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## A Ethical considerations

All of the studies conducted in this project received IRB approval and exemption through the University of Wisconsin Madison Educational and Social/Behavioral Science IRB (# 2020-0843-CP002). Informed consent was obtained for all pilot studies and will be obtained for the registered study.

**Fair wage** In establishing pay scales for each study, we conducted pilots to establish average times for pre-treatment, task and post task portions of each study design and paid based on the state with the highest minimum wage in mid 2020 (Washington, at \$13.50 per hour). Our intention was to offer fair wages especially in the context of work showing the median wage of MTurk workers is ~\$2/hour [7]. In the current pre-registered study we follow the same approach and pay subjects the highest minimum wage when fielding the survey.

**Negative treatments and distress** In our studies we intentionally avoided negative affect in interactions as much as possible, by not providing negative peer feedback or emphasizing negative emotions when exploring mediators.

**No deception** Our studies incorporated a strict no-deception of respondents rule throughout, which in part motivated and necessitated Pilot Study 2 – garnering real peer praise and validating its authenticity.

## B Pilot Studies

	<b>Study goal</b>	<b>N</b>	<b>Trials</b>	<b>Total obs.</b>
<b>Study 1</b>	Costliness of empathy	318	3	954
<b>Study 2</b>	Eliciting peer praise	114	-	114
<b>Study 3</b>	Peer praise on empathy	328	15	4680
<b>Study 4</b>	Happiness as mediator	223	1	223
<b>Study 5A</b>	Mediation analysis	337	20	6480
<b>Study 5B</b>	Mediation analysis	624	3	1731
<b>Study 6</b>	Empathy towards racial outgroups	214	1	214
<b>Study 7</b>	Co-partisan praise	308	1	308
<b>Total</b>	-	2466	-	14704

Table B.1: **Summarizing information on pilot studies.** *N* indicates number of consented respondents.

### B.1 Recruitment

Respondents were recruited to the different pilot studies through MTurk using the following ad:

You are participating in a research project conducted by Jonathan Renshon and Adeline Lo at the University of Wisconsin–Madison. The goal of this study is to learn about how people think about other people. You are asked to complete 1 human interface task. You will be paid \$XX for completing this task and have the opportunity to make more based on the choices in the task (from \$XX to \$XX based on your choices). You will be asked to complete a survey on your attitudes and thoughts about other people and to provide some limited demographic information. No identifying information will be collected.

We plan to use similar wording in order to recruit respondents for our registered study.

### B.2 Narrative Summary of Pilots

Below, we describe in brief narrative form the seven pilot studies that preceded our pre-registered study. For more detail, see Sections B.4-B.10.

#### B.2.1 Our Empathy Choice Task

The foundation of our empathy studies—in Pilots 1 & 3-7—is a behavioral empathy task adapted from Cameron et al. [4] and designed to explicitly measure motivated empathy avoidance with behavior-based revealed preferences. This type of forced-choice scenario

mimics many everyday occurrences of empathy regulation, where people might similarly choose to scroll quickly past charity-based ads or opt for walking around non-profit volunteers on the street.

In the task, respondents see images of either black or white (in the pilot studies; for the registered study, randomization is between black/white/Hispanic) individuals randomized and depicted as being drawn from a deck of cards and then make the decision to either engage in empathy—by describing how the person depicted feels—or simply describe what the person looks like. Following the decision to empathize with (FEEL) or describe (DESCRIBE) the appearance of face they are presented, respondents then act in accordance with their choices in a brief writing task.<sup>1</sup>

An example of a face people might see, along with the buttons they use to choose their task, can be found in Figure B.1. While respondents see one specific face per trial, the images are drawn from a larger database (the Chicago Faces Database; [14]) such that different respondents will see different faces. The faces for the pilots were randomized among the following features: Race=Black/white and Valence=Angry/Fearful (in the main proposed study we add Latino faces). We held constant gender (at “male,” i.e., no variation) and Attractiveness.<sup>2</sup> In all pilot studies except Pilot 6 and 7, respondents make the choice to empathize (or not) *before* the face is drawn from a deck of cards, so they are unaware of the identity of the person with whom they will have to either describe or empathize with. In Pilot 6, 7 and the pre-registered design below, respondents make their choices *after* seeing the faces, allowing us to estimate effectiveness of our intervention in encouraging empathy towards outgroups, specifically.

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<sup>1</sup>We use Latino/a faces in the Chicago Faces Database which are labeled as “Hispanic” within the database.

<sup>2</sup>Specifically, we include images where actors are ranked the average score for attractiveness  $\pm$  1 SD, based on coding done by Chicago database raters.



Figure B.1: *Top*: Behavioral Empathy Task illustration. Example of an image (Race = white, Valence = Fearful) randomly drawn from a deck of cards, presented to respondents before choice task. *Bottom*: Respondents choose between DESCRIBE and FEEL buttons to select their task.

### B.2.2 Empathy is Costly

While past studies suggest that individuals tend to avoid empathy [17, 4], in Pilot 1 we provide motivation for our intervention by demonstrating not only a marked preference for avoiding empathy towards a generalized “other” person, but also by precisely estimating the cost of empathy using our choice-based behavioral empathy task.

We found that the empathy option was 39.7% less likely to be chosen by respondents than the descriptive one (GLM logit exponentiated coefficient estimate = 0.603,  $z=-5.638$ ,  $p=1.722e-08$ , CI[0.506, 0.719]) and—in a modified version of the task that included an incentive compatible reservation wage-elicitation stage (“wage task”)—we estimated that choices to engage in empathy required a 10% premium in wages to motivate our respondents ( $t = 7.740$ ,  $p=1.277e - 13$ , CI[1.077, Inf]). Our subjects also reported that empathy felt more demanding, more costly and difficult and made them more anxious compared to pure description (see SI Pilot Study 1 for further details).

### B.2.3 The Development of our Peer Praise Intervention

Pilot Study 2 set the stage for future studies, eliciting naturalistic praise and warmth ratings from online respondents that we use in subsequent studies, obviating the need to use deception and increasing the verisimilitude of our intervention.

Study 2 was fielded in September 2020 with a total of 114 respondents who consented to the survey. The purpose of the study was to elicit naturalistic peer praise for the empathy and objective tasks. Respondents were asked to write sentences and words that would praise peers who engaged in empathetic/objective behavior following the FEEL and DESCRIBE tasks.



Figure B.2: Real peer praise gathered for engaging in empathetic behavior.

We used the actual praise—for both the FEEL and DESCRIBE tasks—in subsequent pilot studies. In pilot studies 3-6 and in our main registered study, our main intervention was *praise from peers* about engaging in empathy. Any time a respondent was assigned to receive peer praise, they were presented with a word cloud of praise<sup>3</sup> (presented in Figure B.2), drawn from the praise collected in Pilot Study 2, given for people who behave empathetically (measured as choosing the FEEL task), along with a line of text about peer group average thermometer ratings towards people who are empathetic:

“Peers of yours on this platform have said they hold favorable feelings towards people who engage in empathetic behavior, with an average of 7.9, on a scale of 0 (least favorable) to 10 (most favorable). That same peer group provided real feedback for empathetic behavior which is pictured in the word cloud below”.

#### B.2.4 Beneficial Effects of Peer Praise

Pilot Studies 3-5 provided evidence for the beneficial effects of peer praise in encouraging empathy and honed in on the affective mechanism through which praise works to encourage empathy, while also shedding light on a potential norms-based mechanism.

<sup>3</sup>We use word stems here, as is common in text preprocessing and visualization[6], as people used variations of the same words often, for instance saying “empathy” 20 times, “empathetic” 21 times, “empathize” 3 times, and “empathizes” once.

Pilot 3 used the collected peer praise (from Pilot 2) to encourage empathy in respondents (using the same choice task as Pilot 1). Here, we found that the peer-praise group was 20% more likely to choose empathy compared to a control group that did not receive praise (GLM logit coefficient=0.182,  $z=2.269$ ,  $p=0.023$ , CI[0.025, 0.339]).

### B.2.5 Evidence for Norms and Affect as Mechanisms

Pilot Studies 4 and 5 replicated the effectiveness of our peer praise intervention and extended our findings through a focus on causal mechanisms. Norms were addressed in two ways. First, in Pilot 3 we included a placebo condition—in which respondents were praised for engaging in objective behavior rather than empathy—under the logic that if praise operated by changing respondents’ beliefs about what is normatively “good” behavior (behavior valued by others), we would expect our “praise for description” placebo to impact choice task selection. It did not, which does not rule out norms as a mechanism on its own, but we took to be circumstantial evidence against that explanation. In Pilot 4, we asked respondents what percentage of people they believed think that objectivity (or empathy) is a good thing. While “peer praise for empathy” slightly increased respondents’ perception that people generally view empathy favorably (from 70.9 to 72.7 on a scale of 0-100), the effect was not statistically significant (estimate=1.812,  $t=0.63$ ,  $p=0.529$ , CI[−3.858, 7.483]). While it’s possible that the pilot was underpowered for detecting this effect, we consider this at the least not strong evidence in favor of a norms mechanism.

In Pilot Studies 4 and 5, we found relatively strong support for peer praise operating through an emotional pathway (happiness) to encourage greater empathy towards generalized others — 16% of the total effect of peer praise is estimated to be mediated through happiness ( $p=0.006$ , Quasi-Bayesian 95% CI[0.06, 0.54]). Our SI includes discussion of scope conditions to the effectiveness of our peer praise intervention, highlighting its limits but also noting that it is broadly effective across demographic and ideological categories.

### B.2.6 Empathy Towards Outgroups

Pilot 6 focused on our first pre-registered hypothesis in this registered report: does peer praise given to white participants increase their willingness to choose the empathy task for a black (racial outgroup) person, compared to white participants who do not receive such praise? This pilot serves the purpose of establishing the efficacy of our praise intervention in a much more difficult context—encouraging empathy specifically for a racial outgroup—as well as helping us to hone our power calculations to achieve reasonable estimates of the required sample size for our main study. We found that the likelihood of the peer praised group choosing to empathize when seeing a racial outgroup member was 0.42, a 0.17 increase from the control group average of 0.25.<sup>4</sup>

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<sup>4</sup>OLS estimate of the regression coefficient of peer praise on choosing to empathize: 0.17,  $df=202$ ,  $t=2.543$ ,  $p=0.0117$ , CI= [0.037, 0.296].

### B.2.7 Varying the source of Praise

While all pilots described thus far used a peer praise treatment in which the praise came from a neutral group of online peers on MTurk, our final Pilot 7 implemented a preliminary test of the effects of *co-partisan peer praise* towards outgroups. Having repeatedly piloted and found that general peer praise moves empathy towards outgroups, we focus here on providing respondents in the treatment group a version of peer praise that is solicited and delivered from a group of co-identity peers along the dimension of partisanship, with a comparison group that received peer praise from a neutral group of peers (such as previously piloted).<sup>5</sup>

Our findings in Pilot 7 are thus meant to be interpreted in terms of the effect of neutral peer praise and co-partisan peer praise relative to each other, to see whether the latter identity may serve as a salient one to ramp up the effects of peer praise generally. Here, we found mixed results: while peer praise for empathy from co-partisans on its own does not appear to differentially affect the likelihood of (1) choosing to empathize with racial outgroups or (2) learn about BLM compared to peer praise from a neutral group, there are hints that co-partisan peer praise might be effective. For example, Democrat co-partisan peer praise has a positive effect on empathizing ( $0.184$ ,  $t=2.417$ ,  $p=0.0165$ ,  $CI[0.034, 0.334]$ ) and choosing to learn about BLM ( $0.172$ ,  $t= 2.478$ ,  $p= 0.014$ ,  $CI[0.035, 0.309]$ ), while Republican co-partisan peer praise has a negatively signed but not significant effect on empathizing ( $-0.102$ ,  $t=-1.377$ ,  $p=0.17$ ,  $CI[-0.249, 0.044]$ ), and negative effect on willingness to learn about BLM ( $-0.13$ ,  $t=-2.102$ ,  $p=0.04$ ,  $CI[-0.25, -0.008]$ ).

## B.3 General handling of attrition for pilot studies

For all studies, we evaluated attrition and its possible effects on our results in the same manner. We present for each study an attrition evaluation plot, whereby the x-axis presents in order questions posed to the respondents in the survey experiment. The y-axis denotes the proportion of respondents who attrited (compared to the original starting sample). We indicate through colored vertical lines where Pre-Treatment, Treatment, Mediator (or Other), and Outcome variables are measured. When large proportions of attrition occur at specific moments of the survey, it can become quickly clear to the researcher if these are at key points of the study – such as if it was treatment-induced attrition, which would most directly and problematically affect estimation of average treatment effects. Throughout our pilot studies we see very low attrition (an average of 5%) with no obvious correlations with introduction of treatment.

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<sup>5</sup>Pilot 7 focused on Republican and Democrat identities given work by, among others, Klar and Krupnikov [12], that suggests Independents may actively seek to avoid expressive political labelings and behaviors.

## **B.4 Pilot Study 1: Costs of Empathy**

Study 1 was fielded in September 2020, with a total of 318 respondents. The purpose of the study was to establish the baseline costliness of empathy. Figure B.3 presents the consort diagram for Study 1. Descriptive statistics on respondent covariates are presented in Table B.2. Respondents were also asked about their beliefs on how often other respondents on the platform chose the FEEL and DESCRIBE tasks, and what they thought others' beliefs about empathy and objectivity were (see Table B.3). Other than measuring respondents' behavioral choices to establish baseline costs of empathy, we also directly asked respondents to rate the FEEL and DESCRIBE tasks for difficulty using the NASA task load; summary statistics for answers to these questions are presented in Table B.4 and differences between the answers by task type are in Table B.5.

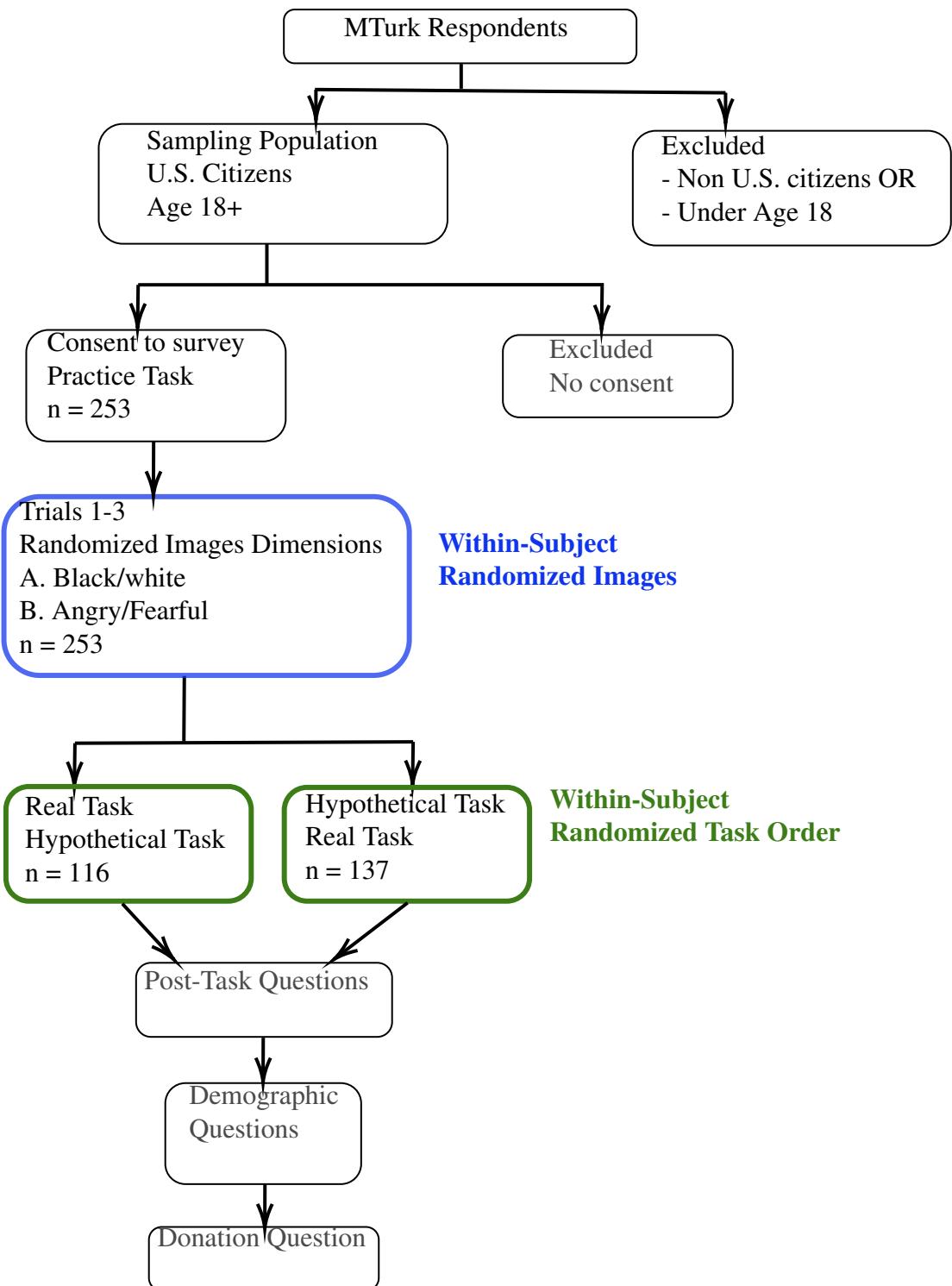


Figure B.3: Study 1: Consort Diagram

	Level	N	%
Sex	Female	97	30.5
	Male	155	48.7
	Missing	66	20.8
Race	white	195	61.3
	Asian	1	0.3
Education	Black or African American	33	10.4
	Native Hawaiian or Pacific Islander	13	4.1
	Other	7	2.2
	Missing	69	21.7
Income	Associate degree	17	5.3
	Bachelor's degree (BA/BS)	149	46.9
	High school or equivalent (GED)	14	4.4
	Kindergarten to 8th grade	1	0.3
	Master's degree (MA/MS/MBA)	43	13.5
	Medical (MD), law (JD) or other doctoral degree (PhD)	2	0.6
Religion	No schooling completed	1	0.3
	Some college, but did not complete a degree	25	7.9
	Missing	66	20.8
Party	100k or more	14	4.4
	25k to less than 50k	91	28.6
	50k to less than 75k	91	28.6
	75k to less than 100k	29	9.1
Ideology	Less than 25k	27	8.5
	Missing	66	20.8
	Atheist/agnostic	45	14.2
	Buddhist	9	2.8
	Hindu	4	1.3
	Jewish	6	1.9
Age	Muslim	7	2.2
	Nothing in particular	24	7.5
	Orthodox (Greek or Russian)	1	0.3
	Protestant	53	16.7
Race	Roman Catholic	103	32.4
	Missing	66	20.8
	Democrat	62	19.5
	Independent	33	10.4
Education	Lean Democrat	21	6.6
	Lean Republican	13	4.1
	Republican	63	19.8
	Strong Democrat	34	10.7
Income	Strong Republican	26	8.2
	Missing	66	20.8
	Conservative	34	10.7
	Liberal	75	23.6
Religion	Moderate	37	11.6
	Slightly conservative	24	7.5
	Slightly liberal	23	7.2
	Very conservative	25	7.9
Party	Very liberal	34	10.7
	Missing	66	20.8
Age	N	Missing	Mean
	250	68	36.45
Age	SD	Min	Q1
	11.36	20	29
Age	Median	Q3	Max
	33	40	77

Table B.2: **Study 1 Respondents (Summarizing covariates).** Total number of respondents 318.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Belief people choose Feel task	252	57.421	23.959	3	39.8	79	100
Belief people choose Describe task	250	67.320	17.788	2	56.2	80.8	100
Belief people think empathy is good	250	72.396	18.783	1	58.5	86	100
Belief people think objectivity is good	250	72.128	16.948	1	63	85	100

Table B.3: Descriptive Statistics - Empathy norms

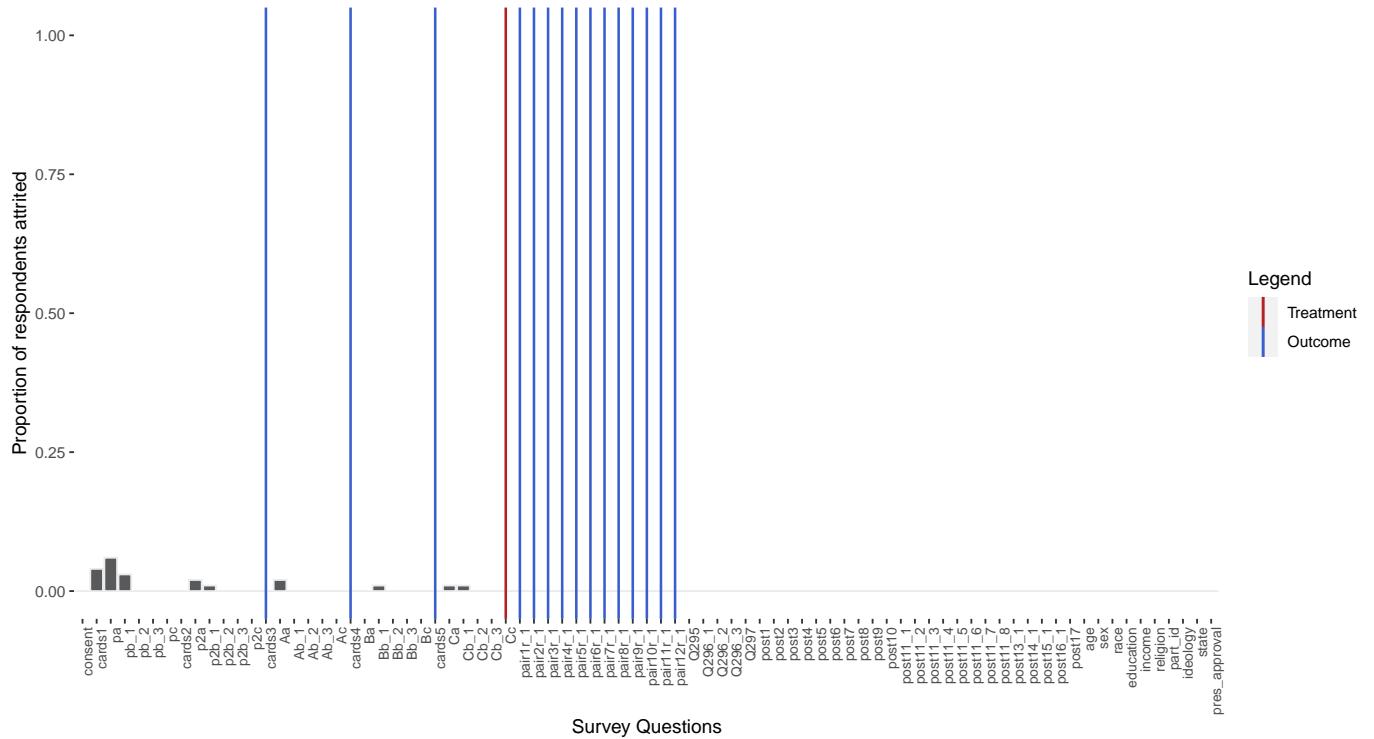
Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Describe task mentally demanding	252	2.702	1.232	1	2	4	5
Feel task mentally demanding	252	2.937	1.043	1	2	4	5
Describe task hard to accomplish	252	2.385	1.037	1	2	3	5
Feel task hard to accomplish	252	2.762	1.085	1	2	3	5
Describe task raised insecurity	252	2.095	1.177	1	1	3	5
Feel task raised insecurity	252	2.329	1.170	1	1	3	5
Describe task done successfully	252	3.762	1.005	1	3	4	5
Feel task done successfully	252	3.575	1.048	1	3	4	5

Table B.4: Descriptive Statistics - NASA task load

Task	Demanding	Hard	Insecure	Successful
Objective (DESCRIBE)	2.702	2.385	2.095	3.762
Empathy (FEEL)	2.937	2.762	2.329	3.575
Difference	0.234 (p=0.0217)	0.377 (p=1e-04)	0.234 (p=0.0256)	-0.187 (p=0.042)

Table B.5: Task load summary. Mean values reported (choices from 1-5). Difference row conducts two-sample t-tests at alpha of 0.05 without multiple comparisons adjustments.

**Study 1 Attrition** Attrition evaluation plot for Study 1 is presented in Figure B.4.



**Figure B.4: Attrition across survey questions:** X axis denotes survey questions in chronological order. Blue vertical lines mark outcome questions: open-ended, three short words, and a feeling thermometer, which followed the behavioral empathy tasks. Red vertical line represents randomization of hypothetical and real wage tasks. Y axis is the proportion of total n attrited, calculated as number of attrited respondents / total n.

## B.5 Pilot Study 2: Eliciting Naturalistic Praise (non-experimental)

Study 2 was fielded in September 2020 with a total of 114 respondents who consented to the survey. The purpose of the study was to elicit naturalistic peer praise for the empathy and objective tasks. The consort diagram for Study 2 is presented in Figure B.5. Table B.6 presents respondent covariate descriptives from the study. No attrition occurred in the study. Respondents were asked to write sentences and words that would praise peers who engaged in empathetic/objective behavior due to doing the FEEL and DESCRIBE tasks. Figure B.6 presents a plot of the words that occur differentially across the words elicited for praising FEEL and DESCRIBE.

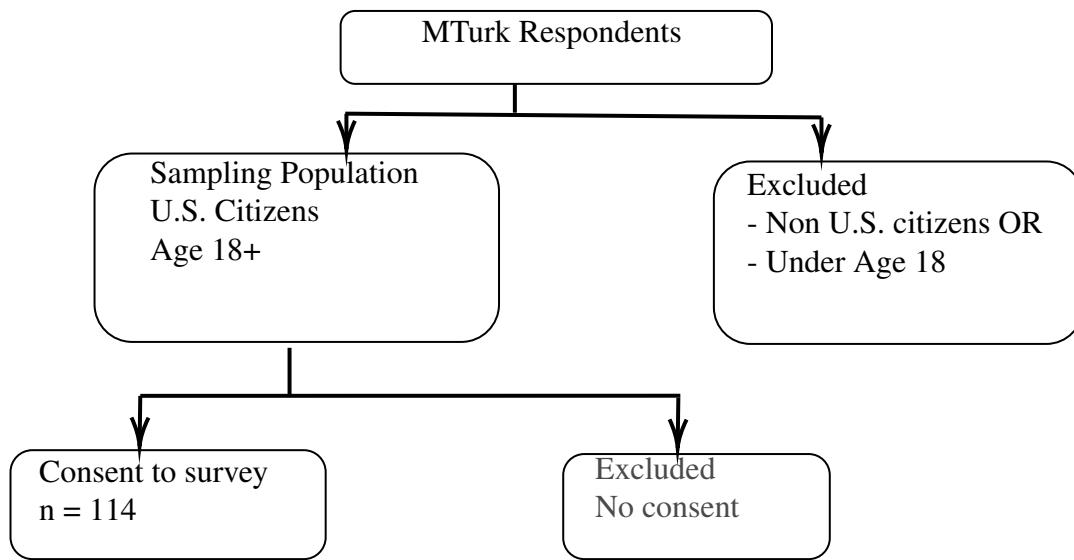
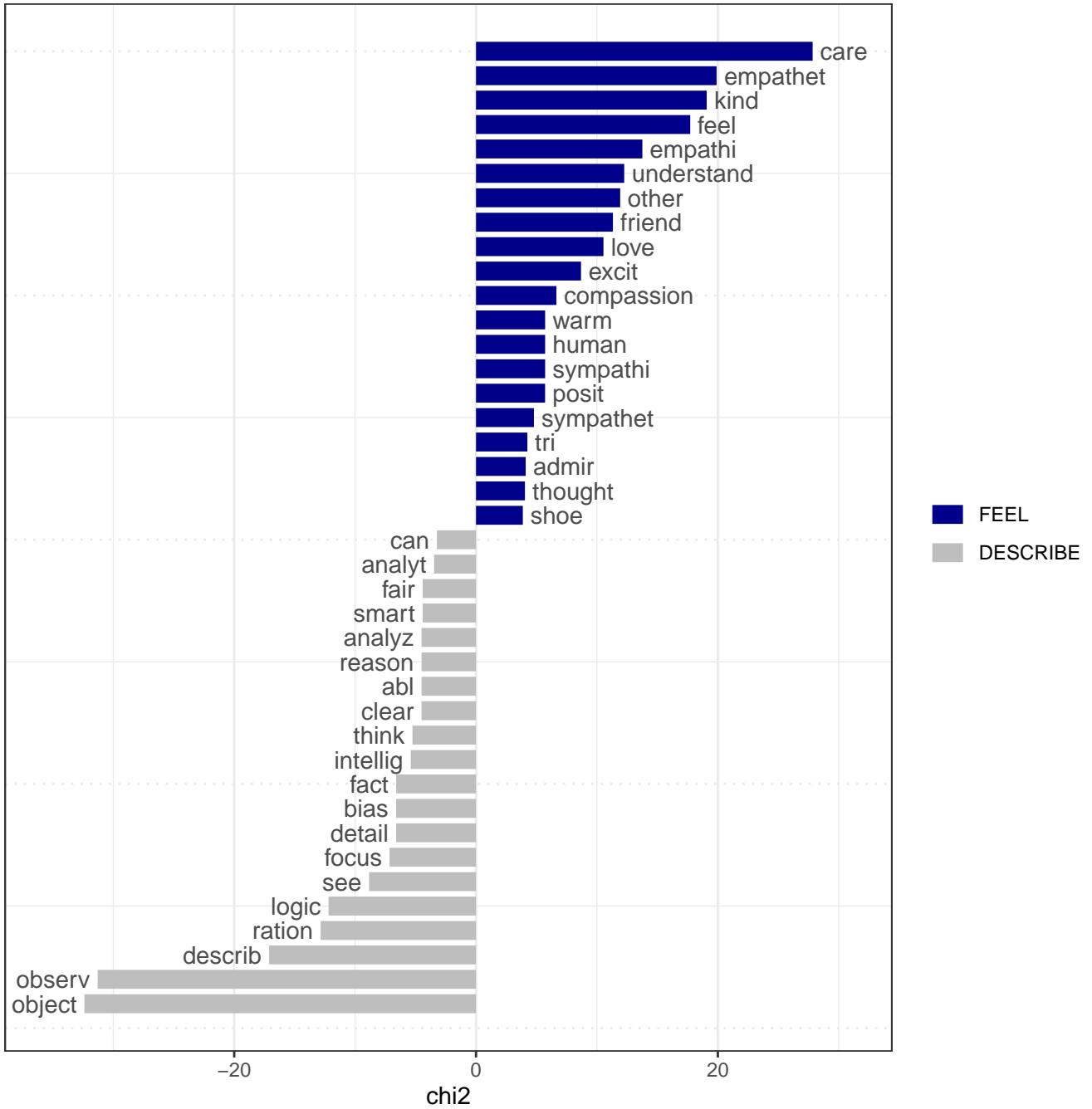


Figure B.5: Study 2: Consort Diagram

	Level	N	%					
Sex	Female	38	33.3					
	Male	76	66.7					
Party	Democrat	38	33.3					
	Independent	17	14.9					
Ideology	Lean Democrat	8	7.0					
	Lean Republican	7	6.1					
	Republican	23	20.2					
	Strong Democrat	11	9.6					
	Strong Republican	10	8.8					
	Conservative	19	16.7					
Race	Liberal	36	31.6					
	Moderate	20	17.5					
	Slightly conservative	8	7.0					
	Slightly liberal	9	7.9					
	Very conservative	8	7.0					
Education	Very liberal	14	12.3					
	Asian	2	1.8					
	Black or African American	15	13.2					
	Native Hawaiian or Pacific Islander	9	7.9					
Income	Other	8	7.0					
	white	80	70.2					
	Associate degree	11	9.6					
	Bachelor's degree (BA/BS)	53	46.5					
Religion	High school or equivalent (GED)	9	7.9					
	Master's degree (MA/MS/MBA)	21	18.4					
	Medical (MD), law (JD) or other doctoral degree (PhD)	2	1.8					
Income	Some college, but did not complete a degree	18	15.8					
	100k or more	9	7.9					
	25k to less than 50k	32	28.1					
Religion	50k to less than 75k	39	34.2					
	75k to less than 100k	17	14.9					
	Less than 25k	17	14.9					
Religion	Atheist/agnostic	36	31.6					
	Buddhist	1	0.9					
	Jewish	1	0.9					
	Mormon	1	0.9					
	Nothing in particular	17	14.9					
Age	Orthodox (Greek or Russian)	1	0.9					
	Protestant	22	19.3					
	Roman Catholic	35	30.7					
	N	Mean	SD	Min	Q1	Median	Q3	Max
Age	114	34.58	10.9	19	27	31	38	72

Table B.6: **Study 2 Respondents.** Total number of respondents 114.



