Supplementary Information

Family Matters: How Immigrant Histories Can Promote Inclusion

Contents

Appendices

A Descriptive Statistics

A.1 Family History

Table A1: First Family Generation to Arrive in America

	Survey 1	Survey 2	Survey 3
My Generation	6.70%	8.25%	8.80%
Parents' Generation	9.40%	9.98%	12.57%
Grandparents' Generation	19.30%	18.77%	19.62%
Great-Grandparents' Generation	21.50%	17.67%	17.10%
Great-Great-Grandparents' Generation or Earlier	43.10%	45.33%	41.91%

A.2 Attitudes toward Immigrants

Table A2: First Family Generation to Arrive in America

	Survey 1	Survey 2	Survey 3
Restrict Immigration			
Mean	4.83	5.03	5.07
SD	1.93	1.89	1.68
Range	1 to 7	1 to 7	1 to 7
Feeling Thermometer			
Mean	–	58.80	57.69
SD	–	29.80	28.38
Range	–	1 to 100	0 to 100

For *restrict immigration*, 7 = strongly agree; can flip such that it codes for *open immigration* with higher values for more openness. For *feeling thermometer*, 100 = completely favorable.

A.3 Pretreatment Covariates

Table A3: Descriptive Statistics for Pretreatment Covariates

	Survey 1	Survey 2	Survey 3
Age			
Mean	46.27	45.04	45.63
SD	17.14	16.55	16.48
Range	19 to 100	18 to 99	18 to 93
Male			
Mean	0.48	0.48	0.49
SD	0.50	0.50	0.50
Range	0 to 1	0 to 1	0 to 1
College			
Mean	0.56	0.67	0.73
SD	0.50	0.47	0.44
Range	0 to 1	0 to 1	0 to 1
White			
Mean	0.73	0.73	0.70
SD	0.44	0.45	0.46
Range	0 to 1	0 to 1	0 to 1
Republican			
Mean	0.26	0.29	0.36
SD	0.44	0.45	0.48
Range	0 to 1	0 to 1	0 to 1
Democrat			
Mean	0.30	0.37	0.37
SD	0.46	0.48	0.48
Range	0 to 1	0 to 1	0 to 1
Employed			
Mean	0.47	0.55	–
SD	0.50	0.50	–
Range	0 to 1	0 to 1	–
Baseline Empathy (Standardized)			
Mean	–	–	0.00
SD	–	–	1.0
Range	–	–	-4.59 to 3.63

A.4 Survey Time

We present summary statistics for survey time for Studies 2 and 3 in Table A.4; note the average length of time for Study 3 was longer (nearly double) than that for Study 2. Study 1 times available upon request.

Table A4: Studies 2 and 3 Survey Completion Time in Minutes

	Study 2			Study 3		
	Full Sample	**Treatment**	**Control**	**Full Sample**	**Treatment**	**Control**
Min	1.000	2.000	2.000	2.033	2.033	2.283
1st Q	8.000	8.000	9.000	15.650	15.683	15.633
Median	12.000	12.000	13.000	22.317	22.267	22.333
Mean	17.765	17.683	18.472	31.439	32.086	30.762
3rd Q	18.000	18.000	19	33.992	34.225	33.367
Max	716.000	556.000	716.000	543.583	543.583	437.650

B Treatment Design

Treatment assignment occurred with equal probability.

Question Order for Treatment Group:

Family History Prime: question about when family arrived in United States.

Survey transitions to new page.

Mediation: question about empathy for immigrants (study 3 only).

Outcomes: questions about open immigration policies (studies 1, 2, and 3) and immigrant feeling thermometer (studies 2 and 3 only).

Question Order for Control Group:

Mediation: question about empathy for immigrants (study 3 only).

Outcomes: questions about open immigration policies (studies 1, 2, and 3) and immigrant feeling thermometer (studies 2 and 3 only).

Survey transitions to new page.

Family History Prime: question about when family arrived in United States.

C Tests of Design Assumption: Covariate Balance

The logistic regression results displayed in Table C5 below suggest that randomization was generally successful across the three surveys. While a small number of variables predict treatment assignment, the results are consistent with control variables included: see Appendix Section D.

Table C5: Balance for Family History Treatment

Logistic Regression			
Variable	Survey 1	Survey 2	Survey 3
Age	-0.001	0.001	-0.000
	(0.004)	(0.004)	(0.129)
Male	0.369**	-0.087	-0.019
	(0.129)	(0.113)	(0.067)
College	0.208	-0.143	0.082
	(0.132)	(0.120)	(0.073)
White	-0.009	0.014	-0.028
	(0.150)	(0.134)	(0.079)
Republican	0.113	0.086	0.240**
	(0.160)	(0.144)	(0.083)
Democrat	-0.001	0.101	0.154
	(0.153)	(0.134)	(0.083)
Employed	0.114	0.093	
	(0.133)	(0.120)	
Baseline			-0.002
Empathy			(0.034)
Constant	-0.290	-0.041	-0.128
	(0.253)	(0.219)	(0.129)
Observations	1,000	1,299	3,381
Prob $> \chi^2$	0.058	0.895	0.127

*** p<0.001, ** p<0.01, * p<0.05
Dependent variable is assignment to treatment.

D Robustness of Main Effects

D.1 Main effects controlling for pretreatment covariates

Table D6 below demonstrates that the family history treatment effects are consistent with the difference in means analysis reported in the paper when they are estimated using ordinary least squares regression with pretreatment covariates including: age, gender, education, race (white or non-white), party, and employment status.

Table D6: Family History Main Effects

	Open Immigration			*Thermometer*	
	Survey 1	Survey 2	Survey 3	Survey 2	Survey 3
Family History Treatment	0.397***	0.297**	-0.003	4.342**	1.774*
	(0.112)	(0.096)	(0.051)	(1.548)	(0.873)
Age	-0.024***	-0.016***	-0.013***	-0.142**	-0.011
	(0.003)	(0.003)	(0.002)	(0.051)	(0.029)
Male	-0.242*	0.033	-0.175***	1.292	3.112***
	(0.112)	(0.099)	(0.052)	(1.569)	(0.916)
College	0.373***	0.304**	0.032	10.498***	9.094***
	(0.115)	(0.104)	(0.058)	(1.743)	(1.042)
White	-0.119	-0.209	0.006	-4.899**	2.077
	(0.146)	(0.126)	(0.070)	(1.819)	(1.154)
Republican	-1.089***	-1.055***	-0.911***	-10.325***	-3.018**
	(0.126)	(0.113)	(0.062)	(2.066)	(1.134)
Democrat	0.668***	0.645***	0.456***	11.576***	13.456***
	(0.144)	(0.124)	(0.069)	(1.810)	(1.130)
Employed	-0.131	-0.403***		-4.136*	
	(0.118)	(0.102)		(1.664)	
Constant	3.636***	3.826***	4.335***	63.651***	29.454*
	(0.686)	(0.230)	(0.541)	(3.675)	(11.665)
Location Indicators	✓	✓	✓	✓	✓
Observations	1,000	1,274	3,818	1,274	3,831

*** p<0.001, ** p<0.01, * p<0.05
OLS regressions with robust standard errors.

D.2 Weighted main results

Study 1 and Study 2 were fully representative samples with quotas filled from Lucid and YouGov respectively.

In Study 3 we conducted nationally representative sampling with Lucid, based off of respondent age, gender, race, and geographic location. Given that the end sample resulted in only slight undersampling of 18-24 year olds and Hispanic respondents, we present main results of Study 3 with computed sampling weights that adjust for age and ethnicity in Table D7. Main results are substantively unchanged.

D.2.1 Weighted main results: Study 3

Table D7: Weighted Main Results: Study 3

	Dependent variable:	
	Open Immigration	Immigration Thermometer
	(1)	(2)
(Family History) Treatment	−0.037	2.021**
	(-0.145,0.071)	(0.213,3.828)
Constant	2.968***	56.685***
	(2.891,3.044)	(55.385,57.984)
Observations	3,818	3,831
Akaike Inf. Crit.	14,851.880	36,528.920
Note:		*p<0.1; **p<0.05; ***p<0.01

