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The effect of reciprocity priming on organ donor registration intentions and behavior

--Manuscript Draft--

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Abstract:	Background: Internationally the demand for organ transplants far exceeds the available supply of donated organs. Purpose: We examine if a digital reciprocity prime based on reciprocal altruism can be used to increase organ donor registration intentions and behavior. Methods: 420 participants (223 females) from England and Scotland aged 18+ who were not currently registered organ donors were randomized by block allocation using a 1:1 ratio to receive either a reciprocity prime or control message. After manipulation, they were asked to indicate their organ donation intentions and whether or not they would like to be taken to an organ donation registration and information page. Results: In line with our previous work, participants primed with a reciprocity statement reported greater intent to register as an organ donor than controls (using a 7-point Likert scale where higher scores = greater intention; prime mean = 4.3 (1.6) vs. control mean = 3.7 (1.4), P = <.001, d =0.4 [95%CI = 0.21-0.59]). There was again however, no effect on behavior as rates of participants agreeing to receive the donation register web-link were comparable between those primed at 11% (n= 23/210) [95%CI = 7.4-16.0] and controls at 12% (n= 25/210) [95%CI = 8.1-17.1], $X^2(1) = 0.09$, p = .759. Conclusions: Reciprocal altruism appears useful for increasing intention towards joining the organ donation register. It does not however appear to increase organ donor behavior.
Response to Reviewers:	June 2018 Professor Eamonn Ferguson Associate Editor Annals of Behavioral Medicine Re:Resubmission of Manuscript (ANBM-D-17-00450) "The effect of reciprocity priming on organ donor registration intentions and behavior"

	Dear Eamonn, Thank you for taking the time to once again carefully read and evaluate our manuscript. We have noted the constructive comments and have revised the manuscript incorporating their suggestions (noted below. We hope that our manuscript is now acceptable for publication in Annals of Behavioral Medicine as a Brief Report. Many thanks for your consideration. Yours sincerely, Comments from Reviewer #2 1) Page 4, lines 1-3: As in the reviewer letter, it would be worth stating that this replication study benefits from a more representative sample than the prior study. - We have now inserted this into the last paragraph of the introduction section. 2) Page 9, line 9-10: This statement (i.e., regarding face-to-face delivery) warrants a citation. If this statement is regarding reference #7, then this difference (i.e., original study using face-to-face prime versus the present replication using an online prime) should be noted in the introduction, too. - We have inserted the correct citation (reference #7) in the first paragraph of the discussion section and updated the last paragraph of the introduction accordingly. 3) Page 9, line 12: This sentence is missing the word "not"; should read as "However, this increase in intentions does [not] appear. . . " - Thank you for highlighting, we have now corrected this mistake in the first paragraph of the discussion section. 4) Supplemental Tables 1 and 2: For the categorical variables (i.e., sex, know anyone who had donated an organ, know anyone who needs a transplant), please indicate which response was coded as the higher value. Without this information, it is not possible for the reader to understand the direction of associations between variables. - We have now corrected this in Tables 1, 2 and 3 in the supplementary material.

Running head: Reciprocity priming and organ donation

Title: The effect of reciprocity priming on organ donor registration intentions and behavior

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Methods: 420 participants (223 females) from England and Scotland aged 18+ who were not currently registered organ donors were randomized by block allocation using a 1:1 ratio to receive either a reciprocity prime or control message. After manipulation, they were asked to indicate their organ donation intentions and whether or not they would like to be taken to an organ donation registration and information page.

Results: In line with our previous work, participants primed with a reciprocity statement reported greater intent to register as an organ donor than controls (using a 7-point Likert scale where higher scores = greater intention; prime mean = 4.3 (1.6) vs. control mean = 3.7 (1.4), P = <.001, *d* =0.4 [95%CI = 0.21-0.59]). There was again however, no effect on behavior as rates of participants agreeing to receive the donation register web-link were comparable between those primed at 11% (*n*= 23/210) [95%CI = 7.4-16.0] and controls at 12% (*n*= 25/210) [95%CI = 8.1-17.1], $X^2(1) = 0.09$, $p = .759$.