**Figure B.6: Keyness plot of words for empathy (FEEL) versus objective (DESCRIBE) tasks.** Figure plots the results of a keyword of features comparing their differential associations with providing language in praise of peers who engage in empathy (FEEL) versus objective (DESCRIBE) tasks, after calculating “keyness”, a score for features that occur differentially across different categories. Here text for (FEEL) and (DESCRIBE) are the different categories.

As a further check on whether positive feelings are held towards people who exhibit empathetic or observational behaviors, we asked respondents to provide thermometer ratings towards people who exhibited these types of behaviors. We calculate the positive and negative sentiments for praise texts respondents generated for people who display empa-

thetic and objective behaviors respectively, using the Lexicoder Sentiment Dictionary and verify whether the thermometer ratings are positively correlated with positive text sentiments and negatively correlated with negative text sentiments. Figures B.7 and B.8 present linear association results that suggest the same.

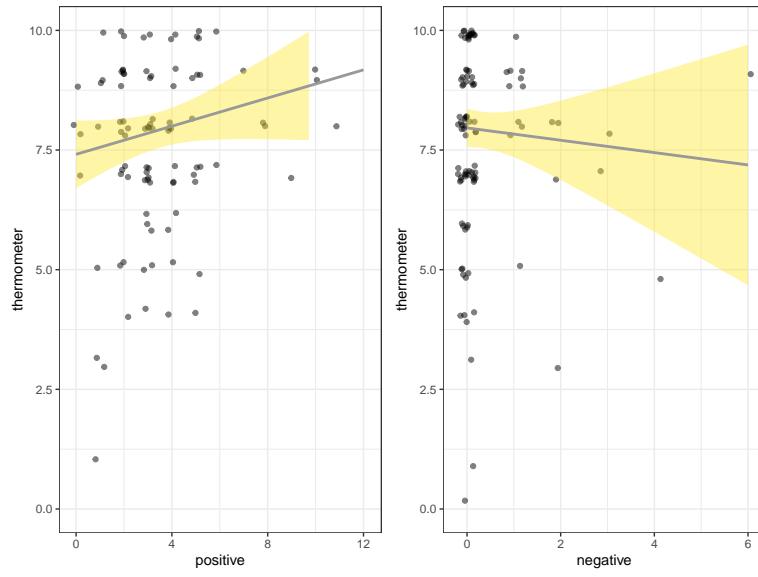


Figure B.7: Correlation between positive and negative text sentiments for generated texts of praise for empathetic behavior with thermometer ratings for people who engage in empathetic behavior plotted as linear regression `lm` in R with 95% confidence band.

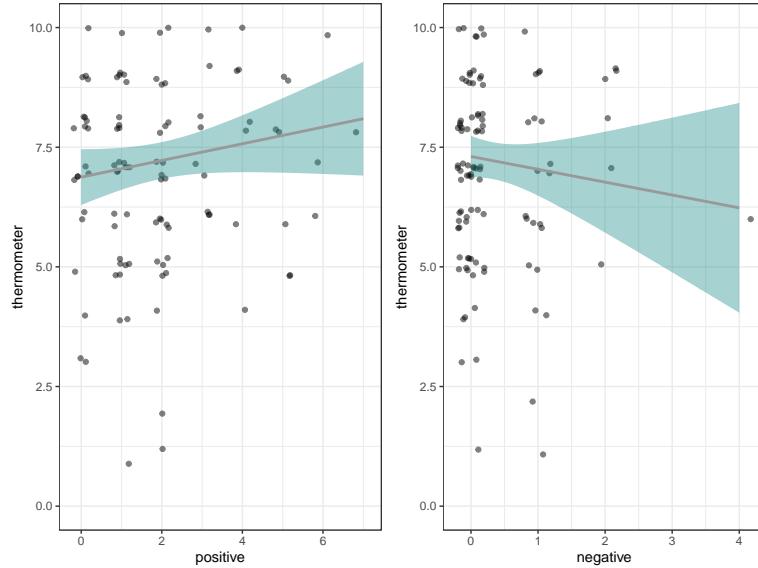


Figure B.8: Correlation between positive and negative text sentiments for generated texts of praise for objective behavior with thermometer ratings for people who engage in objective behavior plotted as linear regression `lm` in R with 95% confidence band.

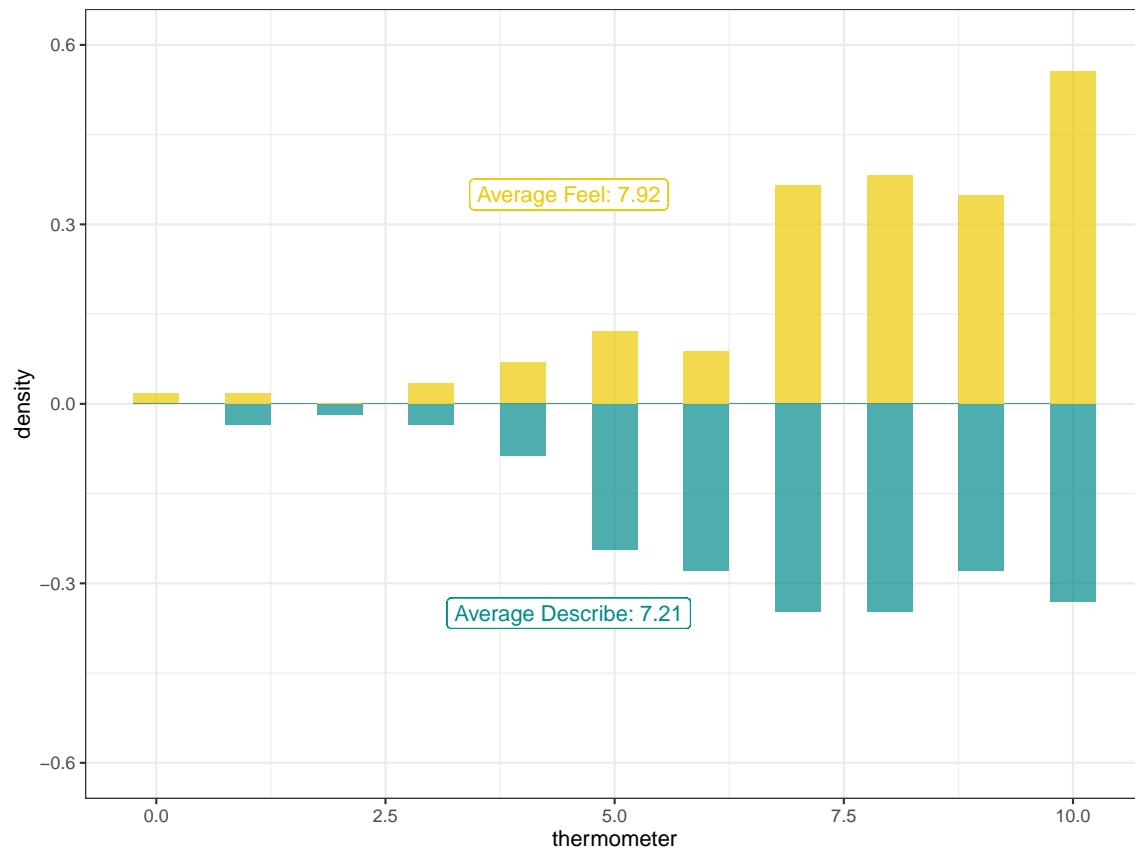
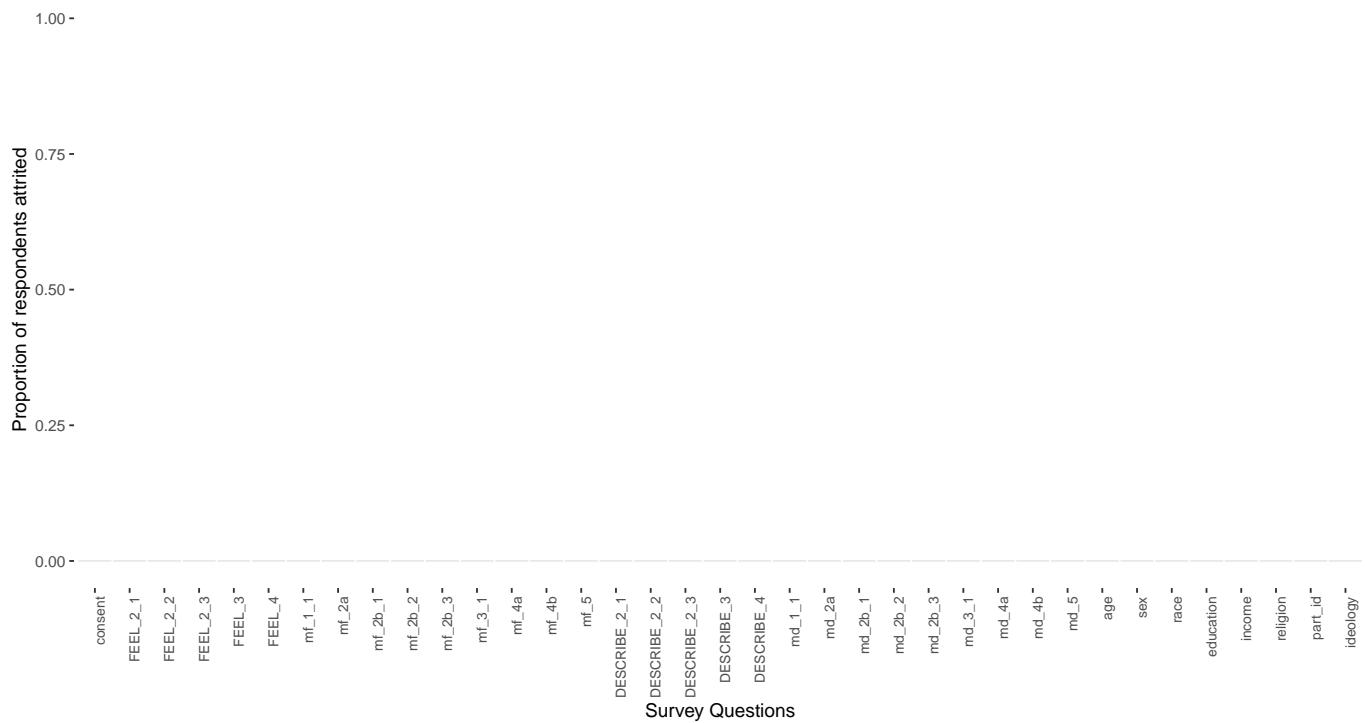


Figure B.9: Distributions of thermometer ratings towards peers who exhibit empathetic behavior (top) and towards peers who exhibit objective behavior (bottom).

**Study 2 Attrition** As demonstrated in Figure B.10, no attrition occurred in Study 2.



**Figure B.10: Attrition across survey questions:** X axis denotes survey questions in chronological order. Y axis is the proportion of total n attrited, calculated as number of attrited respondents / total n. No attrition occurred in Study 2.

## **B.6 Pilot Study 3: Praise Lowers the Cost of Empathy**

Study 3 was fielded in November 2020 with 328 respondents. The primary purpose of the study was to establish whether peer praise (for empathy) could encourage empathetic behavior. We randomized peer praise for empathetic behavior, peer praise for objective behavior (taken from Study 2) and a control arm of no intervention and measured respondents' choice of task between FEEL and DESCRIBE. Secondarily, we were interested in evaluating whether peer praise might change reservation wages for the FEEL task. Figure B.11 depicts the consort diagram for Study 3.

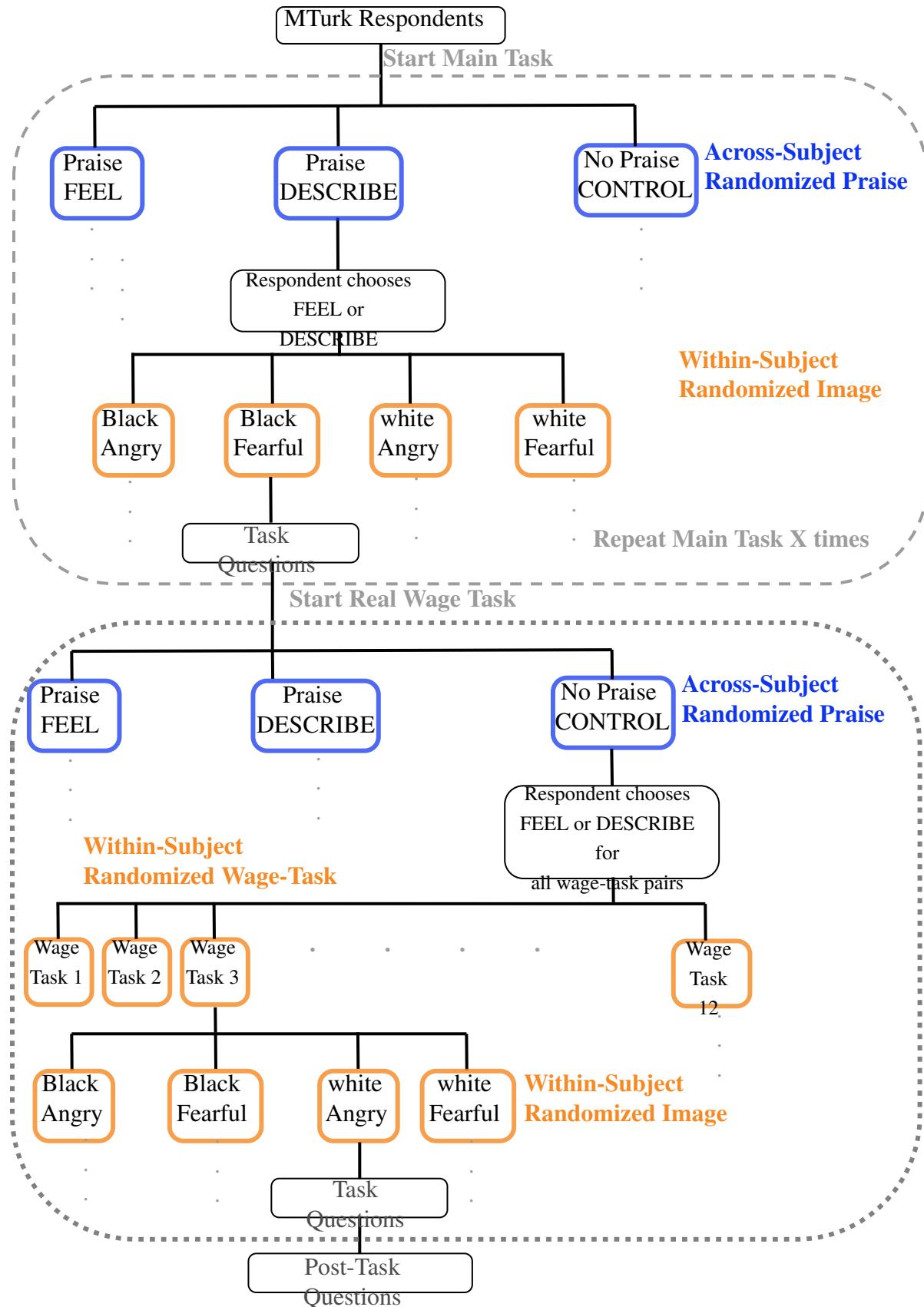


Figure B.11: **Study 3 Consort Diagram.** Peer praise for feel, peer praise for describe and control equally randomized throughout.

	Level	N	%
Sex	Female	99	30.2
	Male	153	46.6
	other	1	0.3
	Missing	75	22.9
Party	Democrat	40	12.2
	Independent	30	9.1
	Lean Democrat	25	7.6
	Lean Republican	21	6.4
	Republican	60	18.3
	Strong Democrat	32	9.8
	Strong Republican	45	13.7
Ideology	Missing	75	22.9
	Conservative	32	9.8
	Liberal	49	14.9
	Moderate	42	12.8
Slight	Slightly conservative	26	7.9
	Slightly liberal	28	8.5
	Very conservative	33	10.1
	Very liberal	43	13.1
	Missing	75	22.9
Race	white	180	54.9
	Asian	1	0.3
	Black or African American	48	14.6
	Hispanic or Latino	2	0.6
	Native Hawaiian or Pacific Islander	10	3.0
Education	Other	9	2.7
	Missing	78	23.8
	Associate degree	23	7.0
	Bachelor's degree (BA/BS)	122	37.2
	High school or equivalent (GED)	23	7.0
Master's	Master's degree (MA/MS/MBA)	54	16.5
	Medical (MD), law (JD) or other doctoral degree (PhD)	2	0.6
	Some college, but did not complete a degree	25	7.6
	Some high school, but did not graduate	4	1.2
	Missing	75	22.9
Income	100k or more	20	6.1
	25k to less than 50k	75	22.9
	50k to less than 75k	78	23.8
	75k to less than 100k	49	14.9
	Less than 25k	31	9.5
Religion	Missing	75	22.9
	Atheist/agnostic	42	12.8
	Buddhist	2	0.6
	Hindu	2	0.6
	Jewish	6	1.8
Christian	Mormon	2	0.6
	Muslim	4	1.2
	Nothing in particular	33	10.1
	Orthodox (Greek or Russian)	1	0.3
	Protestant	52	15.9
Catholic	Roman Catholic	108	32.9
	Missing	76	23.2
		N	Missing
		Mean	SD
		Min	Q1
		Median	Q3
		Max	
Age		253	75
		36.3	10.48
		21	29
		34	41
		71	

Table B.7: **Study 3 Respondents (Summarizing covariates).** Total number of respondents 328.

When primed with praise for the feel task, respondents are 4.4% ( $p=0.023$ , estimate=0.044,  $t=2.275$  CI[0.006, 0.082]) more likely to select the Feel task (baseline is 0.391) than com-

	<b>Log Odds</b>	<b>95% CI</b>	<b>Odds Ratio</b>	<b>95% CI</b>
<b>Intercept</b>	-0.442	[-0.625,-0.259]	0.643	[0.535,0.772]
<b>Peer praise for empathy (v. control)</b>	0.182	[0.025,0.339]	1.200	[1.025,1.404]

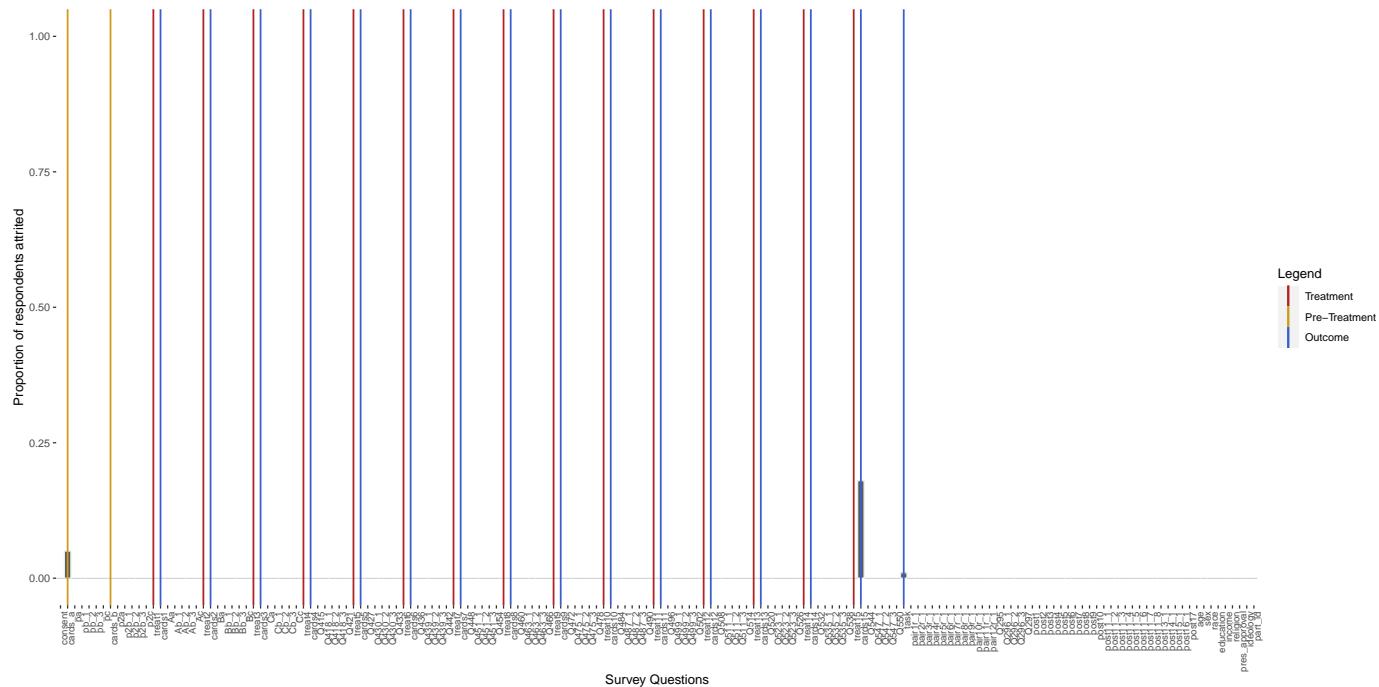
Table B.8: Peer praise for empathy effect on choosing FEEL in main behavioral empathy task, compared to control condition.

	<b>Log Odds</b>	<b>95% CI</b>	<b>Odds Ratio</b>	<b>95% CI</b>
<b>Intercept</b>	-0.367	[-0.55,-0.183]	0.693	[0.577,0.832]
<b>Peer praise for empathy (v. praise-describe)</b>	0.106	[-0.051,0.264]	1.112	[0.951,1.302]

Table B.9: Peer praise for empathy effect on choosing FEEL in main behavioral empathy task, compared to peer praise Describe.

pared to respondents who receive Control (no praise). When compared to the praise-describe condition, respondents primed with praise for the feel task, respondents are 2.6% ( $p=0.156$ , estimate=0.025,  $t=1.419$ , CI[−0.01, 0.061]) more likely to select the Feel task (praise-describe baseline is 0.409) than compared to respondents who receive praise for the describe task (though this is not statistically significant at  $\alpha = 0.05$ ). In tables B.8 and B.9 we further report the log odds.

**Study 3 Attrition** Attrition evaluation plot for Study 3 is presented in Figure B.12.



**Figure B.12: Attrition across survey questions:** X axis denotes survey questions in chronological order. Blue vertical lines mark outcome questions: open-ended, three short words, and a feeling thermometer, which followed the behavioral empathy tasks. Orange vertical line represents pre-treatment practice rounds, administered before the behavioral empathy tasks. Red vertical lines mark randomization of peer praise. Y axis is the proportion of total n attrited, calculated as number of attrited respondents / total n.

A total of 75 respondents attrited from the survey. Of those, 18.7% attrited during the first set of instructions, 34.7% attrited during the practice round, and 21.3% attrited during the post task questions. Attrition is not associated with praise treatment, or randomization of images. Respondents who were randomly given the peer praise for empathy were 0.5% less likely to attrite (baseline is 0.01) than compared to respondents who received the Control (estimate=-0.005,  $t=-1.644$ ,  $p=0.101$ , CI[-0.011, 0.001]). Respondents who saw an image with a black person, were 0.2% less likely to attrite (baseline is 0.007) than compared to respondents who received an image with a white person (estimate=-0.002,  $p=0.377$ ,  $t=-0.8854$ , CI[-0.006, 0.002]). Respondents who saw an image with an angry person, were 0.1% less likely to attrite (baseline is 0.006) than compared to respondents who received an image with a fearful person (estimate=-0.0006,  $p=0.775$ ,  $t=-0.286$ , CI[-0.005, 0.004]).

**Study 3 Robustness checks** It could be that respondents who are peer praised into selecting the empathy task are in fact simply doing a less good job (so responding to the peer praise and then selecting to do less work afterwards). Here, we conduct a few empirical (observational) tests to try to see if respondents are indeed taking “short cuts”. In our first test, we check if respondents who chose the empathy task under the peer praise treatment are similarly likely in using diverse (unique) words (“Unique tokens”) compared with respondents who chose the empathy task under the control treatment. In our second test, we consider if respondents who chose the empathy task under treatment are more likely to use words from the peer praise wordcloud (“Proportion of wordcloud”) – which would suggest short-cutting as well through simply applying words presented. In our last test, we check if the sentiment of words written in the empathy task is similar in the peer-praise group compared to the control group; if the former set of words are less positive, then it might suggest that respondents are actually not actually conducting the empathy task in the same manner. Our findings from the three tests are presented in Table B.10 and suggest that there does not seem to be evidence of shortcutting.

DV: Unique tokens			DV: Proportion of wordcloud			DV: Text sentiment		
Estimate	s.e.	p	Estimate	s.e.	p	Estimate	s.e.	p
Intercept	5.438	0.165	7.56e-237	0.164	0.013	1.03e-35	-0.2	0.028
Peer praise	0.102	0.142	0.473	0.009	0.013	0.48	-0.016	0.032

Table B.10: Testing for shortcutting. Each test is an OLS coefficient test from OLS regression of the DV on Peer Praise with clustered standard errors at the individual level.

### B.6.1 Explorations of other mechanisms for peer praise on empathy

In a short follow up study to Study 3 we also measured respondent reported anxiety randomly either before or after the tasks (one main task, one reservation wage task). We consider the difference in measured anxiety for control group respondents who chose the empathy task each time with the respondents who chose the objective task each time. If respondents become more anxious after choosing the empathy task then we should see that their change in anxiety values should be higher than their colleagues who chose the objective task each time (change in anxiety was measured as pre minus post). As this is an observational exploration, we further control for respondent sex, age, education, race and party. Table B.11 reports this analysis, and suggests that there is no evidence in support of the empathy task correlating with an increase in anxiety (coefficient on “Choose Empathy over Objective” is not significantly different from zero).

	Estimate	s.e.	p
<b>Intercept</b>	0.8892	0.1896	0.0000
<b>Choose Empathy over Objective</b>	-0.0224	0.0732	0.7593

Table B.11: Change in **anxiety** after choosing Empathy over Objective. OLS regression of Change in anxiety regressed on choosing Empathy Objective controlling for sex, age, education, race and party. Coefficient of interest is regression coefficient test for Choose Empathy.

To see if respondents alleviate anxiety of empathy through peer praise, we further explored changes in reported anxiety among respondents who received either peer praise for empathy or control and who *only chose the empathy task* (comparing treatment effects on changes in anxiety while holding the task chosen constant). If it were the case that peer praise alleviates anxiety around the empathy task, we should see the peer praised group report higher changes in anxiety values compared to the second control. Again, this is an observational exploration, so we control for respondent sex, age, education, race and party. Table B.12 reports these findings, and suggests no evidence towards such a pathway.

	Estimate	s.e.	p
<b>Intercept</b>	0.5604	0.1623	0.0006
<b>Peer praise</b>	0.0589	0.0516	0.2536

Table B.12: Change in **anxiety** after peer praise for empathy

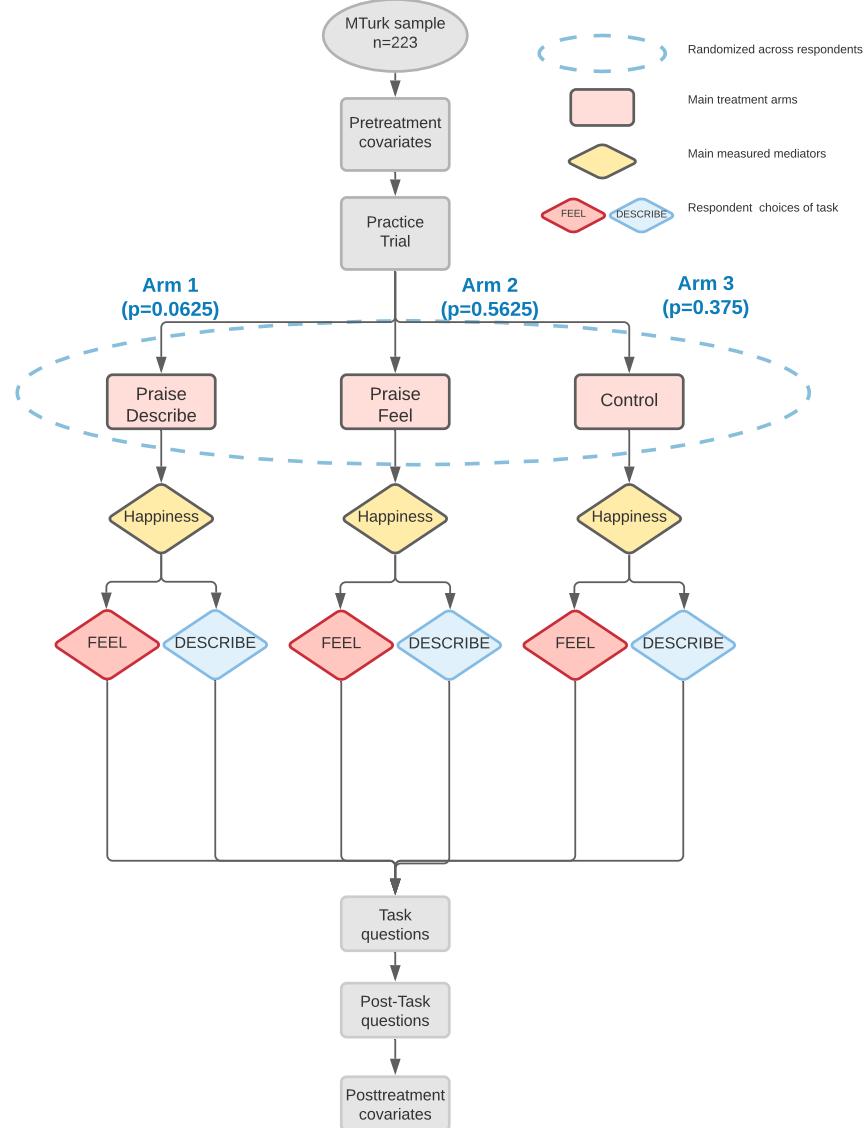


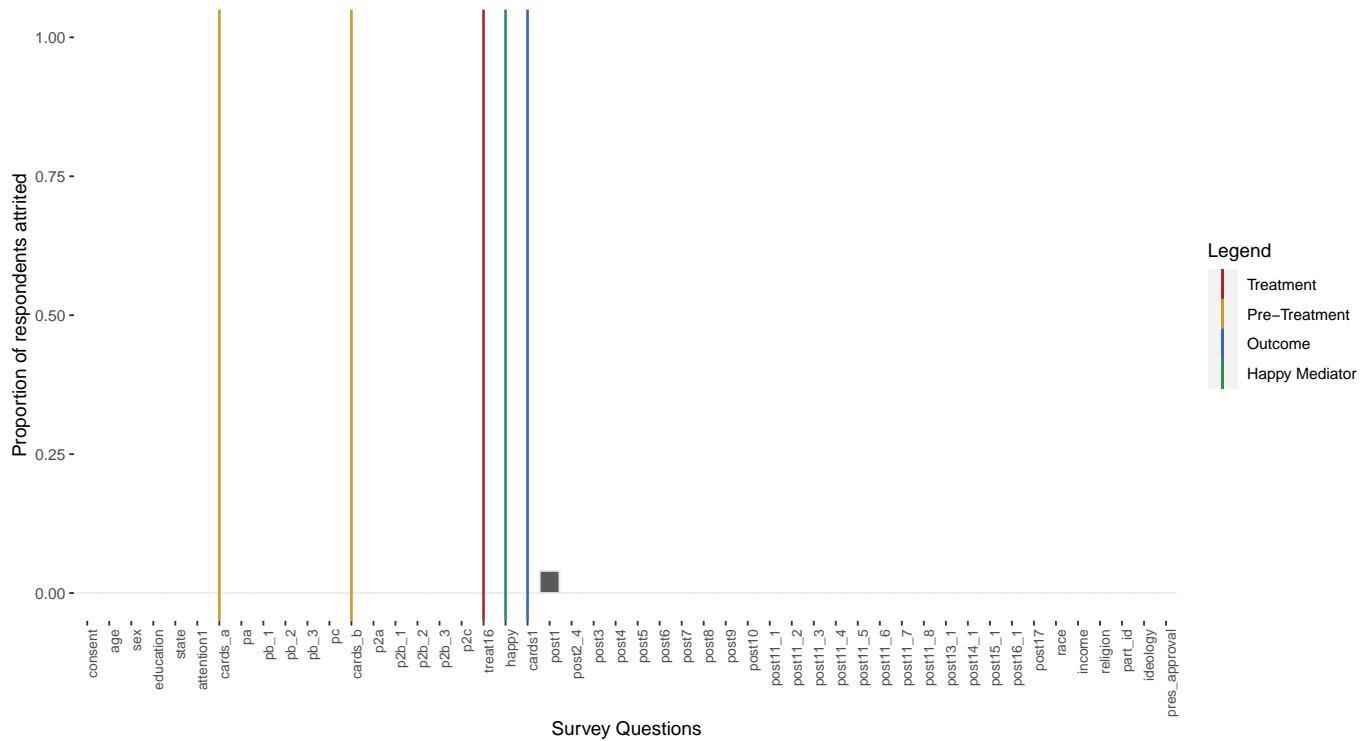
Figure B.13: **Study 4 Consort diagram.** Main arms labeled with probability of assignment in parentheses (probability out of total assignment).

