

Taking, Giving, and Impure Altruism in Dictator Games

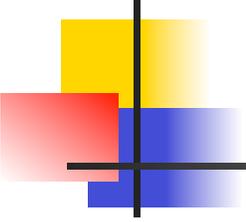
by

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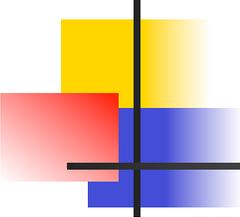
A presentation to the Science of Philanthropy
Initiative Conference

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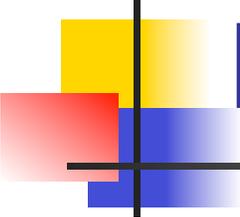
Outline

- Main points
- Is giving equal to not taking?
- Motivation and literature review
- Experiment and results
- Implication
- Application for practitioners



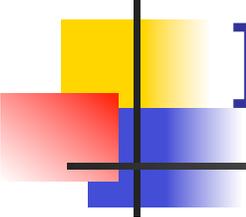
Main points

- We conduct experiment to determine if giving is equal to not taking
- If so, impure altruism accounts for recent findings that payoff to recipients decreases when taking option introduced
- We find that giving is not equal to not taking
- Payoff to recipients lower when payoff possibilities are equal and the dictator must take more to obtain same payoff



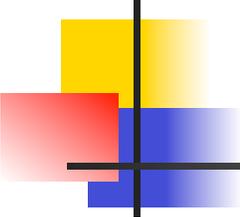
Main points

- Implication: Cold prickle of taking exceeds the warm glow of giving
- Application: Philanthropies may increase donations by imposing a default gift in solicitations



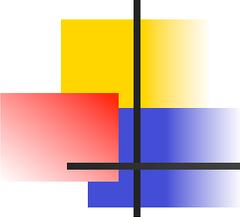
Is not taking equal to giving?

- Game 1: $E_D = \$20$, $E_r = \$0$
- Game 2: $E_D = \$15$, $E_r = \$5$, and option to take \$5 exists
- If giving is equal to not taking, a dictator who gives \$2 in Game 1 would take \$3 in Game 2
 - Giving in Game 1 = Not taking in Game 2 = \$2
 - Payoffs equivalent: \$18, \$2



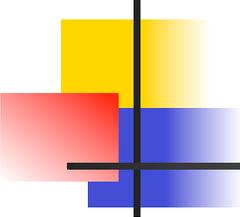
Motivation and literature

- List (2007) and Bardsley (2008) compare games with no option to take with games where the dictator may take
 - Game 2: $E_D = \$15$, $E_r = \$5$, with option to take
 - Game 3: $E_D = \$15$, $E_r = \$5$, no option to take
- They find that payoff to recipient is lower in games that resemble Game 2 than in games that resemble game 3



Motivation and literature

- “The data suggest that current interpretations of dictator game data likely need revision.” (List 2007)
- “The reversing of generosity between treatments is inconsistent with any ... orthodox social preference account.” (Bardsley, 2008)