E Subgroup Effects

E.1 Subgroup Effects by Partisanship and Trump Approval

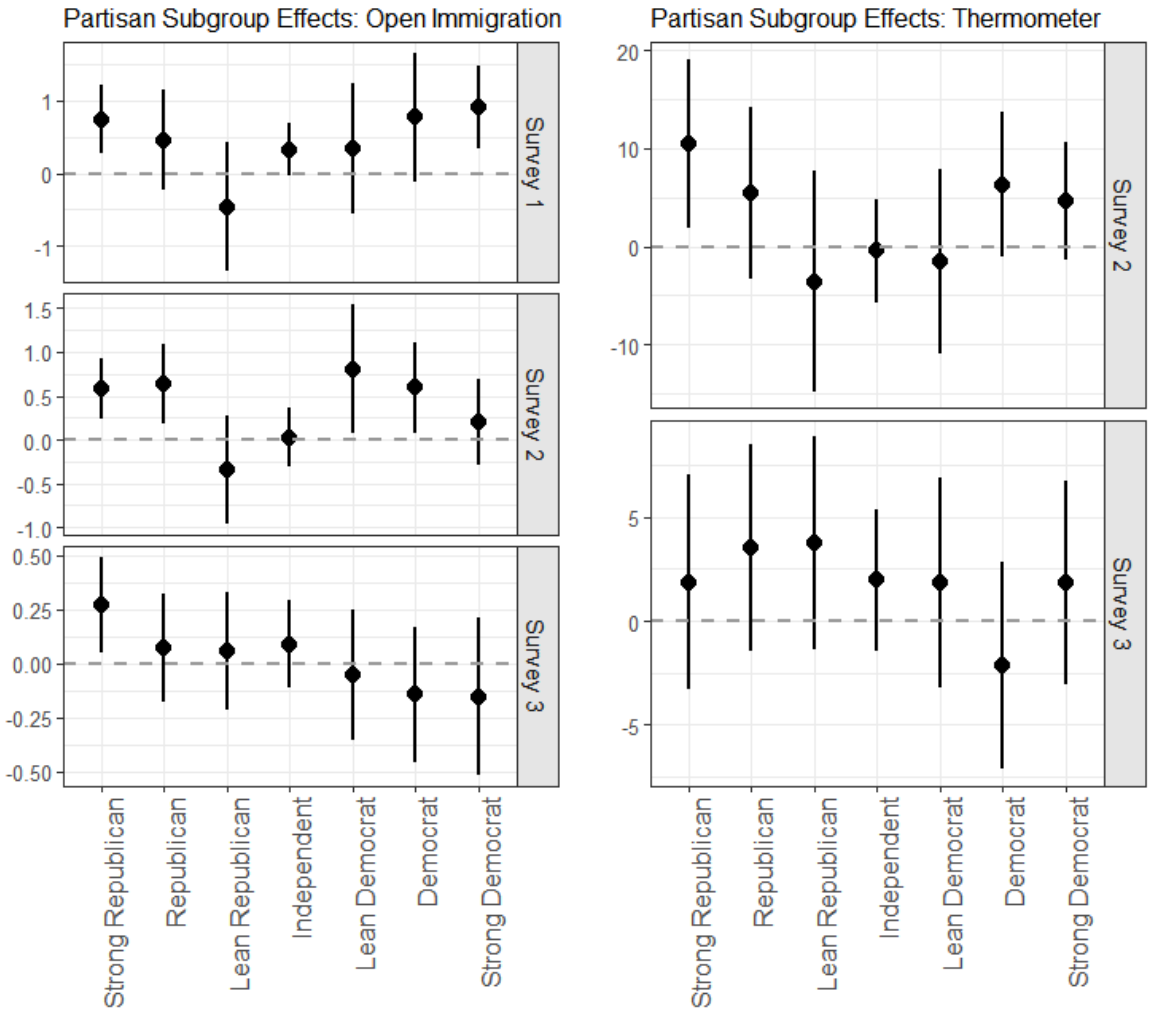
Because Republicans and Trump supporters hold more negative views of immigrants and immigration on average (Wong 2016), we assess whether the treatment moves attitudes among these groups, or if effects are limited to Democrats and Independents who already demonstrate relatively positive views. To estimate these partisan subgroup effects, we limit our sample to the relevant respondent characteristic subgroup and conduct an OLS regression with robust standard errors. We also incorporate control variables including gender, race, education, age, employment, and location.[1]

Figure 3 in the main paper shows the treatment effects across the subgroups for the different surveys and outcomes. In general, they suggest that the treatment generated attitude shifts regardless of partisan identity or Trump approval. We might imagine that in an increasingly polarized environment around the issue of immigration, only specific partisan groups (perhaps Democrats) might be more predisposed towards responding to the treatment, but find that, in fact, Republicans and Independents alike demonstrated responsiveness to the treatment. These findings suggest the treatment can generate attitude change among Americans who are most opposed to immigrants and immigration.

E.2 Subgroup Effects for Strong and Weak Partisans

[1]These control variables were pre-registered. Employment status is not available in the third study. The location variable is an indicator for state in the first study, an indicator for region in the second study, and an indicator for birth state in the third study.

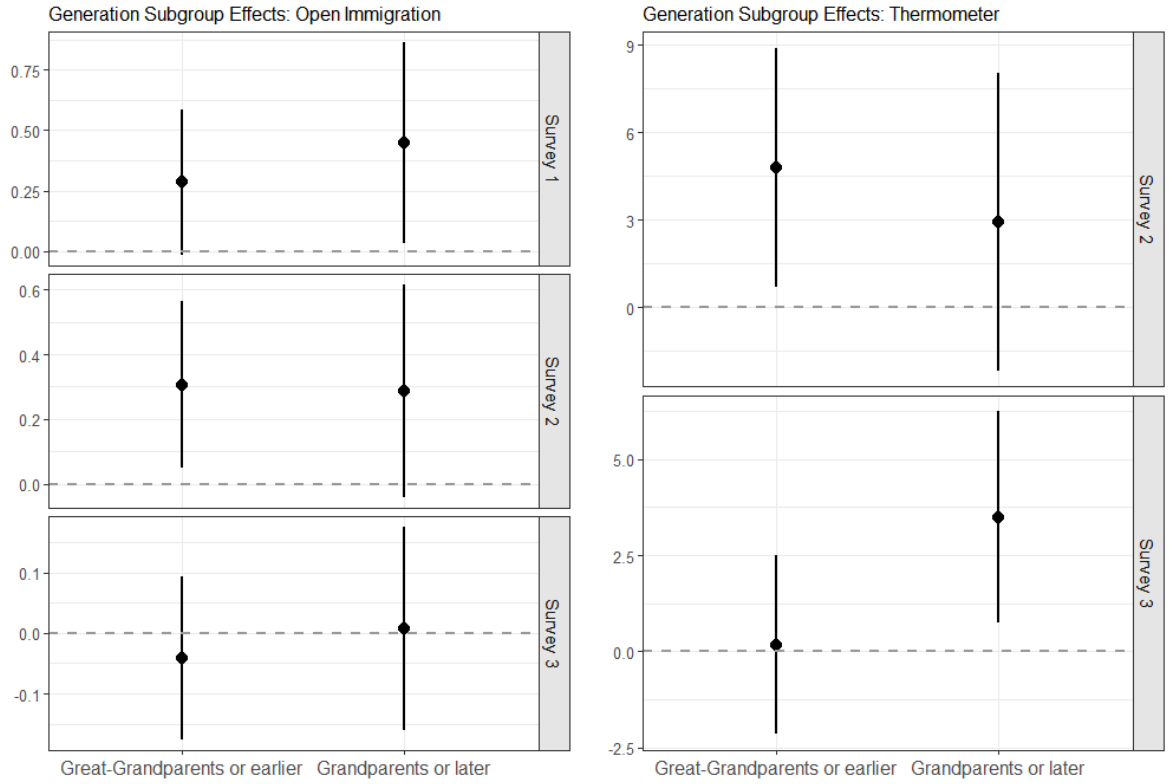
Figure E1: Family History Treatment Effects by Partisanship



E.3 Generational Subgroup Effects

Our sample demonstrates significant variation in which generation of respondents' families first arrived in the United States. For instance, in the third study, 42 percent of respondents said their families came during their great-great-grandparents' generation or earlier, 37 percent answered that it was during their grandparents' or great-grandparents' generation, and 21 percent said that they or their parents were the first to come to the country. One possibility is that the treatment only generates more inclusive attitudes among respondents for whom immigration was experienced by their families within living memory. We assess whether the treatment is limited in this way by analyzing subgroup effects among respondents whose families arrived during their grandparents' generation or later, and among those whose families came earlier than their grandparents' generation. We conduct this analysis by implementing the same OLS model used with the partisan subgroup analysis above.

Figure E2: Family History Treatment Effects by Generation of Immigration



Note: Each coefficient is the treatment effect within the specified subgroup. OLS regression models. 95% c.i.

Figure E2 presents the treatment effects for the open immigration and thermometer outcomes across the three studies. In general, it suggests that the treatment is similarly effective regardless of whether respondents' families arrived in the United States within living memory. For the first two surveys, the treatment generated more support for open immigration policies among both subgroups. It also resulted in more favorable thermometer

scores for both groups on the second survey, though only respondents whose families arrived more recently showed improvement on the thermometer in the third survey.

E.4 Subgroup effects by Baseline Measures of Empathy

In Survey 3, we measure respondents' baseline empathy using a battery of questions designed to measure different dimensions of empathy, from which we construct a score (Davis 1980) referred to throughout as the "empathy battery" or "baseline empathy".

E.4.1 by baseline Empathy

We consider the effects of the Family History treatment moderated by measures of baseline empathy in Table E8. Respondents with higher baseline empathy scores are associated with higher likelihoods of preferring open immigration and give higher thermometer scores to immigrants. We do not find subgroup effects of baseline empathy with the family history treatment.

Table E8: by baseline Empathy

	Dependent variable:	
	Open Immigration	Immigration Thermometer
	(1)	(2)
(Family History) Treatment	−0.033	1.880**
	(-0.139,0.074)	(0.130,3.629)
Baseline Empathy	0.224***	6.773***
	(0.149,0.299)	(5.544,8.002)
Treatment*Baseline Empathy	−0.050	−0.303
	(-0.157,0.057)	(-2.052,1.447)
Constant	2.951***	56.675***
	(2.875,3.027)	(55.426,57.923)
Observations	3,799	3,812
R^2	0.014	0.056
Adjusted R^2	0.013	0.055
Note:		*p<0.1; **p<0.05; ***p<0.01

E.4.2 by baseline Empathy and Political Engagement

We consider subgroup analysis based on baseline levels of empathy and political engagement, which we proxy by a measurement for the likelihood of a respondent being willing to contact the president. We find that high empathy types who are politically engaged are more likely to respond positively to the family history treatment. We do not find the same subgroup effect on the open immigration outcome. Baseline party label is Independent (see Table E9).

Table E9: by baseline Empathy and Political Engagement

	Dependent variable:	
	Open Immigration	Immigration Thermometer
	(1)	(2)
(Family History) Treatment	0.321	16.340*
	(-0.727,1.369)	(-1.552,34.231)
Empathy (Baseline)	0.012**	0.611***
	(0.002,0.022)	(0.440,0.782)
(Would Submit) Comments	−0.861	11.444
	(-1.937,0.216)	(-6.931,29.820)
Democrat	0.406***	11.945***
	(0.279,0.533)	(9.776,14.114)
Republican	−0.966***	−3.590***
	(-1.094,-0.838)	(-5.781,-1.399)
Empathy*Comments	0.008	−0.099
	(-0.006,0.023)	(-0.348,0.149)
Treatment*Empathy	−0.004	−0.194
	(-0.019,0.010)	(-0.438,0.049)
Treatment*Comments	0.327	−28.889**
	(-1.200,1.855)	(-54.986,-2.792)
Treatment*Empathy*Comments	−0.004	0.384**
	(-0.025,0.016)	(0.030,0.737)
Constant	2.385***	6.913
	(1.651,3.119)	(-5.627,19.452)
Observations	3,798	3,808
R^2	0.152	0.117
Adjusted R^2	0.150	0.115
Note:		*p<0.1; **p<0.05; ***p<0.01

E.5 Subgroup effects by Race

We consider whether race interacted with our family history treatment resulting in heterogeneous treatment effects. Table E10 presents four models in four columns, from left to right first for the open immigration outcome, then for the thermometer outcome, with and without further sociodemographic control variables. Our results suggest that our treatment effect on the thermometer ratings are not driven by specific racial subgroups.