## B.7 Pilot Study 4: Peer praise increases reported happiness

	Level	N	%
Sex	Female	96	43.0
	Male	126	56.5
	other	1	0.4
Party	Democrat	62	27.8
	Independent	30	13.5
Ideology	Lean Democrat	19	8.5
	Lean Republican	9	4.0
	Republican	35	15.7
	Strong Democrat	33	14.8
	Strong Republican	24	10.8
Race	Missing	11	4.9
	Conservative	31	13.9
	Liberal	58	26.0
	Moderate	34	15.2
	Slightly conservative	14	6.3
Education	Slightly liberal	21	9.4
	Very conservative	14	6.3
	Very liberal	40	17.9
	Missing	11	4.9
	white	156	70.0
Income	Asian	2	0.9
	Black or African American	29	13.0
	Native Hawaiian or Pacific Islander	15	6.7
	Other	9	4.0
	Missing	12	5.4
Religion	Associate degree	14	6.3
	Bachelor's degree (BA/BS)	126	56.5
	High school or equivalent (GED)	21	9.4
	Master's degree (MA/MS/MBA)	38	17.0
	Some college, but did not complete a degree	22	9.9
Religion	Some high school, but did not graduate	2	0.9
	100k or more	10	4.5
	25k to less than 50k	66	29.6
	50k to less than 75k	78	35.0
	75k to less than 100k	33	14.8
Religion	Less than 25k	25	11.2
	Missing	11	4.9
	Atheist/agnostic	41	18.4
	Buddhist	4	1.8
	Hindu	1	0.4
Religion	Jewish	3	1.3
	Mormon	3	1.3
	Muslim	3	1.3
	Nothing in particular	29	13.0
	Protestant	38	17.0
Age	Roman Catholic	90	40.4
	Missing	11	4.9
		N	Mean
		SD	Min
		Q1	Median
		Q3	Max
Age		223	37.04
		10.05	20
		30	35
		42	69

Table B.13: **Study 4 Respondents (Summarizing covariates)**. Total number of respondents 223.

**Study 4 Attrition** Attrition evaluation plot for Study 4 is presented in Figure B.14.



**Figure B.14: Attrition across survey questions:** X axis denotes survey questions in chronological order. Orange vertical lines mark pre-treatment practice rounds of behavioral empathy tasks. Red vertical line marks peer praise treatment. Green vertical line marks the Discrete Emotions Questionnaire questions on happiness. Blue vertical line marks outcome questions: open-ended, three short words, and a feeling thermometer, which followed the behavioral empathy tasks. Y axis is the proportion of total n attrited, calculated as number of attrited respondents / total n.

Study 4 collected information on respondent happiness as well as pride (one after the other in the survey). To measure pride, respondents were asked the following set of questions also from the PANAS scale:

- (Emotions) This scale consists of a number of words that describe feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent you feel this way RIGHT NOW.

[scale: very slightly or not at all/ a little/ moderately/ quite a bit/ extremely]

[emotions: satisfied/ proud/ accomplished/ fulfilled ]

A similar index for pride is created as in the happiness index; Figure B.15 presents the distribution of the pride index for peer praise for empathy versus control groups, along with their difference in means. Respondents in the peer praise for empathy group had an average of 0.487 units bump upwards in the pride index compared to the control group respondents.

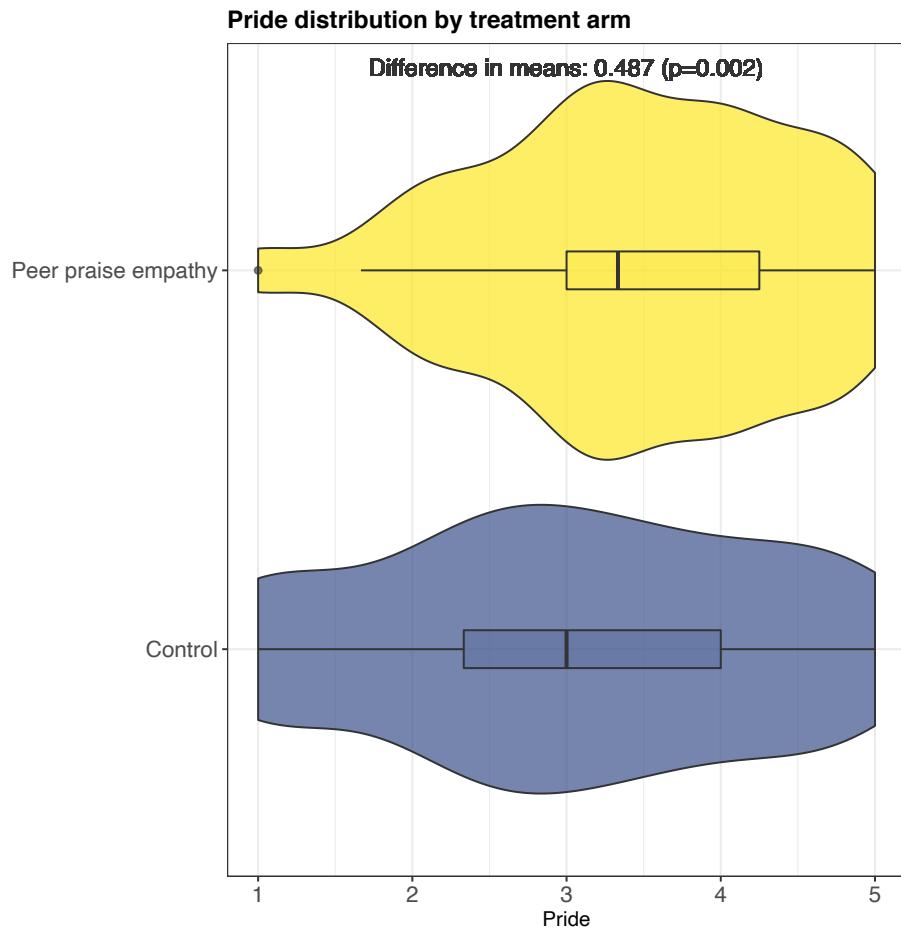


Figure B.15: Pride of respondents in peer praise (for empathy) and control groups. Difference in means (two sample t) test estimate: (estimate=0.487,  $t=3.113$ ,  $p=0.002$ , CI[0.179, 0.795]). Boxplot Control information: minima = 1, lower 25 = 2.33, middle = 3, upper 75 = 4, maxima = 5. Boxplot Peer praise empathy information: minima = 1.67, lower 25 = 3, middle = 3.33, upper 75 = 4.25, maxima = 5.

## B.8 Pilot Study 5: Peer praise increases likelihood of empathy task through increased happiness

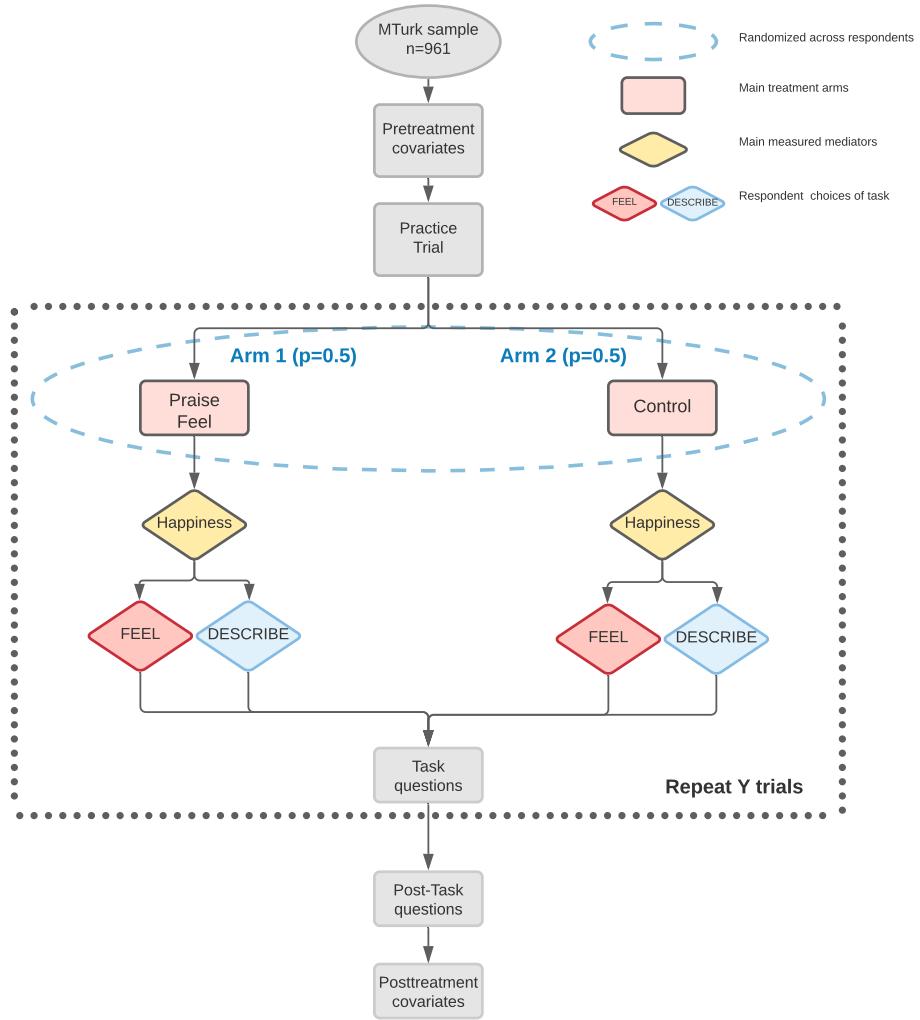


Figure B.16: **Study 5 Consort diagram.** Main arms labeled with probability of assignment in parentheses (probability out of total assignment). Dotted gray space encapsulates the main task, which is repeated for Y trials for each respondent, where for Study 5A Y is 20, while for Study 5B Y is 3.

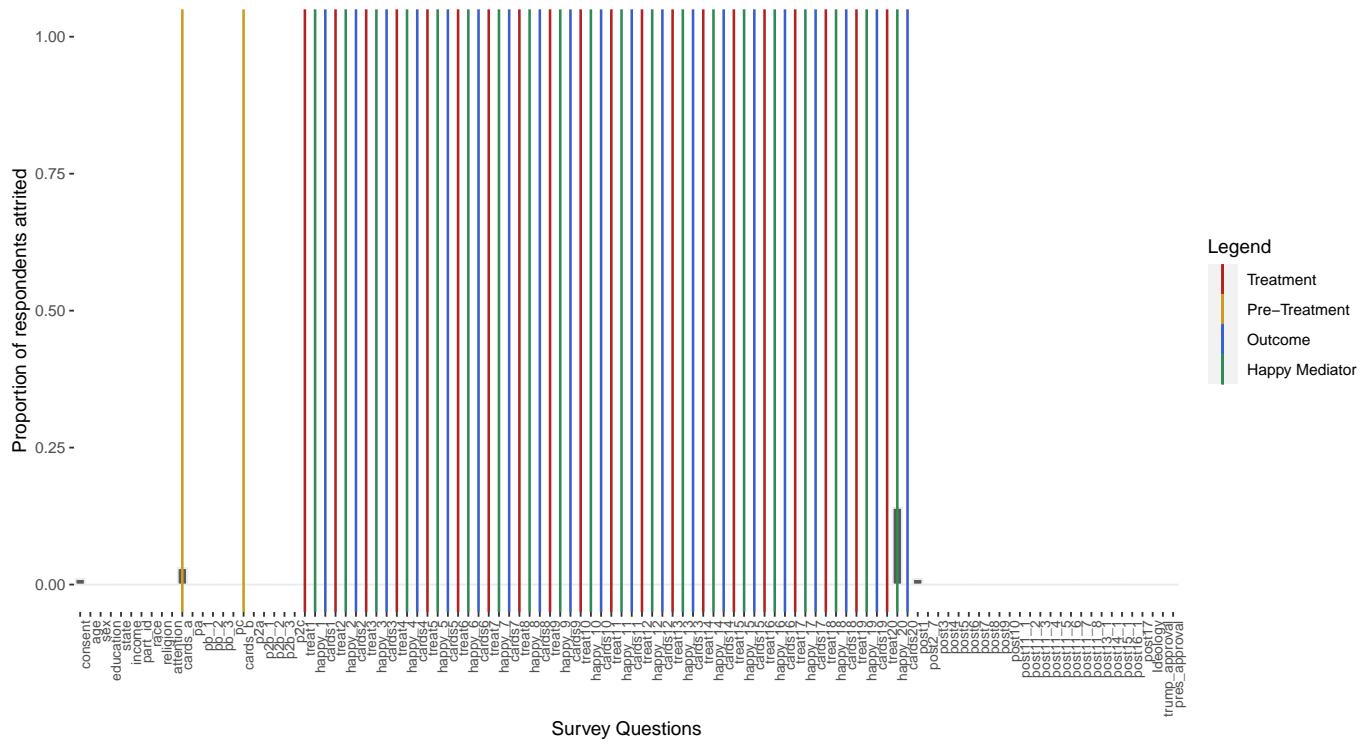
	Level	N	%						
Sex	Female	120	35.6						
	Male	213	63.2						
	other	1	0.3						
	Missing	3	0.9						
Party	Democrat	101	30.0						
	Independent	49	14.5						
	Lean Democrat	39	11.6						
	Lean Republican	23	6.8						
	Republican	35	10.4						
	Strong Democrat	55	16.3						
Ideology	Strong Republican	32	9.5						
	Missing	3	0.9						
	Conservative	39	11.6						
	Liberal	66	19.6						
	Moderate	53	15.7						
	Slightly conservative	21	6.2						
Race	Slightly liberal	36	10.7						
	Very conservative	32	9.5						
	Very liberal	29	8.6						
	Missing	61	18.1						
	Black or African American	74	22.0						
Education	Native Hawaiian or Pacific Islander	14	4.2						
	Other	20	5.9						
	white	218	64.7						
	Missing	11	3.3						
Income	Associate degree	23	6.8						
	Bachelor's degree (BA/BS)	164	48.7						
	High school or equivalent (GED)	26	7.7						
	Master's degree (MA/MS/MBA)	66	19.6						
	Medical (MD), law (JD) or other doctoral degree (PhD)	2	0.6						
Religion	Some college, but did not complete a degree	52	15.4						
	Some high school, but did not graduate	1	0.3						
	Missing	3	0.9						
	100k or more	37	11.0						
	25k to less than 50k	94	27.9						
Religion	50k to less than 75k	127	37.7						
	75k to less than 100k	38	11.3						
	Less than 25k	38	11.3						
	Missing	3	0.9						
	Atheist/agnostic	75	22.3						
Religion	Buddhist	4	1.2						
	Hindu	1	0.3						
	Jewish	11	3.3						
	Mormon	1	0.3						
	Muslim	2	0.6						
Religion	Nothing in particular	39	11.6						
	Orthodox (Greek or Russian)	3	0.9						
	Protestant	54	16.0						
	Roman Catholic	137	40.7						
	Missing	10	3.0						
	N	Missing	Mean	SD	Min	Q1	Median	Q3	Max
Age	334	3	37.23	10.16	22	30	35	42	72

Table B.14: **Study 5A Respondents (Summarizing covariates).** Total number of respondents 337.

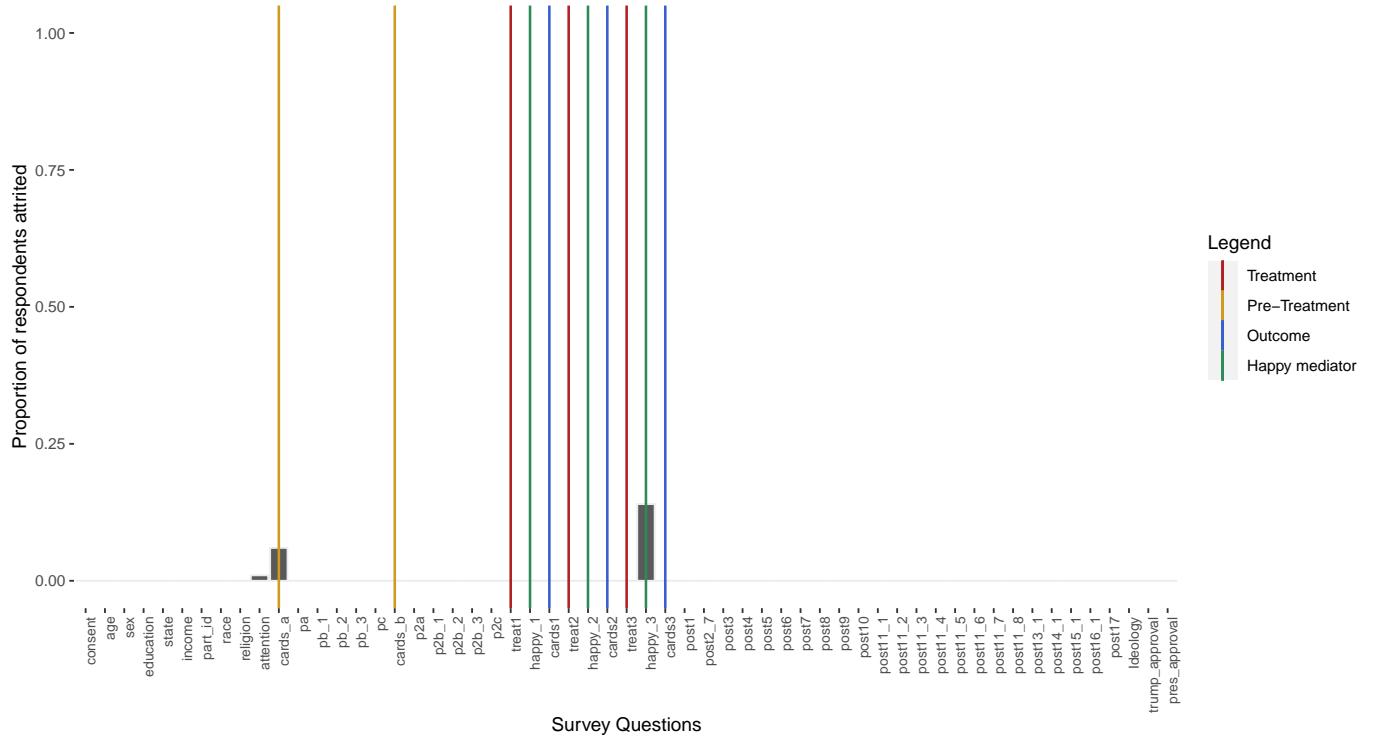
	Level	N	%						
Sex	Female	227	36.4						
	Male	391	62.7						
	other	3	0.5						
	Missing	3	0.5						
Party	Democrat	111	17.8						
	Independent	99	15.9						
	Lean Democrat	80	12.8						
	Lean Republican	60	9.6						
	Republican	84	13.5						
	Strong Democrat	109	17.5						
	Strong Republican	78	12.5						
Ideology	Missing	3	0.5						
	Conservative	76	12.2						
	Liberal	103	16.5						
	Moderate	86	13.8						
Race	Slightly conservative	47	7.5						
	Slightly liberal	61	9.8						
	Very conservative	55	8.8						
	Very liberal	67	10.7						
	Missing	129	20.7						
Education	Asian	5	0.8						
	Black or African American	96	15.4						
	Native Hawaiian or Pacific Islander	25	4.0						
	Other	23	3.7						
	white	455	72.9						
Income	Missing	20	3.2						
	Associate degree	48	7.7						
	Bachelor's degree (BA/BS)	290	46.5						
	High school or equivalent (GED)	61	9.8						
	Master's degree (MA/MS/MBA)	121	19.4						
	Medical (MD), law (JD) or other doctoral degree (PhD)	9	1.4						
	No schooling completed	1	0.2						
Religion	Some college, but did not complete a degree	87	13.9						
	Some high school, but did not graduate	4	0.6						
	Missing	3	0.5						
	100k or more	61	9.8						
Age	25k to less than 50k	191	30.6						
	50k to less than 75k	187	30.0						
	75k to less than 100k	95	15.2						
	Less than 25k	87	13.9						
	Missing	3	0.5						
Religion	Atheist/agnostic	129	20.7						
	Buddhist	8	1.3						
	Hindu	5	0.8						
	Jewish	11	1.8						
	Mormon	2	0.3						
	Muslim	16	2.6						
	Nothing in particular	84	13.5						
Race	Orthodox (Greek or Russian)	4	0.6						
	Protestant	117	18.8						
	Roman Catholic	237	38.0						
	Missing	11	1.8						
	N	Missing	Mean	SD	Min	Q1	Median	Q3	Max
Age	621	3	37.62	10.49	19	30	35	42	73

Table B.15: **Study 5B Respondents (Summarizing covariates).** Total number of respondents 624.

**Study 5 Attrition** Attrition evaluation plots for 5A and 5B are presented in Figures B.17 and B.18 respectively.



**Figure B.17: Study 5A: Attrition across survey questions:** X axis denotes survey questions in chronological order. Orange vertical lines mark pre-treatment practice rounds of behavioral empathy tasks. Red vertical line marks peer praise treatment. Green vertical line marks the Discrete Emotions Questionnaire questions on happiness. Blue vertical line marks outcome questions: open-ended, three short words, and a feeling thermometer, which followed the behavioral empathy tasks. Y axis is the proportion of total n attrited, calculated as number of attrited respondents / total n.



**Figure B.18: Study 5B: Attrition across survey questions:** X axis denotes survey questions in chronological order. Orange vertical lines mark pre-treatment practice rounds of behavioral empathy tasks. Red vertical line marks peer praise treatment. Green vertical line marks the Discrete Emotions Questionnaire questions on happiness. Blue vertical line marks outcome questions: open-ended, three short words, and a feeling thermometer, which followed the behavioral empathy tasks. Y axis is the proportion of total n attrited, calculated as number of attrited respondents / total n.

**Sensitivity analysis of mediation** We analyze the mediating effect of happiness on the behavioral empathy task variable using [9] approach for model-based causal mediation analysis; the key assumption required is sequential ignorability. Thus we focus on the sensitivity parameter  $\rho \equiv \text{Corr}(\epsilon_{i2}, \epsilon_{i3})$ ; sequential ignorability implies  $\rho = 0$ . We set  $\rho$  at different values and see how our ACME changes for our Study 5 (pooled) sample. This requires the following assumed usual equations relating outcome ( $Y$ ), treatment ( $T$ ) and mediator ( $M$ ) variables:

$$Y_i = \alpha_1 + \beta_1 T_i + \epsilon_{i1} \quad (1)$$

$$M_i = \alpha_2 + \beta_2 T_i + \epsilon_{i2} \quad (2)$$

$$Y_i = \alpha_3 + \beta_3 T_i + \gamma M_i + \epsilon_{i3} \quad (3)$$

We estimate that when  $\rho$  is around 0.12 the ACME becomes 0. Assume the unobserved (pre-treatment) confounder formulation:

$$\epsilon_{i2} = \lambda_2 U_i + \epsilon'_{i2} \quad (4)$$

and

$$\epsilon_{i3} = \lambda_3 U_i + \epsilon'_{i3} \quad (5)$$

How much does  $U_i$  have to explain for our results to go away? Figure B.19 presents the proportion of original variance explained by  $U_i$ .

We can reparameterize  $\rho$  using  $(\tilde{R}_M^2, \tilde{R}_Y^2)$ :

$$\rho = \frac{\text{sgn}(\lambda_2 \lambda_3) \tilde{R}_M \tilde{R}_Y}{\sqrt{(1 - \tilde{R}_M^2)(1 - \tilde{R}_Y^2)}} \quad (6)$$

where  $R_M^2$  and  $R_Y^2$  are from the original mediator/outcome models. We can set  $(\tilde{R}_M^2, \tilde{R}_Y^2)$  to different values and see how mediation effects change.

Figure B.20 assumes that the confounder influences both the mediator and outcome variables in the same direction.<sup>6</sup> The bold line represents the various combinations of  $R^2$  statistics where the ACME would be 0. In this case the product would have to be 0.014 for the ACME to become 0. Another way to say this is that when the product of the original variance explained by the omitted confounding is 0.014 the point estimate for ACME would be 0.

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<sup>6</sup>This matters because the sensitivity analysis is in terms of the product of  $R^2$  statistics; we assume positive because it seems more likely that something positively affecting the Mediator and the Outcome is happening to create the positive finding for the ACME).

## Sensitivity Analysis (5 pooled)

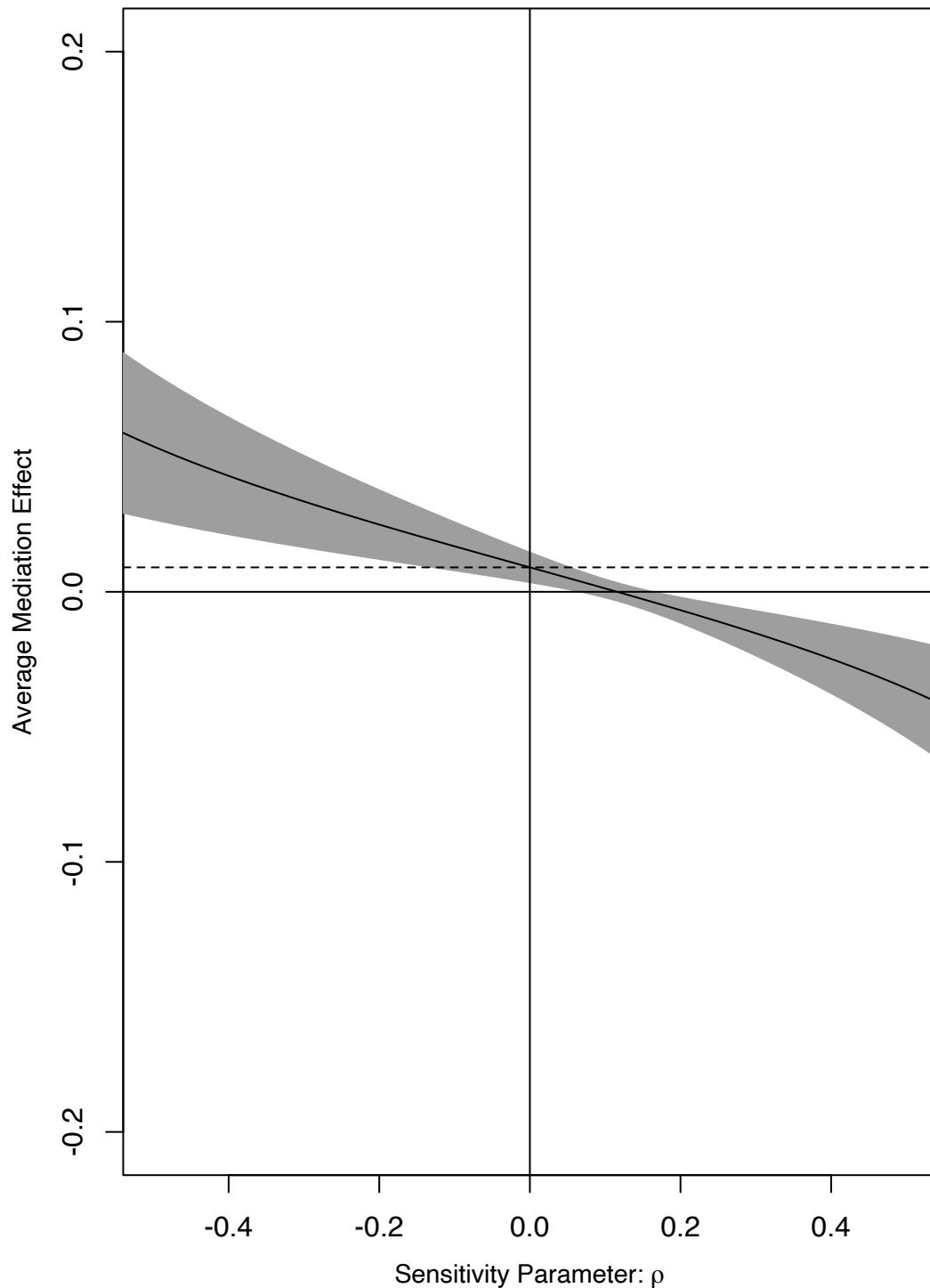


Figure B.19: Proportion of original variance explained by  $U_i$ . 95% confidence intervals plotted.