Conclusions: Reciprocal altruism appears useful for increasing intention towards joining the organ donation register. It does not however appear to increase organ donor behavior.

Introduction

In the U.S. over 116,000 people are currently in need of an organ transplant [1]. Ninety-five percent of US adults support organ donation, but only 54%, are registered to donate their organs [1]. In the U.K. approximately 400 people will die each year whilst waiting for an organ [2]. Internationally the demand for organ transplants far exceeds the available supply of donated organs. The development of strategies to increase organ donor registration is therefore vital.

Reciprocal altruism is defined as: *"a process that favours costly cooperation among reciprocating partners"* (p.R827) and has been considered crucial for ensuring group survival during human evolution [3]. Reciprocal altruism may be a useful concept to consider when considering strategies to increase organ donor registration [4]. Reciprocity priming encourages an individual to consider their potential future need for donated organs and thus may increase their likelihood of registering to be an organ donor. The U.K. NHS Blood and Transplant service previously used reciprocity priming in digital marketing materials to encourage people to register as organ donors by asking: *"If you needed an organ transplant would you have one? If so, please help others"* [5]. This type of reciprocity priming has also been used in U.K. Government driving license application web-pages and may encourage an extra 96,000 people to register as organ donors per year [6]. However, there is only limited controlled evidence regarding whether reciprocal priming strategies increase organ donor registration intentions and behavior.

We previously conducted a reciprocity priming (RP) experiment and found that both face-to-face and internet delivery of RP led to a significant increase in intentions (particularly in the online mode), but did not lead to an increase in registration behavior[7]. In this replication

study of participants who can be considered more representative of the UK population, we again hypothesise that RP delivered by the internet will increase organ donor registration intentions and behavior compared to a control condition.

Methods

Participants (aged 18+) from England and Scotland who had never previously donated an organ and were not registered as organ donors were asked to take part in a digital survey (using the U.K. Qualtrics participant panel) in September-October 2017. All participant data were captured digitally through online questionnaires administered by a Qualtrics digital platform. Participants viewed study information and were asked to provide their informed consent to the digital survey. On completion of the survey, participants were thanked and given a debrief statement about the study. Participants were free to leave the survey at any time and also leave questions blank if they wished.

All participants were randomized by Qualtrics on a 1:1 ratio to either Block A, the reciprocity prime condition or Block B, a control condition. The reciprocity prime statement was as follows: *"I would accept an organ from a deceased donor in order to save my own life."* The statement for the control participants was: "*most of the general public have a good understanding of organ donation"* [7,8]. Intention to donate organs was assessed with the following two statements: "*I strongly intend to donate my organs when I die*;" and "*I will definitely donate my organs when I die*." Responses for both questions were rated a on a 7-point Likert scale, ranging from strongly disagree (1) to strongly agree (7) and were averaged across participants for analysis. Our proxy for organ donor registration behavior was measured as follows. At the end of the questionnaire, all participants were asked to respond either yes or no to the statement: "*would you like to be taken to the U.K. organ donor*

registration and information pages?" After completion of study recruitment, data were exported from Qualtrics and imported into SPSS (SPSS Statistics 23.0, IBM Corp Armonk, NY) for statistical analysis. Chi-squared tests and one-way ANOVA examined differences in demographics and outcomes between primed participants and controls. Correlation and regression models were used to understand associations between background measures with organ donation intentions and behavior.

Results

In total, 420 non-registered organ donor participants were recruited and 210 randomized to the reciprocity prime condition with 210 to the control. The study sample characteristics are displayed in Table 1.

Effect of reciprocity prime on intention attitudes to organ donation

Participants in the prime condition displayed higher intention towards organ donation (mean = 4.3, SD = 1.6) compared to controls (mean = 3.7, SD = 1.4); F(1,418) = 17.4, *P* = <.001 (Welch correction), *d* = 0.4 [95%CI = 0.21-0.59].