Table E10: by Race

	Open Immig	Open Immig	Thermometer	Thermometer
(Intercept)	**2.828**	**5.481**	**55.821**	**76.274**
	(.044)	(.172)	(.750)	(3.025)
Treatment	−.012	.017	**2.742**	**2.462**
	(.062)	(.053)	(1.049)	(.927)
African American	**.461**	.119	3.534	.082
	(.116)	(.102)	(1.970)	(1.796)
Alaska Native	.572	.293	3.379	7.847
	(.749)	(.637)	(12.697)	(11.199)
American Indian	.092	−.238	.739	.314
	(.337)	(.288)	(5.718)	(5.063)
Asian American	**.644**	**.419**	**7.471**	1.490
	(.183)	(.158)	(3.096)	(2.772)
Native Hawaiian	.422	.154	−7.421	2.365
	(.837)	(.712)	(12.697)	(12.518)
Other	**.617**	.222	2.151	−.128
	(.202)	(.176)	(3.423)	(3.092)
Pacific Islander	.272	−.178	−3.921	−7.108
	(.531)	(.452)	(8.994)	(7.955)
Treatment*African American	−.092	−.064	−4.849	−2.251
	(.164)	(.140)	(2.772)	(2.452)
Treatment*Alaska Native	−1.388	−2.013	−20.942	−22.373
	(1.223)	(1.049)	(20.724)	(18.448)
Treatment*American Indian	−.212	.196	3.220	7.557
	(.487)	(.419)	(8.256)	(7.373)
Treatment*Asian American	−.031	−.089	−4.059	−3.331
	(.242)	(.206)	(4.101)	(3.620)
Treatment*Native Hawaiian	.162	.285	−10.342	−18.817
	(1.124)	(.954)	(17.955)	(16.774)
Treatment*Other	−.025	−.139	2.203	.072
	(.300)	(.257)	(5.064)	(4.494)
Treatment*Pacific Islander	−.888	−.227	−26.242	−17.232
	(.918)	(.780)	(15.559)	(13.722)
Controls	No	Yes	No	Yes
R^2	.017	.295	.007	.226
Adj. R^2	.013	.289	.003	.219
Num. obs.	3818	3808	3831	3811

Coefficients with $p < 0.05$ in **bold**.

F Mediation Analysis

F.1 Sensitivity of Mediation Analysis (observational design)

F.1.1 Sensitivity analysis via Imai et al. 2010

We conduct a sensitivity analysis for the possible existence of unobserved pre-treatment covariates. We follow Imai et al. 2010 and assume the standard estimation models for mediator and outcome:

$$\begin{aligned} Y_i = &\quad \alpha_1 + \beta_1 T_i + \epsilon_{i1} \\ M_i = &\quad \alpha_2 + \beta_2 T_i + \epsilon_{i2} \\ Y_i = &\quad \alpha_3 + \beta_3 T_i + \gamma M_i + \epsilon_{i3} \end{aligned}$$

We assume the unobserved (pre-treatment) confounder formulation:

$$\begin{aligned} \epsilon_{i2} = &\quad \lambda_2 U_i + \epsilon'_{i2} \\ \epsilon_{i3} = &\quad \lambda_3 U_i + \epsilon'_{i3} \end{aligned}$$

and we ask how much does U_i have to explain in order for our identified ACMEs to drop to zero? The sensitivity parameter is defined in terms of this confounder formulation: $\rho \equiv \text{Corr}(\epsilon_{i2}, \epsilon_{i3})$; sequential ignorability implies $\rho = 0$. We set ρ at different values and see how our ACME changes.

Sensitivity Analysis on ρ :

Figures F3 and F6 plot the sensitivity parameter ρ at different values against the corresponding Average Mediation Effect for the Open Immigration and Immigration Thermometer outcomes, respectively. We find that when ρ is around 0.11 the ACME becomes 0 for Open Immigration. For the Immigration Thermometer outcome, this is when ρ is around 0.47.

Sensitivity Analysis on R^2 :

We also plot the proportion of original variance explained by U_i and present sensitivity in terms of R^2s. Define (Imai et al. 2010):

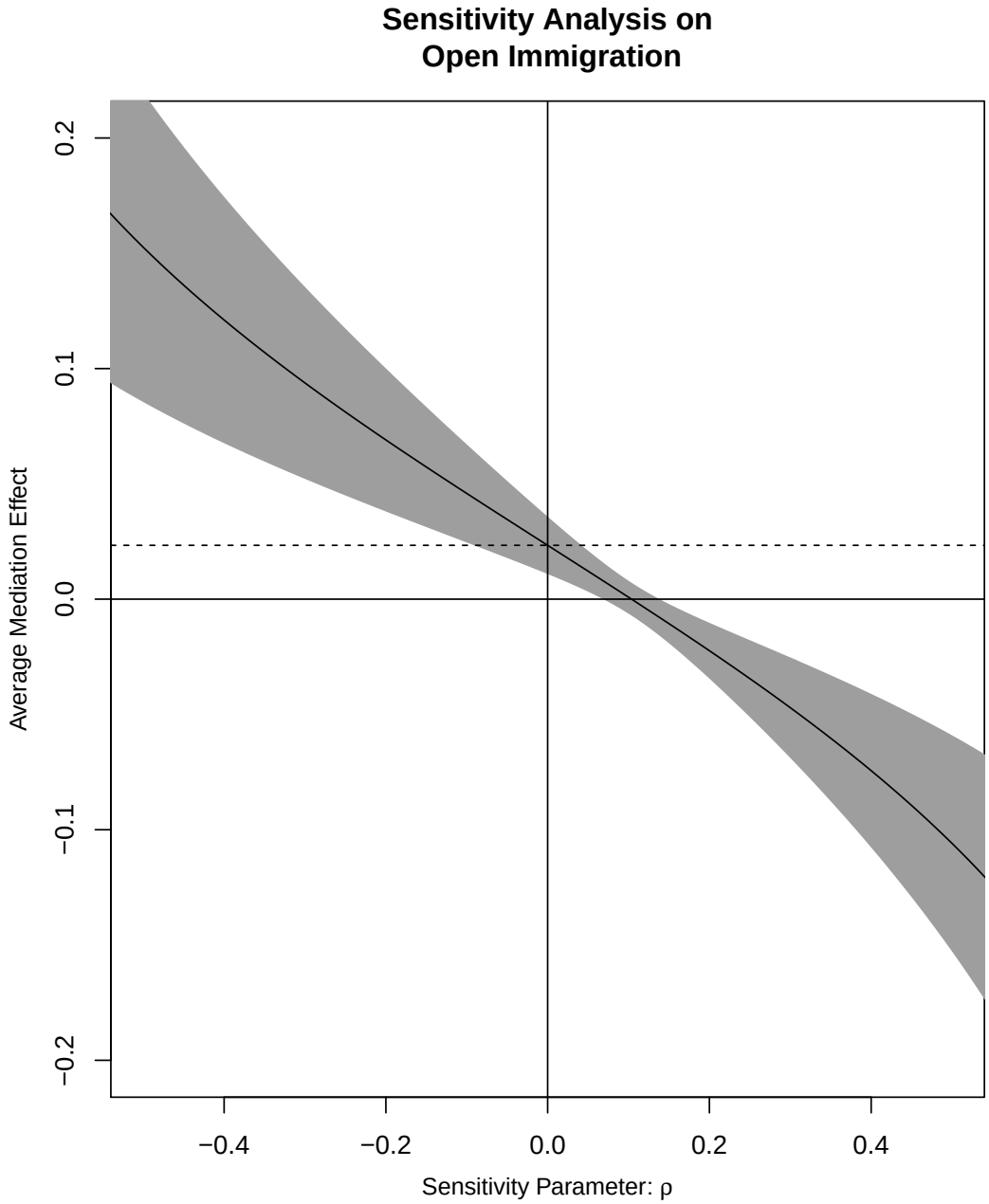
$$\tilde{R}^2_M \equiv \quad \frac{var(\epsilon_{i2}) - var(\epsilon'_{i2})}{var(M_i)}$$

and

$$\tilde{R}^2_Y \equiv \quad \frac{var(\epsilon_{i3}) - var(\epsilon'_{i3})}{var(Y_i)}$$