## Sensitivity Analysis (5 pooled)

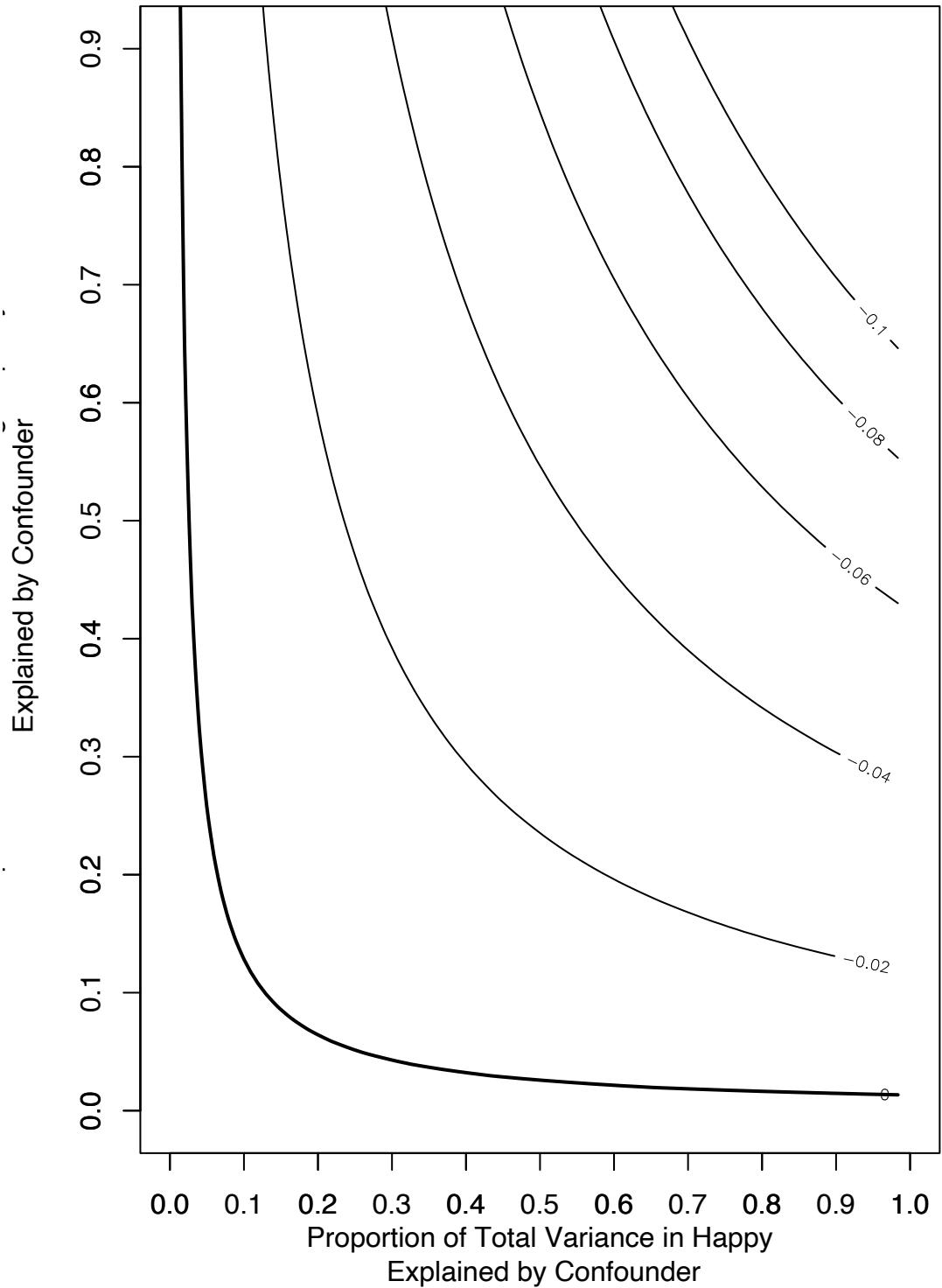


Figure B.20:  $R^2$  statistics for which ACME would be 0.

## B.9 Pilot Study 6: Peer praise and empathy towards racial outgroups

In Pilot Study 6 we field a study with n=340 to pilot our registered H1 hypothesis of peer praise affecting the likelihood of choosing to empathize with an outgroup member.

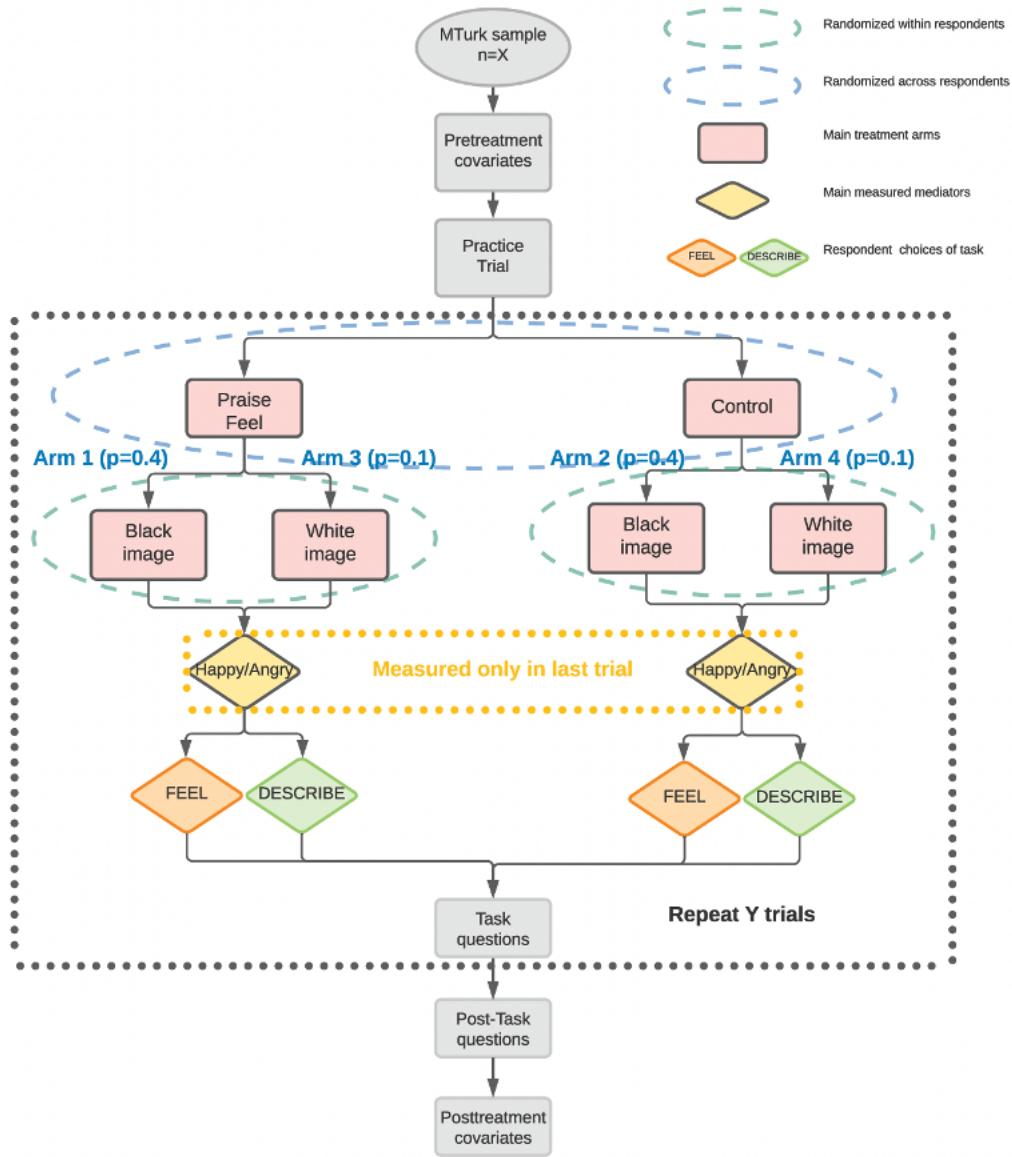


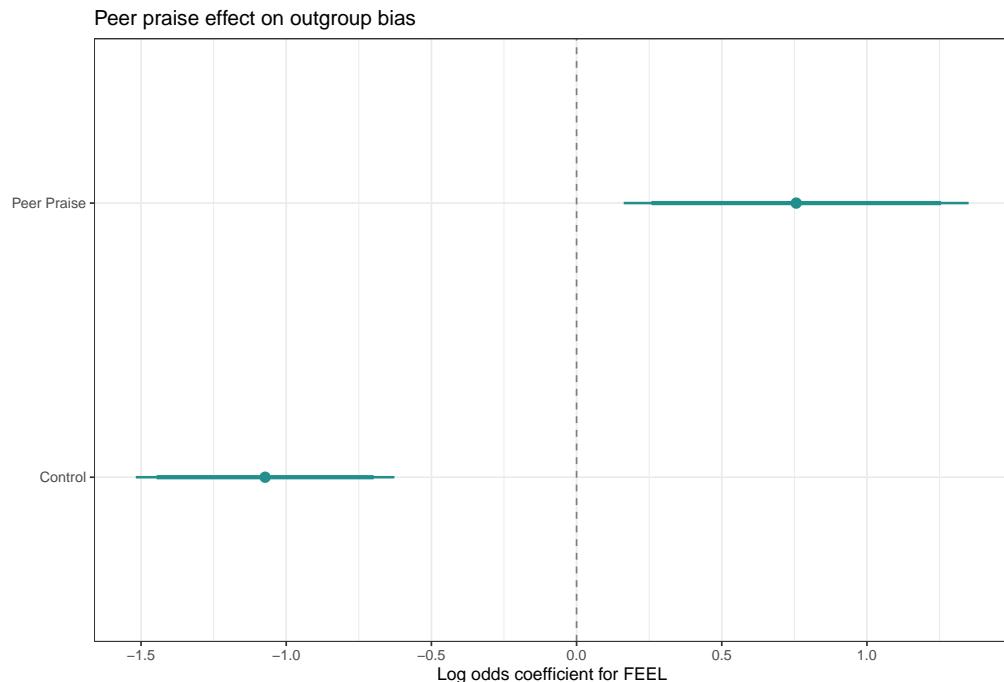
Figure B.21: **Pilot Study 6 Consort diagram.** Main arms labeled with probability of assignment in parentheses (probability out of total assignment). Respondents completed the task in 4 trials. In the last trial emotional mechanisms were tested.

	Level	N
Sex	Female	322
	Male	440
	other	1
	<Missing>	96
Party	Democrat	232
	Independent	96
	Lean Democrat	41
	Lean Republican	30
	Republican	122
	Strong Democrat	211
	Strong Republican	119
	<Missing>	8
	Conservative	147
Ideology	Liberal	186
	Moderate	117
	Slightly conservative	35
	Slightly liberal	48
	Very conservative	124
	Very liberal	112
	<Missing>	90
	American Indian/ Native American	14
	Asian American	40
Race	Black or African American	75
	Hispanic or Latino	30
	Other	4
	White, not-Hispanic	669
Education	<Missing>	27
	Associate degree	28
	Bachelor's degree (BA/BS)	533
	High school or equivalent (GED)	46
	Master's degree (MA/MS/MBA)	200
	Medical (MD), law (JD) or other doctoral degree (PhD)	4
	Some college, but did not complete a degree	35
	Some high school, but did not graduate	4
	<Missing>	9
Income	100k or more	37
	25k to less than 50k	258
	50k to less than 75k	336
	75k to less than 100k	152
	Less than 25k	68
	<Missing>	8
Religion	Atheist/agnostic	50
	Buddhist	6
	Hindu	21
	Jewish	20
	Mormon	2
	Muslim	18
	Nothing in particular	27
	Orthodox (Greek or Russian)	1
	Protestant	82
	Roman Catholic	566
	<Missing>	66

Figure B.22: Pilot Study 6 all Respondents (Summarizing covariates).

	Level	N
Sex	Female	88
	Male	113
	other	0
	<Missing>	17
Party	Democrat	65
	Independent	17
	Lean Democrat	12
	Lean Republican	9
	Republican	21
	Strong Democrat	65
Ideology	Strong Republican	29
	Conservative	43
	Liberal	38
	Moderate	26
	Slightly conservative	8
	Slightly liberal	15
	Very conservative	42
	Very liberal	29
Race	<Missing>	17
	American Indian/ Native American	0
	Asian American	0
	Black or African American	0
	Hispanic or Latino	0
	Other	0
Education	White, not-Hispanic	218
	Associate degree	12
	Bachelor's degree (BA/BS)	124
	High school or equivalent (GED)	18
	Master's degree (MA/MS/MBA)	53
Income	Medical (MD), law (JD) or other doctoral degree (PhD)	1
	Some college, but did not complete a degree	9
	Some high school, but did not graduate	1
	100k or more	12
	25k to less than 50k	68
Religion	50k to less than 75k	79
	75k to less than 100k	37
	Less than 25k	22
	Atheist/agnostic	21
	Buddhist	1
	Hindu	2
	Jewish	3
	Mormon	0
	Muslim	2
	Nothing in particular	9
	Orthodox (Greek or Russian)	1
	Protestant	32
	Roman Catholic	138
	<Missing>	9

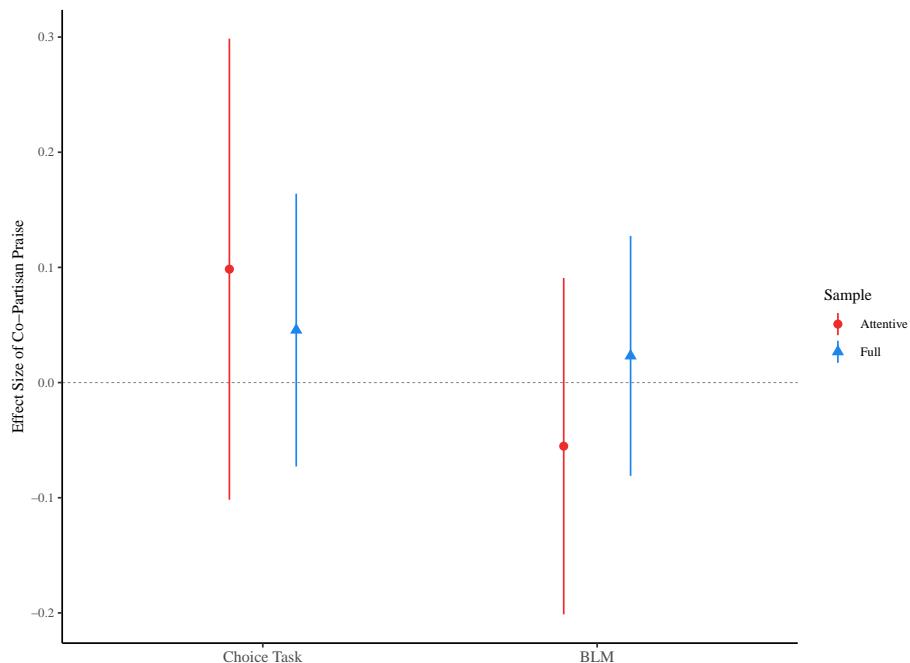
Figure B.23: Pilot Study 6 white Respondents who saw Black images (Summarizing covariates, N=218)



**Figure B.24: Pilot Study 6 main effect: Peer-praise effect on outgroup bias for attentive white respondents, trial 1.** Points plotted at the center of bands are logistic regression coefficients of control (intercept = -1.073) and Peer Praise (=0.756) of choosing empathy for the outgroup regressed on Peer Praise (N=218). Bands are (thick) 90% and (thin) 95% confidence intervals. The baseline odds of choosing FEEL over DESCRIBE is 0.34 times; the odds of choosing FEEL over DESCRIBE if respondents are in the treatment group is 2.13 ( $p=0.01$ ; 203 degrees of freedom; 95% CI [1.18, 3.89]) compared to the control group.

## B.10 Pilot Study 7: Co-partisan peer praise and empathy towards racial outgroups

In Pilot Study 7 we fielded a study with 590 respondents with DLABBS.<sup>7</sup> Respondents were randomly assigned into one of three peer-praise conditions – praise from Democrats, praise from Republicans, and general peer-praise used in the previous pilots. All word-clouds were generated from real praise solicited from real users on MTurk. Respondents were told that “among peers of yours on this platform, Republican/Democrat/[no specification] participants have said they hold favorable feelings towards people who engage in empathetic behavior”.



**Figure B.25: Pilot Study 7 main effect: Peer-praise effect on behavioral empathy task (choice task) and semi-behavioral outcome (BLM).** Points plotted at the center of bands are OLS regression coefficients of dependent variable regressed on Co-Partisan Praise. Full sample model for Choice task has N=267; for BLM N=249. Attentive sample models for Choice task has N=100; for BLM N=94. Bands are 95% confidence intervals.

In our analysis, reported in Figure B.25, we compare respondents who received co-partisan praise (meaning respondents who identify as Democrats and received praise from Democrats and respondents who identify as Republicans and received praise from Republicans, n=110), to respondents in the general praise control (n=198). We regress our co-partisan peer praise treatment over two outcomes of interest: (1) choice of "FEEL" in our behavioral empathy task, and (2) choosing to be redirected to the BLM page at the end of the survey.

<sup>7</sup>Note that we only use 308 respondents in our analysis, as we match respondents who were assigned to praise from Democrat/Republican partisans to their own self-reported party.

	Level	N	%
Gender	Missing	29	4.9
	Female	184	31.2
	Male	367	62.2
	Other/Prefer not to answer	10	1.7
Party		53	9.0
	Democrat	180	30.5
	Other	203	34.4
	Republican	154	26.1
Race	American Indian / Native American	3	0.5
	Asian American	6	1.0
	Black or African American	12	2.0
	Hispanic or Latino	19	3.2
Education	Middle Eastern or Arab	0	0.0
	white, not-Hispanic	527	89.3
	Missing	23	3.9
		28	4.7
Education	Associate's Degree	72	12.2
	B.A. or B.S.	195	33.1
	High school graduate	83	14.1
	J.D.	1	0.2
Education	M.D.	8	1.4
	Master's	155	26.3
	Middle school	0	0.0
	Ph.D.	47	8.0
Education	Some high school	1	0.2

Table B.16: Study 7 Respondents

We find that co-partisan praise increases respondents willingness to choose feel ( $\beta = 0.046$ ), but not at statistically significant levels ( $t=0.769, p=0.443, CI[-0.071, 0.162]$ ). Similarly, co-partisan praise increases respondents' willingness to agree to be redirected to the BLM webpage ( $\beta = 0.023$ ), but not at statistically significant levels ( $t=0.445, p=0.657, CI[-0.079, 0.126]$ ).

## B.11 Scope of peer praise for empathy

Estimated standard errors are clustered at respondent levels and robust, and 90 and 95% confidence intervals are plotted throughout.

### B.11.1 Subgroup analyses

We conduct subgroup analyses drawing on data from Pilots 3, 5, and 6 (details of data used for each analysis in captions of each graphic).

**by Party** Democrats comprise of respondents who reported themselves as “Lean Democrat”, “Democrat” and “Strong Democrat” while Republicans are respondents who reported themselves as “Lean Republican”, “Republican” and “Strong Republican”; Independents are those who reported themselves as “Independent”.

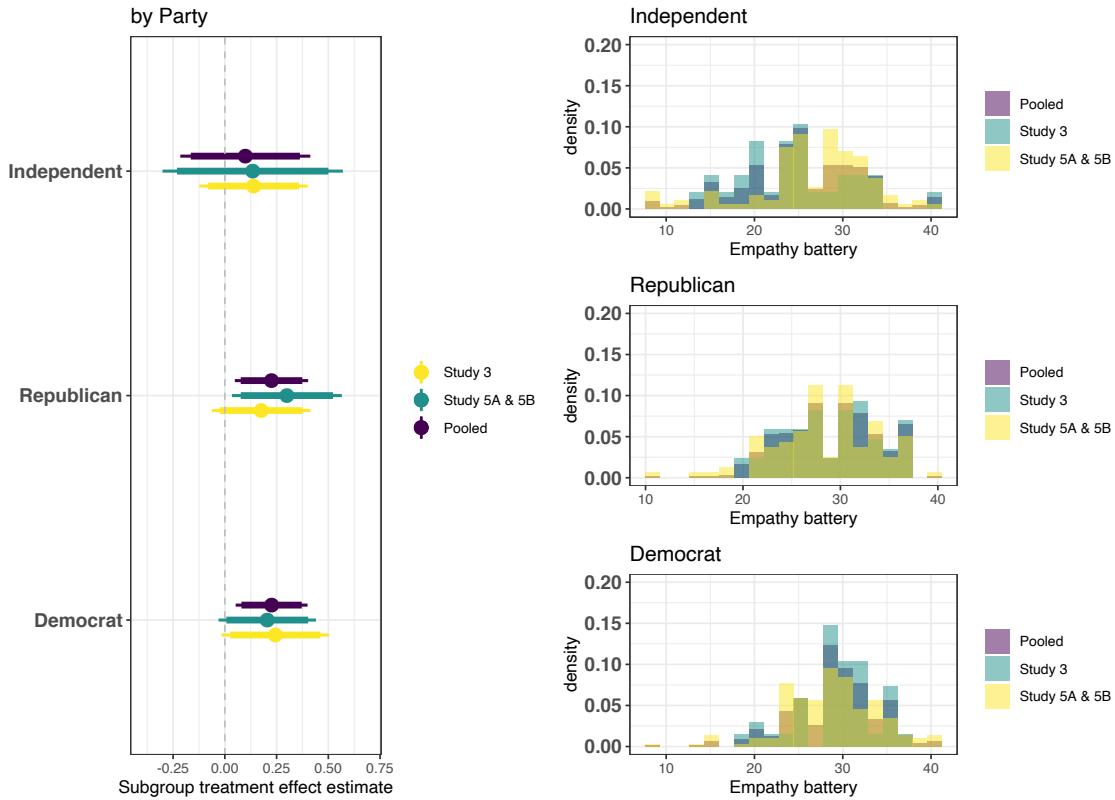


Figure B.26: Left panel: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by party subgroup. Right panel: density distribution of baseline empathy battery score by party subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents (n are used for right-panel density distributions). For Study 3 Democrat, Republican, Independent models: N=1455, n=97; N=1890, n=126; N=1140, n=76. Study 5 Democrat, Republican, Independent models: N=1214, n=408; N=813, n=274; N=333, n=111. Pooled Democrat, Republican, Independent models: N=2669, n=505; N=2703, n=400; N=783, n=141. Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by Trump and Biden approval** Trump approval was measured in Study 3 under the question of presidential approval as Donald Trump was the then president-in-office; in Pilot Studies 5A and 5B to follow Joe Biden had taken office and so two questions were asked – one for presidential approval for Joe Biden, and a second on approval for former President Donald Trump. Figure B.27 presents subgroup analyses for Trump approval while Figure B.28 presents subgroup analyses for Biden approval.

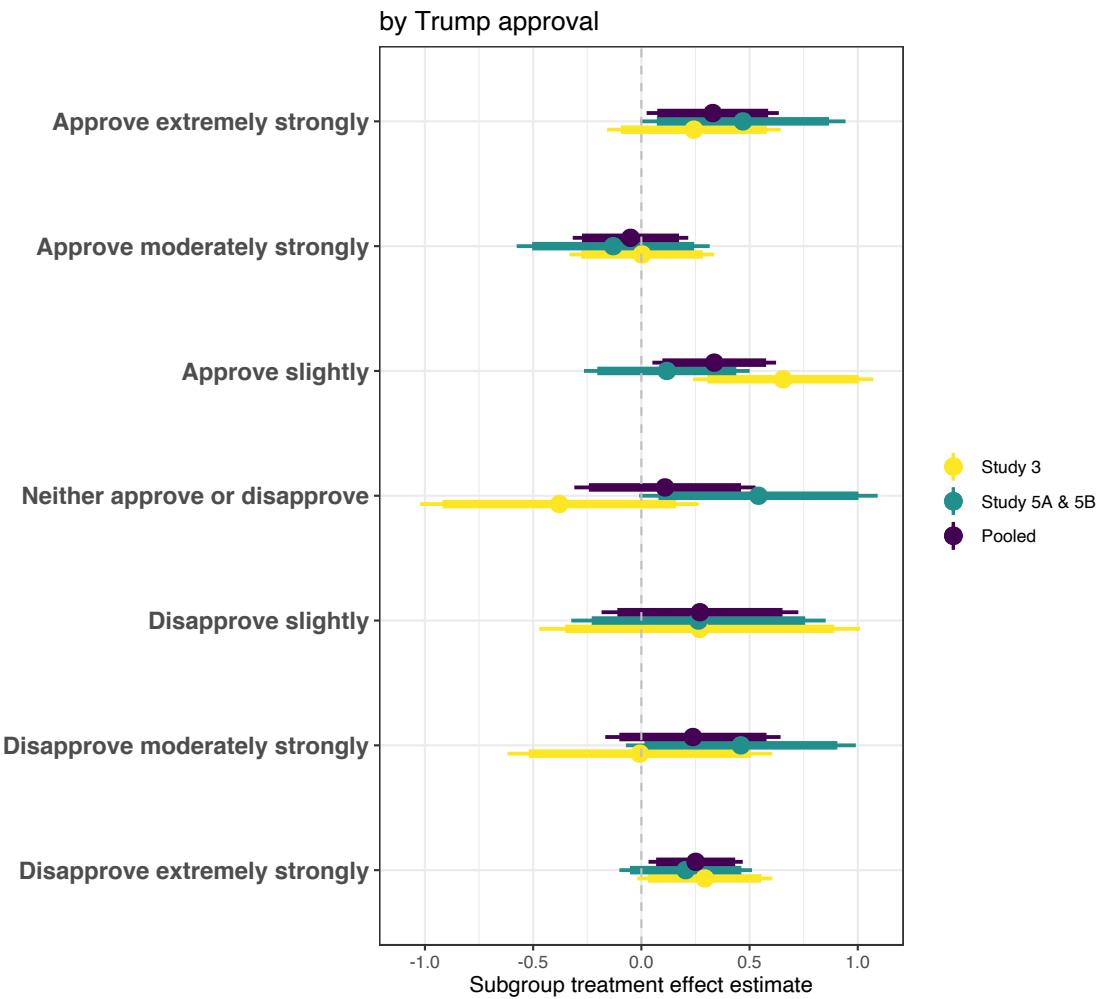


Figure B.27: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Trump approval subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 3 Disapprove extremely strongly down to Approve extremely strongly ( $N=n=$ ): (679,66), (189,19), (123,11), (181,19), (341,36), (567,58), (431,44). For Study 5: (717,239), (213,71), (180,60), (210,70), (380,127), (342,114), (270,90). Pooled: (1396,305), (402,90), (303,71), (391,89), (721,163), (909,172), (701,134). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

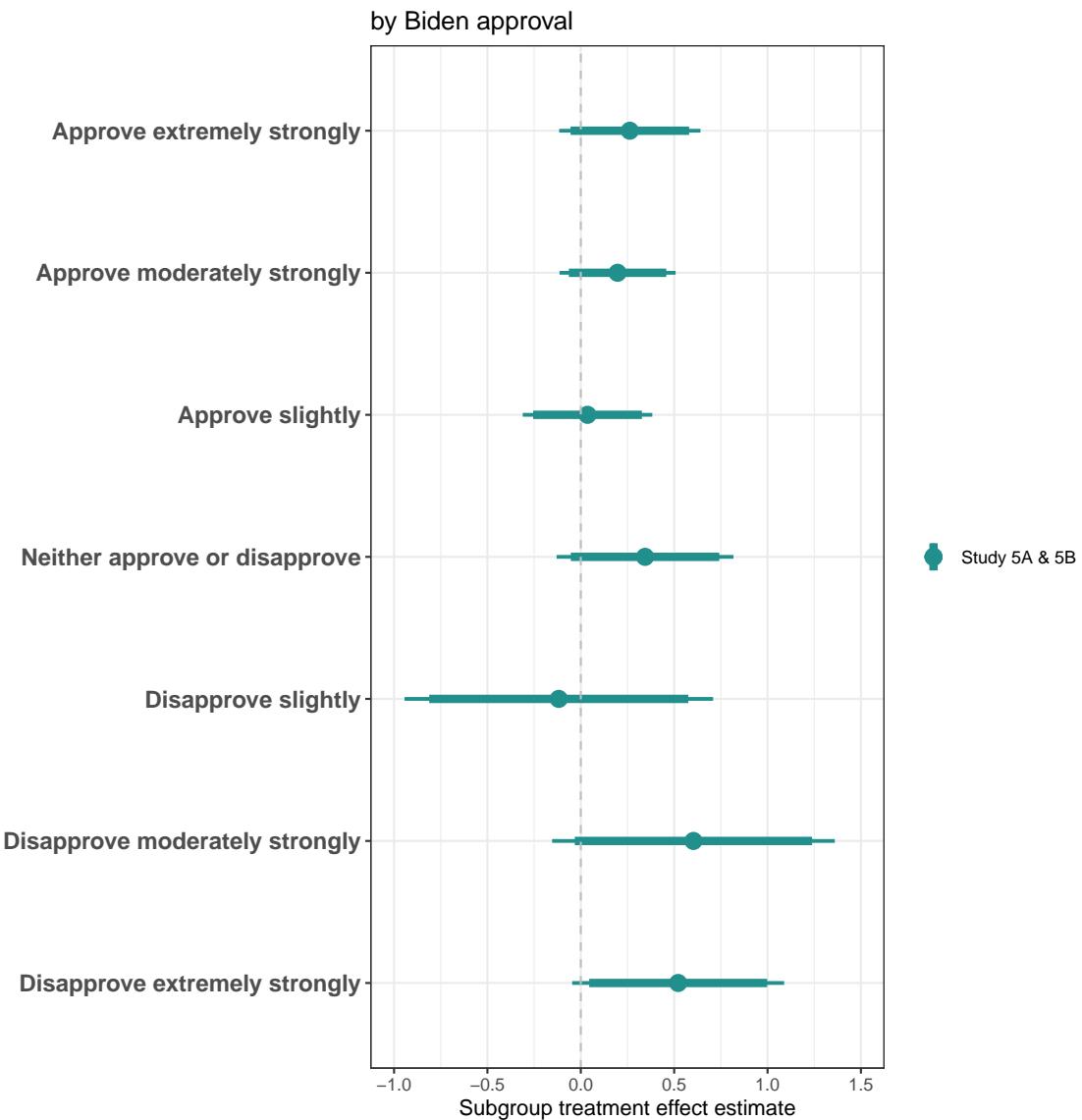


Figure B.28: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Biden approval subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. Data is from Pilot 5. For Study 5 Disapprove extremely strongly down to Approve extremely strongly (N=n=): (201,67), (105,35), (102,34), (318,106), (456,152), (692,231), (438,146). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by Income** There are four income categories: 25k to less than 50k, 50k to less than 75k, 75k to less than 100k, and over 100k income annually. No respondents chose the fifth category, less than 25k. Figure B.29 presents subgroup analyses by income.

