Appendix (For Online Publication)

Table 5: Field Experiment Balance On Pre-Experiment Attributes

Treatment	Cohort Year	Warm4	Male	Count Prev. Donations	Sum Prev. Donations	Mean Prev. Donations	Days Since Last Donation
C	1993.41	0.11	0.51	0.73	130.92	38.45	434.66
M	1992.32	0.10	0.48	0.97	105.50	28.94	521.78
T1	1992.30	0.11	0.48	0.74	89.20	23.76	518.85
T2	1992.31	0.11	0.47	0.75	84.32	22.84	460.03
T3	1992.30	0.11	0.47	0.97	80.85	16.19	391.58
F Statistic	2.35*	0.11	0.73	1.38	0.33	0.31	0.26
Min	1977	0	0	0	0	0	0
Max	2007	1	1	53	35,000	17,500	7,112

Table 6: Field Experiment Dependent Variable Probability of Donation (0 to 100)

	In Text Warm4	Logit	Warm1	Warm2	Warm3	Warm5
	1	2	3	4	5	6
Match (M)	0.731	0.446	0.965	1.117	0.822	0.591
	(0.829)	(0.486)	(0.832)	(0.855)	(0.830)	(0.830)
Threshold Match 1 (T1)	0.335	0.289	0.578	0.686	0.532	0.417
	(0.975)	(0.608)	(1.019)	(0.987)	(0.967)	(0.989)
Threshold Match 2 (T2)	0.675	0.491	0.878	1.129	0.856	0.833
	(0.923)	(0.510)	(0.897)	(0.877)	(0.916)	(0.937)
Threshold Match 3 (T3)	1.945*	1.017**	2.147*	2.116*	1.999*	2.153*
	(1.051)	(0.488)	(1.066)	(1.057)	(1.041)	(1.095)
warm1			25.752***			
			(4.408)			
warm2				21.657***		
				(4.002)		
warm3					17.607***	
					(3.104)	
warm4	15.876***	3.504***				
	(2.694)	(0.442)				
warm5						13.286***
						(2.279)
Adjusted R2	0.107		0.121	0.129	0.114	0.089
Psuedo R2		0.305				
N	2,567	2,120	2,567	2,567	2,567	2,567

Notes: All coefficients are multiplied by 100 for ease of readability. Standard errors are clustered at the cohort level. Observations are weighted to account for the constraints on randomization.
Legend: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Table 7: Lab Experiment: Realized vs. Expected Number of Peer Donors

Treatment	**Realized Peer Donors**	**Expected Peer Donors**
Control	2.16	2.11
T1	3.51	3.56
T3	4.50	3.82
T5	3.87	3.91
T7	4.05	3.90
T10	3.78	3.95

Notes: There were 100 subjects who each participated in 6 treatments. The realized and expected number of peer donors can take a value between 0 other donors up to 9 other donors, so it does not include the subject's own choice to keep or donate.

Table 8: Lab Experiment Logit Models Dependent Variable Probability of Donation (0 to 100)

	With Control	**With Beliefs**	**Without Beliefs**
	1	**2**	**3**
T1	1.33***		
	(0.46)		
T3	2.11***	0.84**	0.77**
	(0.47)	(0.36)	(0.35)
T5	1.62***	0.28	0.29
	(0.46)	(0.41)	(0.38)
T7	1.76***	0.51	0.43
	(0.45)	(0.48)	(0.46)
T10	1.55***	0.09	0.22
	(0.39)	(0.45)	(0.43)
Pivotal Belief		0.02***	
		(0.01)	
Pseudo R2	0.10	0.05	0.02
N	366	285	285

Notes: All coefficients are multiplied by 100 for ease of readability. All models include subject fixed effects and standard errors are clustered at the subject level. Legend: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Table 9: Alternative Specifications for Lab Experiment Dependent Variable: Probability of Donation (0 to 100)