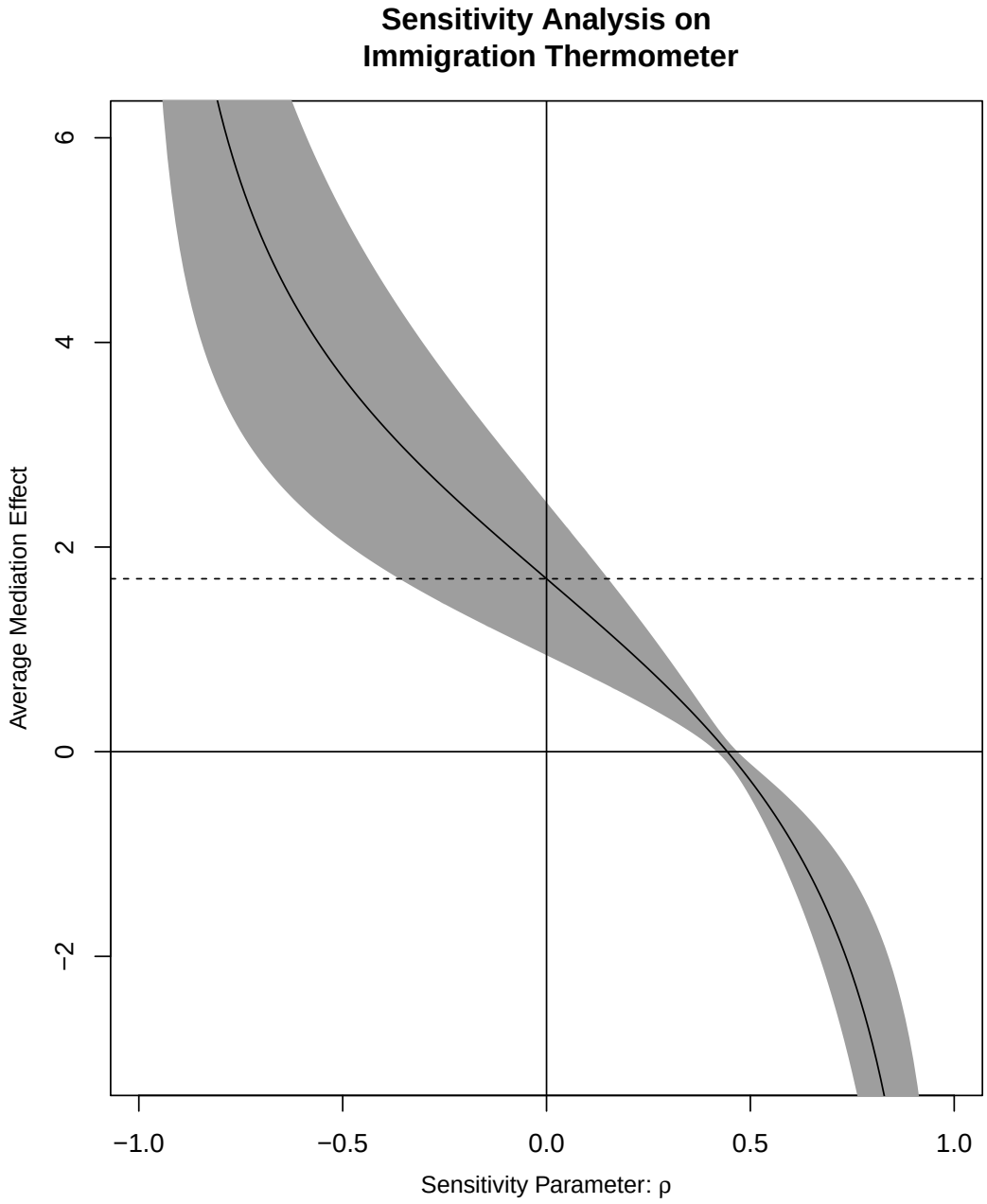
Reparameterize ρ using $(\tilde{R}^2_M, \tilde{R}^2_Y)$: $\rho = \frac{\text{sgn}(\lambda_2\lambda_3)\tilde{R}_M\tilde{R}_Y}{\sqrt{(1-\tilde{R}^2_M)(1-\tilde{R}^2_Y)}}$ where R^2_M and R^2_Y are from the original mediator and outcome models. We can set $(\tilde{R}^2_M, \tilde{R}^2_Y)$ to different values and see how mediation effects change.

Figure F3: Sensitivity Analysis on ρ for Immigration Outcome



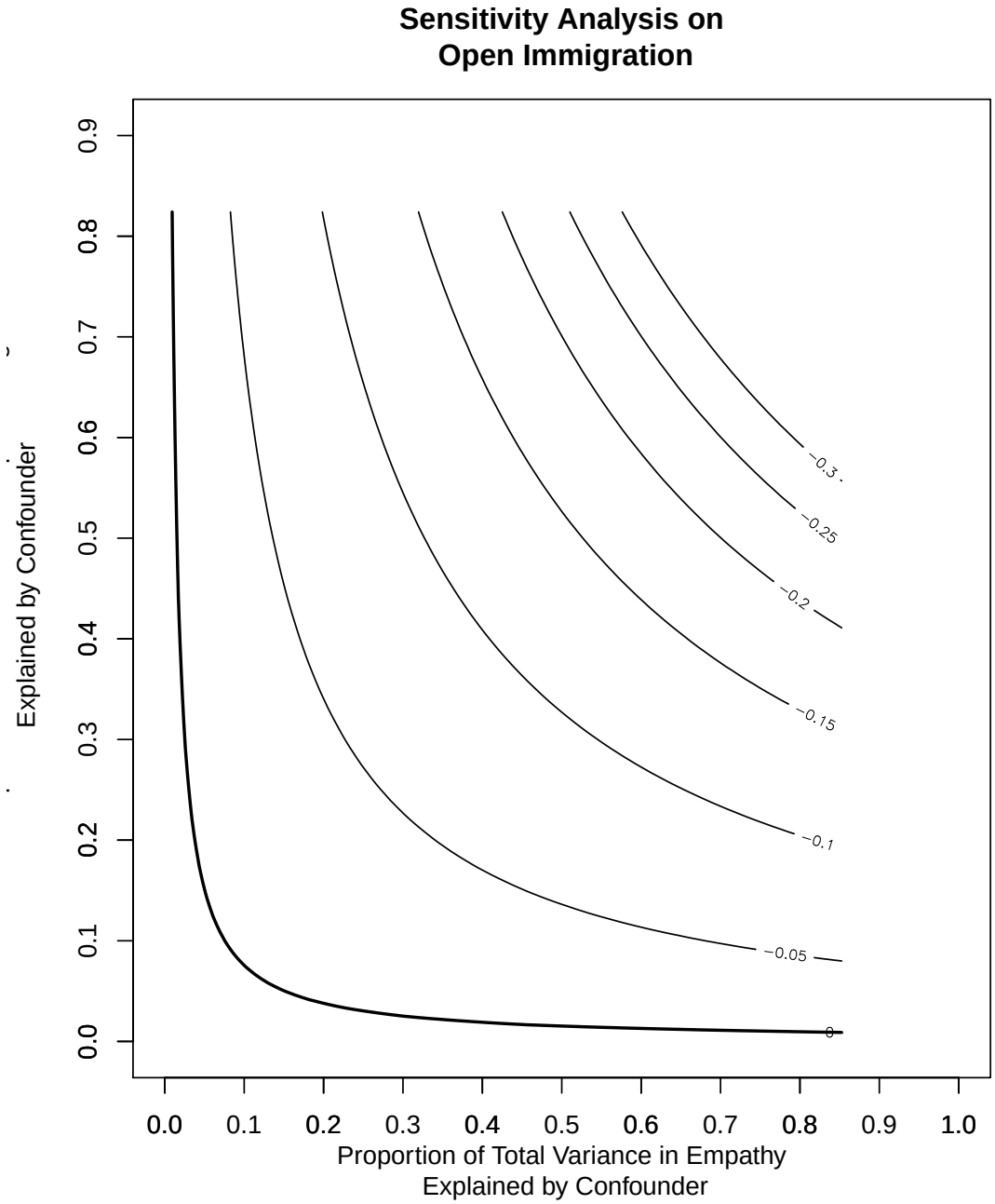
Figures F5 and F6 show sensitivity analysis in terms of R^2 for Open Immigration and Immigration Thermometer, respectively. In Figure F5, the bold line represents the various combinations of R^2 statistics where the ACME would be 0. In this case the product would have to be 0.0092 for the ACME to become 0. Another way to say this is that when the

Figure F4: Sensitivity Analysis on ρ for Thermometer Outcome



product of the original variance explained by the omitted confounding is 0.0092, the point estimate for ACME would be 0. In Figure F6 the product would have to be 0.1405 for the ACME to become 0.

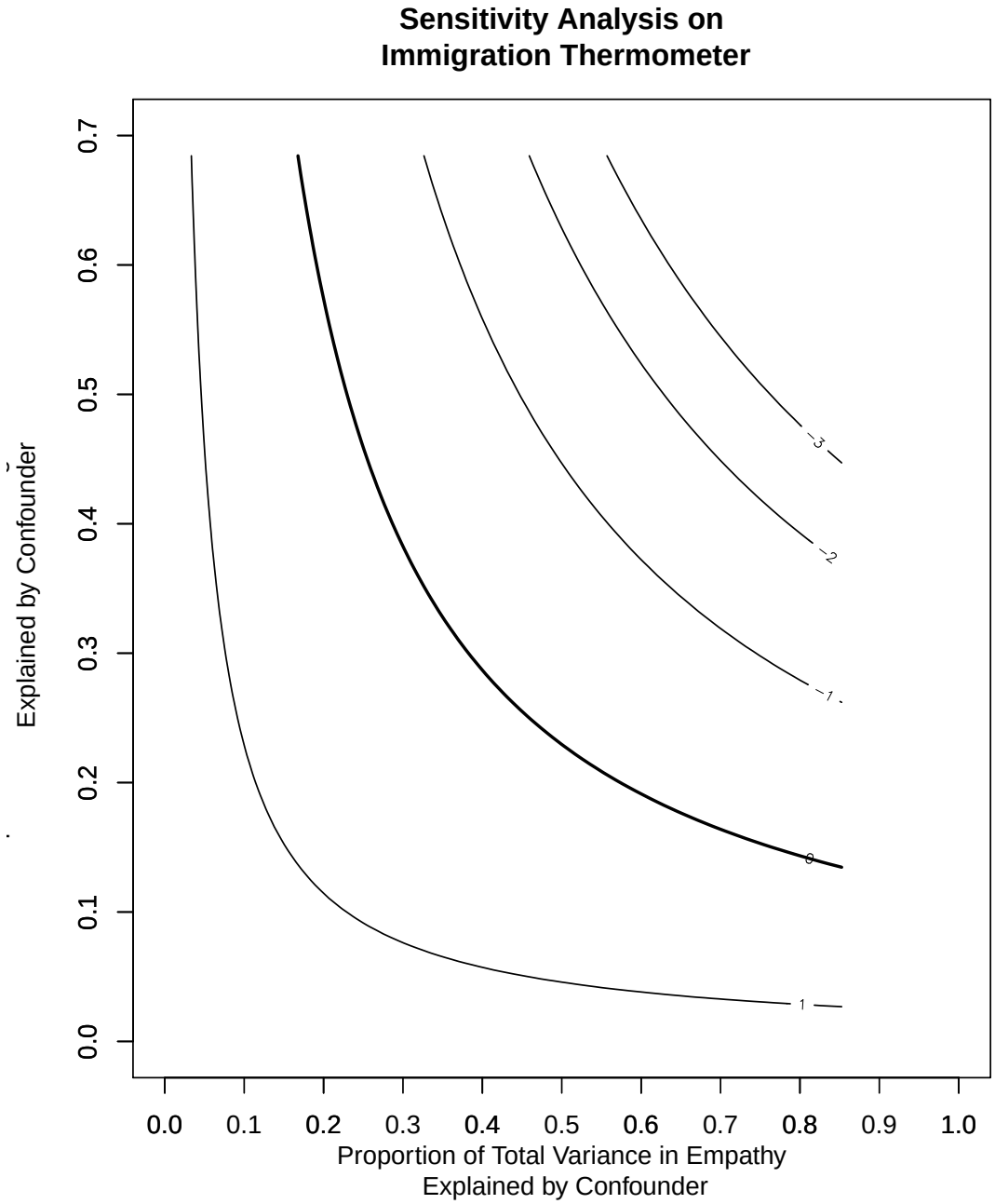
Figure F5: Sensitivity Analysis on R^2 for Immigration Outcome



F.1.2 Sensitivity analysis via Cinelli & Hazlett (2020)

We further conduct a sensitivity analysis using the approach suggested in Cinelli & Hazlett (2020), which bears some relationship to the Imai et al. (2010) approach, but further al-

Figure F6: Sensitivity Analysis on R^2 for Thermometer Outcome



lows us to consider relative sizes of omitted variable bias against observable confounding covariates.