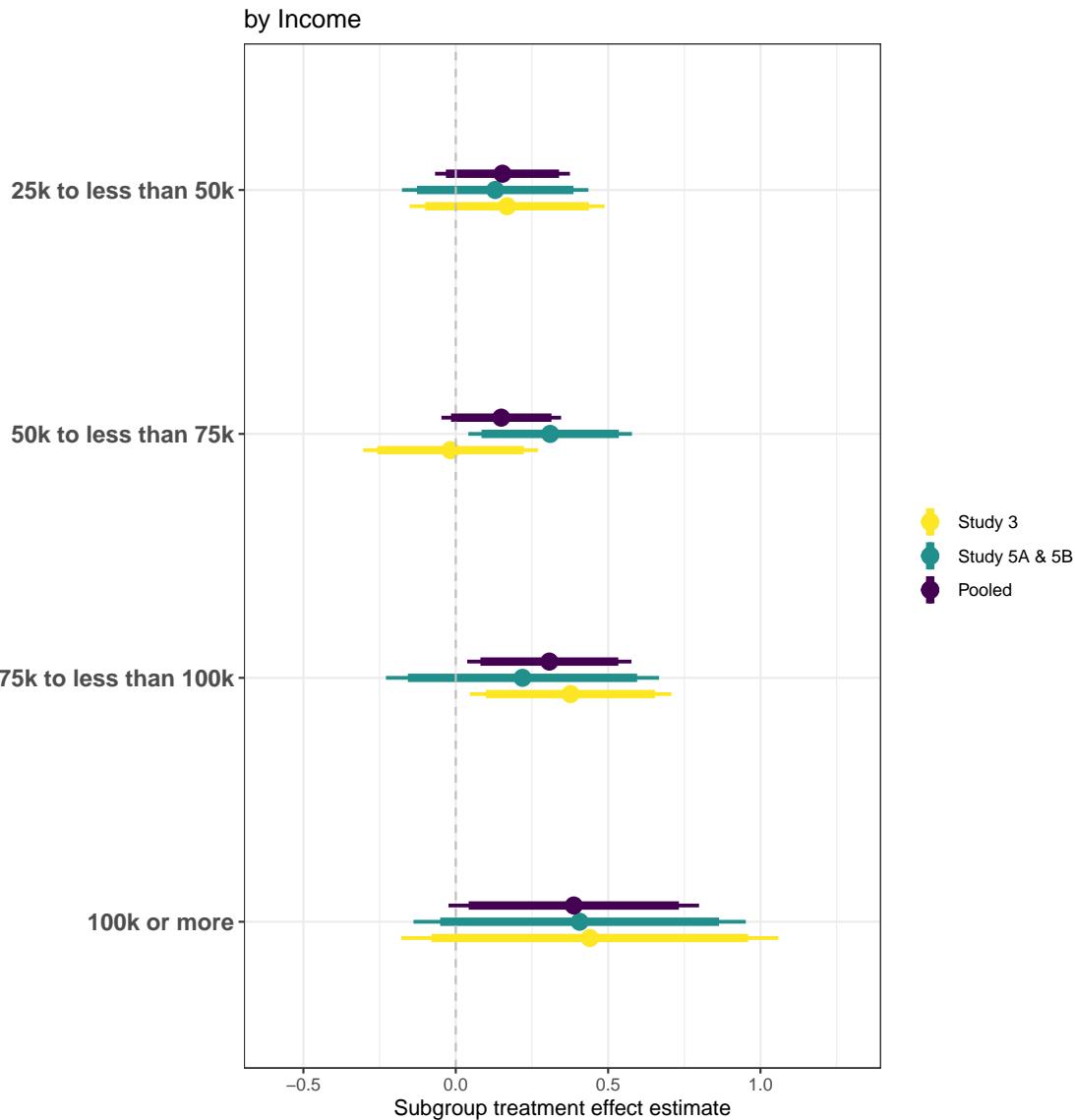


Figure B.29: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Income subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 3 100k or more down to 25k to less than 50k (N=n): (204,20), (488,49), (765,78), (743,75). For Study 5: (246,82), (358,120), (791,266), (676,228). Pooled: (450,102), (846,169), (1556,344), (1419,303). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by Race** Race subgroups presented are Black or African American (“Black”), white, and a combined grouping of Asian, Hispanic, Latinx, Native Hawaiian, Pacific Islander and Other (“Other”) given the small sample sizes of the race subgroups. Figure B.30 presents subgroup analyses by race.

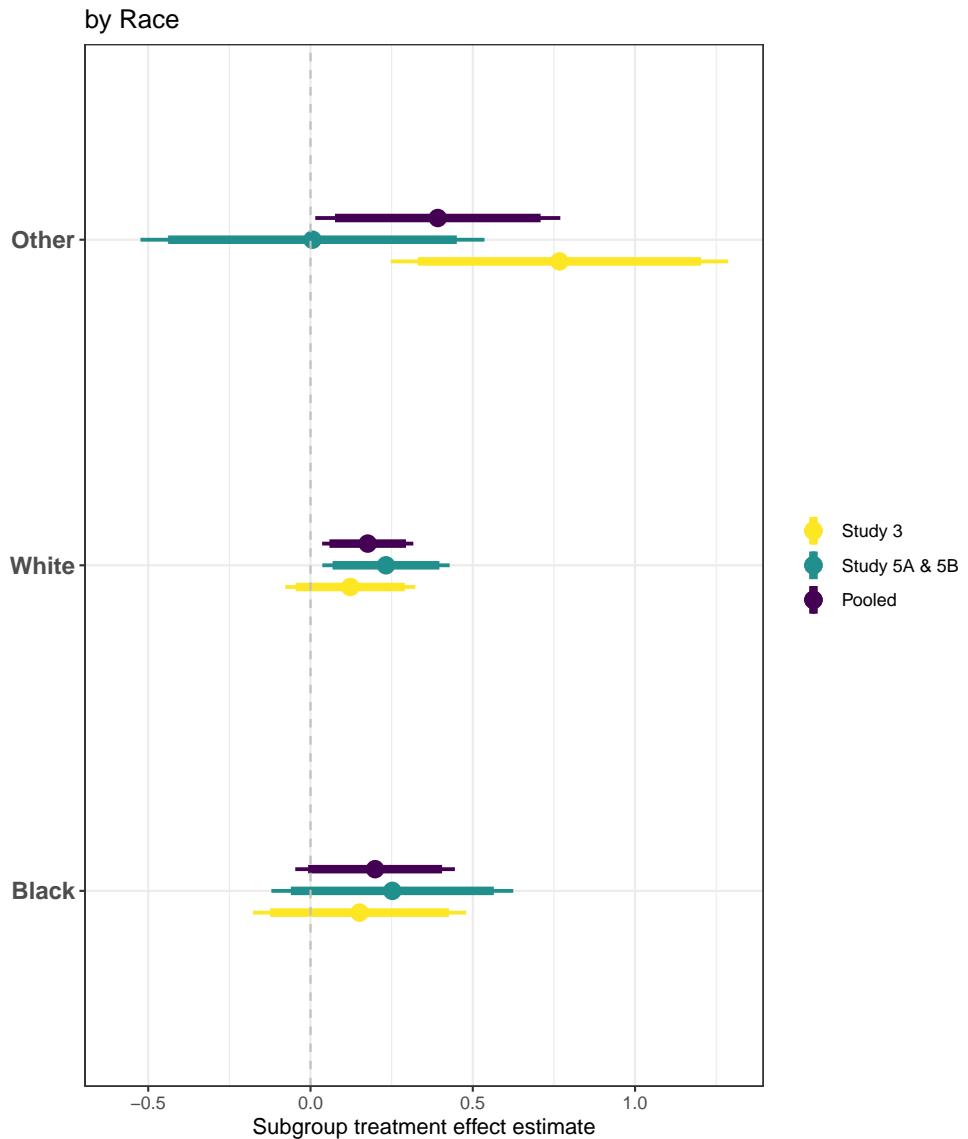


Figure B.30: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Race subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 3 Black, White and Other subgroups (N=n=): (492,48), (1765,180), (229,22). For Study 5: (447,149), (1656,557), (209,71). Pooled: (939,197), (3421,737), (438,93). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by Education** Our most disaggregated coding for education level has too few observations for some categories for within-subgroup estimation of treatment effects, so we aggregate to three general categories, bundling "Some high school, but did not graduate" and "High school or equivalent (GED)" to "HS", combining "Some college, but did not complete a degree" and "Bachelor's degree (BA/BS)" and "Associate degree" to "College", and "Master's degree (MA/MS/MBA)" and "Medical (MD), law (JD) or other doctoral degree (PhD)" combined to "Postgrad". In Study 5B we had an extra category for "no schooling

completed” but since this was a single respondent we drop this category throughout. Figure B.31 presents subgroup analyses by aggregated education level.

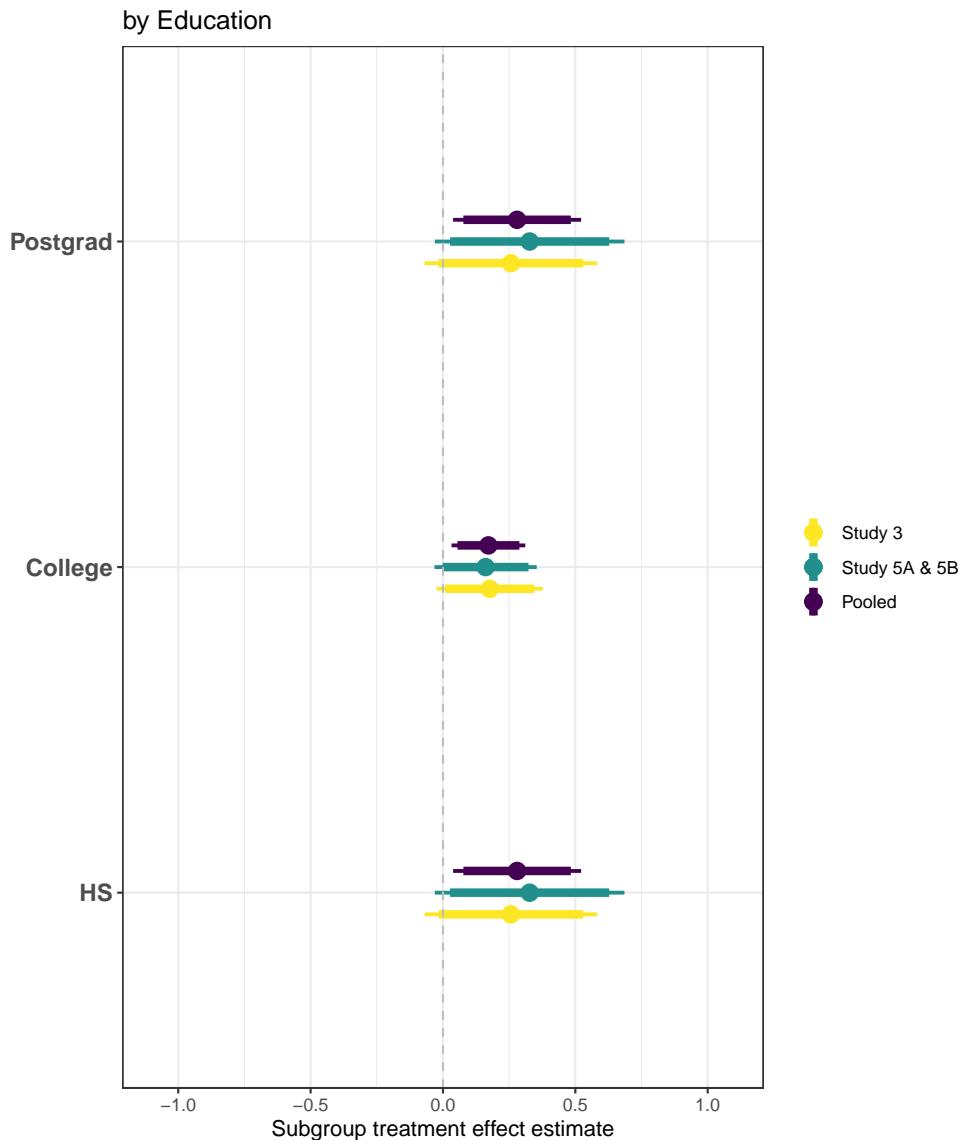


Figure B.31: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Education subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 3 HS, College and Postgrad subgroups (N=n=): (565,56), (1692,170), (565,56). For Study 5: (525,176), (1658,558), (525,176). Pooled: (1090,232), (3350,728), (1090,232). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by Sex** Figure B.32 presents subgroup analyses by respondent sex.

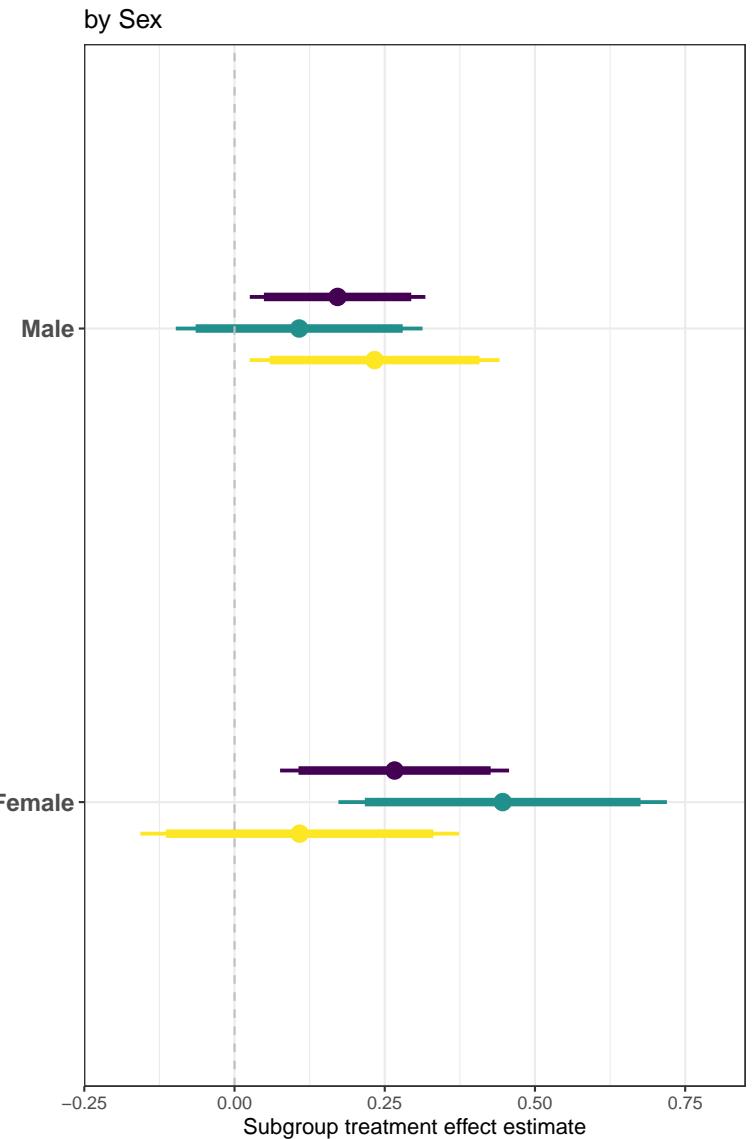


Figure B.32: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Sex subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 3 Female, Male subgroups (N=n): (997,99), (1503,153). For Study 5: (887,298), (1464,492). Pooled: (1884,397), (2967,645). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by baseline empathy** In this section we consider subgroup effects of the peer praise treatment for baseline empathy. There are two reasons an exploration by baseline empathy is of interest; first, respondents who have high baseline measured *ability* or *practice* in being empathetic may be able to respond more to the treatment, but does this preclude individuals who score lower in this baseline? Second, measures of baseline empathy may also be capturing *proclivity* and general tendencies towards preferring empathy-oriented behaviors — a baseline “taste for empathy”. Are we simply moving respondents who display such a taste alone using peer praise? In short, we find suggestive evidence against both argu-

ments – while respondents who score in the highest tercile for baseline empathy are able to respond to the peer praise for empathy treatment, this does not preclude respondents from the middle tercile from doing so as well. Estimates of correlations between treatment and outcome by baseline empathy battery terciles (low, medium and high) presented in Figure B.33.

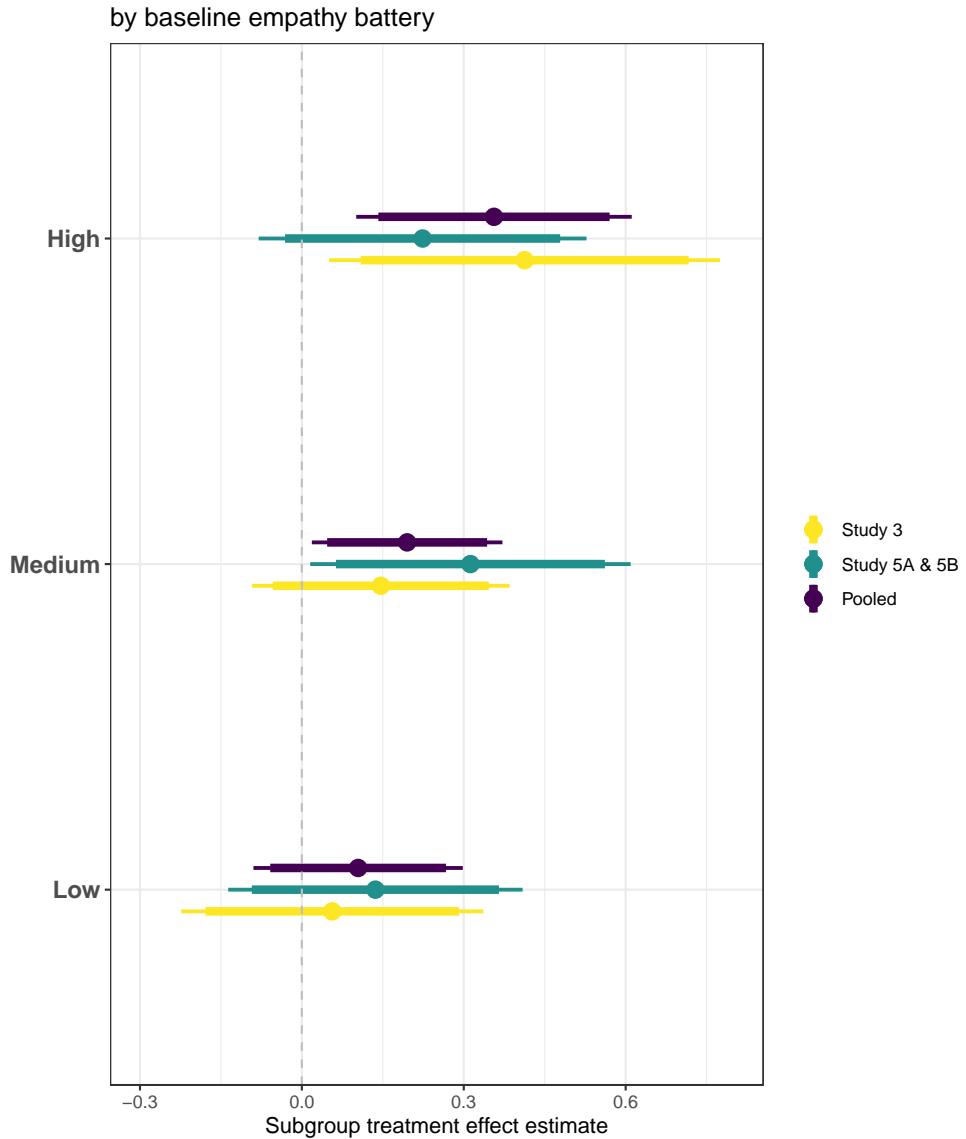


Figure B.33: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by empathy battery tercile subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 3 Low, Medium, High subgroups (N=n=): (861,90), (942,93), (634,61). For Study 5: (884,295), (702,234), (699,233). Pooled: (1745,385), (1833,390), (1144,231). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

**by Attentiveness** We look at subgroup effects by respondent attentiveness in Pilot Studies 5A and 5B (where the peer praise and task choice outcome are both measured for respondents over several trials) and look at attentive (respondents who pass the multiple choice attentionMC and grid attentionG attention checks), somewhat attentive (pass only attentionMC or attentionG but not both) and inattentive respondents (pass neither check). See Appendix Section C.1.4 for details. Figure B.34 presents estimated treatment effects of peer praise for empathy on choosing the empathy task within each of these subgroups.

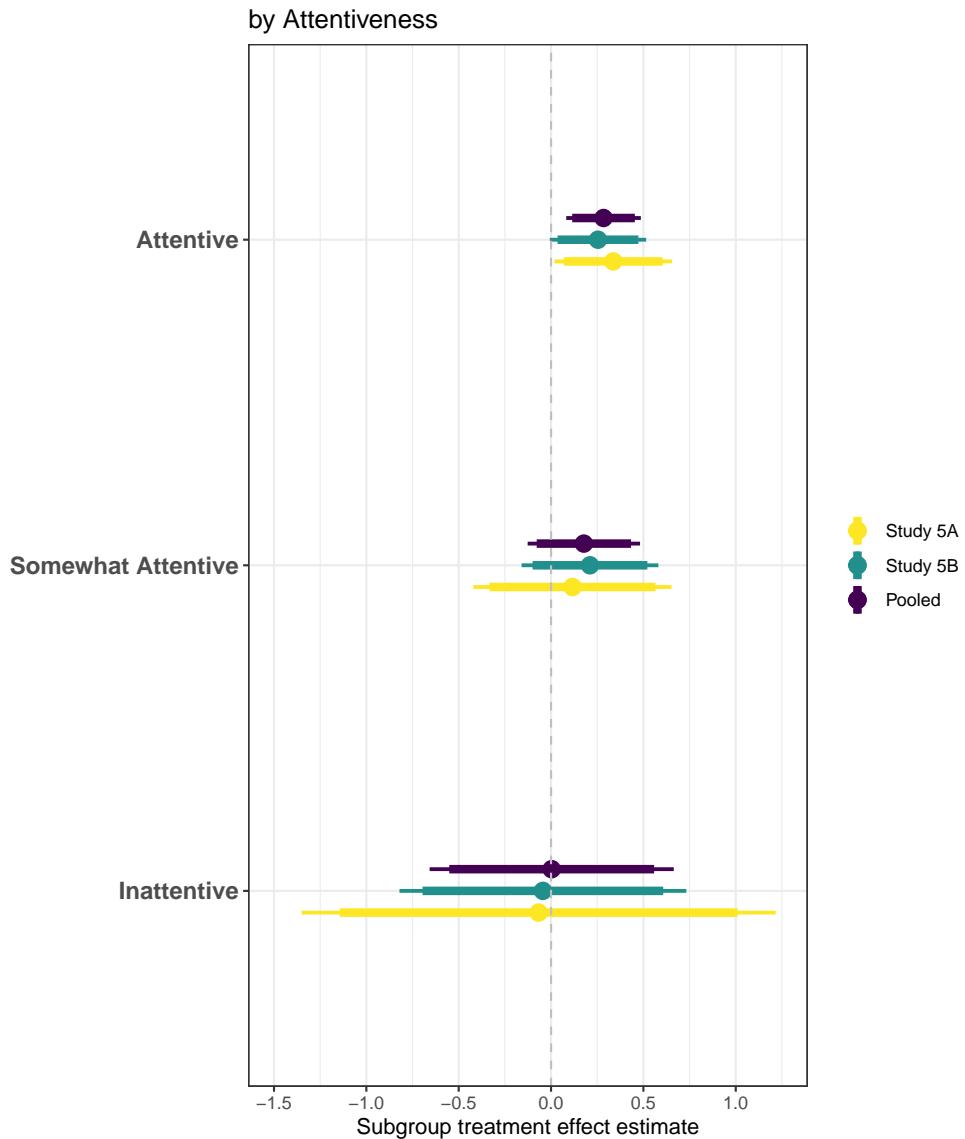
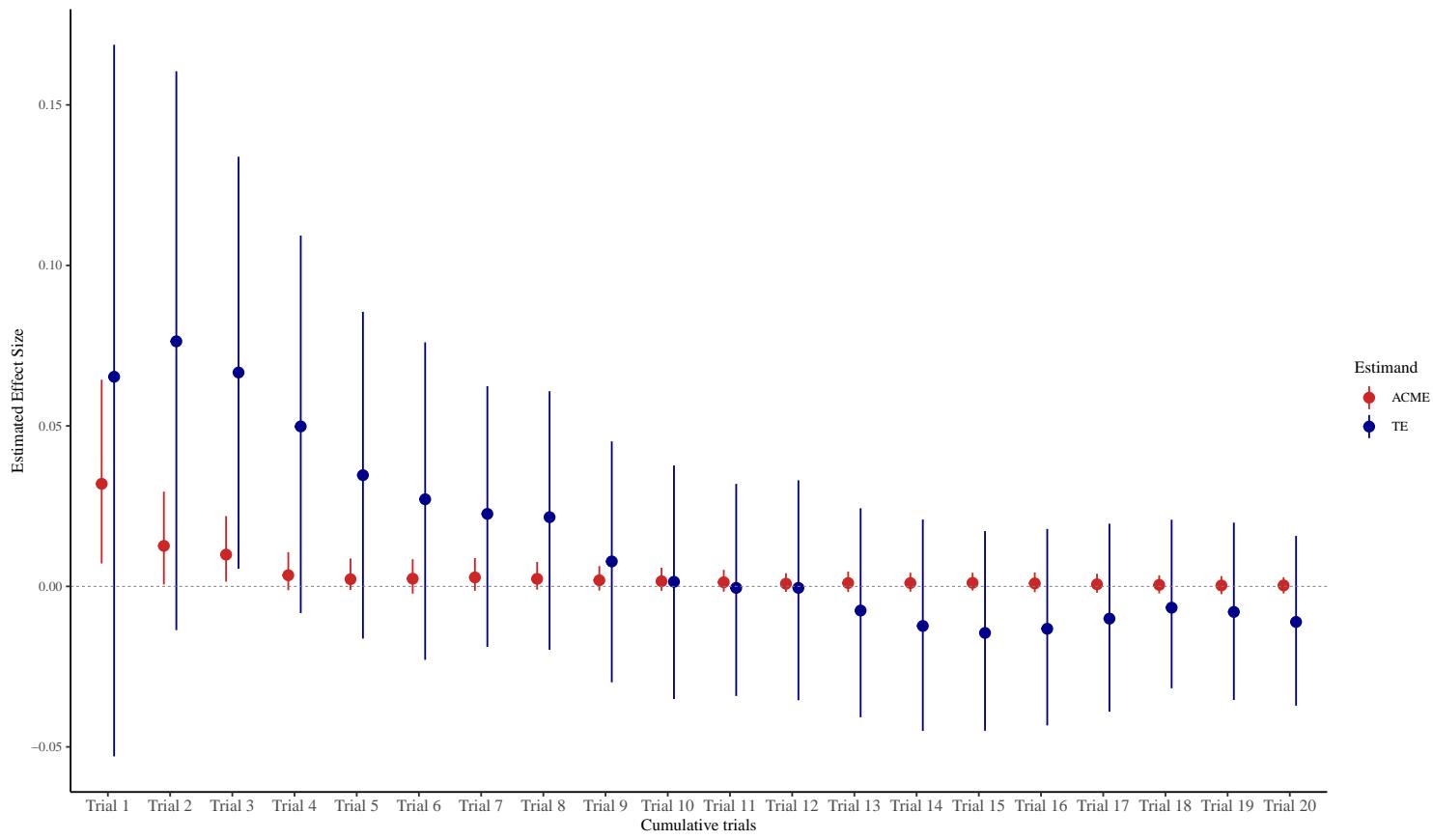


Figure B.34: Logistic regression estimated peer praise for empathy treatment effect on log likelihood of choosing empathy task, by Attentiveness subgroup. The following are N sizes for each of the models, where N represents respondent-trials; n for respondents. For Study 5a Attentive, Somewhat Attentive, Inattentive subgroups (N=n=): (563,189), (245,82), (50,17). For Study 5b: (941,317), (459,154), (102,34). Pooled: (1504,506), (704,236), (152,51). Points plotted at the center of bands are logistic regression coefficients of dependent variable regressed on Peer Praise with respondent-clustered-standard-errors. Bands are 90% and 95% confidence intervals.

Study 5 was composed of two days' worth of survey experiments, which we refer to throughout as 5A and 5B. 5A included 20 trials of the main task for all respondents, while 5B included 3.

### B.11.2 Fading effects of peer praise

Figure B.35 presents estimated average causal marginal effects (ACME) and total effects (TE) or peer praise for empathy (through happiness) over successive main task trials.



**Figure B.35: Mediation analyses estimated average causal marginal effects (ACME) and total effects (TE) for peer praise on empathy (through happiness) over successive main task trials in Pilot 5a.** Models follow the linear regression-based approach in [9] and use the R package mediation. The following are N sizes for each of the models for each (cumulative) trial: (287, 574, 858, 1141, 1422, 1704, 1986, 2264, 2541, 2820, 3097, 3375, 3653, 3932, 4211, 4488, 4766, 5042, 5319, 5597). Points plotted at the center of bands are estimates of ACME and TE, while bands are 95% confidence intervals.

## C Pre-Registered Study

### C.1 Further details on Measurements for Registered Study

#### C.1.1 Treatment: Peer Praise

We elicited naturalistic peer praise in Pilot Study 2 (see details on the Study in Methods section) in the following manner:

1. We ask respondents to provide feedback on two tasks a real adult has performed – the FEEL and DESCRIBE tasks and explained what each task entailed and an example drawn image of a person.
2. Respondents are asked to think of language that would admire or encourage the participant for choosing and doing the FEEL/DESCRIBE, especially positive things that can be said to people who choose to empathize/be objective to others in order to encourage them. Respondents then are asked for three words, then a full sentence. Finally respondents are asked to select how they feel about people who choose and engage in empathetic/objective behavior in a thermometer from 0-10 with zero as least warm and 10 as most warm.
3. To encourage respondents to think and write genuinely, we ask respondents in a series of follow up questions to tell us what the likelihood participants who are shown their words will believe that they are genuine, and give respondents the opportunity to return and edit their responses if they desire.

We collected the words used by respondents to praise empathetic behavior and created a word cloud, with a short sentence above indicating the average feeling thermometer value for that behavior, calculated from Study 2 participants. This constitutes the main peer praise for empathy treatment, replicated here and found in the main text as well. We similarly create a peer praise for describe treatment for our robustness checks. Both are found in Figure C.36.

#### C.1.2 Dependent variables

##### Measuring Respondent Empathy

1. **Behavioral empathy task:** forced-choice task selection between FEEL and DESCRIBE, where the former is always coded as a 1 while the latter is coded as a 0 when conducting statistical tests; for more detail below on “Images for Behavioral Empathy Task”.
2. **Self-reported empathy:** We ask respondents how much they agree with the statements (1) “I feel empathy for the grievances expressed by Black and Hispanic Americans about how they are treated by police”, (2) “I feel empathy for the grievances

one import shoe  
 can thought best  
 put thought best  
 understand  
 empathet good go take  
 admir tri humap  
 help tri humap  
 feel kind  
 care kind  
 friend friend  
 person person  
 think nice  
 love better  
 behavior behavior  
 show compassion  
 selflessness share honest  
 need need  
 because relat  
 work work  
 show show  
 friend friend  
 person person  
 think nice  
 love better  
 behavior behavior  
 show compassion  
 selflessness share honest  
 need need

(a) Peer praise for empathy

behav reason  
 analyz intellig  
 fact person high  
 help peopl decis  
 think great give  
 logic focus  
 person focus  
 feel good  
 object fair  
 observe one look  
 describ nice  
 make see care  
 honest detail  
 clear well  
 smart kind  
 descrip understand

(b) Peer praise for objectivity

Figure C.36: Left panel (a) main peer praise for empathy treatment; right panel (b) peer praise for objectivity.

expressed by Black and Hispanic Americans about how they are treated by fellow citizens”, (3) “I feel empathy for the grievances expressed by Black and Hispanic Americans about the hardships they face due to discrimination by race and ethnicity”. We combine the responses to the statements into a single “Self-reported empathy” outcome measure (normalizing each and adding to an index taking values from 0 to 3).

