From Lab to Field:
Social Distance and Charitable Giving in Teams

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Introduction

In a 1986 article on uses for laboratory experimentation, eventual Nobel Laureate Alvin Roth emphasized the potential for such experiments to influence policy and practice *outside* the laboratory (Roth, 1986). Reflecting nearly three decades later on the development of the experimental economics discipline, Roth noted the success of laboratory experiments as "demonstrations and proofs of concept" of novel approaches subsequently implemented in applied settings (Roth, 2015). Though Roth's particular focus in his retrospective was on market design, it cannot be disputed that charitable giving constitutes one applied setting about which laboratory experiments have had much to say. A large body of laboratory research has yielded insights about the motivations for charitable giving and has suggested fundraising mechanisms of potential interest to practitioners. Another large body of field experimental research has explored the practical implications of those insights and furthered our understanding of what motivates donors to give (Andreoni & Payne, 2013; Gee & Meer, forthcoming). Yet in this letter, we propose that one salient finding from the laboratory with potentially significant implications for fundraising practice has gone largely untested in the field. We suggest that this constitutes a growth opportunity for future research, and in the spirit of "proof of concept," we discuss a field experiment that demonstrates one avenue for exploiting that opportunity.

Our focus is on laboratory experimental evidence that members of a team behave more altruistically when they perceive a closer *social distance* to other *members of their team*. A number of laboratory experiments have demonstrated this phenomenon when reducing social distance among team members by showing them photos of each other, having them engage in a puzzle solving task, or priming them with shared school identity (Andreoni & Petrie, 2004; Eckel and Grossman 2005; Chen et. al. 2014).

These findings would seem to port well to the applied setting of charitable giving. Donating is a popular and convenient way to practice altruism. Opportunities to form teams out of potential donors are readily available. Because potential donors often have personal connections to the causes they support, it is often possible to form such teams with relatively close social distance. For example, consider being asked to donate to your alma mater in a team made up of members from your graduating class, or being asked to donate to NPR with a team made up of others who listen to the same radio show as you. Nonetheless, we are unaware of any prior research that has

attempted to vary the social distance among members of a team being asked to donate to a third party cause outside the laboratory—despite the suggestion from laboratory evidence that doing so could be fruitful.

We find this somewhat surprising given the considerable field experiment attention given to charitable giving generally, and more specifically, to social distance in the context of charitable giving. But such research has not focused on the team setting. Rather, it has typically focused on the social distance between a potential donor and a *solicitor/recipient* (Meer & Rigbi 2013, Ajay, Catalini, and Goldfarb, 2011; Meer, 2011).

We seek to begin filling that gap by conducting a charitable giving field experiment that varies social distance among team members being asked to give to a non-profit university. We find no evidence that closer social distance leads to greater altruism in this context, yet we caveat our findings in two ways. First, we conjecture that our "reduced" social distance level may not have been granular enough to trigger group identity within our teams. Second, logistical constraints on the number of subjects we could include in our experiment limited the precision of our estimates, such that we are unable to reject economically substantial effects. We remain optimistic that the "demonstration and proof of concept" of the importance of social distance in teams by prior laboratory studies can be leveraged to produce improved giving results in the field, and we encourage future work in this area.

Summary of Experiment

Our field experiment makes use of the "threshold match" fundraising mechanism (Gee and Schreck, 2018). Each potential donor is randomly assigned to a small team and told that a matching donor will provide money to the charity if the number of donations within the team meets a specified threshold. For example, our subjects received messages like "You will be randomly assigned to a group of 10 Tufts alumni…if at least 3 alumni from your group of 10 donate by June 15th, a donor will give an extra \$50 to Tufts."[1] Our population of interest is 6,471 alumni of Tufts University who participated in exactly one of the following social groups during college: athletics, Greek life or a volunteering organization. Each subject received a donation solicitation letter in the mail informing the subject of the availability of the threshold match.