Effect of reciprocity prime on proxy organ donor registration behavior

In the prime condition, 11% (*n*= 23/210) [95%CI = 7.4-16.0] compared to 12% (*n*= 25/210) [95%CI = 8.1-17.1] in the control condition, agreed to obtaining the organ donation register information web-link, and this was not significant; $X^2(1) = 0.09$, (*P* = .759), *Cramer's V* = 0.15. With over 200 participants in each condition, we were adequately powered to detect a meaningful 10% increase in those responding yes to the donor web-link information question, with 80% power and an alpha level of 0.05.

Prediction of organ donation behavior and intentions

Logistic regression confirmed that there was no direct effect of the reciprocity prime condition (prime or control) on organ donor behaviour, B = -.09, SE = .307, P = .759. However, when intention towards organ donation was added to the model, this then became significant, B = .47, SE = .120, P < .001 (Exp(B) 1.60 (95% CI 1.27-2.02) and correctly predicted 88.6% of cases. Logistic regression also indicated a significant association between education and organ donation behaviour ($\chi^2(6) = 12.6$, P =.049). An increase in educational attainment was associated with a 1.24 increased likelihood of organ donation behaviour (see Supplementary Table 2). Linear regression also indicated a significant association between background measures (age and blood donation) and organ donation intention $F(6, 413) = 2.7$, P =.015, *Adjusted* R^2 = .02 (see Supplementary Table 3).

Table 1: Participant demographics

Characteristics	Reciprocity prime condition *n*= 210	Control condition *n*= 210
Age (mean, *SD & range*)	52.9 (15.4), 18-85	53.9 (15.3), 18-90
Sex (*N, %)*		
Female	117 (56%)	106 (51%)
Male	93 (44%)	104 (50%)
Religion		
No religion	83 (40%)	74 (35%)
Christian	114 (54%)	115 (55%)
Buddhist	1 (1%)	1 (1%)
Hindu	0 (.%)	2 (1%)
Jewish	6 (2%)	2 (1%)
Muslim	3 (1%)	4 (2%)
Sikh	0 (.%)	2 (1%)
Other	3 (1%)	7 (3%)
No response	0 (.%)	3 (1%)
Ethnicity		
White	192 (92%)	187 (90%)
Mixed multiple ethnic groups	1 (1%)	1 (1%)
Asian or Asian British	6 (3%)	11 (5%)
African	3 (1%)	4 (2%)
Caribbean or black	4 (2%)	3 (1%)
Other ethnic group	2 (1%)	1 (1%)
Education		
No formal qualifications	20 (10%)	16 (8%)
High school diploma	76 (36%)	64 (31%)
College entrance exam	38(18%)	42 (20%)
Higher National Certificate	15 (7%)	12 (6%)
Higher National Diploma	16 (8%)	13 (6%)
Bachelor's degree	10 (5%)	15 (7%)
Bachelor's degree (honours)	20 (10%)	31 (15%)
Master's degree	13 (6%)	16 (8%)
Doctoral degree	2 (1.%)	1 (1%)
Do you know anyone who has donated an organ (*N, %)*		
Yes	19 (9%)	16 (8%)
No	191 (91%)	194 (92%)
Do you know anyone who needs a transplant (*N, %)*		
Yes	9 (4%)	17 (8%)
No	201 (96%)	193 (92%)

Blood donor (*N, %)*		
Yes	65 (31%)	69 (33%)
No	145 (69%)	141 (67%)
How often have donated blood		
Once	15 (23%)	14 (20%)
2-4 times	14 (22%)	15 (22%)
5-10 times	18 (47%)	20 (29%)
11-20 times	5 (8%)	10 (15%)
21+ times	13 (20%)	10 (15%)