**Images for Behavioral Empathy Task** For all pilot studies and registered study, images are drawn from the Chicago Faces Database [14], and which is freely available for download on <https://www.chicagofaces.org/>. In the main registered study, images are randomized among the following features: Race=Black/Hispanic/white and Valence=Angry/Fearful. Examples of the hundreds of images we draw from are presented in Figure C.37.



Figure C.37: Example of an image (Race = white, Valence = Fearful) randomly drawn from a deck of cards, presented to respondents before behavioral empathy task.

After respondents are randomized into seeing a drawn image, they may choose between DESCRIBE and FEEL buttons to select their respective task, as presented in Figure C.38

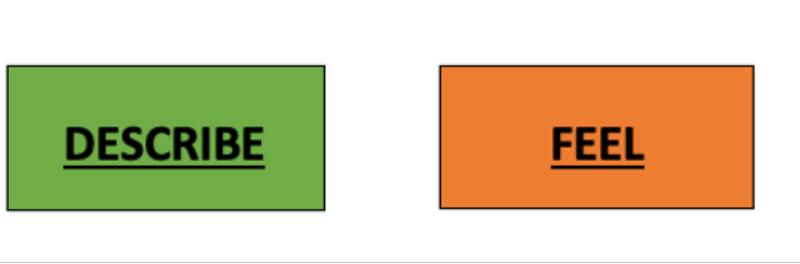


Figure C.38: Respondents choose between DESCRIBE and FEEL buttons to select their following task.

### Measuring Political Inclusion

3. **Donate:** we offer all respondents a bonus and ask them whether they would be willing to pay a portion of their bonus to the BLM movement/UnidosUS (a functional equivalent of a dictator game with the two organizations as the “other” and the bonus as the allocation; see Ben-Ner et al. [2] as an example, and Linos et al. [13] for a donation-only version.).
4. **Letter:** we ask respondents if they would be willing to write an anonymous letter to the White House in support of prioritizing racial and ethnic equity policies in the United States, and provide them open-ended space to write such a letter should they choose to (see Adida et al. [1] for a similar behavioral measure). We plan to submit written letters to the White House anonymously on behalf of the respondents.

### Attitudinal Inclusion

5. **Social distance:** scale from [5], which measures individuals’ exclusionary preferences by capturing their willingness to share social spaces with a member of another group.
6. **Thermometer:** measure for how warm the respondent feels towards each racial and ethnic outgroup.

#### C.1.3 Mediators

**Happy** In Pilot Studies 4 and 5, immediately after the randomization of treatment, respondents were asked about their happiness developed from an emotion scale by [8]. We specifically focus on the measurement of respondent emotion *in the moment*, so as to avoid conflating emotions across the experience of the overall survey with the emotions related to the treatment. Below is the phrasing of the happiness measure:

This scale consists of a number of words that describe feelings

and emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent you feel this way RIGHT NOW.

**scale: very slightly or not at all/ a little/ moderately/ quite a bit/ extremely**

**emotions: happy/enjoyment/liking**

**Norms** We include a measure of norms as a potential mediator for the peer praise effect.

Below is the phrasing of the norms measure:

How strongly do you agree or disagree that people value empathetic behavior?

**scale: strongly agree/agree/neither agree nor disagree/disagree/somewhat disagree**

#### C.1.4 Attention checks

Given concerns of greater online fatigue and inattentiveness during the COVID-19 global pandemic (see Peyton et al. [16]), we follow Peyton et al.’s work, and the work of others on the usage of attention checks in online surveys (see for example Berinsky et al. [3]), and incorporate two pre-treatment attention check questions for Pilot Pilot Studies 4, 5A and 5B. The first attention check is styled in a multiple choice and the second via a grid question (see Figures C.39-C.40) to capture most attentive respondents as well as least [3]. The multiple choice (attentionMC) and screening questions in the grid (attentionG) are drawn directly from Berinsky et al. [3], while the filler questions in the grid are designed to elicit non-politically oriented opinions from respondents so as to minimizeI possible priming effects downstream. Respondents who miss either 1 or 2 attention checks are removed from our analysis.

#### C.1.5 Respondent covariates

Each study asked a series of respondent-level covariates within the surveys; for ease we present information on the collection and timing of each of respondent covariates across pilot studies in Table C.17.

We are interested in what sections people like to read in the newspaper. This might affect what they learn from articles and how they feel about the issues discussed in them. We also want to see if people are reading the questions carefully. To show that you've read this much, please mark both the classified and none of the above options below. That's right, just select these two options only.

Regardless of how frequently you read the newspaper, what would you say are your favorite newspaper sections to read? (please check all that apply)

National

Local

Real estate

Comics

Classified

Style

Sports

Business

Science and technology

Opinion

None of the above

All of the above

Figure C.39: MC attention check

In the grid below, you will see a series of statements. Please tell us whether you agree or disagree with each statement.

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly
The best sport to watch live is baseball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook is the best social media platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Two is greater than one	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Football is more interesting than basketball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please click the "neither agree nor disagree" response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter is more engaging than Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soccer is more fun to play than hockey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure C.40: Grid attention check

	Study 1	Study 2	Study 3	Study 4	Study 5 (A & B)	Study 6
<b>State of residence</b>	Post DV	-	Post T/DV	Pre T	Pre T	Pre T
<b>Age</b>	Post DV	Post DV	Post T/DV	Pre T	Pre T	Pre T
<b>Sex</b>	Post DV	Post DV	Post T/DV	Pre T	Pre T	Post T/DV
<b>Education</b>	Post DV	Post DV	Post T/DV	Pre T	Pre T	Pre T
<b>Race</b>	Post DV	Post DV	Post T/DV	Post T/DV	Pre T	Pre T
<b>Income</b>	Post DV	Post DV	Post T/DV	Post T/DV	Pre T	Pre T
<b>Religion</b>	Post DV	Post DV	Post T/DV	Post T/DV	Pre T	Pre T
<b>Party</b>	Post DV	Post DV	Post T/DV	Post T/DV	Pre T	Pre T
<b>Ideology</b>	Post DV	Post DV	Post T/DV	Post T/DV	Post T/DV	Post T/DV
<b>Trump approval</b>	Post DV	-	Post T/DV	Post T/DV	Post T/DV	Post T/DV
<b>Biden approval</b>	-	-	-	-	Post T/DV	Post T/DV
<b>Baseline empathy</b>	Post DV	-	Post T/DV	Post T/DV	Post T/DV	Post T/DV

Table C.17: Measurement of respondent covariates across pilot studies. T indicates when treatment (peer praise) was measured, DV indicates when dependent variables are measured. In Pilot Studies 1 and 2 no treatments were manipulated.

### C.1.6 Pre-treatment covariates

Pre-treatment covariates utilized in the registered study are listed below. We also ask pre-treatment measures of respondent attitudinal inclusion and self-reported empathy of the same style as in the “Dependent variables” section.

1. (State of residence) Please select your state of residence:  
**[answer options: scrolled U.S. states]**
2. (Age) Please enter your age on your last birthday:  
**[answer options: two digit numerical input]**
3. (Sex) Are you:  
**[answer options: male/female/other]**
4. (Education) What is the highest level of school you have completed?  
**[answer options: no schooling completed/Kindegarten to 8th grade/Some high school, but did not graduate/High School or equivalent (GED)/Some college, but did not complete a degree/Associate Degree/Bachelor's Degree (BA/BS)/Master's Degree (MA/MS/MBA etc.)/Medical (MD), law (JD) or other doctorate degree (PhD)]**
5. (Race) In order to make sure we have a representative sample of everyone across America, let's start with a few basic demographic questions to ensure this study is inclusive of all Americans: (Please choose all that apply). This scale has been borrowed from CMPS.  
**[answer options: white/Black or African American/Hispanic or Latino/American Indian or Alaska Native/Asian/Native Hawaiian or Pacific Islander/other]**  
**[If ‘other’ is selected: Do you consider any part of your race or ethnicity to be African-American/Hispanic or Latino/Asian, Hawaiian or Pacific Islander?: Yes/No]**
6. (Party ID) Generally speaking, do you think of yourself as a Democrat, a Republican or what?  
**[answer options: Strong Republican, Republican, Lean Republican, Independent, Lean Democrat, Democrat, Strong Democrat]**

7. (Citizenship) Please select all the countries where you hold a citizenship

[answer options: list of countries]

8. (Income) Thinking back over the last year, what was your household's annual income? If you are single, but live with roommates, please report only your income

[answer options: less than 25k/25k to less than 50k/ 50k-less than 75k/ 75k to less than 100k/100k or more]

9. (Religion) What is your present religion, if any? Are you Protestant, Roman Catholic, Mormon, Orthodox such as Greek or Russian Orthodox, Jewish, Muslim, Buddhist, Hindu, atheist, agnostic, something else, or nothing in particular? choose any that apply

[answer options: Protestant/ Roman Catholic/ Mormon/ Orthodox (Greek or Russian)/ Jewish/ Muslim, Buddhist/ Hindu/ atheist/agnostic/ nothing in particular]

### C.1.7 Post-task questions

Post-task covariates utilized in the registered study are listed below.

#### 1. Task preference questions

- (a) How did you choose between the buttons? [Open-ended]
- (b) Did you develop a preference for one of the buttons? [0-10 scale]

#### 2. Task Load question

- NASA Task Load Index: version of the NASA Task Load Index (Hart & Staveland, 1988). Rated each Selection Task on the following questions (from 1=Very low to 5=Very high). Participants rate the objective task first, which is referred to as "the Describe task (the one on the left)", followed by the objective task, referred to as "the Feel task (the one on the right)".

- (a) How mentally demanding was this task?
- (b) How hard did you have to work to accomplish your level of performance with this task?
- (c) How insecure, discouraged, irritated, stressed, and annoyed were you by this task?

- (d) How successful were you in accomplishing what you were asked to do in this task?

### 3. Empathy questions

- Interpersonal Reactivity Index (Davis, 1983)
  - (a) When I'm upset at someone, I usually try to put myself in his shoes, for a while.
  - (b) Before criticizing somebody, I try to imagine how I would feel if I were in their place.
  - (c) I often have tender, concerned feelings for people less fortunate than me.
  - (d) When I see someone being taken advantage of, I feel kind of protective toward them.
  - (e) Being in a tense emotional situation scares me.
  - (f) When I see someone who badly needs help in an emergency, I go to pieces.
  - (g) When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
  - (h) When I watch a good movie, I can very easily put myself in the place of a leading character.
- Empathy norms: “Please answer the following questions, as honestly as possible, based on your own personal opinion and experiences” (Cameron et al. 2019)
  - Descriptive norms of choice in the Empathy Selection Task (scale from 0-100): “What percentage of people tend to choose the FEEL task in the task you just completed?”
  - Descriptive norms of choice in the Empathy Selection Task (scale from 0-100): “What percentage of people tend to choose the DESCRIBE task in the task you just completed?”
  - Injunctive norms about empathy and objectivity (scale from 0-100): “What percentage of people think that empathy is a good thing?”
  - Injunctive norms about empathy and objectivity (scale from 0-100): “What percentage of people think that objectivity is a good thing?”
  - “According to your own personal beliefs, do you think that it is more desirable to be empathic or to be objective” (1=objectivity is much more desirable, 2=objectivity is more desirable, 3=they are equally desirable, 4=empathy is more desirable, 5=empathy is much more desirable).

4. Ethnocentrism: Do you agree or disagree with the following statements? [Str. disagree/Disagree/Neutral/Agree/Str. agree]<sup>8</sup>

- Most other cultures are backward compared with my culture
- My culture should be the role model for other cultures
- People from other cultures act strangely when they come to my culture
- Lifestyles in other cultures are just as valid as are those in my culture
- Other cultures should try to be more like my culture
- I am not interested in the values and customs of other cultures
- People in my culture could learn a lot from people from other cultures
- Most people from other cultures just don't know what's good for them

### C.1.8 Manipulation Checks

Did you hear from peers of yours on this platform that they hold favorable feelings towards people who engage in empathetic behavior?

[Answers: Yes/ No/ Not sure]

Please choose the image of the person for whom you conducted your earlier task from the below.

[Answers: selection of images.]

Is the person in the image white?

[Answers: Yes/ No/ Not sure]

Think back to when you were conducting the task. What were you thinking of when you were conducting it?

[Open-ended]

How much do you agree or disagree with the following statement: I imagined the emotions and experiences of the person in the image during the task.

[Answers: Strongly Agree/Agree/Somewhat Agree/Neither agree nor disagree/Somewhat Disagree/Disagree/Strongly Disagree]

---

<sup>8</sup>This measure is borrowed from [1], who adapted a measure developed by [15].

How much do you agree or disagree with the following statement:  
I felt empathy towards the person in the image during the task.

[Answers: Strongly Agree/Agree/Somewhat Agree/Neither agree nor disagree/Somewhat Disagree/Disagree/Strongly Disagree]

### C.1.9 Post treatment questions

**Randomized order of questions below.** Post-treatment questions utilized in the registered study are listed below.

### C.1.10 Other Demographics and Opinions

1. (Ideology scale) In general, do you think of yourself as...

[answer options: Very liberal/ liberal/ slightly liberal/ moderate/ slightly conservative/ conservative/very conservative]

2. (Trump approval) Do you approve, disapprove, or neither approve nor disapprove of the way Donald Trump handled his job as president?

[answer options: Approve extremely strongly/ Approve moderately strongly/ Approve slightly/ Neither approve nor disapprove/ Disapprove slightly/ Disapprove moderately strongly/Disapprove extremely strongly]

3. (Biden approval) Do you approve, disapprove, or neither approve nor disapprove of the way Joe Biden is handling his job as president?

[answer options: Approve extremely strongly/ Approve moderately strongly/ Approve slightly/ Neither approve nor disapprove/ Disapprove slightly/ Disapprove moderately strongly/Disapprove extremely strongly]

4. (Racial resentment) Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with each of the following statements? This scale has been borrowed from ANES.

Statements: [Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors./Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class./Over the past few years, blacks have gotten less than they deserve./It's really a matter of

**some people not trying hard enough; if blacks would only try harder they could be just as well off as whites.]**

5. (Race followup) (if selected ‘Asian American’): In an earlier part of this survey you said that you identify as an Asian American. Asian Americans come from a diversity of backgrounds. What do you consider to be your primary ethnicity or family ancestry?/ (if selected ‘Black or African American’): In an earlier part of this survey you said that you identify as Black or African American. Some African Americans are part of immigrant communities that are newer to America while others have roots in America for generations going back to slavery. How about you? Do you, or part of your family trace your ancestry to:/ (if selected ‘Hispanic or Latino’): In an earlier part of this survey you said that you identify as Hispanic or Latino. Hispanics and Latinos have their roots in many different countries in Latin America. To what country do you or your family trace your ancestry?

[Open ended]

6. (Attrition behavior-Wave 2 only) Do you approve, disapprove, or neither approve nor disapprove of the way Joe Biden is handling his job as president?

**[answer options: Approve extremely strongly/ Approve moderately strongly/ Approve slightly/ Neither approve nor disapprove/ Disapprove slightly/ Disapprove moderately strongly/Disapprove extremely strongly]**

## C.2 Power calculation details

# Power calculations Registered Report

This version: December 2024

```
rm(list=ls())
pacman::p_load(here,Hmisc,dplyr,gridExtra,grid,stargazer,hrbrthemes,quantada,readtext
  ,tidyverse,knitr,paperR,tidyr,kableExtra,ggpubr,printr,tab,lfe,sjPlot
  ,clusterSEs,BBmisc,miceadds,mediation,estimatr,sensemkr,SentimentAnalysis
  ,ggplot2,ggridges,viridis,randomizr,doParallel,sandwich,ggplot2,reshape2
  ,kableExtra,ggpattern)
scale_values <- function(x){(x-min(x))/(max(x)-min(x))}
```

## Peer Praise Study

Here we conduct power calculations for the effects of **Peer Praise**. We restrict respondents to White Americans. For the Behavioral Empathy Task, the target (face) is an outgroup member.

Main Study is about 1) Effect of Peer Praise, 2) Long-term Effect of Peer Praise.

1.1) Is Peer Praise able to change respondent inclusion to racial/ethnic outgroups?

- **H1 DV Behavioral Empathy Task:** the effect of the treatment (praise) on the behavioral empathy task (choosing the FEEL task), when target is an outgroup member.
- **H2 DV Self-reported Empathy:** the effect of treatment (praise) on the outcome (reporting feeling empathy for racial/ethnic outgroups), when target is an outgroup member.
- **H3 DV Political Inclusion:** the effect of treatment (praise) on the political inclusion index (donate bonus amount + writing letter, equally weighted in Index of 0-2), when target is an outgroup member.
- **H4 DV Attitudes:** the effect of treatment (praise) on the attitudinal index outcome (social distance + thermometer rating, equally weighted into an Index of 0-2), when target is an outgroup member.

1.2) Does the effect of Peer Praise exist over longer periods? (We follow up a week later – in Wave 2 – for those who were assigned Peer Praise or Control in Wave 1)

- **H5 DV Behavioral Empathy Task:** the long-run effect of the treatment (praise) on the behavioral empathy task (choosing the FEEL task), when target is an outgroup member.
- **H6 DV Attitudes:** the long-run effect of treatment (praise) on the attitudinal index outcome (social distance + thermometer rating, equally weighted into an Index of 0-2), when target is an outgroup member.

## Assumptions

Power calculations require two main inputs: estimates of effects sizes and standard deviations. We detail here where our priors for those parameters come from. Whenever possible, we use information from our extensive series of pilots for these values or on studies that are as similar to ours as possible along key dimensions (for example, in using the same dependent measure).

Here we make several key assumptions for our simulations: 1) effect sizes for peer praise on the six outcome DVs for outgroup members, 2) their standard deviations. For each of the long-run effects of peer praise we look at Broockman & Kalla (2016) and (2020) findings which saw a reduction in 50% of the effect within

the months follow-up period. Conservatively we thus assume a reduction of 25% of the effect in the shorter follow-up period of one week later.

1. For H1, we take effect and SD information from Pilot Study 6, which similarly utilized peer praise on the behavioral choice outcome (0.17, SD=0.47).
2. For H2 self reported empathy, as we do not have a piloted peer praise study to directly look for effect sizes, we look at findings from Williamson et al. 2021, which had a similar self-reported empathy outcome but utilized a family history perspective as its intervention (0.171, SD=1).
3. For H3 we use two semi-behavioral outcomes and index them into one political inclusion index. First, for Donation, we use the same study, from Williamson et al. 2021, and borrow from their outcome of expressed support for more open policies (0.1, SD=0.06). For Letter we look at a similar tested outcome from Adida Lo Platas 2018 —a letter to the White House—and utilize the same treatment effect sizes and sds (0.165, SD=0.8). We combine Donation and Letter into a single Political Inclusion Index whereby Donation and Letter take on equal weight and the Index ranges from [0,2].
4. For H4 we use two attitudinal measures and index them into one attitudinal outcome index. First, for Social Distance, we do not have an equivalent study to lean on for priors on effect sizes, so we assume a conservative increment of 0.1 rank move (in a 0-6 rank scale) with a similar sized sd (0.25, SD=0.1). For Thermometer, we also turn to similar tested outcomes from Williamson et al 2021 — a thermometer towards an outgroup (though in this case refugees) and use the same treatment effect size and sd (2.4, SD=0.08). We combine Social Distance and Thermometer into a single Attitudinal Outcome Index whereby Social Distance and Thermometer take on equal weight and the Index ranges from [0,2].

Calculations below also incorporate wages and time taken. For wages, we use the highest min wage in 2022 (California) \$15/hr.

H5 and H6 are for the peer effects in the long-run on Behavioral Empathy Task and Attitudinal Index. We assume long-run effects are reduced by a *quarter*. Finally we keep track of our 6 hypotheses in this peer praise on outgroup section for MH adjustments later.

```
set.seed(123)
# n sizes we simulate through
possible.ns <- c(seq(from=4000, to=6000, by=100))
scenarios<-data.frame(N=possible.ns)
# we calculate time to take study and pay
scenarios$time<-8
scenarios$pay<-(((scenarios$time/60)*15)+1)*scenarios$N
# alpha level, sims set, number of hypotheses to adjust
alpha <- 0.05
sims <- 10000
n.hyp = 6

# Population assumptions for respondents
# based on prior proportions in pilots
#proportion of White, proportion of Black in sample
#mean(c(61.3,70.4,54.9,70, 64.5,72.9)) White
prop_white<-66
#mean(c(10.4,13,14.6,13,22.2,15.4))
prop_black<15

# Effects: treatment main effects for each of H1-H4 (H5-H6 halved)
sds<-rep(NA,6)
#H1: effect and sd information from Pilot Study 6
beta1=0.17
sds[1]=0.47
```

```

#H2: effect and sd from Williamson et al. 2021, which had a
#similar self-reported empathy outcome
beta2=0.171 #H2
sds[2]=1
#H3: Donation - 0.1 effect and 0.06 sd from Williamson et al. 2021, and borrow from
#their outcome of expressed support for more open policies.
# Letter - 0.165 effect and 0.02 se from similar tested outcome
# from Adida Lo Platas 2018---a letter to the White House
beta3=0.1 #Donation
sds[3]=0.06
beta4=0.142 #Letter
sds[4]=.02*sqrt(1800)
#H4: Social distance scores we do not have an equivalent study
#to lean on for priors on effect sizes, so we assume an
#increment of 0.25 rank move (on DV value up to 6) with a sd=0.1.
# Thermometer - effect and sd from similar tested outcomes from
#Williamson et al 2021 -- a thermometer towards an
#outgroup (though in this case refugees) and use the same
#2.4 treatment effect size 0.08 sd
beta5=0.25 #Social Distance
sds[5]=0.1
beta6=2.4 #Thermometer
sds[6]=0.08

```

## Generate simulations

One potential complication in our power calculations (that makes using “off the shelf” solutions difficult) is that we must consider the overall number of subjects as well as the “usable” number of subjects,” since our main registered hypotheses are for White subjects (and some proportion of respondents recruited will not be White). The code below takes this into account in the following way:

Because we’d like to account for the probabilistic aspects of 1) receiving respondents who are not all White Americans (for which our main registered hypotheses are on) and 2) whether they are randomized to see an outgroup image (as the platform does not allow for sampling conditional on race), we simulate 10,000 experiments for each N size with a generated set of data in each simulation and estimate the 6 tests (with registered Benjamini and Hochberg MH adjustments) and store. From here we can find how often, under each N scenario, the 6 treatment effects are able to be recovered — the level of power. We aim for a power level above 0.95.

```

# Data holders: p-values and means
set.seed(123)
c.main1 <- c.main2 <- c.main3 <- c.main4 <- c.main5 <- c.main6 <- rep(NA, sims)
p.main1 <- p.main2 <- p.main3 <- p.main4 <- p.main5 <- p.main6 <- rep(NA, sims)
obs1 <- obs2 <- rep(NA, sims)
#set up parallel cores ii 191-195
no_clusters<-detectCores()-2
if (Sys.getenv("RSTUDIO") == "1" && !nzchar(Sys.getenv("RSTUDIO_TERM")) &&
    Sys.info()["sysname"] == "Darwin" && getRversion() >= "4.0.0") {
  parallel::setDefaultClusterOptions(setup_strategy = "sequential")
}
clust <- parallel::makeCluster(no_clusters)
registerDoParallel(clust)
t<-Sys.time()
mydata<-vector("list", nrow(scenarios))

```

```

##### Outer loop to vary the overall number of subjects #####
dat <- foreach(j=1:nrow(scenarios), .combine=rbind,.packages = c("lmtest")) %dopar% {
  N <- scenarios$N[j]
  for (i in 1:sims){#inner loop
    ### (I) ###
    # Generate Respondent Race, Treatment/Image, Respondent ID
    RespondentRace<-sample(c("Black","White","Other"),N,prob=c(prop_black
      , prop_white,(100-prop_black-prop_white)), replace=TRUE)
    Treatment<- sample(c(rep("Peer Praise",N*0.4),rep("Control",N*0.4),rep("Placebo",N*0.2))
      ,N,replace=F)
    ID<-1:N
    Image_name<-sample(c("Black", "Hispanic", "White"),N,prob=c(0.45, 0.45, 0.1),replace=T)
    ImageBH<-ifelse(Image_name=="White","Ingroup","Outgroup")

    #Bind the X data
    X<-data.frame(ID=ID,RespondentRace=RespondentRace,Treatment=as.factor(Treatment),
      ImageBH=as.factor(ImageBH),Image_name=as.factor(Image_name))
    X$ControlvPraise<-ifelse(X$Treatment=="Control",0,ifelse(X$Treatment=="Peer Praise",1,NA))

    X <- within(X, ImageBH <- relevel(ImageBH, ref = "Ingroup"))
    X <- within(X,Treatment <- relevel(Treatment, ref="Peer Praise"))
    #Powered hypotheses on White resp, without Placebo
    d <- subset(X, RespondentRace=="White"&Treatment!="Placebo")

    ### (II) ###
    # Generate Ys
    n_d<-nrow(d)
    d$Y1 = beta1*d$ControlvPraise+ rnorm(n_d,0,sds[1]) #H1
    d$Y2 = beta2*d$ControlvPraise+ rnorm(n_d,0,sds[2]) #H2
    d$Y3a = beta3*d$ControlvPraise+ rnorm(n_d,0,sds[3]) #H3 Donation
    d$Y3b = beta4*d$ControlvPraise+ rnorm(n_d,0,sds[4]) #H3 Letter

    d$Y4a = beta5*d$ControlvPraise+ rnorm(n_d,0,sds[5]) #H4 SD
    d$Y4b = beta6*d$ControlvPraise+ rnorm(n_d,0,sds[6]) #H4 Thermometer

    #Wave 2 long-run
    d$Y5 = 0.75*beta1*d$ControlvPraise+ rnorm(n_d,0,sds[1]) #H5
    d$Y6a = 0.75*beta5*d$ControlvPraise+ rnorm(n_d,0,sds[5]) #H6 SD
    d$Y6b = 0.75*beta6*d$ControlvPraise+ rnorm(n_d,0,sds[6]) #H6 Thermometer

    #Create Indexed values
    d$Y3<-scale_values(d$Y3a)+scale_values(d$Y3b)
    d$Y4<-scale_values(d$Y4a)+scale_values(d$Y4b)
    d$Y6<-scale_values(d$Y6a)+scale_values(d$Y6b)
    dout <- subset(d,ImageBH=="Outgroup")
    #attrition for wave 2: half
    set.seed(i)
    d2<-d[sample(nrow(d),nrow(d)/2),]
    d2out<-subset(d2,ImageBH=="Outgroup")

    ### (III) ###
    ## Estimate models: H1-H6
    main1 <- lm(formula = Y1 ~ ControlvPraise, data = dout)
    main2 <- lm(formula = Y2 ~ ControlvPraise, data = d)
  }
}

```

```

main3 <- lm(formula = Y3 ~ ControlvPraise, data = d)
main4 <- lm(formula = Y4 ~ ControlvPraise, data = d)
main5 <- lm(formula = Y5 ~ ControlvPraise, data = d2out)
main6 <- lm(formula = Y6 ~ ControlvPraise, data = d2)

### (IV) ####
## Store coefficients & Benjamini-Hochberg adjusted pvals
obs1[i] <- nrow(model.frame(main2)) #obs for most DVs
obs2[i] <- nrow(model.frame(main1)) #obs for behavioral empathy task
c.main1[i] <- coef(main1)[2] #H1
p.main1[i] <- p.adjust(summary(main1)$coefficients[2,4], "BH", n=n.hyp)
c.main2[i] <- coef(main2)[2] #H2
p.main2[i] <- p.adjust(summary(main2)$coefficients[2,4], "BH", n=n.hyp)
c.main3[i] <- coef(main3)[2] #H3
p.main3[i] <- p.adjust(summary(main3)$coefficients[2,4], "BH", n=n.hyp)
c.main4[i] <- coef(main4)[2] #H4
p.main4[i] <- p.adjust(summary(main4)$coefficients[2,4], "BH", n=n.hyp)
c.main5[i] <- coef(main5)[2] #H5
p.main5[i] <- p.adjust(summary(main5)$coefficients[2,4], "BH", n=n.hyp)
c.main6[i] <- coef(main6)[2] #H6
p.main6[i] <- p.adjust(summary(main6)$coefficients[2,4], "BH", n=n.hyp)
}

## Collect power info
powerAll<- mean(abs(c.main1)>0.0 & p.main1<alpha
                 & abs(c.main2)>0.0 & p.main2<alpha
                 & abs(c.main3)>0.0 & p.main3<alpha
                 & abs(c.main4)>0.0 & p.main4<alpha
                 & abs(c.main5)>0.0 & p.main5<alpha
                 & abs(c.main6)>0.0 & p.main6<alpha
                 )

## Collect remaining obs
Obs1 <- mean(obs1)
Obs2 <- mean(obs2)
data.frame(Obs1=Obs1, Obs2=Obs2, powerAll=powerAll)
}
stopCluster(clust)
print(Sys.time()-t)

dat<-cbind(scenarios,dat)

#update pay based on calcs for function obs:
#for each N, control/peer praise will be followed up in Wave 2 at higher wage per hour
#(for a much shorter survey, we pay the same as the first survey $2+1bonus)
dat$pay_updated<-dat$pay + (dat$N*0.8)*0.5*3 #N * in Control/Peer Praise arms * attrition * pay

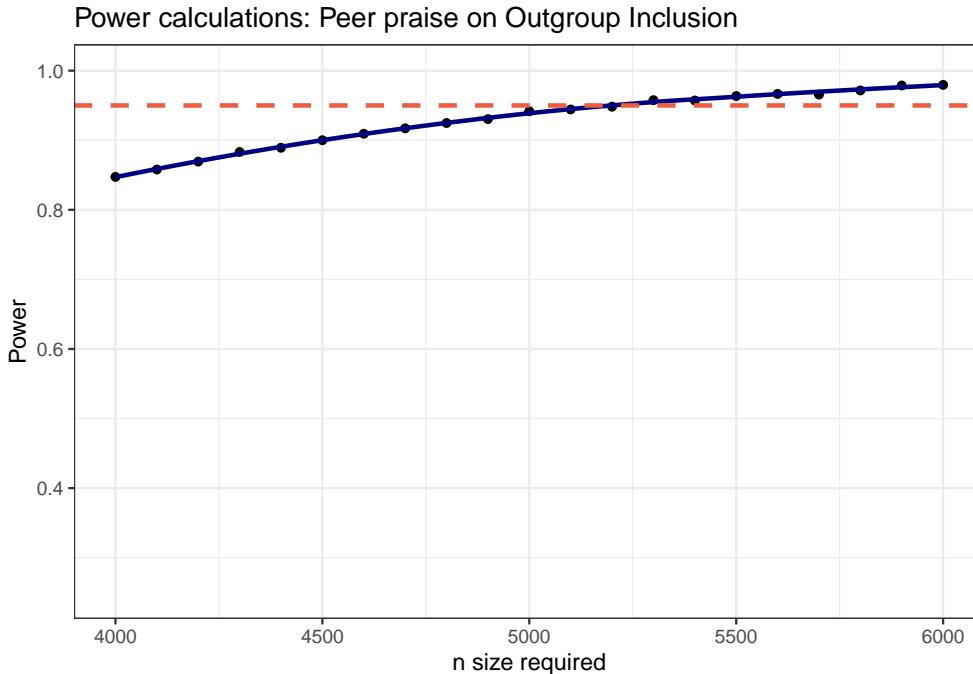
saveRDS(dat,file=here::here("power_v5.rds"))

```

## Plots

```
dat<-readRDS(file=here::here("power_v5.rds"))
```

```
#power
plot1<- ggplot(data=dat,aes(x=N,y=powerAll))+ 
  geom_point(alpha=1)+ 
  labs(x="n size required",y="Power") + ylim(0.25,1) + 
  theme_bw()+
  geom_smooth(se = FALSE, method = "loess", color="navy")+
  geom_hline(yintercept=0.95,linetype="dashed",color = "tomato2", linewidth=1) +
  ggtitle("Power calculations: Peer praise on Outgroup Inclusion")
plot1
```



```
ggsave(plot1,file=here::here("Figures","power v5.pdf"), width=8, height=7)
```

Required N size for Main Study powered at 0.95 is N=5,300.