We experimentally vary social distance within these small teams via the information provided in the solicitation letters. Intuitively, a team member's action may be influenced by the knowledge that other team members come from a shared group membership background. Half of the sample was informed that their team consisted exclusively of other members from their college social group. For example, former athletes were informed that their team of 10 was comprised exclusively of other former Tufts athletes. The other half of the sample was informed only that

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[1] We also randomly varied whether the threshold number of team members needed was one out of 10 or three out of 10. For both a threshold of one person and three persons we found the donation rate was 2.7%. This pattern is different from the pattern reported in Gee and Schreck (2017) who see a donation rate of 2.0% with a threshold of one person, and a rate of 3.7% with a threshold of three persons (although these differences are not statistically significant). See the online appendix available at https://laurakgee.weebly.com/ for more details.
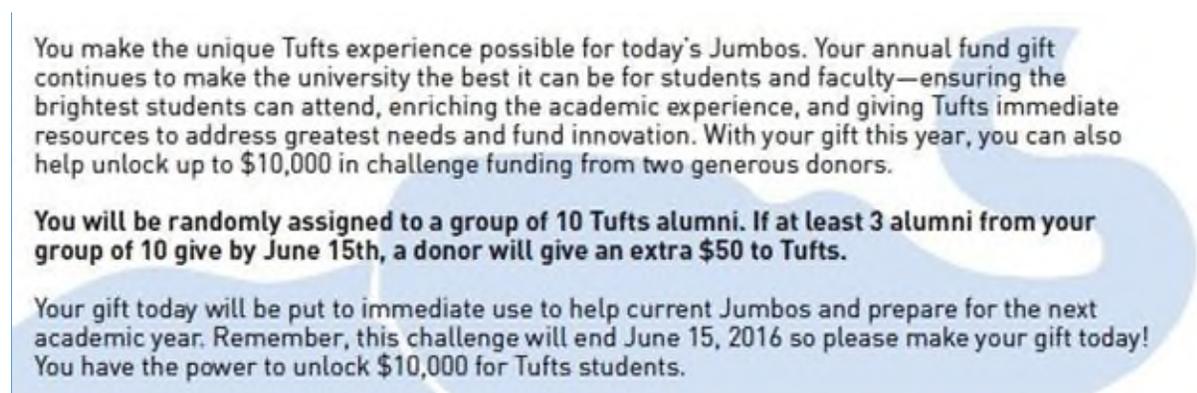
they were in a team with other Tufts alumni.[2] Therefore, subjects in the "Social Information" treatment were aware of the smaller social distance in their team while subjects in the "No Information" treatment were not aware.

The letters sent out had the same message except for one paragraph (in bold) that varied with different treatments as shown in Figure 1.

Figure 1: Text of letters sent out in the Social Information and No Information treatments.

You make the unique Tufts experience possible for today's Jumbos. Your annual fund gift continues to make the university the best it can be for students and faculty—ensuring the brightest students can attend, enriching the academic experience, and giving Tufts immediate resources to address greatest needs and fund innovation. With your gift this year, you can also help unlock up to $10,000 in challenge funding from two generous donors.

You will be randomly assigned to a group of 10 Tufts alumni who were also ←←Group Match Club→→ like you. If at least 3 alumni from your group of 10 give by June 15th, a donor will give an extra $50 to Tufts.

Your gift today will be put to immediate use to help current Jumbos and prepare for the next academic year. Remember, this challenge will end June 15, 2016 so please make your gift today! You have the power to unlock $10,000 for Tufts students.

(a) Social Information

You make the unique Tufts experience possible for today's Jumbos. Your annual fund gift continues to make the university the best it can be for students and faculty—ensuring the brightest students can attend, enriching the academic experience, and giving Tufts immediate resources to address greatest needs and fund innovation. With your gift this year, you can also help unlock up to $10,000 in challenge funding from two generous donors.

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(b) No Information

Notes: The top panel shows the message sent to subjects who were in the "Social Information" treatment, and the bottom panel shows the message sent to subjects in the "No Information" treatment. We also sent variations of these letters where the threshold number of donors was one person rather than three.

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[2] Subjects in the two treatments were balanced on the following observable variables: gender, the number of times the individual has donated in the last 9 years, and whether they are a recent graduate (2005-2015). See the Online Appendix for details.

Results

As shown in Table 1 the donation rate is very similar for those in the Social Information treatment (2.5%) and those in the No Information treatment (2.8%). We concentrate on the donation rate because outliers drive any differences in donation amount conditional on giving as shown in Table 1.