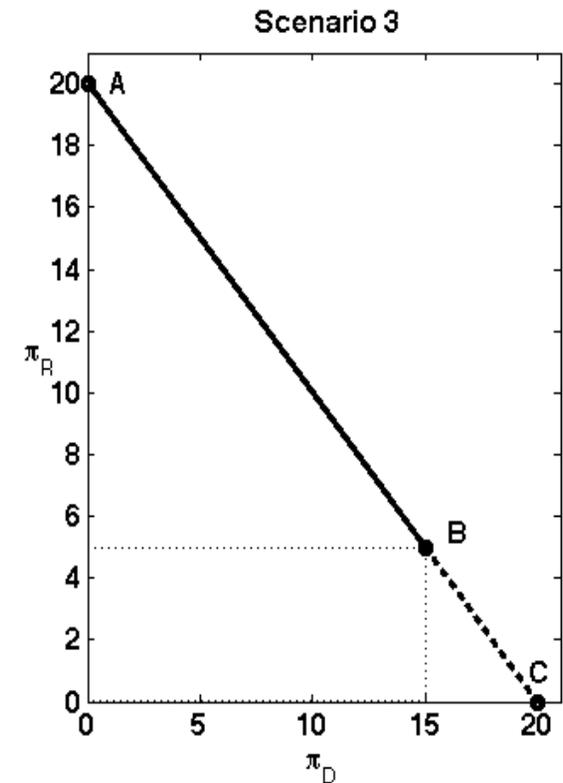
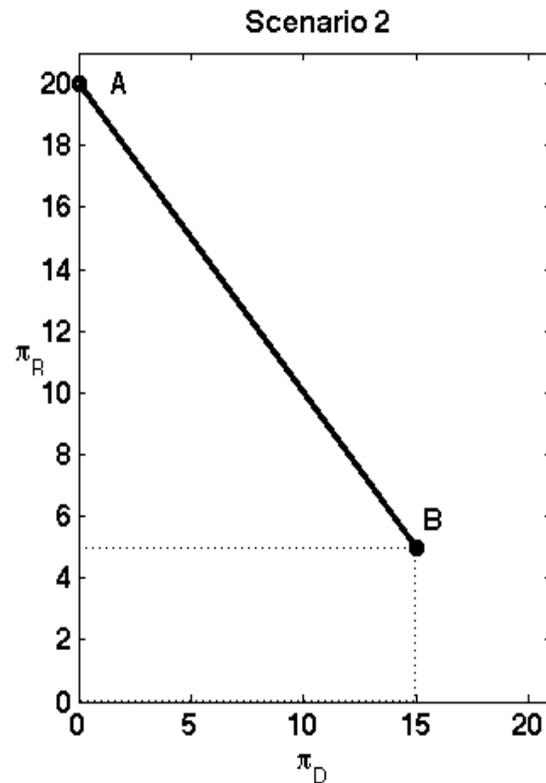


Motivation and literature

- Impure altruism resolves the contradictions observed by List and Bardsley if the amount passed, P , and NT , the amount not taken, are equivalent sources of warm glow
- $U(\pi_D, \pi_r, S)$ with $S = P+NT$
- Effect on payoff possibilities of adding the option to take is equal to the effect of transferring endowment from recipient to dictator

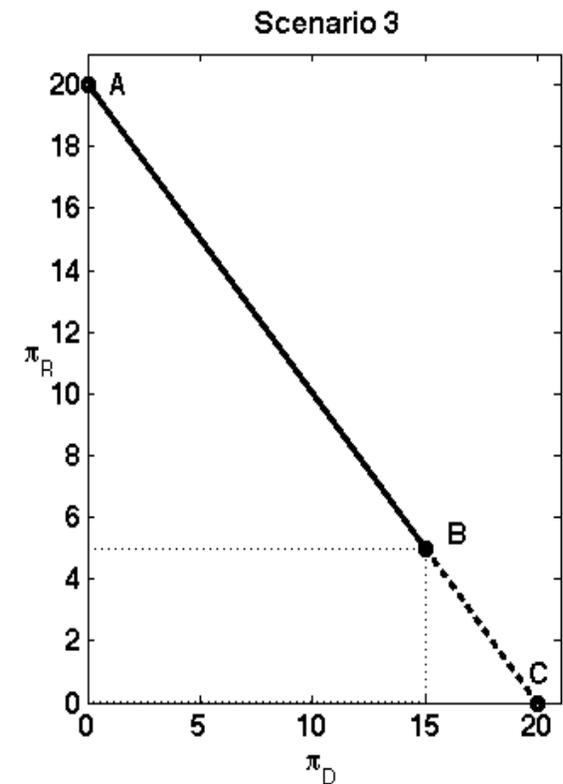
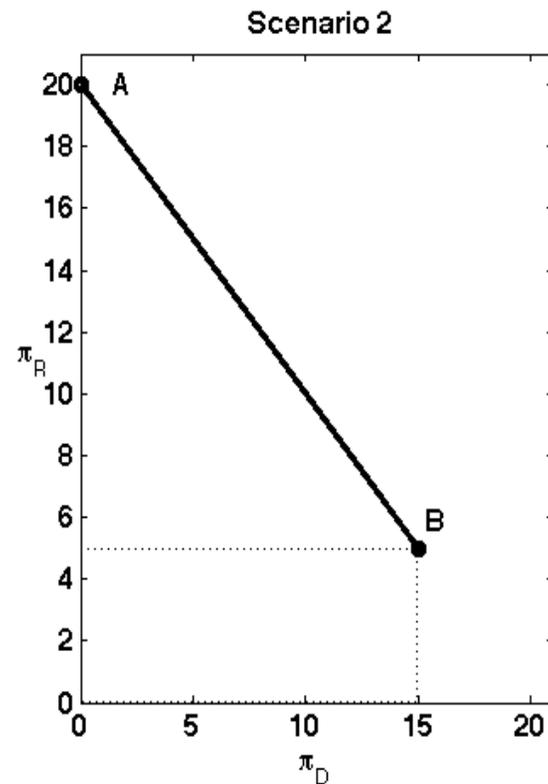
Taking option