Discussion

Reciprocity priming led to greater reported intentions to donate organs compared to controls. Despite more positive intentions, there was no effect of priming on organ donation registration behavior. Both face-to-face and online delivery of a reciprocity prime appear to increase intentions towards organ donation[7]. However, this increase in intentions does not appear to translate into increased sign-up rates for organ donation registration. We have thus replicated our previous finding [7]. Changing behaviour is difficult and further research is now required in order to find the best methods of bridging this intention-behavior gap. Importantly, our form of delivery of the reciprocity prime asked participants to simply rate their willingness to accept an organ (and their intention) using a 7-point Likert scale. This text/questionnaire format may not be the best form of delivery of RP to lead to behavior change [9]. Further research is needed to test different forms of RP delivery, e.g. using RP text paired with images of an unwell patient pre-transplant and recovered patient post-transplant (as used recently in UK NHSBT promotion materials)[5].

Limitations

This study recruited participants from an online digital platform which may not be representative of the wider population of people from England and Scotland who are not registered organ donors. It is also unclear if the digital delivery of the prime and/or digital collection of response data impacted results. We employed a proxy measure of behavior by asking participants if they would like to receive a link to the organ donation register and does not directly measure organ donation registration. Future studies should employ verified organ donor registration as the primary outcome [8]. The measures employed in this study did not provide an opportunity for participants to report an inability to donate. This

may have affected only a small number of people as there is currently no age limit and few medical conditions that prevent organ donation [10].

Conclusion

Digital reciprocity priming based on reciprocal altruism leads to increased intentions to donate organs, but does not appear to lead to an increase in organ donor behavior. Further research is required to identify the best methods to cross the intention-behavior gap. Alternative modes of delivery of reciprocity priming are worthy of investigation.

References

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Supplementary material

Supplementary Table 1: Correlation matrix showing associations between measures.

	Measure	1	2	3	4	5	6	7	8	9	10
1	Age	-	-	-	-	-	-	-	-	-	-
2	Sex	-.230									
		.000	-	-	-	-	-	-	-	-	-
		420									
3	Education	-.197	.006								
		.000	.904	-	-	-	-	-	-	-	-
		420	420								
4	Blood donor	.130	-.042	.022							
		.008	.385	.655	-	-	-	-	-	-	-
		420	420	420							
5	How often have donated blood	.230	-.011	-.047							
		.008	.900	.594	X	-	-	-	-	-	-
		134	134	134							
6	Know anyone who has donated an organ	-.035	.128	.057	.052	-.185					
		.471	.009	.241	.284	.033	-	-	-	-	-
		420	420	420	420	134					
7	Know anyone who needs a transplant	-.041	.063	.038	-.049	.004	.173				
		.405	.196	.439	.320	.960	.000	-	-	-	-
		420	420	420	420	134	420				

8	Manipulation - Would accept an organ from a deceased donor in order to save my own life.	-.028	-.029	.052	.149	-.204	.031	-.107			
		.683	.677	.455	.031	.103	.652	.123	-	-	-
		210	210	210	210	65-	210	210			
9	Control - Most of the general public have a good understanding of organ donation.	-.037	.110	-.168	-.098	-.024	.169	-.022			
		.597	.111	.015	.155	.846	.014	.752	X	-	-
		210	210	210	210	69-	210	210			
10	Mean intention to donate	-.105	.082	-.003	.092	-.098	.079	-.065	.427	.024	
		.031	.092	.955	.060	.258	.106	.186	.000	.729	-
		420	420	420	420	134	420	420	210	210	

Note: Pearson correlation coefficients for study variables with level of statistical significance and number of participants. 'X' denotes where a correlation could not be computed. Sex: 0 = *male*, 1 = *female*. Blood donor: 0 = *no,* 1 = *yes*. Know anyone who has donated an organ: 0 = *no*, 1 = *yes*. Know anyone who needs a transplant: 0 = *no*, 1 = *yes*.

Supplementary Table 2: Summary of logistic regression analysis to predict organ donation behavior.