We consider again our model of the thermometer outcome on the empathy mediator and family history treatment, as well as the mediator interacted with the treatment,

alongside covariates controlling for gender, age, party, education and baseline empathy of the respondent, and conduct sensitivity analysis on this model. Results of the analysis are presented in Table F11.

The robustness value for bringing the point estimate of mediator interacted with treatment exactly to zero ($RV_{q=1}$) is 3.8% . This means that unobserved confounders that explain 3.8% of the residual variance both of the mediator*treatment and of the outcome are sufficiently strong to explain away all the observed effect. On the other hand, unobserved confounders that do not explain at least 3.8% of the residual variance both of the treatment and of the outcome are not sufficiently strong to do so.

The robustness value for testing the null that the coefficient of the mediator interacted with the treatment is zero ($RV_{q=1,\alpha=0.05}$) falls to 0.7%. This suggests that unobserved confounders that explain 0.7% of the residual variance of both the interaction and the outcome are sufficiently strong to bring the lower bound of the confidence interval to zero at an alpha level of 5%. On the other hand, unobserved confounders that do not explain at least 0.7% of the residual variance of both the interaction and the thermometer outcome are not sufficiently strong to do so.

The partial R^2 of the interaction with the thermometer outcome means that in an extreme scenario where we assume that unobserved confounders explain all of the left out variance of the outcome, these unobserved confounders must explain at least 0.2% of the residual variance of the interaction to fully explain away the observed effect.

We consider the possible unobserved confounding in comparative terms. That is, we think of such an unobserved confounder explaining whether a respondent feels empathy towards immigrants upon receiving the family history treatment in the context of what is likely to be the largest confounder of all (which in this context is thankfully observed) baseline empathy of the respondent. The lower corner of Table F11 provides bounds on confounding as strong as baseline empathy, $R^2_{Y\sim D|\mathbf{X}} = 0.9\%$ and $R^2_{D\sim Z|\mathbf{X}} = 0.0\%$. These values are below the RV so the the table suggests that confounders as strong as baseline empathy are not sufficient to explain away the observed estimate.

Furthermore, the bound on $R^2_{D\sim Z|\mathbf{X}}$ is below the partial R^2 of the mediator-treatment interaction with the outcome, $R^2_{Y\sim D|\mathbf{X}}$ – which suggests that even an extreme unobservable confounder that explains all the residual variation of the thermometer outcome and as strongly associated with the interaction would not be able to to overturn the interaction effect of the mediator and treatment.

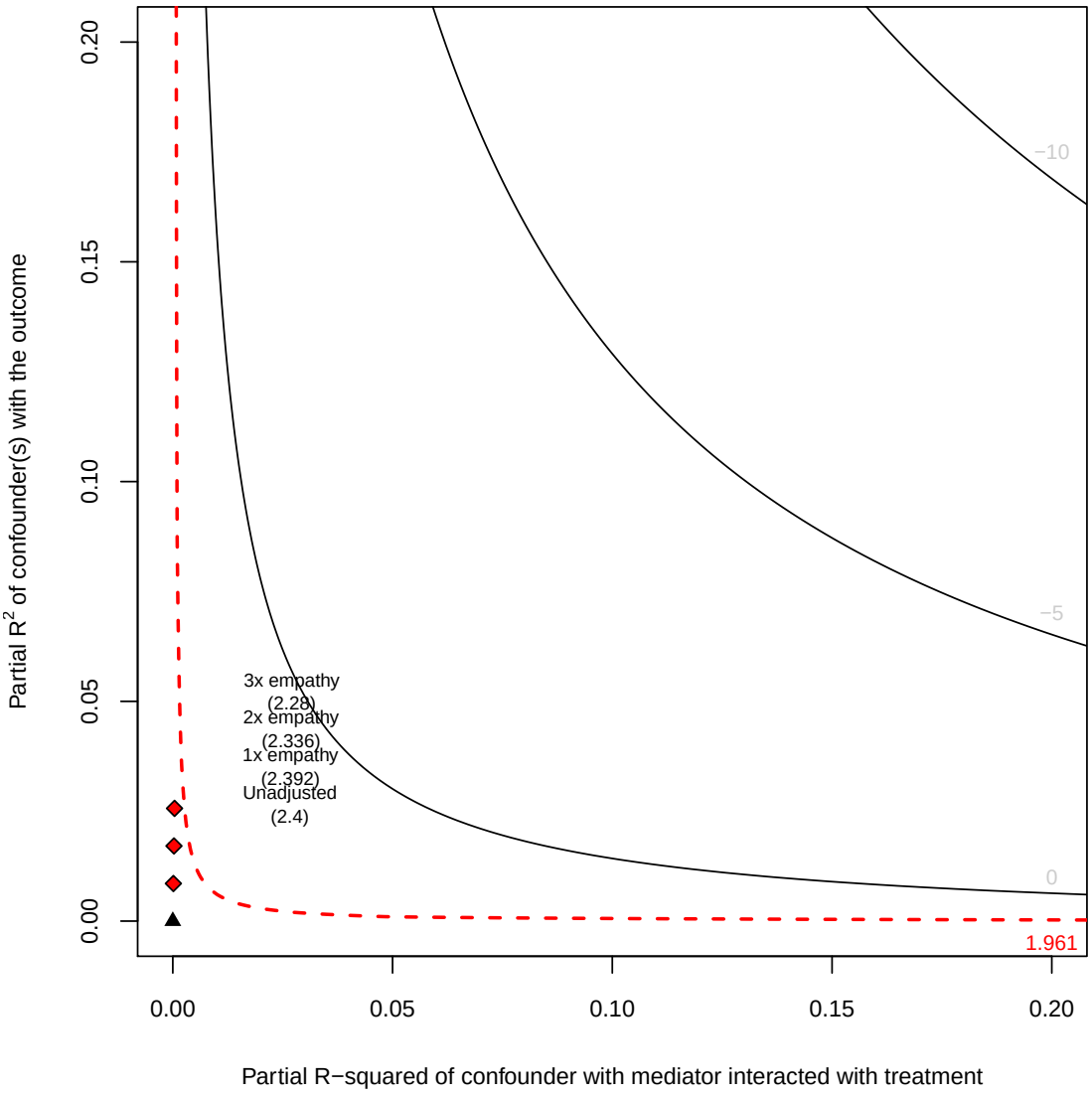
Outcome: *y2*

	Est.	S.E.	t-value	$R^2_{Y\sim D\|\mathbf{X}}$	$RV_{q=1}$	$RV_{q=1,\alpha=0.05}$
*Mediator*Treatment*	1.372	0.561	2.448	0.2%	3.9%	0.8%
df = 3784			*Bound (1x Empathy)*: $R^2_{Y\sim Z\|\mathbf{X},D} = 0.9\%$, $R^2_{D\sim Z\|\mathbf{X}} = 0\%$			

Table F11: Cinelli & Hazlett sensitivity analysis results

Finally, we evaluate the t-value for testing the null hypothesis of zero effect and present the results in Figure F7. At the 5% significance level, the null hypothesis of zero effect would still be rejected given confounders once, twice or even three times as strong as respondent baseline empathy.

Figure F7: Sensitivity Analysis on t-test null hypothesis of zero effect



F.2 Mediation Analysis (experimental design)

Table F12: Parallel Encouragement Design

	Dependent variable:	
	Open Immigration	Immigration Thermometer
	(1)	(2)
(Family History) Treatment	0.134	3.645**
	(-0.075,0.342)	(0.082,7.209)
Emotion (Regulation Treatment)	0.062	−0.453
	(-0.151,0.274)	(-4.078,3.171)
Treatment*Emotion	−0.211	0.048
	(-0.508,0.086)	(-5.027,5.122)
Constant	5.033***	55.242***
	(4.881,5.185)	(52.653,57.831)
Observations	1,910	1,915
R^2	0.001	0.004
Adjusted R^2	-0.0003	0.003
Note:		*p<0.1; **p<0.05; ***p<0.01

G Pre-analysis Plan

The eleven pages included in this section correspond to the pre-analysis plan registered for study 3.

1 Project Overview

As anti-immigrant political parties have gained strength in recent years, scholars have increasingly sought to understand processes by which individuals may develop more inclusive attitudes toward migrants. Building on a nascent literature that leverages emotion to shift such attitudes, this study utilizes online experiments to test whether priming family history can increase support for immigration in the United States by generating greater empathy for immigrants. Almost all American citizens are descended from elsewhere, and these stories are often passed down to the present. By reminding Americans of the struggles and hopes experienced by their families as they came to the United States, can attitudes toward immigrants and immigration be made more favorable?

The experiment randomizes whether respondents are asked about their family's immigration history prior to asking about their attitudes toward immigration. In two already-conducted rounds of this experiment, we find positive effects of the treatment. Our third round, which is the focus of this pre-analysis plan, seeks to replicate this effect once more while also exploring the hypothesized mechanism of generating empathy for immigrants.

The experiment will take place on a survey programmed in Qualtrics and fielded by Lucid, with a nationally representative sample of 4,000 respondents. The survey will ask about perceptions of refugees, respondents' general levels of empathy, and demographic information prior to the implementation of the experiment. Institutional Review Boards at all participating universities approved the study.