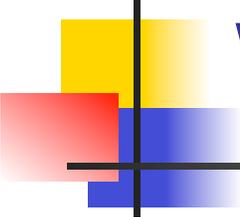
- $E_D = \$15$ and $E_r = \$5$ yields AB
- Adding option to take yields AC
- Payoff to recipient lower with AC



Transferring endowment

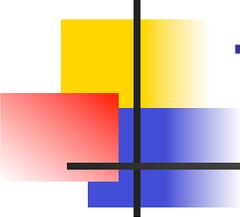
- $E_D = \$15$ and $E_r = \$5$ yields AB
- $E_D = \$20$ and $E_r = \$0$ yields AC
- Payoff to recipient lower with AC,
(Bolton and Katok, 1998)





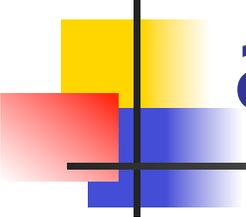
Warm glow

- Impure altruism consistent with reduction in recipient payoff when endowment transferred to dictator
- $U(\pi_D, \pi_r, P)$
- Utility derived directly from P is the “warm glow” of giving



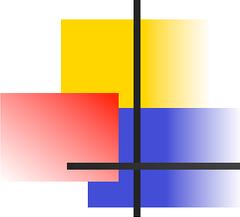
Imperfect crowding in and transferring endowment

- Predicts imperfect crowding in
- Optimal amount passed increases by less than the amount of endowment transferred $\rightarrow \pi_r$ decreases



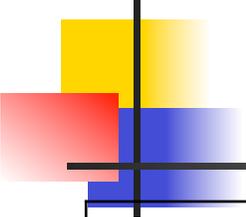
Imperfect crowding in and adding the option to take

- If $U(\pi_{D'}, \pi_r, S)$ with $S = P+NT$ then extending the budget line by adding the option to take would also imperfectly crowd in not taking
- Optimal amount S increases by less than the option to take $\rightarrow \pi_r$ decreases
- Korenok, Millner, Razzolini (2013) show that $U(\pi_{D'}, \pi_r, P)$ rationalizes choices in giving games



EXPERIMENT

- Each subject chooses how much to pass or take in each of 9 scenarios
- 5 sessions with a total of 106 subjects
- Each subject was both Dictator & Recipient
- Z-tree