Measure	*B*	Exp(B)	95%CI for B	
			Lower	Upper
Age	-.006	.994	.973	1.015
Sex	.075	1.078	.568	2.045
Education	.211*	1.235	1.082	1.409
Know anyone who has donated an organ	.129	1.138	.365	3.545
Know anyone who needs a transplant	.014	1.014	.279	3.687
Blood donor	-.411	.663	.351	1.252
Nagelkerke r^2	5.8%			
X^2	12.6, *d*f = 6, *P* = .049			

Note: Sex: 0 = *male*, 1 = *female*. Know anyone who has donated an organ: 0 = *no*, 1 = *yes*. Know anyone who needs a transplant: 0 = *no*, 1 = *yes*. Blood donor: 0 = *no,* 1 = *yes*.

* *P* < .01.

Supplementary Table 3: Summary of linear regression analysis to predict average organ donation intention.

Measure	B	SE^B	β	95%CI for B	
				Lower	Upper
Intercept	4.498	.359		3.792	5.205
Age	-.011*	.005	-.112	-.021	-.001
Sex	.174	.155	.056	-.131	.479
Education	-.020	.034	-.029	-.088	.048
Know anyone who has donated an organ	.436	.277	.078	-.109	.981
Know anyone who needs a transplant	-.515	.316	-.080	-1.135	.106
Blood donor	.337*	.162	.101	.018	.656

Note: Sex: 0 = *male*, 1 = *female*. Know anyone who has donated an organ: 0 = *no*, 1 = *yes*. Know anyone who needs a transplant: 0 = *no*, 1 = *yes*. Blood donor: 0 = *no,* 1 = *yes*.

Adjusted R^2 = .02. * *P* < .05.

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Introduction

In the U.S. over 116,000 people are currently in need of an organ transplant [1]. Ninety-five percent of US adults support organ donation, but only 54%, are registered to donate their organs [1]. In the U.K. approximately 400 people will die each year whilst waiting for an organ [2]. Internationally the demand for organ transplants far exceeds the available supply of donated organs. The development of strategies to increase organ donor registration is therefore vital.

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Results

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Effect of reciprocity prime on proxy organ donor registration behavior

In the prime condition, 11% (*n*= 23/210) [95%CI = 7.4-16.0] compared to 12% (*n*= 25/210) [95%CI = 8.1-17.1] in the control condition, agreed to obtaining the organ donation register information web-link, and this was not significant; $X^2(1) = 0.09$, (*P* = .759), *Cramer's V* = 0.15. With over 200 participants in each condition, we were adequately powered to detect a meaningful 10% increase in those responding yes to the donor web-link information question, with 80% power and an alpha level of 0.05.

Prediction of organ donation behavior and intentions

Logistic regression confirmed that there was no direct effect of the reciprocity prime condition (prime or control) on organ donor behaviour, B = -.09, SE = .307, P = .759. However, when intention towards organ donation was added to the model, this then became significant, B = .47, SE = .120, P < .001 (Exp(B) 1.60 (95% CI 1.27-2.02) and correctly predicted 88.6% of cases. Logistic regression also indicated a significant association between education and organ donation behaviour ($\chi^2(6) = 12.6$, P =.049). An increase in educational attainment was associated with a 1.24 increased likelihood of organ donation behaviour (see Supplementary Table 2). Linear regression also indicated a significant association between background measures (age and blood donation) and organ donation intention $F(6, 413) = 2.7$, P =.015, *Adjusted* R^2 = .02 (see Supplementary Table 3).