Table 1: Donation Behavior Summary Across Social vs No Information Treatments		
Variables	**Social Information**	**No Information**
Donation Rate	0.025	0.028
Donation Amount, conditional on giving	$157	$285
Amount 25th pct, conditional on giving	$25	$25
Amount 50th pct, conditional on giving	$50	$50
Amount 75th pct, conditional on giving	$100	$100
Amount 99th pct, conditional on giving	$2,000	$11,000
Donors	82	91
Letters sent	3,238	3,233

Table 2 presents the results from linear regressions, and shows that there is no statistically significant difference in the donation rate when people are informed they are in a team with those from the same social group.[3] This lack of significance holds when we include observable covariates in the model. The point estimates represent a 0.2 to 0.3 percentage point decrease in donation rate, against a base rate of approximately 2.8%, when people are informed they are in a donation team with others of their shared social group. However, the imprecision of our estimates limits meaningful inference about the effect size and even sign. The 95% confidence interval for this effect ranges from a nearly 1 percentage point decrease to a 0.6 percentage point increase. The bounds of the confidence interval represent potentially substantial effects against the low base rate, meaning we would not feel comfortable concluding from the estimates that there is no effect of manipulating social distance. Likewise, we do not derive confidence from the estimates that there is a positive or negative effect. This lack of difference between the Social Information and No Information treatment may be surprising given that many laboratory papers and some observational data papers have found effects of social closeness on altruistic behaviors.

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[3] We report here the results of a linear regression model. Probit model marginal effect estimates are of similar magnitude and are available on request.

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Table 2 - Probability of Donation by Treatment		
	(1)	(2)
VARIABLES		
Social Information Treatment	-0.00274	-0.00179
	(0.00401)	(0.00392)
Years Donated		0.0179***
		(0.00224)
Female		0.00198
		(0.00403)
Young Alum		0.0140**
		(0.00616)
Reunion Year		0.0408**
		(0.0186)
Constant	0.0281***	0.00498
	(0.00290)	(0.00316)
Observations	6,471	6,471
R-squared	0.000	0.040

Notes: Years donated is the number of donations a person made between 2006-2015; Young alum takes the value 1 if a person graduated between 2005-2015; reunion year refers to if they had a 10 year or 5-year reunion; Threshold 1 takes the value 1 if this person's team was told they needed at least 1 person (instead of 3 persons) to obtain matching funds.

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In addition to the above analysis, we looked at the effect of Social Information on donations by different social groups and by gender. However, the heterogeneous treatment effects were small and not statistically significant.

Conclusion

Despite a strong body of evidence from laboratory experiments showing that reduced social distance within a team can motivate individuals to be more altruistic, our experiment finds no such effect. Our Social Information treatment had no statistically significant effect and in fact decreased the probability of donating from 2.8% to 2.5%. However, we caution against reading too much into the results of our single experiment. First, the precision of our estimates was constrained by the sample size we could obtain based on the number of Tufts alumni we had access to who had previously participated in one of our chosen social groups. Moreover, our result may be an artifact of our measure of social distance. Our chosen social groups (college participation in Greek life, athletics, or a volunteering organization) may have been too broad to trigger meaningful group identity. Narrower groups (e.g., informing subjects they were grouped with other alumni of the men's soccer team rather than athletes generally, or from a particular sorority as opposed to Greek life generally) may have yielded better outcomes. We view this as a natural avenue for further research.

We therefore remain optimistic that the "demonstration and proof of concept" of the importance of social distance in teams by prior laboratory studies can be leveraged to produce improved donation results in the field. While our study provides limited inference as to the effect size, it serves as a "proof of concept" that manipulating social distance within a team in the field is feasible and that partner organizations are interested in investigating the role of social distance.

Given the strength of findings available from laboratory experiments, as well as the ready availability of natural groups among potential donors, we believe that this is a research area worthy of further study.