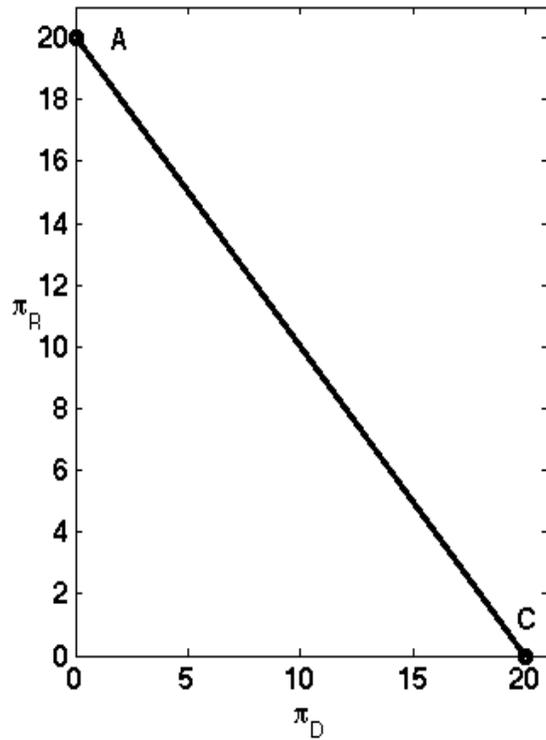


Scenarios

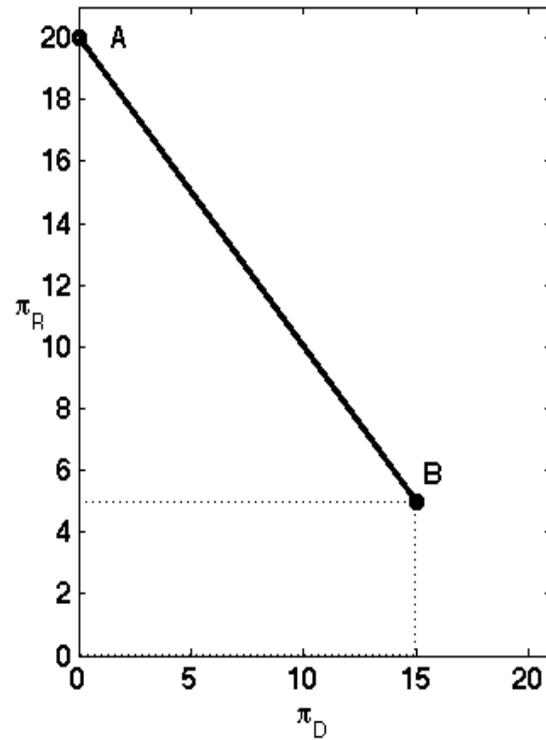
Scenario	Dictator's Endowment	Recipient's Endowment	Maximum Take	Range of Payoffs Possible
1	20	0	0	(20, 0) to (0, 20)
2	15	5	0	(15, 5) to (0, 20)
3	15	5	5	(20, 0) to (0, 20)
4	10	10	0	(10, 10) to (0, 20)
5	10	10	5	(15, 5) to (0, 20)
6	10	10	10	(20, 0) to (0, 20)
7	5	15	10	(15, 5) to (0, 20)
8	5	15	15	(20, 0) to (0, 20)
9	0	20	20	(20, 0) to (0, 20)