2 Empathy and Attitudes toward Immigration

An extensive literature explores the causes and correlates of anti-immigrant sentiment in the United States and Europe, and these studies suggest that such attitudes are motivated by perceptions of both economic and cultural threats (e.g. Dancygier 2010, 2017; Malhotra et al. 2013; Hainmueller and Hopkins 2015). Recently, a growing literature has begun to explore strategies for nudging negative attitudes in a more positive direction. Several of these studies have sought to shift attitudes by correcting the public's misperceptions about how immigrants create economic and cultural threats, but this approach has produced mixed results (e.g. Grigorieff et al. 2016; Hopkins et al. 2019).

Another set of strategies to change attitudes toward immigrants involves the use of emotions, and especially perspective-taking exercises that can encourage greater empathy. Existing literature in psychology and political science indicates that the experience of putting one's self in the shoes of vulnerable minority groups is associated with – and can cause – more favorable attitudes toward these groups (e.g. Broockman

and Kalla 2016; Galinsky and Moskowitz 2000; Todd et al. 2012). Regarding migrants specifically, Adida et al. (2018) demonstrate that a perspective taking exercise, in which respondents are asked to imagine decisions they would make as a refugee, can increase pro-refugee behaviors. Likewise, Dinas et al. (2019) show that reminding Germans and Greeks about past refugee waves in their countries can generate more positive attitudes toward refugees among respondents whose families were affected by these historical events. Such results suggest the utility of exploring methods for creating greater empathy toward immigrants.

We expand on Dinas et al.'s use of family history and Adida et al.'s use of perspective taking to explore in greater depth the ability of heightened empathy to result in more positive views of immigrants in the United States. We do this by designing an experiment in which American respondents are randomly assigned to a treatment that primes them to think about when and why their family moved to the country. This exercise should make it easier for them to empathize with the motives immigrants hold and the difficulties they face, which should in turn result in more supportive views of immigrants and pro-immigrant policies. Furthermore, we design several tests, discussed below, to evaluate whether treatment effects are mediated by empathetic responses. While both Dinas et al. and Adida et al. argue that their treatments work because of empathy, neither study tests this mechanism directly.[1] Yet, demonstrating the relevance of this specific mechanism is important in this context, since different interventions that reflect a variety of subjects and activities can be built to increase empathy.

Substantively, we believe it is also particularly fruitful to evaluate an intervention built around family histories of immigration in the United States. Nearly every American family originated somewhere else, and immigration advocates frequently rely on messaging that emphasizes these immigrant histories.[2] Thus, priming family history may provide an especially useful approach for increasing empathy and improving attitudes toward immigrants in the United States.

3 Family History Experiment

3.1 Experimental Design

Respondents will be assigned with equal probability to a treatment or control condition. For those assigned to the treatment group, they answer a battery of questions

[1] Dinas et al. posit that their treatment effects may be explained by two mechanisms: recategorization of group identities and increased empathy.

[2] For example, in 1938, the US Office of Education sponsored a radio series, aired on CBS and called "Americans All...Immigrants All" that highlighted the contributions of immigrants to American society (Shiffman 1996). For more recent examples, see Starr (2011) in the Huffington Post and Everett (2018).

about their family history prior to answering the outcome questions. For those assigned to the control group, they answer the family history questions after completing the outcome questions.

The family history battery is designed to encourage respondents to think about their families' immigrant roots as well as the reasons their families came to the United States. It includes the following questions. First, respondents are asked to: *Take a moment to think about your own family history. Which was the first generation in your family to arrive in America?* Respondents can answer "my generation," "my parents' generation," "my grandparents' generation," "my great-grandparents' generation," or "my great-great-grandparents' generation or earlier."

Next, respondents are asked: *Do you know why your family came to the United States?*. They can answer "yes" or "no." Those who say yes are then directed to a question in which they are asked the following: *In one or two sentences, please tell us why your family came to the United States.*

3.2 Outcome Questions

Respondents will be asked one outcome question about their policy attitudes toward immigration and one outcome question about their attitudes toward immigrants as people.

The policy outcome asks their views about restricting immigration to the United States. Specifically, respondents are asked: *Do you agree or disagree that the United States should limit the number of immigrants entering the country?* Responses range from strongly agree to strongly disagree on a 7-point Likert scale.

The attitudinal outcome uses a feeling thermometer in which respondents are asked: *On a scale from 0 to 100, how do you feel about immigrants in the United States?* Respondents are told that a value of 0 means viewing immigrants "completely unfavorably" and a value of 100 means viewing immigrants "completely favorably."

3.3 Empathy Mechanism Questions

Immediately prior to the outcome questions and following the treatment, respondents will be asked a question that measures their empathy toward immigrants. Specifically, respondents are asked how much they agree or disagree with the following statement: *I empathize with the reasons people want to immigrate to the United States, as well as the hardships they face when coming to this country.* Higher responses would indicate more empathy for immigrants.

We will implement a parallel encouragement design in an effort to influence whether the treatment causes respondents to feel more empathy for immigrants (Imai et al.

2013). The implementation of this analysis will be discussed further below. It relies on a series of questions that scholars have used previously to measure the ability of individuals to regulate their emotions – i.e. suppress their emotional response to a given situation. These questions are listed below in the Appendix.

Earlier in the survey, respondents are also asked a battery of questions utilized by psychologists to measure an individual's general levels of empathy (Davis 1980). This battery includes 21 questions whose order is randomized.[3] These questions are listed below in the Appendix.

4 Analysis

4.1 Main Effects

We will first estimate the difference in means of the treatment and control groups using t-tests for both outcome questions. We will then analyze the results using linear regression with robust standard errors, while including control variables for gender, age, political party, region of the United States, education, ethnicity, and employment status to increase precision. Specifically, we will estimate the following equation for both outcome measures:

$$Y_i = \beta_0 + \beta_1 \text{Treatment}_i + \delta X_i + \epsilon_i$$

in which Y_i is the relevant outcome measure for respondent i, $Treatment_i$ is an indicator for the individual's assignment to the family history treatment group; X_i is a vector of control variables; and ϵ_i is the error term.

4.2 Empathy Mechanism

The empathy mechanism will be tested through the following three strategies.

4.2.1 Mediation Analysis for Empathizing with Immigrant Experiences

First we include the mediation question about empathy toward immigrants, described above. We will follow the approach used by Baron and Kenny (1986) to assess whether responses to this question mediate the effects of the treatment. To account for potential confounding between the mediator and the outcome measures, we will control for pre-treatment demographic variables, including gender, age, political party, region of the United States, education, ethnicity, and employment status.

First, we will estimate the equation outlined in Section 4.1. Then, we will test whether the treatment affects the mediator and whether the mediator affects the outcome

[3]We exclude 7 questions from the battery that ask about respondents' ability to empathize with characters in books, movies, and plays.

measures using the following two equations:

$$Mediator_i = \beta_0 + \beta_1 \text{Treatment}_i + \delta X_i + \epsilon_i$$

$$Y_i = \alpha_0 + \alpha_1 \text{Mediator}_i + \delta X_i + \epsilon_i$$

Finally, we will test whether the treatment effect remains significant when controlling for the mediator, using the following equation:

$$Y_i = \gamma_0 + \gamma_1 \text{Treatment}_i + \gamma_2 \text{Mediator}_i + \delta X_i + \epsilon_i$$

If the inclusion of γ_2 in the above equation results in a decrease of the substantive and statistical significance of γ_1, it would suggest that the treatment effect of priming family history is mediated by increased empathy for immigrants.

4.2.2 Causal Mediation Analysis with Emotion Regulation

Second, we also use a parallel encouragement design to acquire causal leverage on empathy's role as a mediator of the treatment (Imai et al. 2013). To conduct this test, respondents are randomly assigned to one of two groups. The first participates in the family history experiment exactly as described above, with respondents assigned to the treatment or control conditions with equal probability before answering the outcome questions. In the second, we also attempt to manipulate the empathy mediator by randomly assigning half of respondents to a battery of questions about their ability to regulate their emotions. We expect that respondents primed to think about emotion regulation will be more likely to control their emotional responses to the remainder of the survey questions, which should encourage them to avoid becoming more empathetic toward immigrants if they are assigned to the family history treatment. By randomly adjusting the mediator in this way, we should be able to evaluate more credibly whether the treatment effects are driven by increased empathy.[4] This analysis will be conducted using the *mediation* package in R (Tingley et al. 2014).

4.2.3 Subgroup Analysis for Respondents with High and Low Empathy

Third, if priming family history improves attitudes toward immigrants by increasing empathy, the treatment may be more effective among respondents predisposed to feel empathy toward others in the first place. Thus, we will use the empathy battery to evaluate whether respondents with higher levels of empathy are more responsive to the treatment. We will utilize principal components analysis (PCA) to identify high and low empathy respondents, and we will then interact this binary empathy variable with the the treatment to assess conditional average treatment effects (Gerber and Green 2012). As above, we will control for pre-treatment demographic variables to

[4]It is plausible that the emotional regulation questions will fail to impact empathetic responses, in which case we will rely on the mediation analysis outlined in Section 4.2.1.

account for potential omitted variable bias concerning the relationship between the moderating variable and the outcome measures. Specifically, we will estimate the following equation:

$$Y_i = \beta_0 + \beta_1 \text{Treatment}_i + \beta_2 \text{Empathy}_i + \beta_3 \text{Treatment} : \text{Empathy} + \delta X_i + \epsilon_i$$

where β_1 is the effect of the treatment among respondents with low empathy, β_2 is the relationship between high empathy and the outcome questions in the control condition, and β_3 is the interaction term between the treatment and high empathy. We would interpret a positive and significant β_3 as evidence of the empathy mechanism.