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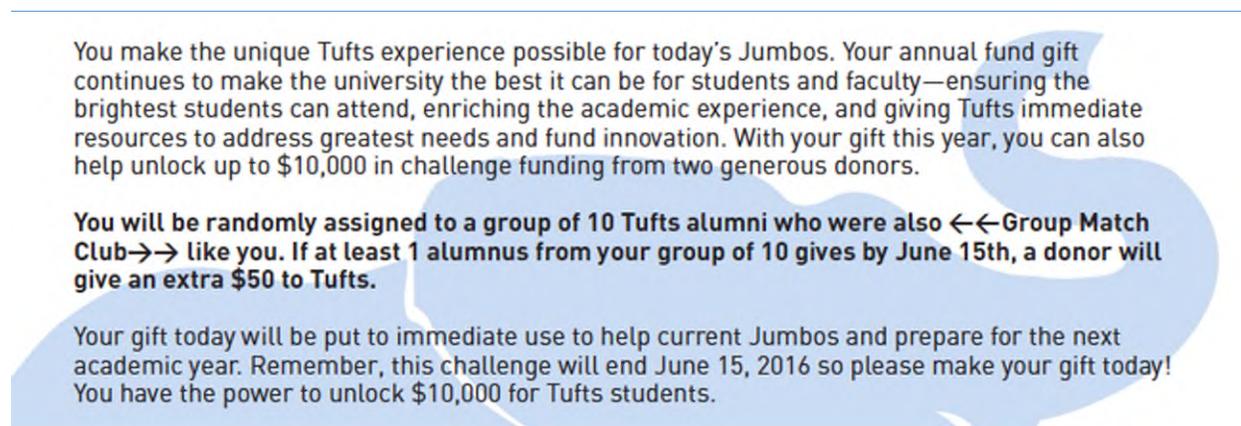Meer, Jonathan. "Brother, can you spare a dime? Peer pressure in charitable solicitation." *Journal of public economics* 95, no. 7-8 (2011): 926-941.

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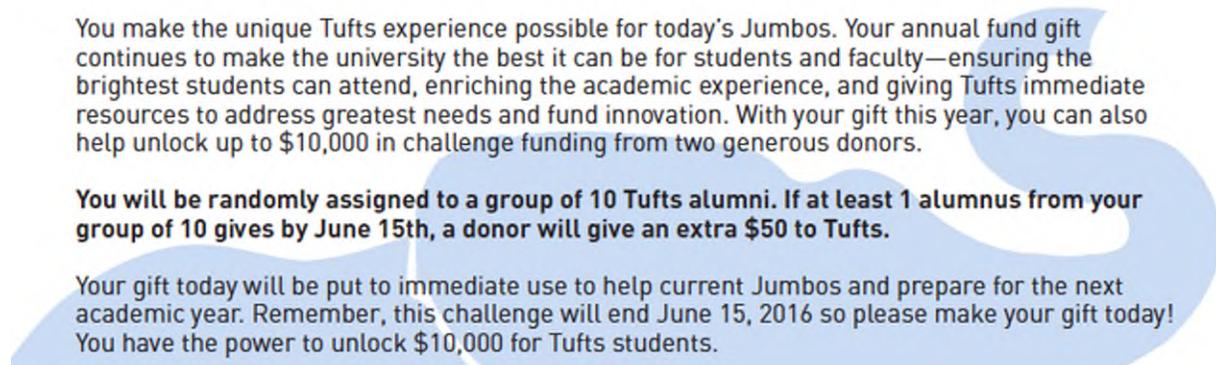
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Online Appendix

Figure A1: Text of letters with threshold of one sent out in the Social Information and No Information treatments.

You make the unique Tufts experience possible for today's Jumbos. Your annual fund gift continues to make the university the best it can be for students and faculty—ensuring the brightest students can attend, enriching the academic experience, and giving Tufts immediate resources to address greatest needs and fund innovation. With your gift this year, you can also help unlock up to $10,000 in challenge funding from two generous donors.

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Your gift today will be put to immediate use to help current Jumbos and prepare for the next academic year. Remember, this challenge will end June 15, 2016 so please make your gift today! You have the power to unlock $10,000 for Tufts students.

(b) No Information

Notes: The top panel shows the message sent to subjects who were in the "Social Information" treatment, and the bottom panel shows the message sent to subjects in the "No Information" treatment. We also sent variations of these letters where the threshold number of donors was one person rather than three.

Table A1: Donation Behavior Summary Across 4 Treatments					
	Social Info		No Info		All
	Threshold 1	Threshold 3	Threshold 1	Threshold 3	
Donation Rate	0.024	0.027	0.030	0.026	0.027
Donation Amount, conditional on giving	$112.69	$194.96	$361.54	$198.90	$224.09
Amount P25, conditional on giving	25	25	27.5	25	25
Amount Median, conditional on giving	50	75	50	50	50
Amount P75, conditional on giving	100	112.5	105.55	100	100
Amount P99, conditional on giving	100	2000	11000	5000	5000
Donors	38	44	48	43	173
Letters Sent	1614	1619	1616	1622	6471

Notes: Threshold 1 are those who were sent letters with a threshold of 1 donor to active matching funds, while Threshold 3 required 3 donors. Those in Threshold 1 Social Info received the same letter as those in Threshold 1 No Info with the addition of being told they were in a team of the same social type, the same is true of Threshold 3 Social Info.