Scenario 1 ,2 and 3

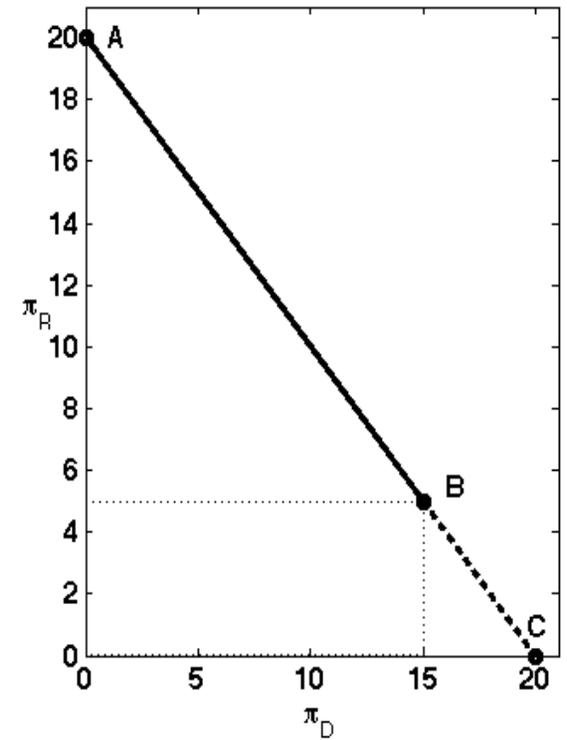
Scenario 1

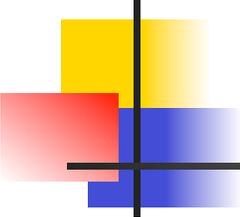


Scenario 2



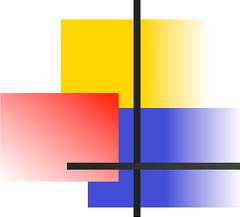
Scenario 3





Finding 1

- Our results are consistent with the results reported for the standard dictator game.
- In Scenario 1, 68 of the 106 dictators (64%) give a positive amount and the average amount given is \$4.05, about 20% of the endowment.



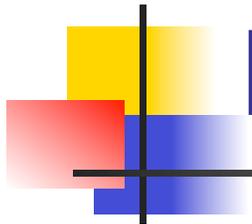
Finding 2

- Results consistent with imperfect crowding in when endowment transferred from recipient
- Compare Scenarios 1, 2, and 4
 - Scenario 2 transfers \$5 from recipient relative to scenario 1
 - Scenario 4 transfers \$5 from recipient relative to scenario 2
 - In any comparison, we exclude the dictators who are selfish in the scenario where the set of payoff possibilities are truncated.
- On average, π_r decreases significantly as the experimenter transfers endowment from the recipient to the dictator.

Transferring Endowments

Comparison of Scenarios			
	1 versus 2	1 versus 4	2 versus 4
Scenario with the truncated set of payoff possibilities	2	4	4
Scenario with the extended set of payoff possibilities	1	1	2
Mean paired difference (\$)	-3.30 ^a	-8.31 ^a	-4.15 ^a
Mean π_r in the truncated scenario (\$)	9.44	13.48	13.48
Mean π_r in the extended scenario (\$)	6.14	5.17	9.33
# observations	65	44	44

a. Significantly different from zero at the 1% level.



Finding 3

- Results consistent with imperfect crowding in when the option to take is added or increased
- Compare Scenarios 2 & 3; 4, 5 & 6; and 7 & 8
 - In any comparison, we exclude the dictators who are selfish in the scenario where the set of payoff possibilities are truncated.
- On average, π_r decreases significantly as the experimenter adds or increases the option to take

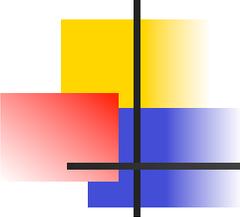
Increasing the option to take

Comparison of Scenarios

	2 vs. 3	4 vs. 5	4 vs. 6	5 vs. 6	7 vs. 8
Scenario with the truncated set of payoff possibilities	2	4	4	5	7
Scenario with the extended set of payoff possibilities	3	5	6	6	8
Mean paired difference (\$)	-1.88 ^a	-4.47 ^a	-5.89 ^a	-1.34 ^b	-1.89 ^a
Mean π_r in the truncated scenario (\$)	9.44	13.48	13.48	10.45	11.44
Mean π_r in the extended scenario (\$)	7.56	9.01	7.59	9.10	9.55
# observations	65	44	44	54	65

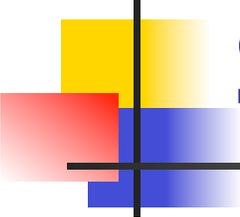
^a Significantly different from zero at the 1% level

^b Significantly different from zero at the 10% level



Finding 4 – Our main result

- Giving is not equal to not taking; dictators tend to give less than they don't take
- Compare Scenario 1 to 3, 6, 8 & 9 and Scenario 2 to 5 & 7.
- Payoff possibilities are equal in each comparison
- On average, π_r increases significantly as the amount the dictator must take to maintain a constant π_r increases.