	In Text		Without Beliefs		With Total Prob.		Highest Peak Beliefs	
	Full	**Variation**	**Full**	**Variation**	**Full**	**Variation**	**Full**	**Variation**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pivotal Belief Level	0.22**	0.43***			0.48***	0.78***		
	(0.09)	(0.15)			(0.10)	(0.15)		
Total Prob. Threshold Met					0.66***	1.07***		
					(0.10)	(0.13)		
$T-1$ is Highest Peak							14.17**	23.35**
							(6.27)	(9.68)
T3	10.71*	20.78**	11.00**	19.30**	21.66***	32.73***	14.66**	26.65**
	(5.56)	(9.59)	(5.50)	(9.53)	(5.74)	(9.26)	(5.98)	(10.48)
T5	3.08	6.22	4.00	7.02	32.27***	48.99***	4.62	6.72
	(6.17)	(11.07)	(5.95)	(10.49)	(7.11)	(9.28)	(6.95)	(13.20)
T7	6.58	12.01	6.00	10.53	51.09***	80.09***	8.18	13.68
	(7.21)	(12.81)	(7.10)	(12.50)	(9.83)	(12.82)	(7.69)	(14.41)
T10	1.71	2.80	3.00	5.26	57.72***	89.61***	2.14	2.09
	(6.67)	(11.75)	(6.67)	(11.76)	(10.39)	(13.04)	(7.35)	(13.82)
constant	36.01***	29.76***	39.00***	36.84***	-24.76**	-65.05***	37.21***	31.95***
	(4.35)	(7.67)	(4.20)	(7.37)	(10.44)	(12.22)	(4.82)	(8.42)
R2	0.54	0.22	0.54	0.20	0.60	0.38	0.62	0.33
Adj R2	0.42	0.01	0.42	-0.01	0.50	0.21	0.50	0.08
N	500	285	500	285	500	285	413	223
Subjects	100	57	100	57	100	57	99	56

Notes: All coefficients are multiplied by 100 for ease of readability. All models include subject fixed effects, and standard errors are clustered at the subject level. In columns 7 and 8 we restrict the sample to observations where a subject reported single peaked beliefs. Legend: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