## Co-Partisan Peer Praise Study

Co-partisan peer praise effect on inclusion towards racial/ethnic outgroups. We also consider the same set up as the above but utilize praise from co-partisan peers on MTurk for our parallel “Co-Partisan Peer Praise”; that is we design and field a separate study that looks at the effects of peer praise (from peers who share partisan identity with the respondent) on inclusion towards racial/ethnic outgroups. Again, we have the same four outcomes, though this time, we generate peer praise such that each time a respondent is randomized to receive treatment, they receive praise from a co-partisan group of peers (e.g. a respondent who self-identifies as Republican receives peer praise from a group of Republican peers). We are interested in whether co-partisan peer praise changes each of our four outcomes (H7-H10).

Thus, Co-Partisan Peer Praise Study is about Co-Partisan Effect of Peer Praise. Is Co-Partisan Peer Praise able to change respondent inclusion to racial/ethnic outgroups?

- **H7 DV Behavioral Empathy Task:** the effect of the treatment (co-partisan praise) on the behavioral empathy task (choosing the FEEL task), when target is an outgroup member.
- **H8 DV Self-reported Empathy:** the effect of treatment (co-partisan praise) on the outcome (reporting feeling empathy for racial/ethnic outgroups), when target is an outgroup member.
- **H9 DV Political Inclusion:** the effect of treatment (co-partisan praise) on the political inclusion index (donate bonus amount + writing letter, equally weighted in Index of 0-2), when target is an outgroup member.
- **H10 DV Attitudes:** the effect of treatment (co-partisan praise) on the attitudinal index outcome (social distance + thermometer rating, equally weighted into an Index of 0-2), when target is an outgroup member.

## Assumptions

As it's unclear whether co-partisan identity creates a peer praise effect that is stronger or weaker compared to peer praise from a general peer, we make the same assumptions of peer praise effect sizes as before for the four tests H7-H10 tests (effect of co-partisan peer praise).

```
set.seed(456)
# n sizes we simulate through
possible.ns <- c(seq(from=3000, to=5000, by=100))
scenarios<-data.frame(N=possible.ns)
# we calculate time to take study and pay
scenarios$time<-8
scenarios$pay<-(((scenarios$time/60)*15)+1)*scenarios$N
# alpha level, sims set, number of hypotheses to adjust:
alpha <- 0.05
sims <- 10000
n.hyp = 4

# Population assumptions for respondents
# based on prior proportions in pilots
prop_white<-66
prop_black<-15
prop_dem<-48.7 #from all MTurk Pilots
prop_rep<-32.9

# Effects:
sds<-rep(NA,6)
beta1=0.17 #h7 behavioral empathy
sds[1]=0.47
beta2=0.171 #h8 self-reported empathy
sds[2]=1
beta3=0.1 #h9a - donation
sds[3]=0.06
beta4=0.142 #h9b - letter
sds[4]=.02*sqrt(1800)
beta5=0.25 #h10a - social distance
sds[5]=0.1
beta6=2.4 #h10b - thermometer
sds[6]=0.08
```

### C.3 Scale-up of Peer Praise

## Scaling up Peer Praise

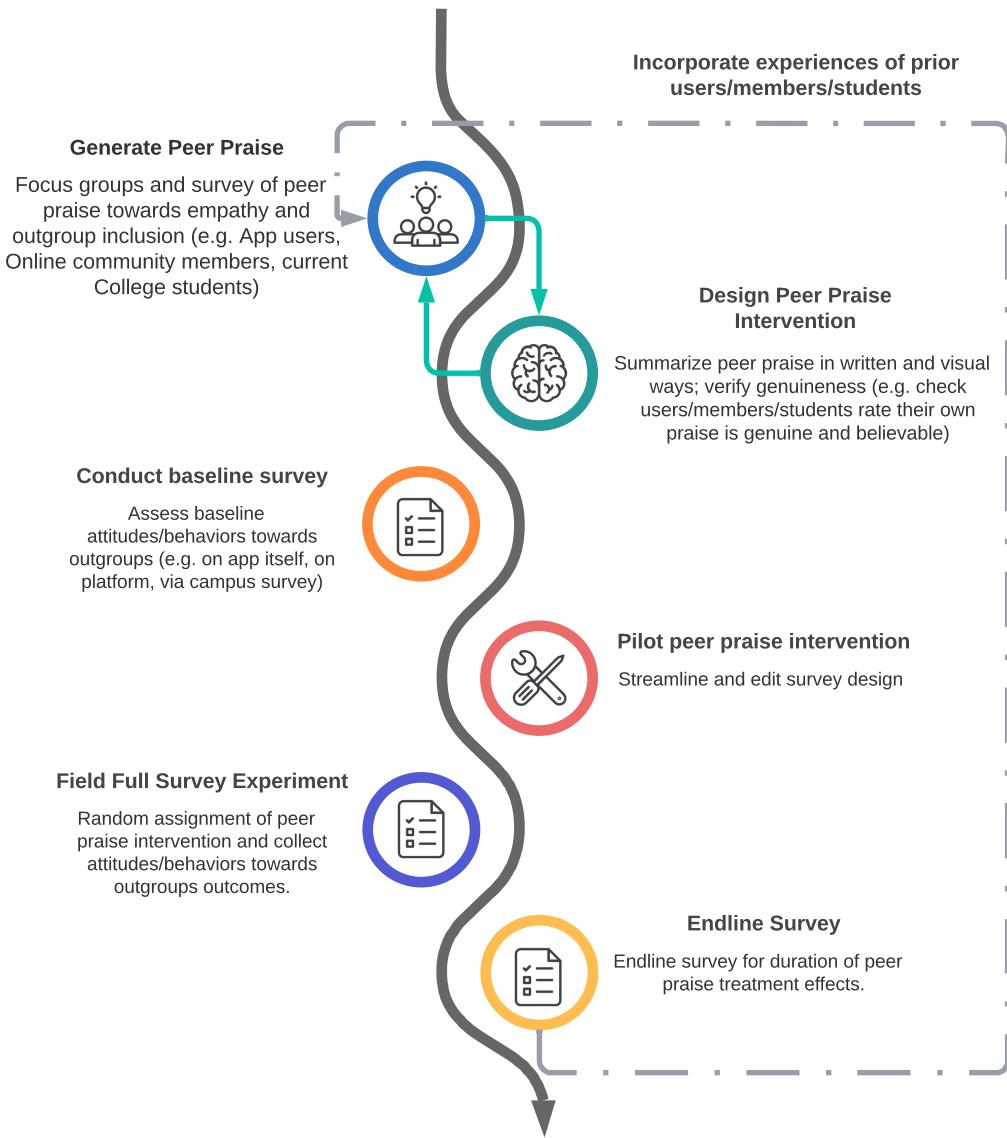


Figure C.41: Scale-up proposal for Peer Praise.

In Figure C.41 we present a proposed work-flow for replicating and/or scaling up peer praise in an online or in-person setting. The figure (and our instructions) assumes surveys can be conducted through pre-existing online (directly through the app or in messaging channels, or campus emails) or in-person (face-to-face with enumerators or handouts to fill out) methods.

The first step involves generating peer praise, either through systematic surveys (as in our studies) or focus groups (see section 'How to generate peer praise' for details). Following this, we recommend conducting a baseline survey to assess initial attitudes and be-

haviors towards outgroups, then designing and piloting the peer praise intervention. After refining the survey design through pilots, the full survey experiment should be conducted, randomly assigning the peer praise intervention and measuring outcomes on attitudes and behaviors towards outgroups. An endline survey should follow later to gauge the long-term effects of peer praise. Compared to effective inclusion-inducing interventions like Kalla and Broockman [10] and Kalla and Broockman [11], we anticipate our peer praise intervention’s design time to be comparable or shorter, considering the extensive preparation needed for those interventions. Our pilot, main, and endline surveys can be conducted without enumerators and face-to-face components, requiring fewer resources than traditional in-person interventions.

### C.3.1 How to generate peer praise

In our proposed workflow, users first generate peer praise to inform relevant interventions. This can be achieved through focus groups or surveys to gather naturalistic praise for individuals who engage in empathy and outgroup inclusion. Participants are asked to write sentences and words praising peers who demonstrate empathetic behavior, broadly or tied to specific tasks or policies. For instance, in our pilot study 2, respondents were briefed on the FEEL and DESCRIBE tasks, then prompted to praise peers who engage in empathy by performing the FEEL task. Our intervention was shaped by this authentic peer praise. Users may consider using the following questions, which we employed in our surveys:

- What are three words you might use to admire and encourage empathetic behavior in the participant?
- Please write a sentence that admires/encourages choosing and engaging in empathetic behavior in the participant.
- How do you feel about people who choose and engage in empathetic behavior? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feelings where 0 means extremely negative, 10 means extremely positive, and 5 is neutral.
- Sometimes people see praise as genuine and other times not. When we show the sentence you wrote encouraging/admiring empathetic behavior to participants, how do you think they will view it?
- Would you like the opportunity to go back to your sentence and update it? [allow respondents to update their praise]

We further attach a minimal working example of a survey that elicits peer praise and in the pages to follow and will include a .qsf file in our deposited repository of shared materials titled `Elicit_Peer_Praise.qsf`.

# Minimal Working Example - Elicit Peer Praise

**consent** This study is conducted by Adeline Lo and Jonathan Renshon at the University of Wisconsin. It seeks to advance scientific knowledge about the ways in which citizens form attitudes and think about other people. The study will consist of questions about your experiences and thoughts about others. There are no direct benefits to participating in this study.

**Eligibility:** To be eligible to participate, you must live in the United States and be at least 18 years old.

**Time required:** most participants will complete the study within 10-14 minutes total.

**Participation and Withdrawal:** There will be no cost to you if you participate in this study. You do not have to participate and are free to withdraw at any time without penalty. Your participation is voluntary.

**Compensation:** You will be paid \$3.15. You will not be compensated if you do not complete the questionnaire.

**Confidentiality:** Your participation in this study will remain confidential and no identifiers will be collected. Adeline Lo and Jonathan Renshon are not provided with any of your identifiable information and will store all of your responses on a secure computer.

**To Contact the Researcher:** If you have any questions about this study, you should feel free to address them to Adeline Lo at [aylo@wisc.edu](mailto:aylo@wisc.edu) or Jonathan Renshon, at [renshon@wisc.edu](mailto:renshon@wisc.edu). If you want to talk with someone about your rights as a research participant, you may contact the Education and Social/Behavioral Science IRB Office at the University of Wisconsin at [608-263-2320](tel:608-263-2320).

Please print or save a copy of this page for your records.

Indicate whether or not you agree to participate below:

- I agree to participate (1)
- I do not agree to participate (2)

**End of Block: consent**

---

**Start of Block: demographics**

**race** Which race/ethnicity do you identify with? Please select all that apply to you:

- White, not-Hispanic (1)
- Hispanic or Latino (2)
- Black or African American (3)
- Asian American (4)
- Middle Eastern or Arab (5)
- American Indian/ Native American (6)
- Other (7)

**age** Please enter your age (in numbers) on your last birthday:

---

party\_id Generally speaking, do you think of yourself as a Democrat, a Republican or what?

- Strong Republican (1)
- Republican (2)
- Lean Republican (3)
- Independent (4)
- Lean Democrat (5)
- Democrat (6)
- Strong Democrat (7)

End of Block: demographics

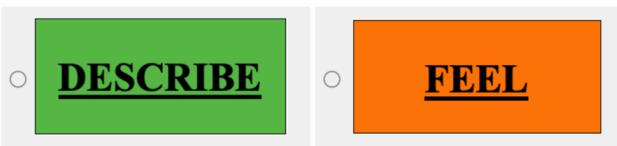
---

Start of Block: task\_inst1

description In the following, you will be asked to provide feedback on two tasks a real adult has performed. The participant was faced with a deck of cards from which an image of a person was drawn.



Then the respondent chose between two buttons: a green button on the left labeled DESCRIBE and an orange button on the right labeled FEEL.



description2 If the participant chose the orange button labeled FEEL, the participant was told to have empathy and focus on the internal feelings and experiences of the person in the image and write a sentence imagining the feelings and experiences of the person, as well as a few words about the feelings of the person.



feel\_words Think of language that would encourage or admire the participant for their efforts and some positive things you can say about people who choose to empathize with another person to encourage them.

What are three words you might use to admire and encourage empathetic behavior in the participant?

- Word 1 (4) \_\_\_\_\_
- Word 2 (5) \_\_\_\_\_
- Word 3 (6) \_\_\_\_\_

feel\_sentence Please write a sentence that admires empathetic behavior in the participant.

---

feel\_therm How do you feel about people who partake in empathetic behavior? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feelings where 0 means extremely negative, 10 means extremely positive, and 5 is neutral.



- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

verify\_feel Sometimes people see praise as genuine and other times not. When we show the words you wrote encouraging/admiring empathetic behavior to participants, how do you think they will view them?

- Very genuine (1)
  - Somewhat genuine (2)
  - Neutral (3)
  - Not very genuine (4)
  - Not at all genuine (5)
- 

verify\_feel2 Would you like the opportunity to go back to your three words and update them?

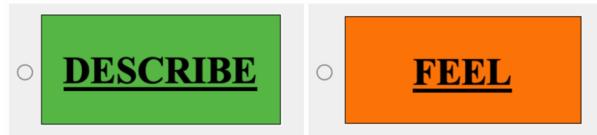
- Yes (1)
- No (2)

[coding: if yes, move back to 3 words]

instructions3 Now recall back to the two tasks the real adult participant performed. The participant was faced with an image drawn from a deck of cards.



Then the respondent was faced with a choice between two buttons: a green button on the left labeled DESCRIBE and an orange button on the right labeled FEEL.



instructions4 If the participant chose the green button labeled DESCRIBE, the participant was told to be objective and focus on the external features and appearances of the person in the image and write a sentence description, as well as a few descriptive words about the person in the image.



describe\_words Think of language that would encourage or admire the participant for their efforts and some positive things you can say about people who choose to objectively describe another person to encourage them.

What are three words you might use to admire and encourage objective behavior in the participant?

- Word 1 (1) \_\_\_\_\_
- Word 2 (2) \_\_\_\_\_
- Word 3 (3) \_\_\_\_\_

describe\_sentence Please write a sentence that admires objective behavior in the participant.

---

describe\_therm How do you feel about people who partake in objective behavior? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feelings where 0 means extremely negative, 10 means extremely positive, and 5 is neutral.



0 (0)  
1 (1)  
2 (2)  
3 (3)  
4 (4)  
5 (5)  
6 (6)  
7 (7)  
8 (8)  
9 (9)  
10 (10)

verify\_describe Sometimes people see praise as genuine and other times not. When we show the words you wrote encouraging/admiring objective behavior to participants, how do you think they will view them?

- Very genuine (1)
  - Somewhat genuine (2)
  - Neutral (3)
  - Not very genuine (4)
  - Not at all genuine (5)
- 

verify\_describe2 Would you like the opportunity to go back to your three words and update them?

- Yes (1)
- No (2)

[coding: if yes, allow to go back to 3 words]

### **C.3.2 How to create a peer praise intervention**

Our conceptualization of a peer praise intervention is around summarizing peer-delivered praise in an easy-to-digest manner for respondents to understand the main message of admiration and encouragement by peers towards empathy for outgroups. To this end, we used the following simplified series of steps to create the language and word cloud combination that constituted our peer praise intervention, all of which can be conducted in R using open-access packages such as `stm`, `quanteda`, `wordcloud`:

- Collect all words and sentences that the “peer” group output in the above “How to generate peer praise” section as a series of short textual data.
- Remove all stop words, punctuation and numbers, and lowercase all words.
- Stem remaining words from the corpus so that words with similar roots can be combined, given their linguistic and meaning-based connections (e.g. “family” and “familial” share the root “famili”).
- Plot a wordcloud of a top set of occurring words, sized by how often they occur.
- Take an average of the thermometer rating measure that respondents gave to people who display empathetic behavior (from “How to generate peer praise”) and incorporate it into a sentence describing how peers on this platform have provided their praise and admiration towards people who are empathetic, with an average rating of # in warmth towards them.
- Combine the sentence and the word cloud as a final peer praise intervention that can be randomly assigned in a survey experiment.

### **C.3.3 How to use peer praise in a survey experiment**

We attach a minimal working example of a survey that randomly assigns peer praise in the pages to follow and will include a .qsf file in our deposited repository of shared materials titled `Intervening_with_Peer_Praise.qsf`.

# Minimal Working Example - Intervening with Peer Praise

This study is conducted by Adeline Lo and Jonathan Renshon at the University of Wisconsin and Lotem Bassan-Nygate at Harvard University. It seeks to advance scientific knowledge about the ways in which citizens form attitudes and think about other people.

The study will consist of questions about your experiences and thoughts about others. There are no direct benefits to participating in this study. You may not be told everything about the purpose or procedures of this research design. **Eligibility:** To be eligible to participate, you must live in the United States and be at least 18 years old. The study includes attention checks, if you fail these checks, you will be removed from the study. **Time required:** most participants will complete the study within 15 minutes total.

**Participation and Withdrawal:** There will be no cost to you if you participate in this study. You do not have to participate and are free to withdraw at any time without penalty. Your participation is voluntary.

**Compensation:** You will be paid \$3.15 through MTurk. You will not be compensated if you do not complete the questionnaire. **Confidentiality:** Your participation in this study will remain confidential and no identifiers will be collected. Since identifiers are removed from your identifiable private information during this research, this information could be used for future research studies or distributed to another investigator for future research studies without your additional informed consent. You may be contacted in the future for a follow-up study.

Adeline Lo, Jonathan Renshon, and Lotem Bassan-Nygate are not provided with any of your identifiable information and will store all of your responses on a secure computer.

**To Contact the Researchers:** If you have any questions about this study, you should feel free to address them to Adeline Lo at [aylo@wisc.edu](mailto:aylo@wisc.edu), Jonathan Renshon, at [renshon@wisc.edu](mailto:renshon@wisc.edu), or Lotem Bassan-Nygate at [lbassan@hks.harvard.edu](mailto:lbassan@hks.harvard.edu). If you want to talk with someone about your rights as a research participant, you may contact the Education and Social/Behavioral Science IRB Office at the University of Wisconsin at 608-263-2320 or the Harvard University Area Institutional Review Board ("IRB") at (617) 496-2847 or [cuhs@harvard.edu](mailto:cuhs@harvard.edu)

Please print or save a copy of this page for your records.

Indicate whether or not you agree to participate below:

- I agree to participate (1)
- I do not agree to participate (2)

**End of Block: consent**

**Start of Block: demographics**

race Which race/ethnicity do you identify with? Please select all that apply to you:

- White, not-Hispanic (1)
- Hispanic or Latino (2)
- Black or African American (3)
- Asian American (4)
- Middle Eastern or Arab (5)
- American Indian/ Native American (6)
- Other (7)

age Please enter your age (in numbers) on your last birthday:

party\_id Generally speaking, do you think of yourself as a Democrat, a Republican or what?

- Strong Republican (1)
  - Republican (2)
  - Lean Republican (3)
  - Independent (4)
  - Lean Democrat (5)
  - Democrat (6)
  - Strong Democrat (7)

## End of Block: demographics

## **Start of Block: Treatment**

(coding: if treatment = empathetic, show treatment)

Peers of yours on this platform have said they hold favorable feelings towards people who engage in **empathetic behavior**, with an average “feeling thermometer” score of 7.9, on a scale of 0 (least favorable) to 10 (most favorable).

**That same peer group provided real feedback for empathetic behavior, which is pictured in the word cloud below.**



## **Start of Block: social\_distance**

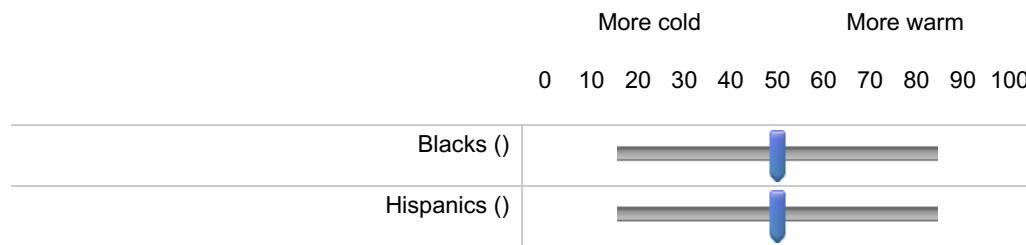
**social\_dis** Which is the closest relationship you would find acceptable for Black and Hispanic Americans. For example, if you would accept Black and Hispanics living on your street, but not as close friends, then you would choose "neighbors".

- Relatives (4)
  - Friends (5)
  - Neighbors (6)
  - Coworkers (7)
  - Citizens (8)
  - Visitors (9)
  - None (10)

## Start of Block: thermometer

therm Now we are going to ask you about your feelings towards Black and Hispanic Americans. using a feeling thermometer.

Ratings between 50 degrees and 100 degrees mean that you feel favorable and warm toward the group. Ratings between 0 degrees and 50 degrees mean that you don't feel favorable toward the group and that you don't care too much for the group. You would rate the group at the 50 degree mark if you don't feel particularly warm or cold toward them.



**End of Block: thermometer**

#### **C.4 Full Survey Instrument**

In the pages to follow, we include our full survey instrument from the Peer Praise study.

## Political empathy

This study is conducted by Adeline Lo and Jonathan Renshon at the University of Wisconsin and Lotem Bassan-Nygate at Harvard University. It seeks to advance scientific knowledge about the ways in which citizens form attitudes and think about other people. The study will consist of questions about your experiences and thoughts about others. There are no direct benefits to participating in this study. You may not be told everything about the purpose or procedures of this research design. Eligibility: To be eligible to participate, you must live in the United States and be at least 18 years old. The study includes attention checks, if you fail these checks, you will be removed from the study. Time required: most participants will complete the study within 15 minutes total. Participation and Withdrawal: There will be no cost to you if you participate in this study. You do not have to participate and are free to withdraw at any time without penalty. Your participation is voluntary. Compensation: You will be paid \$3.15 through MTurk. You will not be compensated if you do not complete the questionnaire. Confidentiality: Your participation in this study will remain confidential and no identifiers will be collected. Since identifiers are removed from your identifiable private information during this research, this information could be used for future research studies or distributed to another investigator for future research studies without your additional informed consent. You may be contacted in the future for a follow-up study. Adeline Lo, Jonathan Renshon, and Lotem Bassan-Nygate are not provided with any of your identifiable information and will store all of your responses on a secure computer. To Contact the Researchers: If you have any questions about this study, you should feel free to address them to Adeline Lo at [aylo@wisc.edu](mailto:aylo@wisc.edu), Jonathan Renshon, at [renshon@wisc.edu](mailto:renshon@wisc.edu), or Lotem Bassan-Nygate at [lbassan@hks.harvard.edu](mailto:lbassan@hks.harvard.edu). If you want to talk with someone about your rights as a research participant, you may contact the Education and Social/Behavioral Science IRB Office at the University of Wisconsin at 608-263-2320 or the Harvard University Area Institutional Review Board ("IRB") at (617) 496-2847 or [cuhs@harvard.edu](mailto:cuhs@harvard.edu). Please print or save a copy of this page for your records.

Indicate whether or not you agree to participate below:

- I agree to participate (1)
- I do not agree to participate (2)

race Which race/ethnicity do you identify with? Please select all that apply to you:

- White, not-Hispanic (1)
- Hispanic or Latino (2)
- Black or African American (3)
- Asian American (4)
- Middle Eastern or Arab (5)
- American Indian/ Native American (6)
- Other (7)

*Display This Question:*

*If Which race/ethnicity do you identify with? Please select all that apply to you: = Other*

raceB Do you consider any part of your race or ethnicity to be African-American?

- Yes (1)
- No (2)

*Display This Question:*

*If Which race/ethnicity do you identify with? Please select all that apply to you: = Other*

raceL Do you consider any part of your race or ethnicity to be Hispanic or Latino?

- Yes (1)
- No (2)

*Display This Question:*

*If Which race/ethnicity do you identify with? Please select all that apply to you: = Other*

raceA Do you consider any part of your race or ethnicity to be Asian, Hawaiian or Pacific Islander?

- Yes (1)
- No (2)

age Please enter your age (in numbers) on your last birthday:\_\_\_\_\_

education What is the highest level of school you have completed?

- No schooling completed (1)
- Kindergarten to 8th grade (2)
- Some high school, but did not graduate (3)
- High school or equivalent (GED) (4)
- Some college, but did not complete a degree (5)
- Associate degree (6)
- Bachelor's degree (BA/BS) (7)
- Master's degree (MA/MS/MBA etc.) (8)
- Medical (MD), law (JD) or other doctoral degree (PhD) (9)

state Please select your state of residence:

▼ Alabama (1) ... I do not reside in the United States (53)

citizenship Please select all the countries where you hold a citizenship

- Afghanistan (1)...
- Zimbabwe (195)

income Thinking back over the last year, what was your household's annual income? If you are single, but live with roommates, please report only your income

- Less than 25k (1)
- 25k to less than 50k (2)
- 50k to less than 75k (3)
- 75k to less than 100k (4)
- 100k or more (5)

party\_id Generally speaking, do you think of yourself as a Democrat, a Republican or what?

- Strong Republican (1)
- Republican (2)
- Lean Republican (3)
- Independent (4)
- Lean Democrat (5)
- Democrat (6)
- Strong Democrat (7)

religion What is your present religion, if any? Choose any that apply

- Protestant (1)
- Roman Catholic (2)
- Mormon (3)
- Orthodox (Greek or Russian) (4)
- Jewish (5)
- Muslim (6)
- Buddhist (7)
- Hindu (8)
- Atheist/agnostic (9)
- Nothing in particular (10)
- Other (11)

---

#### Start of Block: attention checks

attention\_1 We are interested in what sections people like to read in the newspaper. This might affect what they learn from articles and how they feel about the issues discussed in them. We also want to see if people are reading the questions carefully. To show that you've read this much, please mark both the classified and none of the above options below. That's right, just select these two options only.

Regardless of how frequently you read the newspaper, what would you say are your favorite newspaper sections to read? (please check all that apply)

- National (1)
- Local (2)
- Real estate (3)
- Comics (4)
- Classified (5)
- Style (6)
- Sports (7)
- Business (8)
- Science and technology (9)
- Opinion (10)
- None of the above (11)
- All of the above (12)

attention\_2 In the grid below, you will see a series of statements. Please tell us whether you agree or disagree with each statement.

	Agree strongly (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Disagree strongly (5)
The best sport to watch live is baseball (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook is the best social media platform (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Two is greater than one (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Football is more interesting than basketball (32)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please click the "neither agree nor disagree" response (33)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter is more engaging than Instagram (34)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soccer is more fun to play than hockey (35)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Start of Block: social\_dis1

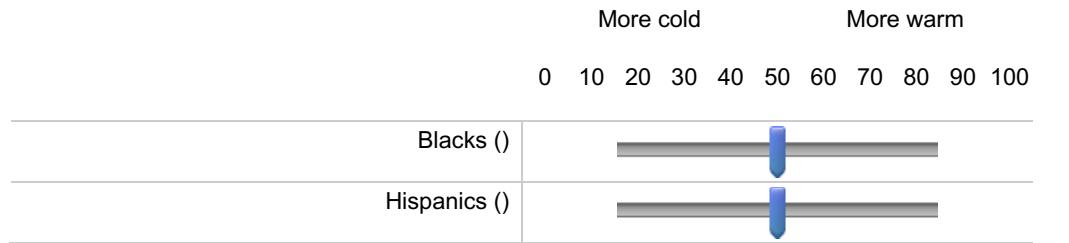
social\_dis1 Which is the closest relationship you would find acceptable for Black and Hispanic Americans. For example, if you would accept Black and Hispanics living on your street, but not as close friends, then you would choose "neighbors".

- Relatives (4)
- Friends (5)
- Neighbors (6)
- Coworkers (7)
- Citizens (8)
- Visitors (9)
- None (10)

#### Start of Block: therm1

therm1 Now we are going to ask you about your feelings towards Black and Hispanic Americans. using a feeling thermometer.

Ratings between 50 degrees and 100 degrees mean that you feel favorable and warm toward the group. Ratings between 0 degrees and 50 degrees mean that you don't feel favorable toward the group and that you don't care too much for the group. You would rate the group at the 50 degree mark if you don't feel particularly warm or cold toward them.



---

#### Start of Block: empathy1

---

empathyself1 How much do you agree with the statement: "I feel empathy for the grievances expressed by Black and Hispanic Americans about how they are treated by the police".

- Strongly agree (1)
- Agree (2)
- Neither agree nor disagree (3)
- Disagree (4)
- Strongly disagree (5)

empathyself2 How much do you agree with the statement: "I feel empathy for the grievances expressed by Black and Hispanic Americans about how they are treated by fellow citizens".

- Strongly agree (1)
- Agree (2)
- Neither agree nor disagree (3)
- Disagree (4)
- Strongly disagree (5)

empathyself3 How much do you agree with the statement: "I feel empathy for the grievances expressed by Black and Hispanic Americans about the hardships they face due to discrimination by race and ethnicity".

- Strongly agree (1)
- Agree (2)
- Neither agree nor disagree (3)
- Disagree (4)
- Strongly disagree (5)

---

#### Start of Block: practice\_inst

inst1 In a short while in this survey, you will be asked to complete the following task.

In the task, a card will be randomly drawn from a deck and you will see an image of a person. You will then be asked to choose between two buttons. The green button on the left will always be labeled DESCRIBE, and the orange button on the right will always be labeled FEEL. You should choose between these two buttons.

---

inst2 If you choose the green button labeled DESCRIBE (pictured below), you will be told to be objective and focus on the external features and appearances of the person in the image. When completing this kind of trial, try to be as objective as possible. To be objective, do not let yourself get caught up in imagining what this person might be feeling. You can, for instance, describe what you think are the **age, gender** and **race** of the person.