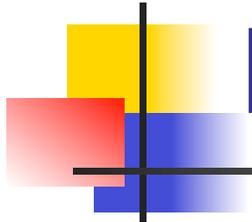
Scenarios 1 v. 9

- Scenario 1: $E_D = \$20$, $E_r = \$0$, and only giving allowed
 - Average gift = $\pi_r = \$5.37$
- Scenario 9: $E_D = \$0$, $E_r = \$20$, and only taking allowed
 - Average amount not taken = $\pi_r = \$8.36$

Giving and Not Taking

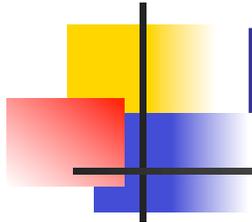
Comparison of Scenarios						
	1 vs. 3	1 vs. 6	1 vs. 8	1 vs. 9	2 vs. 5	2 vs. 7
Min. possible π_r (\$)	0	0	0	0	5	5
Scenario w/ smaller taking option	1	1	1	1	2	2
Scenario w/ larger taking option	3	6	8	9	5	7
Mean paired difference (\$)	1.27 ^b	2.06 ^a	3.37 ^a	3.00 ^a	0.07	1.62 ^a
Mean π_r when the taking option is smaller (\$)	5.37	5.37	5.37	5.37	8.61	8.61
Mean π_r when the taking option is larger (\$)	6.64	7.43	8.73	8.36	8.68	10.23

a. Significantly different from zero at the 1% level.



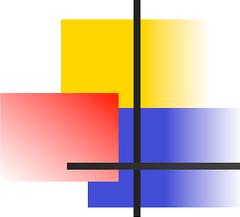
Discussion

- We find an asymmetry between giving and not taking
- “There must be an asymmetry about the way people feel personally about doing good for others versus not doing bad: the warm glow must be stronger than the cold prickle” (Andreoni, 1995)



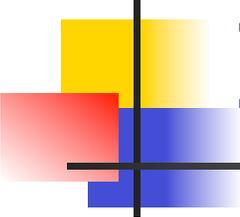
Discussion

- Contrary to Andreoni, we find that the warm glow of giving is weaker than the cold prickle of taking



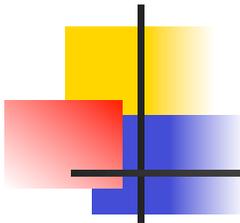
Discussion

- Cannot rely on Korenok, Millner, Razzolini (2013) to claim that $U(\pi_D, \pi_r, S)$ with $S = P + NT$ rationalizes behavior observed in taking games
- $U(\pi_D, \pi_r, P, NT)$ might rationalize behavior observed