	(1) Entire Sample	(2) Social Info Threshold 1	(3) Social Info Threshold 3	(4) No Info Threshold 1	(5) No Info Threshold 3	(6) Pairwise Difference
	Mean (s.d.)	Mean (s.d.)	Mean (s.d.)	Mean (s.d.)	Mean (s.d.)	

<div align="center">Table A2: Subject Balance across 4 Treatments</div>

	(1) Entire Sample	(2) Social Info Threshold 1	(3) Social Info Threshold 3	(4) No Info Threshold 1	(5) No Info Threshold 3	(6) Pairwise Difference
	Mean	Mean	Mean	Mean	Mean	
	(s.d.)	(s.d.)	(s.d.)	(s.d.)	(s.d.)	
Panel A						
Athletics	0.555	0.555	0.554	0.555	0.554	No
	(0.497)	(0.497)	(0.497)	(0.497)	(0.497)	
Volunteer org.	0.176	0.175	0.177	0.176	0.176	No
	(0.381)	(0.380)	(0.381)	(0.381)	(0.381)	
Greek life	0.269	0.270	0.269	0.269	0.270	No
	(0.444)	(0.444)	(0.444)	(0.443)	(0.444)	
Panel B						
female	0.44	0.440	0.440	0.439	0.440	No
	(0.496)	(0.497)	(0.497)	(0.496)	(0.496)	
Years donated	0.981	0.929	0.979	1.033	0.983	No
	(1.678)	(1.606)	(1.701)	(1.767)	(1.678)	
Young alumni	0.198	0.212	0.182	0.200	0.199	No
	(0.399)	(0.409)	(0.386)	(0.400)	(0.399)	
Reunion year	0.034	0.035	0.035	0.035	0.033	No
	(0.182)	(0.185)	(0.183)	(0.183)	(0.178)	
Observations	6,471	1,614	1,619	1,616	1,622	

Notes: Threshold 1 are those who were sent letters with a threshold of 1 donor to active matching funds, while Threshold 3 required 3 donors. Those in Threshold 1 Social Info received the same letter as those in Threshold 1 No Info with the addition of being told they were in a team of the same social type, the same is true of Threshold 3 Social. The last column states whether two-way t-tests between the four treatments were significantly different. Years donated is the number of donations a person made between 2006-2015; Young alum is a dummy which is 1 if a person graduated between 2005-2015; Reunion Year refers to if they had a 10 year or 5-year reunion; LC refers to leonard Carmichael

Table A3 - Probability of Donation by Treatment				
	(1)	(2)	(3)	(4)
VARIABLES				
Social Information Treatment	-0.00274	-0.00179	0.000667	0.000895
	(0.00401)	(0.00392)	(0.00568)	(0.00557)
Years Donated		0.0179***		0.0179***
		(0.00224)		(0.00224)
Female		0.00198		0.00198
		(0.00403)		(0.00403)
Young Alum		0.0140**		0.0141**
		(0.00616)		(0.00617)
Reunion Year		0.0408**		0.0407**
		(0.0186)		(0.0186)
Threshold 1			0.00319	0.00220
			(0.00581)	(0.00567)
Threshold 1* Social Information Treatment			-0.00363	-0.00319
			(0.00553)	(0.00545)
Constant	0.0281***	0.00498	0.0265***	0.00388
	(0.00290)	(0.00316)	(0.00399)	(0.00413)
Observations	6,471	6,471	6,471	6,471
R-squared	0.000	0.040	0.000	0.040

Notes: Years donated is the number of donations a person made between 2006-2015; Young alum takes the value 1 if a person graduated between 2005-2015; reunion year refers to if they had a 10 year or 5-year reunion; Threshold 1 takes the value 1 if this person's team was told they needed at least 1 person (instead of 3 persons) to obtain matching funds.

Robust standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$