4.3 Heterogeneous Effects

Prejudice reduction interventions are particularly interested in changing the attitudes of individuals predisposed to prejudiced views. As such, we examine heterogeneous effects among one subgroup that is particularly likely to hold more hostile attitudes toward immigrants: Trump supporters (Jones 2019). We will analyze whether they respond more strongly or weakly to the treatment, using a linear regression model in which the treatment is interacted with an indicator for respondents who approve of the president. Because these demographic characteristics are not randomly assigned, we will include control variables to account for potential confounding. Specifically, we will estimate the following model:

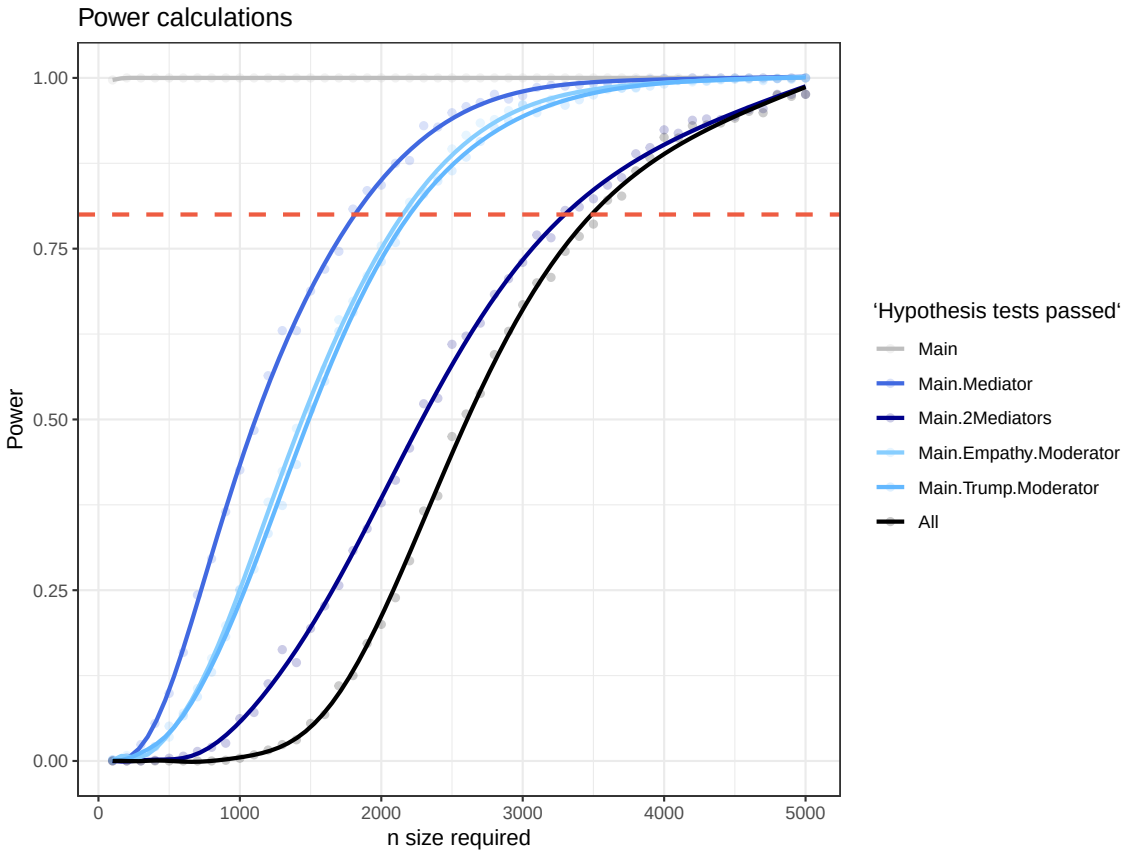
$$Y_i = \beta_0 + \beta_1 \text{Treatment}_i + \beta_2 \text{Demographic}_i + \beta_3 \text{Treatment} : \text{Demographic} + \delta X_i + \epsilon_i$$

where β_3 is the interaction term between the treatment and the indicator for Trump approval. A positive and significant interaction term would indicate that this subgroup responds more strongly to the treatment on average (Gerber and Green 2012).

5 Power Analysis

We estimate the sample size necessary for 80 percent power by relying on the effect sizes and variance from the first two replications of the experiment, in which we evaluated the main effect of priming family history on attitudes toward immigrants. We then make assumptions about the effect sizes for the mediator and moderator variables and account for multiple comparisons. As shown in Figure 1, the analysis suggests a sample size of approximately 3,500 would be needed to detect the treatment effects.

Figure 1: Power Calculations



Sample needed to attain 80 percent power with adjustments for multiple comparisons.

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Appendix

Empathy Battery

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, you will see a scale from 1 to 5 with 1 indicating the

statement does not describe you well and 5 indicating the statement describes you very well.

Please indicate how well each statement describes you by choosing the appropriate response. Read each item carefully before responding.

Answer as honestly as you can. Thank you.

Please click the arrow to proceed to the statements.

1. I often have tender, concerned feelings for people less fortunate than me.
2. I sometimes find it difficult to see things from the "other guy's" point of view.
3. Sometimes I don't feel very sorry for other people when they are having problems.
4. In emergency situations, I feel apprehensive and ill-at-ease.
5. I try to look at everybody's side of disagreement before I make a decision.
6. When I see someone being taken advantage of, I feel kind of protective towards them.
7. I sometimes feel helpless when I am in the middle of a very emotional situation.
8. I sometimes try to understand my friends better by imagining how things look from their perspective.
9. When I see someone get hurt, I tend to remain calm.
10. Other people's misfortunes do not usually disturb me a great deal.
11. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
12. Being in a tense emotional situation scares me.
13. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
14. I am usually pretty effective in dealing with emergencies.
15. I am often quite touched by things that I see happen.
16. I believe that there are two sides to every question and try to look at them both.
17. I would describe myself as a pretty soft-hearted person.

18. I tend to lose control during emergencies.
19. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
20. When I see someone who badly needs help in an emergency, I go to pieces.
21. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Emotion Regulation Battery

Now we would like to ask you about how you manage your emotions. Please click to what extent you agree or disagree with each of the following statements.

1. I control my emotions by changing the way I think about the situation I'm in.
2. When I want to feel **more positive** emotion, I change what I'm thinking about.
3. When I want to feel **less negative** emotion, I change what I'm thinking about.
4. When I'm faced with a **stressful** situation, I make myself think about it in a way that helps me stay calm.
5. When I want to feel **less negative** emotion, I change the way I'm thinking about the situation.
6. When I want to feel **more positive emotion**, I change the way I'm thinking about the situation.

H Compliance with Pre-Analysis Plan

Table H13 documents the PAP delineated registered details for Study 3 and the way in which they are implemented in the manuscript.

PAP	**Manuscript**
Respondents will be assigned with equal probability to a treatment or control condition. For those assigned to the treatment group, they answer a battery of questions about their family history prior to answering the outcome questions. For those assigned to the control group, they answer the family history questions after completing the outcome questions.	Implemented as in PAP
The family history battery includes the following questions: 1. Take a moment to think about your own family history. Which was the first generation in your family to arrive in America? (My generation, my parents' generation, my grandparents' generation, my great-grandparents' generation, my great-great-grandparents' generation or earlier) 2. Do you know why your family came to the United States? (yes/no) 3. If yes: In one or two sentences, please tell us why your family came to the United States.	Implemented as in PAP
Respondents will be asked one outcome question about their policy attitudes toward immigration and one outcome question about their attitudes toward immigrants as people: Do you agree or disagree that the United States should limit the number of immigrants entering the country? (7-point Likert scale) On a scale from 0 to 100, where 0 means viewing immigrants "completely unfavorably" and 100 means viewing immigrants "completely favorably", how do you feel about immigrants in the United States?	Implemented as in PAP
Immediately prior to the outcome questions and following the treatment, respondents will be asked a question that measures their empathy toward immigrants: How much do you agree or disagree with the following statement? I empathize with the reasons people want to immigrate to the United States, as well as the hardships they face when coming to this country.	Implemented as in PAP

Earlier in the survey, respondents are also asked a battery of questions utilized by psychologists to measure an individual's general levels of empathy (Davis 1980). This battery includes 21 questions whose order is randomized (footnote: we exclude 7 questions from the battery that ask about respondents' ability to empathize with characters in books, movies, and plays)	22 questions, not 21. Inclusive of one variable in the original empathy battery of questions that pertained to the dimension of "Fantasy" that we additionally measured: "I daydream and fantasize, with some regularity, about things that might happen to me". We have run all preregistered tests with the 21 question index as well and find the same results; these are all replicable and available in our data repository on Github.
We will first estimate the difference in means of the treatment and control groups using t-tests for both outcome questions.	Implemented as in PAP
We will then analyze the results using linear regression with robust standard errors, while including control variables for gender, age, political party, region of the US, education, ethnicity, and employment status to increase precision.	Done according to PAP though employment variable not collected. Race is collected instead of "ethnicity".

The empathy mechanisms will be tested through three strategies: 1. Mediation analysis: We include the mediation question about empathy toward immigrants, described above. We will follow the approach used by Baron and Kenny (1986) to assess whether responses to this question mediate the effects of the treatment. To account for potential confounding between the mediator and the outcome measures, we will control for pre-treatment demographic variables, including gender, age, political party, region of the US, education, ethnicity, and employment status. 2. We also use a parallel encouragement design (Imai et al. 2013). Respondents are randomly assigned to one of two groups. The first participates in the family history experiment exactly as described above. In the second, we also attempt to manipulate the empathy mediator by randomly assigning half of respondents to a battery of questions about their ability to regulate their emotions... which should encourage them to avoid becoming more empathetic toward immigrants if they are assigned to the family history treatment. This analysis will be conducted using the mediation package in `R` (Tingley et al. 2014). 3. We will use the empathy battery to evaluate whether respondents with higher levels of empathy are more responsive to the treatment. We will utilize Principal Components Analysis (PCA) to identify high and low empathy respondents, and we will then interact this binary empathy variable with the treatment to assess conditional average treatment effects (gerber and Green 2012). We will control for pre-treatment demographic variables.	Implemented as in PAP
We examine heterogenous effects among one subgroup that is particularly likely to hold more hostile attitudes toward immigrants: Trump supporters. We will analyze whether they respond more strongly or weakly to the treatment, using a linear regression model in which the treatment is interacted with an indicator for respondents who approve of the president. We will include control variables to account for potential confounding.	Implemented as in PAP
Power analysis suggests a sample size of approximately 3500	Final $N = 3840$