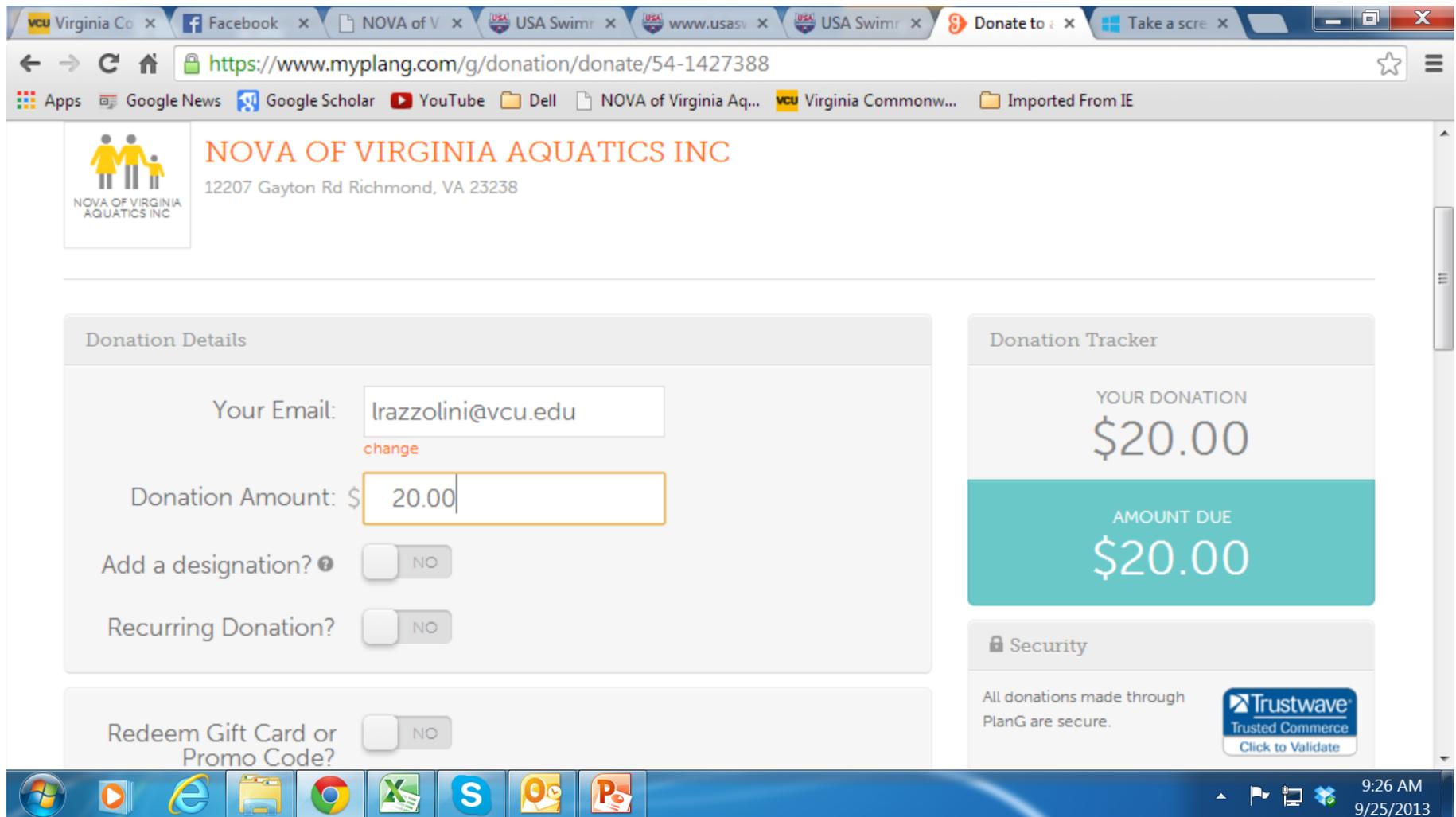


Implication for practitioners

- Philanthropies might increase donations by framing a reduction in a donation as taking from the philanthropy
- We are preparing a field experiment with planG.com



Field experiment



Browser tabs: vcu Virginia Co x, Facebook x, NOVA of V x, USA Swimr x, www.usasv x, USA Swimr x, Donate to x, Take a scre x

Address bar: <https://www.myplang.com/g/donation/donate/54-1427388>

Browser toolbar: Apps, Google News, Google Scholar, YouTube, Dell, NOVA of Virginia Aq..., vcu Virginia Commonw..., Imported From IE

NOVA OF VIRGINIA AQUATICS INC
12207 Gayton Rd Richmond, VA 23238

Donation Details

Your Email: [change](#)

Donation Amount: \$

Add a designation? NO

Recurring Donation? NO

Redeem Gift Card or Promo Code? NO

Donation Tracker

YOUR DONATION
\$20.00

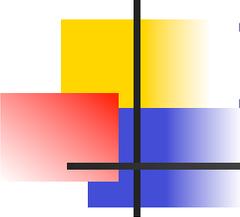
AMOUNT DUE
\$20.00

Security

All donations made through PlanG are secure.  [Click to Validate](#)

Taskbar: Windows 7 icons for Internet Explorer, File Explorer, Google Chrome, Microsoft Excel, Skype, OneNote, PowerPoint

System tray: 9:26 AM, 9/25/2013



Implication for practitioners

- If potential donors view a reduction in the default donation as taking, the average donation should increase
- Present some potential donors the traditional opportunity to increase their gift
- Present other potential donors a default donation and the opportunity either to reduce the donation or to increase it