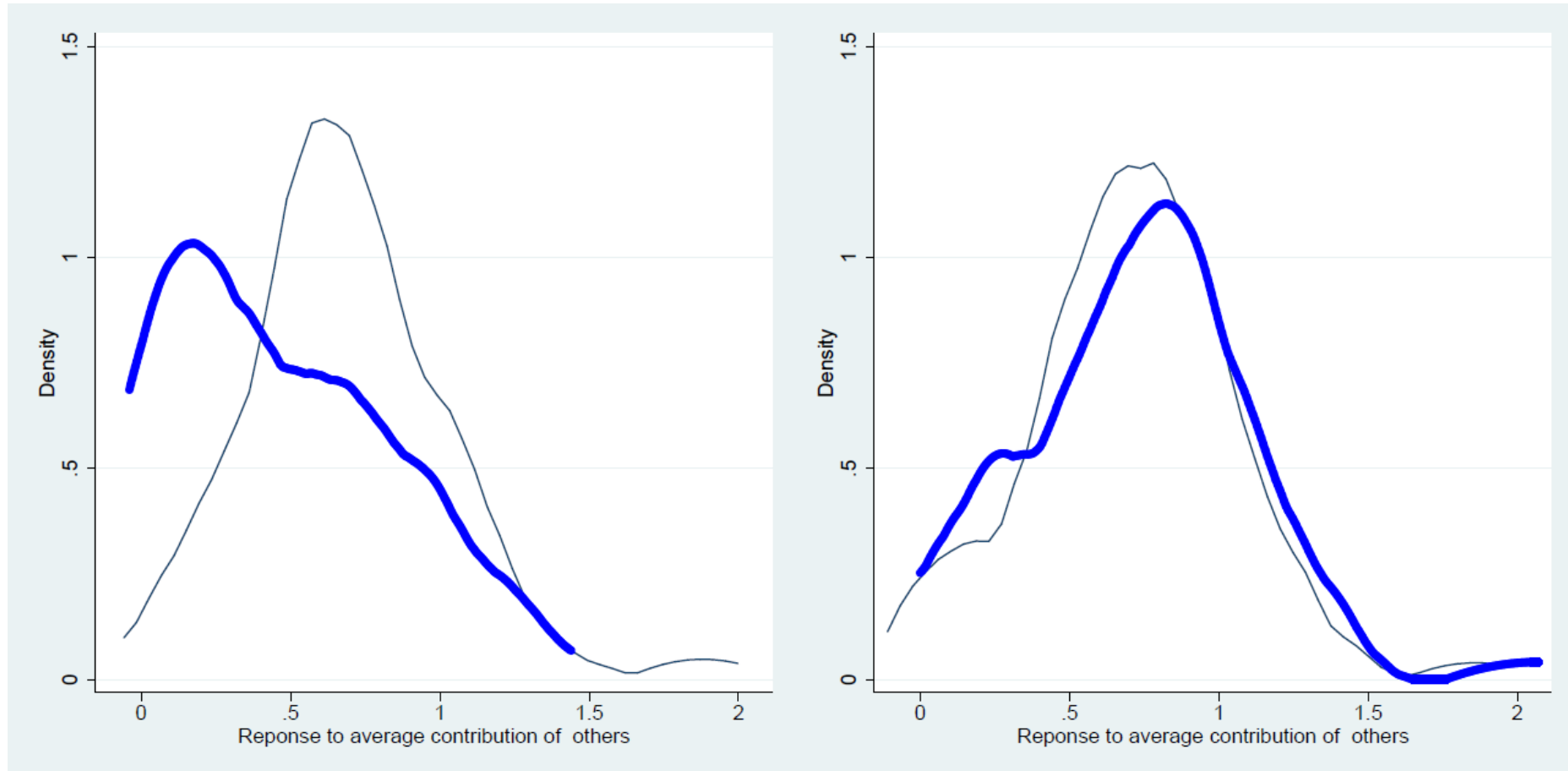
	Implicit		Explicit	
	% Share	95% CI	% Share	95% CI
Cooperators	10.8	10.4–11.2	4.4	4.1–4.7
Free-riders	26.5	25.9–27.1	11.8	11.3–12.2
Reciprocators	62.7	62.0–63.4	83.8	83.3–84.4

Well, this is interesting

	Implicit		Explicit	
	Females	Males	Females	Males
Cooperators	12	9	5	4
Free-riders	38	17	10	13
Reciprocators	<b>49</b>	74	<b>85</b>	83



# Women (left) see implicit (thick) differently



# Why do women pursue non-contingent strategies of defect or cooperate?

- Women are lazy, dumb or time pressured (10 seconds to choose)?
- Women are less competitive, i.e., not following packs or bubbles?
- Women, in the absence of social cues, “diversify” their actions?

**But this seems rather important...**

Average player efficiencies were 68.1 and 67.8 percent (p-value = 0.64)  
in *Implicit* and *Explicit*, respectively

# Gender and social norms

- Norms emerge from a tension: individual vs collective gains
- Everybody has conditional preferences for conformity, all need to believe that enough people are obeying the norm to make it worthwhile to conform (Bicchieri, 2006; Akerlof, 1980; Akerlof and Kranton, 2000, 2005)
- Women more sensitive to social cues to appropriate behaviour (Nowell and Tinkler, 1994; Seguino and Lutz, 1996; Benjamin et al, 2007; Leon-Mejia and Miller, 2007; Croson and Gneezy, 2009) and better able to coordinate around a common *group* equilibrium (Cadsby and Maynes, 1998)
- Evol. Stable Strategy? Ants, women & the *just-so* hunter-gatherer?

# Discussion and significance

- Additional information did not improve average payoffs, but it could be useful if higher levels of reciprocation lead to more public goods or less depletion of common pool goods
- Better signals would lower their cost of communication, education and/or enforcement at water utilities, given that customers often act based on their perceptions of others' contributions
- These ideas depend on women participating in decision making. If not, then they may not “do their share” even if “the man” is!

# Implications and further research

Additional information increased reciprocation and reduced the dispersion of contributions. Lower dispersion means more stability in group dynamics (compared to a group of cooperators/defectors)

So we have not discovered any secret to public goods provision (in the lab), but

1. It is a confirmation that women do not herd as much as men in inflating (private good) asset bubbles (Perugini)
2. We can definitely use these results to “improve behavior” by focusing on target reductions in public bads, e.g., pollution
3. Stability may improve contributions to public goods in the longer run (perhaps try longer games)