**DESCRIBE**

inst3 If you choose from the orange button labeled FEEL (pictured below), you will be told to have empathy and focus on the internal feelings and experiences of the person in the image. When completing this kind of trial, try to feel as much empathy as possible. To be empathetic, let yourself get caught up in imagining what this person might be feeling. You can, for instance, describe what you think are the **thoughts, feelings** and **experiences** of the person.

---



**FEEL**

inst4 Now you will **complete a practice trial of the task**, where we will ask you to try out **both** buttons in whatever order you choose.

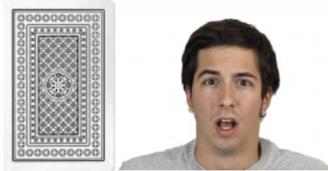
---

Q145 Below is a deck of cards with faces...



image\_practice\_a

The following image has been randomly drawn from the deck.



cards\_a Choose the green button to complete the DESCRIBE task, or the orange button to complete the FEEL task.

**DESCRIBE**

**FEEL**

---

Start of Block: practice a

*Display This Question:*

*If Choose the green button to complete the DESCRIBE task, or the orange button to complete the FEEL... = FEEL*



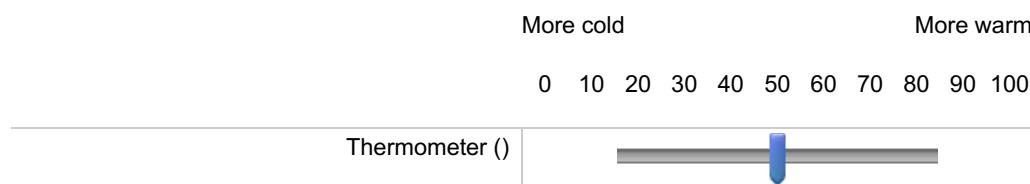
Practice1 Please write a sentence describing the feelings and experiences of this person.

---

Practice2 Please write three words that describe the feelings and experiences of this person.

- 1 (1) \_\_\_\_\_
- 2 (2) \_\_\_\_\_
- 3 (3) \_\_\_\_\_

Practice3 How do you feel about this person? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feelings where 0 means extremely negative, 100 means extremely positive, and 50 is neutral.



*Display This Question:*

*If Choose the green button to complete the DESCRIBE task, or the orange button to complete the FEEL... = DESCRIBE*

**DESCRIBE**



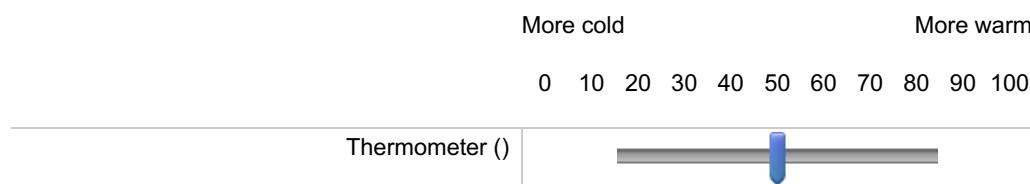
Practice1a Please write a sentence describing the age, gender and race of this person.

---

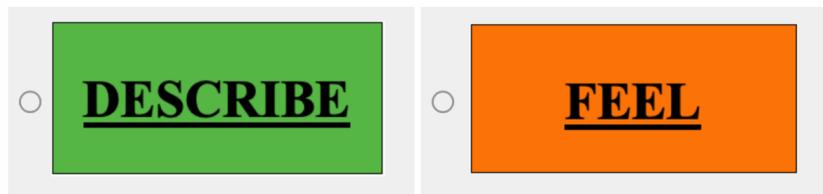
Practice2a Please write three words that describe the age, gender and race of this person.

- 1 (1) \_\_\_\_\_
- 2 (2) \_\_\_\_\_
- 3 (3) \_\_\_\_\_

Practice3a How do you feel about this person? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feelings where 0 means extremely negative, 100 means extremely positive, and 50 is neutral.



cards\_b To complete the practice round, please click whatever button you did not press already



[coding: show other card task]

[coding: if treat1 = empathetic]

Peers of yours on this platform have said they hold favorable feelings towards people who engage in **empathetic behavior**, with an average “feeling thermometer” score of 7.9, on a scale of 0 (least favorable) to 10 (most favorable).

**That same peer group provided real feedback for empathetic behavior, which is pictured in the word cloud below.**



## Start of Block: instructions1

Q347 In the following, you will repeat the task you did in the practice trial round. Here, you will choose one button. You can choose the button you prefer. You will be presented with an image of a person, randomly drawn from a deck, and you will be asked to choose the button you prefer and answer questions related to the button you chose.

Recall: You are free to choose either button.

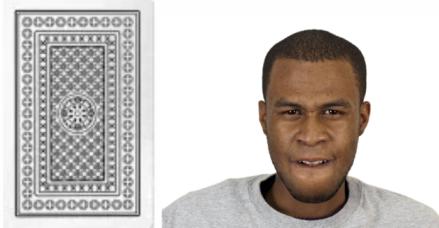
Q151 Below is a deck of cards with faces...



image1

The following image has been randomly drawn from the deck.

[coding: drawn randomly from the Chicago database]



cards1 Choose the green button to complete the DESCRIBE task, or the orange button to complete the FEEL task.Your question here

**DESCRIBE**

**FEEL**

*Display This Question:*

*If Choose the green button to complete the DESCRIBE task, or the orange button to complete the FEEL tas = FEEL*

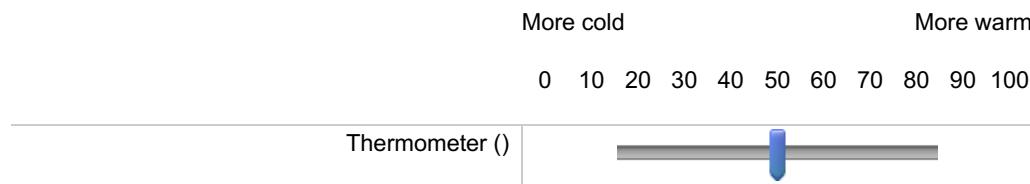


Practice1 Please write a sentence describing the feelings and experiences of this person.

Practice2 Please write three words that describe the feelings and experiences of this person.

- 1 (1) \_\_\_\_\_
  - 2 (2) \_\_\_\_\_
  - 3 (3) \_\_\_\_\_

Practice3 How do you feel about this person? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feelings where 0 means extremely negative, 100 means extremely positive, and 50 is neutral.



*Display This Question:*

If Choose the green button to complete the DESCRIBE task, or the orange button to complete the FEEL task = DESCRIBE



Practice1a Please write a sentence describing the age, gender and race of this person.

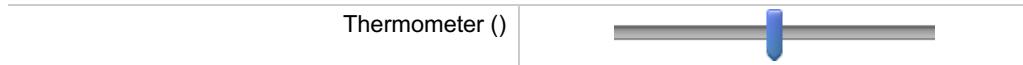
Practice2a Please write three words that describe the age, gender and race of this person.

- 1 (1) \_\_\_\_\_
  - 2 (2) \_\_\_\_\_
  - 3 (3) \_\_\_\_\_

Practice3a How do you feel about this person? Please place your attitudes on a feeling thermometer. According to the thermometer, higher numbers indicate more positive feelings. Please indicate your feeling where 0 means extremely negative, 100 means extremely positive, and 50 is neutral.



0 10 20 30 40 50 60 70 80 90 100



---

Start of Block: social\_dis2

---

social\_dis2 Which is the closest relationship you would find acceptable for Black and Hispanic Americans. For example, if you would accept Black and Hispanics living on your street, but not as close friends, then you would choose "neighbors".

- Relatives (4)
  - Friends (5)
  - Neighbors (6)
  - Coworkers (7)
  - Citizens (8)
  - Visitors (9)
  - None (10)
- 

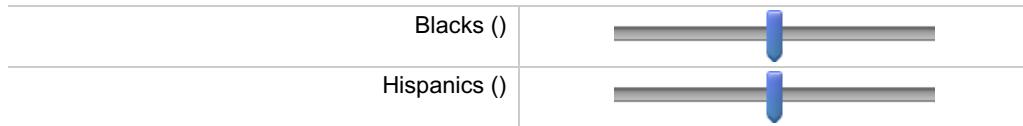
therm2 Now we are going to ask you about your feelings towards Black and Hispanic Americans. using a feeling thermometer.

Ratings between 50 degrees and 100 degrees mean that you feel favorable and warm toward the group.  
Ratings between 0 degrees and 50 degrees mean that you don't feel favorable toward the group and that you don't care too much for the group. You would rate the group at the 50 degree mark if you don't feel particularly warm or cold toward them.

More cold

More warm

0 10 20 30 40 50 60 70 80 90 100



empathyself1a How much do you agree with the statement: "I feel empathy for the grievances expressed by Black and Hispanic Americans about how they are treated by the police".

- Strongly agree (1)
- Agree (2)
- Neither agree nor disagree (3)
- Disagree (4)
- Strongly disagree (5)

empathyself2a How much do you agree with the statement: "I feel empathy for the grievances expressed by Black and Hispanic Americans about how they are treated by fellow citizens".

- Strongly agree (1)
- Agree (2)
- Neither agree nor disagree (3)
- Disagree (4)
- Strongly disagree (5)

empathyself3a How much do you agree with the statement: "I feel empathy for the grievances expressed by Black and Hispanic Americans about the hardships they face due to discrimination by race and ethnicity".

- Strongly agree (1)
- Agree (2)
- Neither agree nor disagree (3)
- Disagree (4)
- Strongly disagree (5)

donation\_blm We are offering a bonus pay to you of \$0.50, which will be added to your pay at the end of the survey. Are you willing to donate a portion of this \$0.50 bonus to the Black Lives Matter (BLM) movement?

If you are, we will donate anonymously on your behalf the portion you decide to donate to BLM and the remainder will be added to your pay at the end of the survey.

0      0.1      0.2      0.3      0.4      0.5



donation\_unidos We are offering a bonus pay to you of \$0.50, which will be added to your pay at the end of the survey. Are you willing to donate a portion of this \$0.50 bonus to the UnidosUS?

If you are, we will donate anonymously on your behalf the portion you decide to donate to UnidosUS and the remainder will be added to your pay at the end of the survey.

0      0.1      0.2      0.3      0.4      0.5



---

Start of Block: letter

letter Are you willing to write an anonymous letter to the White House in support of prioritizing racial and ethnic equity policies in the United States? We will submit the written letter to the White House anonymously on your behalf.

- Yes (1)
  - No (2)
-

Display This Question:

If Are you willing to write an anonymous letter to the White House in support of prioritizing racial... = Yes

letter\_follow Please write an anonymous letter to the White House in support of prioritizing racial and ethnic equity policies in the United States here. We will submit the written letter to the White House anonymously on your behalf.

---

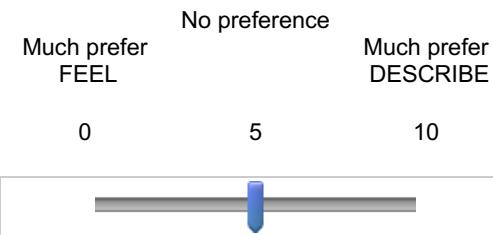
Start of Block: post task

post1 When you completed the task earlier in the survey, how did you choose between the FEEL and DESCRIBE buttons?

---

---

post2 When you completed the task earlier in the survey, did you develop a preference for one of the FEEL or DESCRIBE buttons?



post3 How mentally demanding was this task?

- Not at all demanding (1)
- A little demanding (2)
- Moderately demanding (3)
- Demanding (4)
- Very demanding (5)

**DESCRIBE**

post4 How hard did you have to work in this task?

- Not hard (1)
- A little hard (2)
- Moderately hard (3)
- Hard (4)
- Very hard (5)

**DESCRIBE**

post5 How insecure, discouraged, irritated, stressed, and/or annoyed were you made by this task?

- Not at all annoyed (1)
- A little annoyed (2)
- Moderately annoyed (3)
- Annoyed (4)
- Very annoyed (5)

**DESCRIBE**

post6 How successful were you in accomplishing what you were to do in this task?

- Not at all successful (1)
- A little successful (2)
- Moderately successful (3)
- Successful (4)
- Very successful (5)

**DESCRIBE**

asked

post7 How mentally demanding was this task?

- Not at all demanding (1)
- A little demanding (2)
- Moderately demanding (3)
- Demanding (4)
- Very demanding (5)

**FEEL**

post8 How hard did you have to work in this task?

- Not hard (1)
- A little hard (2)
- Moderately hard (3)
- Hard (4)
- Very hard (5)

**FEEL**

post9 How insecure, discouraged, irritated, stressed, and/or annoyed were you made by this task?

- Not at all annoyed (1)
- A little annoyed (2)
- Moderately annoyed (3)
- Annoyed (4)
- Very annoyed (5)

**FEEL**

post10 How successful were you in accomplishing what you were to do in this task?

- Not at all successful (1)
- A little successful (2)
- Moderately successful (3)
- Successful (4)
- Very successful (5)

asked

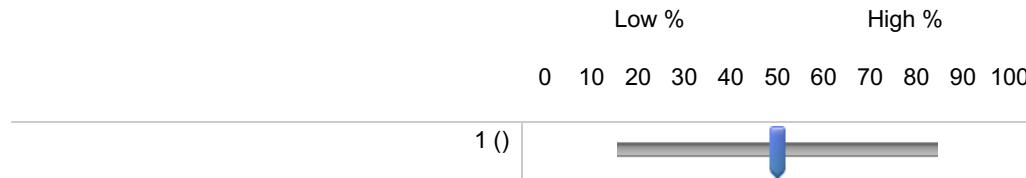
**FEEL**

post11 The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: 1, 2, 3, 4, or 5.

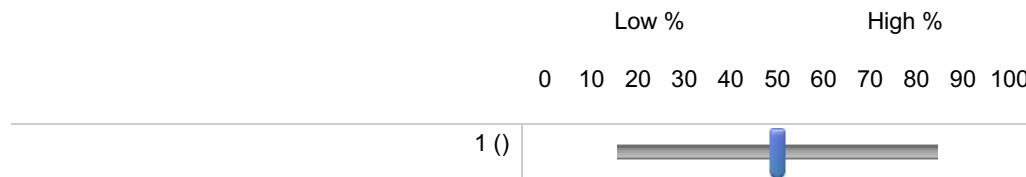
	1 Does not describe me well (1)	2 Does not describe me (2)	3 Somewhat describes me (3)	4 Describes me (4)	5 Describes me very well (5)
When I'm upset at someone, I usually try to put myself in his shoes, for a while (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before criticizing somebody, I try to imagine how I would feel if I were in their place. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often have tender, concerned feelings for people less fortunate than me. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I see someone being taken advantage of, I feel kind of protective toward them. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being in a tense emotional situation scares me. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I see someone who badly needs help in an emergency, I go to pieces. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I watch a good movie, I can very easily put myself in the place of a leading character. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

post12 Please answer the following questions, as honestly as possible, based on your own personal opinion and experiences

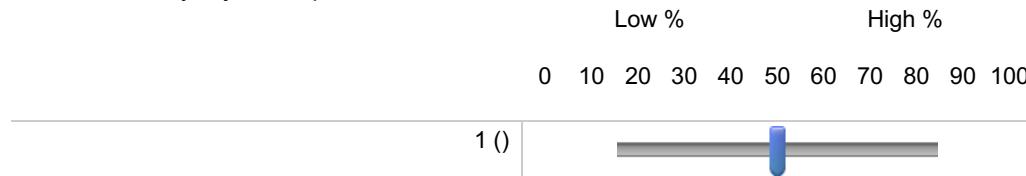
post13 Many other people have participated in the task you just did. What is your estimate of how many of them chose the FEEL button?



post14 Many other people have participated in the task you just did. What is your estimate of how many of them chose the DESCRIBE button?



post15 What percentage of people think that empathy is a good thing? per-cent-age of people tend to choose the empathy deck in the task you just completed?What per-cent-age of people tend to choose the empathy deck in the task you just completed?



post16 What percentage of people think that objectivity is a good thing? per-cent-age of people tend to choose the empathy deck in the task you just completed?What per-cent-age of people tend to choose the empathy deck in the task you just completed?

0 10 20 30 40 50 60 70 80 90 100

1 ()



post17 According to your own personal beliefs, do you think that it is more desirable to be empathic or to be objective?

- Objectivity is much more desirable (1)
- Objectivity is more desirable (2)
- They are equally desirable (3)
- Empathy is more desirable (4)
- Empathy is much more desirable (5)

ethnocentrism Do you agree or disagree with the following statements?

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
Most other cultures are backward compared with my culture (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My culture should be the role model for other cultures (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People from other cultures act strangely when they come to my culture (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifestyles in other cultures are just as valid as are those in my culture (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other cultures should try to be more like my culture (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not interested in the values and customs of other cultures (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People in my culture could learn a lot from people from other cultures (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most people from other cultures just don't know what's good for them (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Start of Block: Norms

norms How strongly do you agree or disagree that people value empathetic behavior?

- Strongly agree (1)
  - Agree (2)
  - Neither agree nor disagree (3)
  - Disagree (4)
  - Somewhat disagree (5)
- 

#### Start of Block: Emotions

emotions This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. To what extent do you feel this way NOW?

---

Happy Your question here

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a lot (4)	Extremely (5)
Happy (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enjoyment (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Liking (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

---

anxiety Your question here

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a lot (4)	Extremely (5)
Anxiety (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worry (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nervous (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

---

anger Your question here

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a lot (4)	Extremely (5)
Anger (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mad (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pissed off (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Start of Block: Manipulation check

man\_check Earlier in the survey, were you presented with the following information?

Peers of yours on this platform have said they hold favorable feelings towards people who engage in empathetic behavior, with an average “feeling thermometer” score of 7.9, on a scale of 0 (least favorable) to 10 (most favorable).

**That same peer group provided real feedback for empathetic behavior, which is pictured in the word cloud below.**



- Yes (1)
  - No (2)
  - Not sure (3)

## Start of Block: peers

peers To what extent do you agree with the following sentences?

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I see other MTurkers as my peers (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learn or gather information from other MTurkers (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I value other MTurkers opinions (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ver\_race Please assess the race/ethnicity of the man in the picture

below:

- Black (2)
- White (3)
- Hispanic (4)
- Don't know (5)



Start of Block: demographics2

sex Are you:

- Female (1)
- Male (2)
- Non-binary (3)
- Other (4)

ideology In general, do you think of yourself as:

- Very liberal (1)
- Liberal (2)
- Slightly liberal (3)
- Moderate (4)
- Slightly conservative (5)
- Conservative (6)
- Very conservative (7)

trump\_approval Did you approve, disapprove, or neither approve nor disapprove of the way **Donald Trump** handled his job as president?

- Approve extremely strongly (1)
  - Approve moderately strongly (2)
  - Approve slightly (3)
  - Neither approve nor disapprove (4)
  - Disapprove slightly (5)
  - Disapprove moderately strongly (6)
  - Disapprove extremely strongly (7)
- 

pres\_approval Do you approve, disapprove, or neither approve nor disapprove of the way **Joe Biden** is handling his job as president?

- Approve extremely strongly (1)
  - Approve moderately strongly (2)
  - Approve slightly (3)
  - Neither approve nor disapprove (4)
  - Disapprove slightly (5)
  - Disapprove moderately strongly (6)
  - Disapprove extremely strongly (7)
- 

Start of Block: open-end\_man

Display This Question:

If treat1 = empathetic

post\_manipulation **Earlier in this survey, you received the following information:**

Peers of yours on this platform have said they hold favorable feelings towards people who engage in empathetic behavior, with an average “feeling thermometer” score of 7.9, on a scale of 0 (least favorable) to 10 (most favorable).

**That same peer group provided real feedback for empathetic behavior, which is pictured in the word cloud below.**

**What did you think when you saw**



---

**Start of Block: Payment**

validation We thank you for participating in this survey.

Your validation code is:  [`\${e://Field/ResponseID}`](#) To receive payment for participating, enter this validation code in the Mechanical Turk window.

In order to submit your response to this survey, please hit the next button.

## D Study 1

Study 1 was fielded between July and August 2025 on Amazon MTurk and resulted in N=5,303 observations in Wave 1 and N=4,789 respondents followed up with in Wave 2. The across-wave attrition rate is 9.69% with a loss of 514 respondents. Respondent demographics were balanced across the main treatment (peer praise) and control arms as shown in Table D.18. Mediation tests conducted and presented as coefficient plots for the posited mechanisms of norms, happiness (registered), and anxiety, anger (not-registered) in Figures D.42-D.45.

Variable	Test	Statistic	p-value
sex	chi-sq	8.281	0.218
age	t.test	-0.404	0.686
education	chi-sq	46.976	0.352
party	chi-sq	1.737	0.784
income	chi-sq	12.704	0.122

Table D.18: Balance Tests Study 1

	<i>Dependent variable:</i>					
	H1 (1)	H2 (2)	H3 (3)	H4 (4)	H5 (5)	H6 (6)
Intercept	-0.01 (0.02)	-0.01 (0.01)	0.03*** (0.01)	-0.003 (0.01)	-0.04** (0.02)	0.001 (0.01)
PeerPraise	0.37*** (0.01)	2.39*** (0.01)	0.40*** (0.01)	1.42*** (0.004)	0.35*** (0.01)	1.41*** (0.004)
BH-adjusted p-value	0.663	0.663	0.009	0.676	0.035	0.814
Observations	3,594	4,047	4,047	4,047	2,795	3,134
R <sup>2</sup>	0.0002	0.0001	0.002	0.0001	0.002	0.0000

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Manski ATE intervals: H5=[-0.263, 0.195]; H6=[-0.22, 0.22]

Table D.19: H1-H6 models

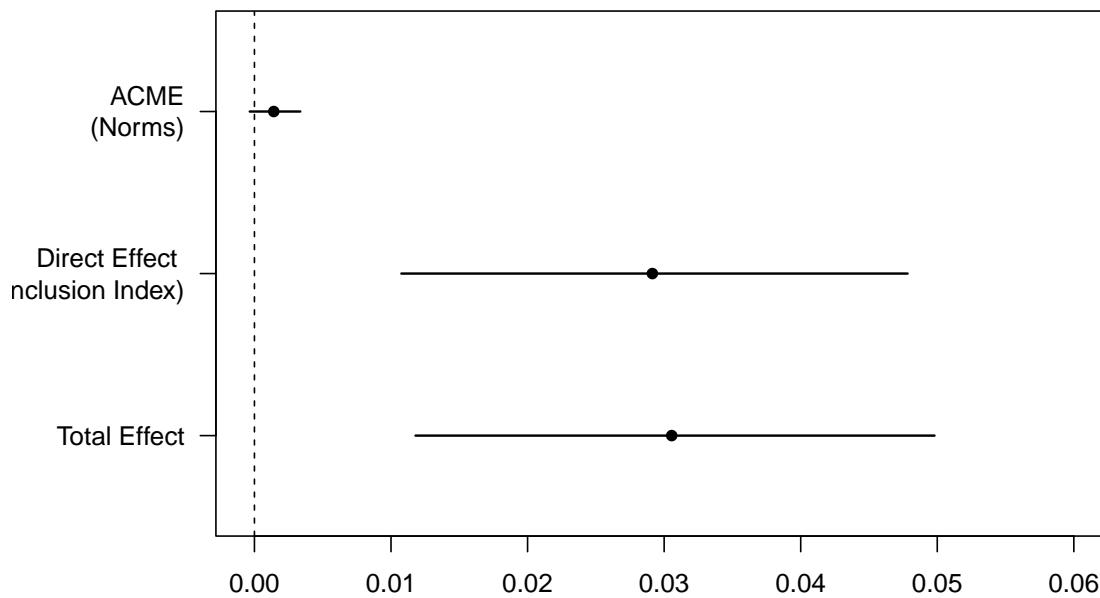


Figure D.42: Mediation analysis of H3 for norms mechanism.

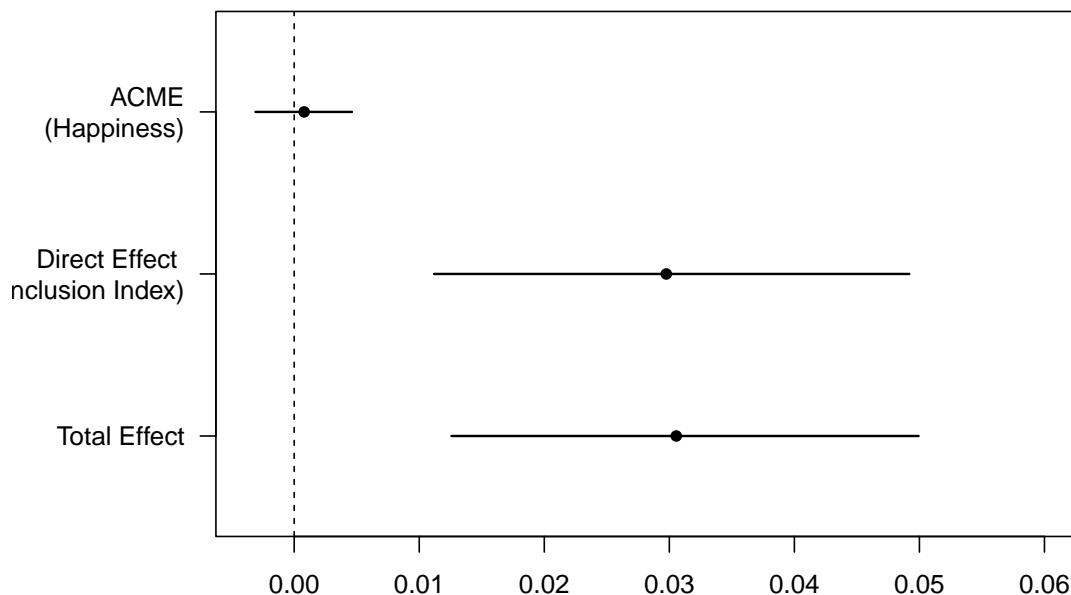


Figure D.43: Mediation analysis of H3 for happy emotion mechanism.

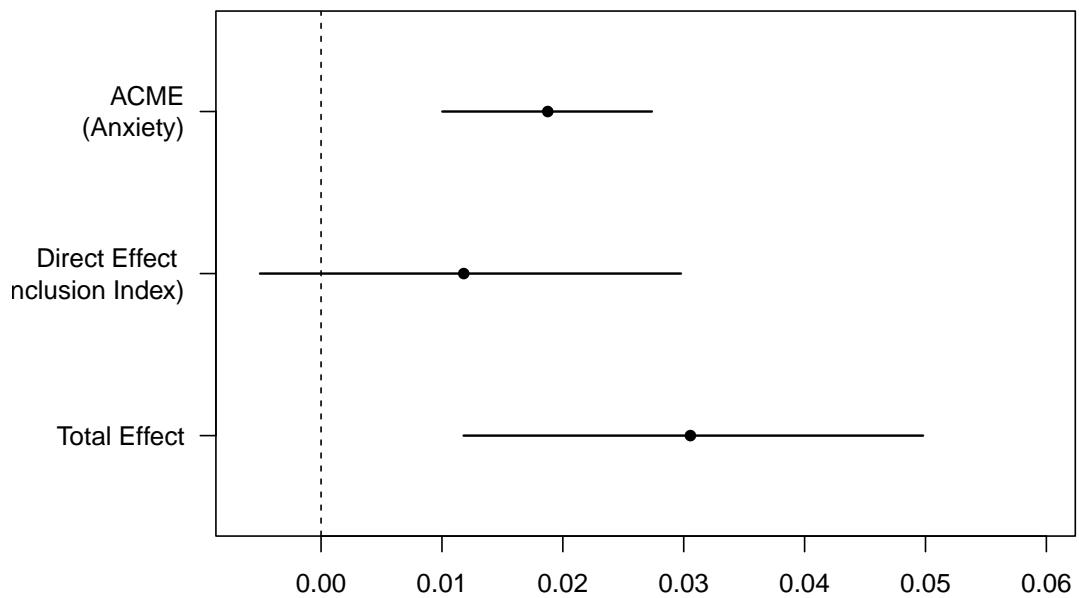


Figure D.44: Mediation analysis of H3 for anxiety mechanism.

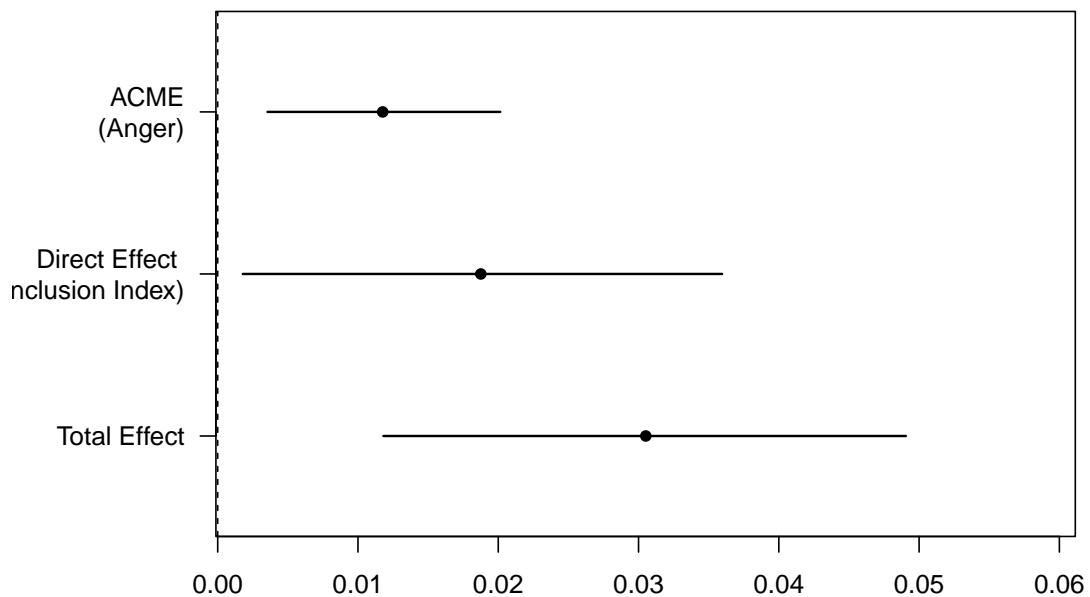


Figure D.45: Mediation analysis of H3 for anger mechanism.

## E Study 2

Study 2 was fielded August 2025 on Amazon MTurk and resulted in N=4,404 observations. Respondent demographics were balanced across the main treatment (co-partisan peer praise) and control arms as shown in Table E.20.

Variable	Test	Statistic	p-value
sex	chi-sq	5.520	0.137
age	t.test	-0.274	0.784
education	chi-sq	7.143	0.308
party	chi-sq	0.081	0.775
income	chi-sq	0.495	0.974

Table E.20: Balance Tests Study 2

	<i>Dependent variable:</i>			
	H7	H8	H9	H10
	(1)	(2)	(3)	(4)
Intercept	0.01 (0.02)	-0.004 (0.02)	0.01 (0.01)	-0.004 (0.01)
Co-Partisan PeerPraise	0.44*** (0.01)	2.37*** (0.01)	0.45*** (0.01)	1.45*** (0.004)
BH-adjusted p-value	0.809	0.809	0.809	0.809
Observations	2,628	2,914	2,914	2,914
R <sup>2</sup>	0.0000	0.0000	0.0004	0.0002

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table E.21: H7-H10 models

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