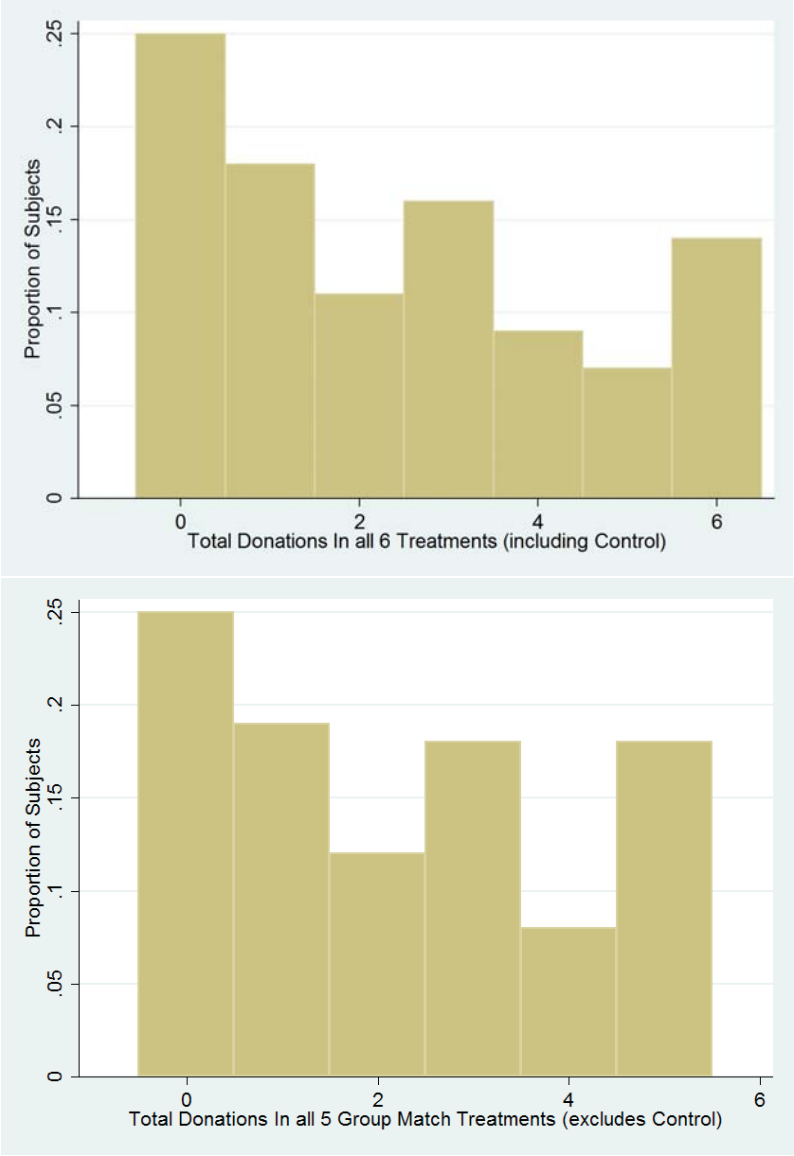

Figure 4: Histogram of Donation Counts per Subject

Note: This histogram indicates the number of subjects associated with a certain number of total donations in the experiment. The top panel shows data for all 6 treatments, while the bottom panel shows data for only the Threshold Match treatments.

6.1 Comparative static on belief of being pivotal, regardless of risk type

This proof demonstrates that the comparative static on p_{T-1} holds for all risk types.

There are two decision options: contribute (C) or keep (K). For each of those options, there are two possible outcomes: the threshold is reached, or it is not. Thus, there are ultimately 4 payoff values that can be realized:

- Contribute and the threshold is achieved (call this $\bar{C}$)
- Contribute and the threshold is not achieved (call this $\underline{\mathrm{C}}$)
- Keep and the threshold is achieved (call this $\bar{K}$)
- Keep and the threshold is not achieved (call this $\underline{\mathrm{K}}$)

We have $\bar{K} > \underline{\mathrm{K}}$ and $\bar{C} > \underline{\mathrm{C}}$ because conditional on choice, if the threshold is achieved then the agent receives the associated positive payoff. If $\underline{\mathrm{K}} > \bar{C}$, then keeping is a dominant strategy regardless of risk type. The remainder of the proof focuses on the condition $\bar{C} > \underline{\mathrm{K}}$.

Define Bernoulli utility function $u(.)$ over payoffs. The function is increasing.

The expected utility of contributing is given by:

$$EU_{contribute} = \sum_{j=0}^{T-2} p_j u(\underline{\mathrm{C}}) + p_{T-1} u(\bar{C}) + \sum_{j=T}^{N-1} p_j u(\bar{C})$$

where p_j denotes the probability that j of the $N-1$ peer donors choose to donate. The expected utility of keeping is given by:

$$EU_{keep} = \sum_{j=0}^{T-2} p_j u(\underline{\mathrm{K}}) + p_{T-1} u(\underline{\mathrm{K}}) + \sum_{j=T}^{N-1} p_j u(\bar{K})$$

It is optimal to donate if the expected utility of contributing exceeds the expected utility of keeping, which occurs if:

$$p_{T-1}\left[u(\bar{C}) - u(\underline{\mathrm{K}})\right] > \sum_{j=0}^{T-2} p_j \left[u(\underline{\mathrm{K}}) - u(\underline{\mathrm{C}})\right] + \sum_{j=T}^{N-1} p_j \left[u(\bar{K}) - u(\bar{C})\right]$$

This has a marginal benefit / marginal cost interpretation. The LHS is the marginal benefit of contributing: with p_{T-1} the donation is pivotal and the donor realizes payoff $\bar{C}$ instead of $\underline{\mathrm{K}}$. The RHS is the marginal cost of contributing: when the donation is not pivotal, the donor sacrifices private consumption but gets the warm glow.

We now consider a comparative static on p_{T-1}. An increase in this value must be accompanied by a decrease in at least one other p_j, because $\sum_{j=0}^{N-1} p_j = 1$. So an increase in p_{T-1} not only increases the LHS (recall $\bar{C} > \underline{\mathrm{K}}$), but it reduces the RHS when $[u(\underline{\mathrm{K}}) - u(\underline{\mathrm{C}})]$ and $\left[u(\bar{K}) - u(\bar{C})\right]$ are both positive. If those quantities are both negative, then the dominant strategy is to contribute regardless of the value of p_{T-1} because the RHS is negative (this is the scenario where the warm glow of giving is so large it outweighs the cost of giving up private consumption by donating).

Therefore we have shown that as long as $u(.)$ is increasing, an increase in p_{T-1} makes the donor more likely to donate (unless the donor's dominant strategy is to contribute, in which contributing remains the dominant strategy). This holds for risk neutral, risk averse, and risk loving preferences.