Table 1: Participant demographics

Characteristics	Reciprocity prime condition *n*= 210	Control condition *n*= 210
Age (mean, *SD & range*)	52.9 (15.4), 18-85	53.9 (15.3), 18-90
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Male	93 (44%)	104 (50%)
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No religion	83 (40%)	74 (35%)
Christian	114 (54%)	115 (55%)
Buddhist	1 (1%)	1 (1%)
Hindu	0 (.%)	2 (1%)
Jewish	6 (2%)	2 (1%)
Muslim	3 (1%)	4 (2%)
Sikh	0 (.%)	2 (1%)
Other	3 (1%)	7 (3%)
No response	0 (.%)	3 (1%)
Ethnicity		
White	192 (92%)	187 (90%)
Mixed multiple ethnic groups	1 (1%)	1 (1%)
Asian or Asian British	6 (3%)	11 (5%)
African	3 (1%)	4 (2%)
Caribbean or black	4 (2%)	3 (1%)
Other ethnic group	2 (1%)	1 (1%)
Education		
No formal qualifications	20 (10%)	16 (8%)
High school diploma	76 (36%)	64 (31%)
College entrance exam	38(18%)	42 (20%)
Higher National Certificate	15 (7%)	12 (6%)
Higher National Diploma	16 (8%)	13 (6%)
Bachelor's degree	10 (5%)	15 (7%)
Bachelor's degree (honours)	20 (10%)	31 (15%)
Master's degree	13 (6%)	16 (8%)
Doctoral degree	2 (1.%)	1 (1%)
Do you know anyone who has donated an organ (*N, %)*		
Yes	19 (9%)	16 (8%)
No	191 (91%)	194 (92%)
Do you know anyone who needs a transplant (*N, %)*		
Yes	9 (4%)	17 (8%)
No	201 (96%)	193 (92%)

Blood donor (*N, %)*		
Yes	65 (31%)	69 (33%)
No	145 (69%)	141 (67%)
How often have donated blood		
Once	15 (23%)	14 (20%)
2-4 times	14 (22%)	15 (22%)
5-10 times	18 (47%)	20 (29%)
11-20 times	5 (8%)	10 (15%)
21+ times	13 (20%)	10 (15%)

Discussion

Reciprocity priming led to greater reported intentions to donate organs compared to controls. Despite more positive intentions, there was no effect of priming on organ donation registration behavior. Both face-to-face and online delivery of a reciprocity prime appear to increase intentions towards organ donation[7]. However, this increase in intentions does not appear to translate into increased sign-up rates for organ donation registration. We have thus replicated our previous finding [7]. Changing behaviour is difficult and further research is now required in order to find the best methods of bridging this intention-behavior gap. Importantly, our form of delivery of the reciprocity prime asked participants to simply rate their willingness to accept an organ (and their intention) using a 7-point Likert scale. This text/questionnaire format may not be the best form of delivery of RP to lead to behavior change [9]. Further research is needed to test different forms of RP delivery, e.g. using RP text paired with images of an unwell patient pre-transplant and recovered patient post-transplant (as used recently in UK NHSBT promotion materials)[5].

Limitations

This study recruited participants from an online digital platform which may not be representative of the wider population of people from England and Scotland who are not registered organ donors. It is also unclear if the digital delivery of the prime and/or digital collection of response data impacted results. We employed a proxy measure of behavior by asking participants if they would like to receive a link to the organ donation register and does not directly measure organ donation registration. Future studies should employ verified organ donor registration as the primary outcome [8]. The measures employed in this study did not provide an opportunity for participants to report an inability to donate. This

may have affected only a small number of people as there is currently no age limit and few medical conditions that prevent organ donation [10].

Conclusion

Digital reciprocity priming based on reciprocal altruism leads to increased intentions to donate organs, but does not appear to lead to an increase in organ donor behavior. Further research is required to identify the best methods to cross the intention-behavior gap. Alternative modes of delivery of reciprocity priming are worthy of investigation.

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Supplementary material

Supplementary Table 1: Correlation matrix showing associations between measures.

	Measure	1	2	3	4	5	6	7	8	9	10
1	Age	-	-	-	-	-	-	-	-	-	-
2	Sex	-.230									
		.000	-	-	-	-	-	-	-	-	-
		420									
3	Education	-.197	.006								
		.000	.904	-	-	-	-	-	-	-	-
		420	420								
4	Blood donor	.130	-.042	.022							
		.008	.385	.655	-	-	-	-	-	-	-
		420	420	420							
5	How often have donated blood	.230	-.011	-.047							
		.008	.900	.594	X	-	-	-	-	-	-
		134	134	134							
6	Know anyone who has donated an organ	-.035	.128	.057	.052	-.185					
		.471	.009	.241	.284	.033	-	-	-	-	-
		420	420	420	420	134					
7	Know anyone who needs a transplant	-.041	.063	.038	-.049	.004	.173				
		.405	.196	.439	.320	.960	.000	-	-	-	-
		420	420	420	420	134	420				

8	Manipulation - Would accept an organ from a deceased donor in order to save my own life.	-.028	-.029	.052	.149	-.204	.031	-.107			
		.683	.677	.455	.031	.103	.652	.123	-	-	-
		210	210	210	210	65-	210	210			
9	Control - Most of the general public have a good understanding of organ donation.	-.037	.110	-.168	-.098	-.024	.169	-.022			
		.597	.111	.015	.155	.846	.014	.752	X	-	-
		210	210	210	210	69-	210	210			
10	Mean intention to donate	-.105	.082	-.003	.092	-.098	.079	-.065	.427	.024	
		.031	.092	.955	.060	.258	.106	.186	.000	.729	-
		420	420	420	420	134	420	420	210	210	

Note: Pearson correlation coefficients for study variables with level of statistical significance and number of participants. 'X' denotes where a correlation could not be computed. Sex: 0 = *male*, 1 = *female*. Blood donor: 0 = *no*, 1 = *yes*. Know anyone who has donated an organ: 0 = *no*, 1 = *yes*. Know anyone who needs a transplant: 0 = *no*, 1 = *yes*.

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Supplementary Table 2: Summary of logistic regression analysis to predict organ donation behavior.

Measure	*B*	Exp(B)	95%CI for B	
			Lower	Upper
Age	-.006	.994	.973	1.015
Sex	.075	1.078	.568	2.045
Education	.211*	1.235	1.082	1.409
Know anyone who has donated an organ	.129	1.138	.365	3.545
Know anyone who needs a transplant	.014	1.014	.279	3.687
Blood donor	-.411	.663	.351	1.252
Nagelkerke r^2	5.8%			
X^2	12.6, *df* = 6, *P* = .049			

Note: Sex: 0 = *male*, 1 = *female*. Know anyone who has donated an organ: 0 = *no*, 1 = *yes*. Know anyone who needs a transplant: 0 = *no*, 1 = *yes*. Blood donor: 0 = *no*, 1 = *yes*.

* *P* < .01.

Supplementary Table 3: Summary of linear regression analysis to predict average organ donation intention.

Measure	B	SE^B	β	95%CI for B	
				Lower	Upper
Intercept	4.498	.359		3.792	5.205
Age	-.011*	.005	-.112	-.021	-.001
Sex	.174	.155	.056	-.131	.479
Education	-.020	.034	-.029	-.088	.048
Know anyone who has donated an organ	.436	.277	.078	-.109	.981
Know anyone who needs a transplant	-.515	.316	-.080	-1.135	.106
Blood donor	.337*	.162	.101	.018	.656

Note: Sex: 0 = *male*, 1 = *female*. Know anyone who has donated an organ: 0 = *no*, 1 = *yes*. Know anyone who needs a transplant: 0 = *no*, 1 = *yes*. Blood donor: 0 = *no*, 1 = *yes*.

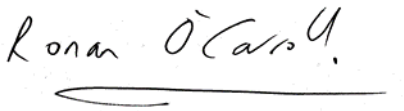
Adjusted R^2 = .02. * *P* < .05.

November 2017

COI and Ethical Adherence file:

The effect of reciprocity priming on organ donor registration intentions and behavior:

Authors Ronan E. O'Carroll, Jody Quigley, and Christopher B. Miller, declare that they have no conflict of interest. All procedures, including the informed consent process, were conducted in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. This article presents independent research funded by the University of Stirling, U.K.



Ronan E. O'Carroll,

On behalf of all co-authors.