Table H13: Study 3: Compliance with PAP

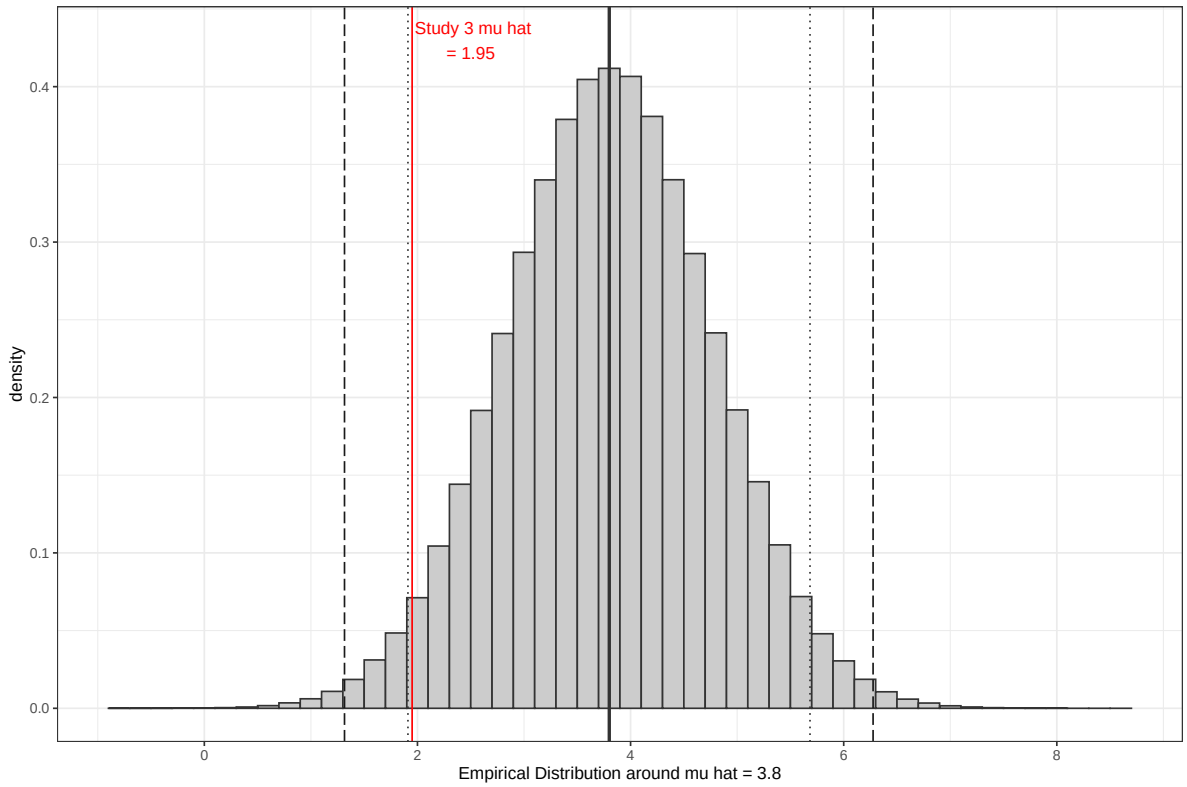
I Experimental Simulations on Treatment Effect across Studies 2 and 3

Given the smaller identified treatment effect size of the family history treatment on the thermometer outcome in Study 3, compared to Study 2, we run experimental simulations to evaluate the likelihood of finding the effect size from Study 3 if in fact the true effect were the larger one identified in Study 2.

Our experimental simulation imagines that the true identified treatment effect is the (larger) one found in Study 2, **3.9**, which had an associated estimated standard error of **1.67**. We ask, what is the likelihood of drawing an estimated treatment effect equivalent to that found in Study 3 ($\hat{\mu} = 1.95$), given the same sample size from Study 3 ($N = 3,831$)? We conduct one million such "experiments", simulating 1 million draws of $N = 3,831$ from a true data generating process of a normal distribution, centered at our Study 2 mean ($\hat{\mu} = 3.8$) with standard deviation from Experiment 2 (calculated to be 60.19).

Figure I8 presents the empirical distribution of the drawn "experiment $\hat{\mu}$s". Black dashed lines at either end of the distribution indicate the 95% coverage interval. This coverage interval includes the treatment effect found in Study 3 (1.95) — indicating that with an $\alpha = 0.05$ we would not reject the null hypothesis that the identified, smaller treatment effect in Study 3 came from a distribution that is centered at the higher identified treatment effect value found in Study 2.

Figure I8: Experimental simulation results. Study 3 mu hat (1.95) drawn in red line, within dotted lines indicating 95% confidence interval band, as well as dashed lines indicating 99% confidence interval band.



J Family history text descriptions

In Study 3, we code and analyze the open-ended answers to the question "In one or two sentences, please tell us why your family came to the United States" to better understand how respondents processed the treatment. We first verify whether there are differential proportions of respondents who write open-ended answers under our control and treatment arms, and find that essentially the same proportion of respondents write under both arms (about 45%, see Table J14). Overall, and descriptively, respondents who wrote open-ended responses were more likely to be minorities, educated, and male, though there were no substantial differences in these types of descriptives on respondents across treatment and arm groups (see Table J15).

We look at what types of words are commonly used by respondents, summarized in Figure J9. The most frequently used words are positive in tone, surrounding opportunities and family.

Table J14: Proportion in each arm writing open-ended answers

	Doesn't write	**Writes**
Control	0.554	0.446
Treatment	0.548	0.452

In Figure J10 the results of a "keyword" of features comparing their differential associations with high thermometer ratings and low thermometer ratings (where "high" and "low" are based off of whether the ratings are above average or below average), after calculating "keyness"[2]. The language utilized by respondents who give high versus low thermometer ratings differs somewhat – the former are more likely to use language surrounding family, like `ancestor` and `children`, while the latter are more likely to reference non-familial words like `start` and `born` as well as `money` and `move`.

This pattern holds specifically for respondents who received the thermometer ratings *after* the family history question (respondents in the treatment group) as well – as presented in Figure J11.

While not preregistered in our PAP, we can explore the text responses for types of elicited thought processes from respondents under control and treatment. We handcode a variable for whether there is a partisan element to the textual response. In Table J16 we present the table of proportions of text that presents as partisan and non-partisan, the numbers of such texts, and example draws. There are very few partisan text examples, only less than 2% in the total sample.

[2]Here "keyness" is a score for features that occur differentially across different categories ("high" vs "low") (see Benoit et al. (2018)).

Figure J9: Word cloud of open-ended answers to family history question.

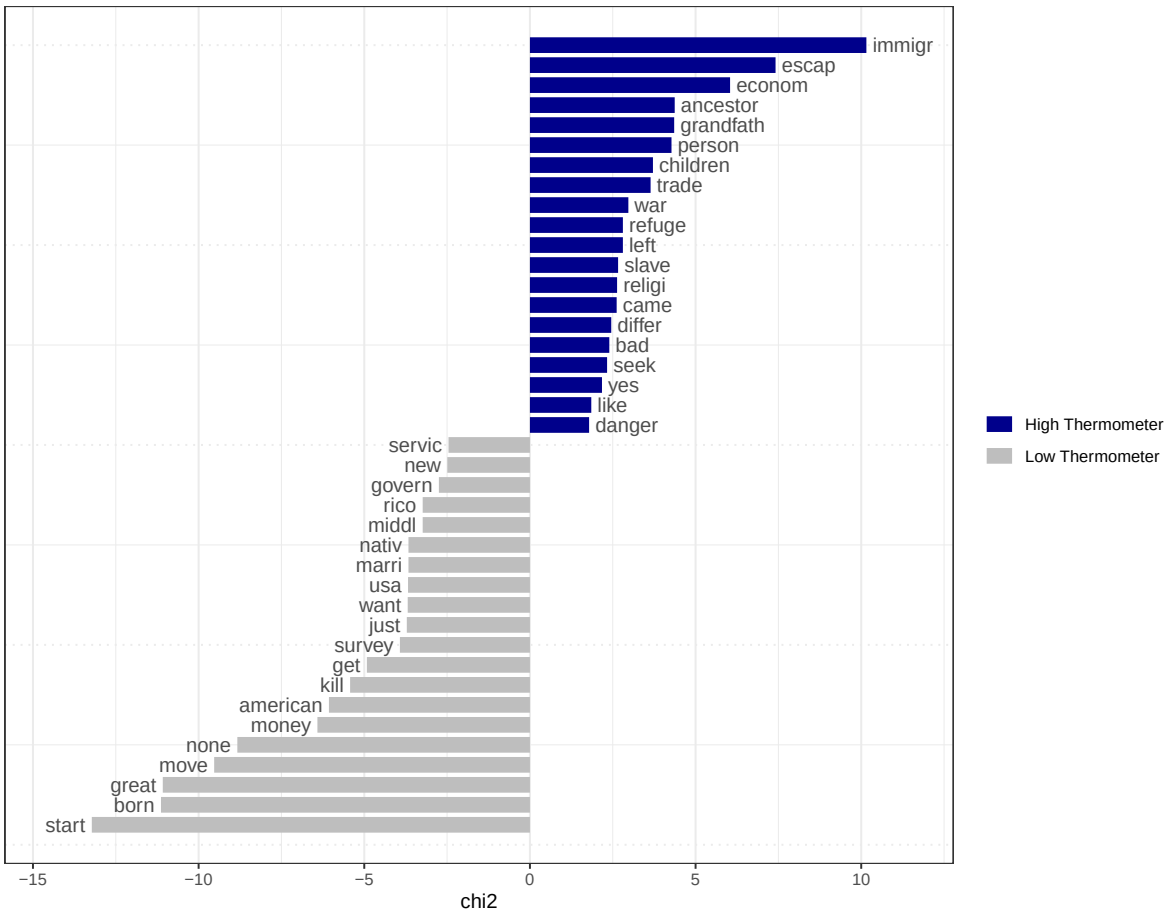
Table J16: Partisan text

	Non Partisan Text	Partisan Text
Proportion	0.981	0.019
N	1691	32
Example	irish potatoe famine	to make a better way for themselves and family through hard work and doing it all legally

We also handcode a variable for whether the text includes any reference to slavery. In Table J17 we present the table of proportions of texts with and without references to slavery, numbers of such texts, and example draws from each type of text. The overall likelihood of mentioning slavery in the text is 6%.

We handcode whether the text includes references to any uncontrolled circumstances,

Figure J10: Family history textual description differences by thermometer ratings



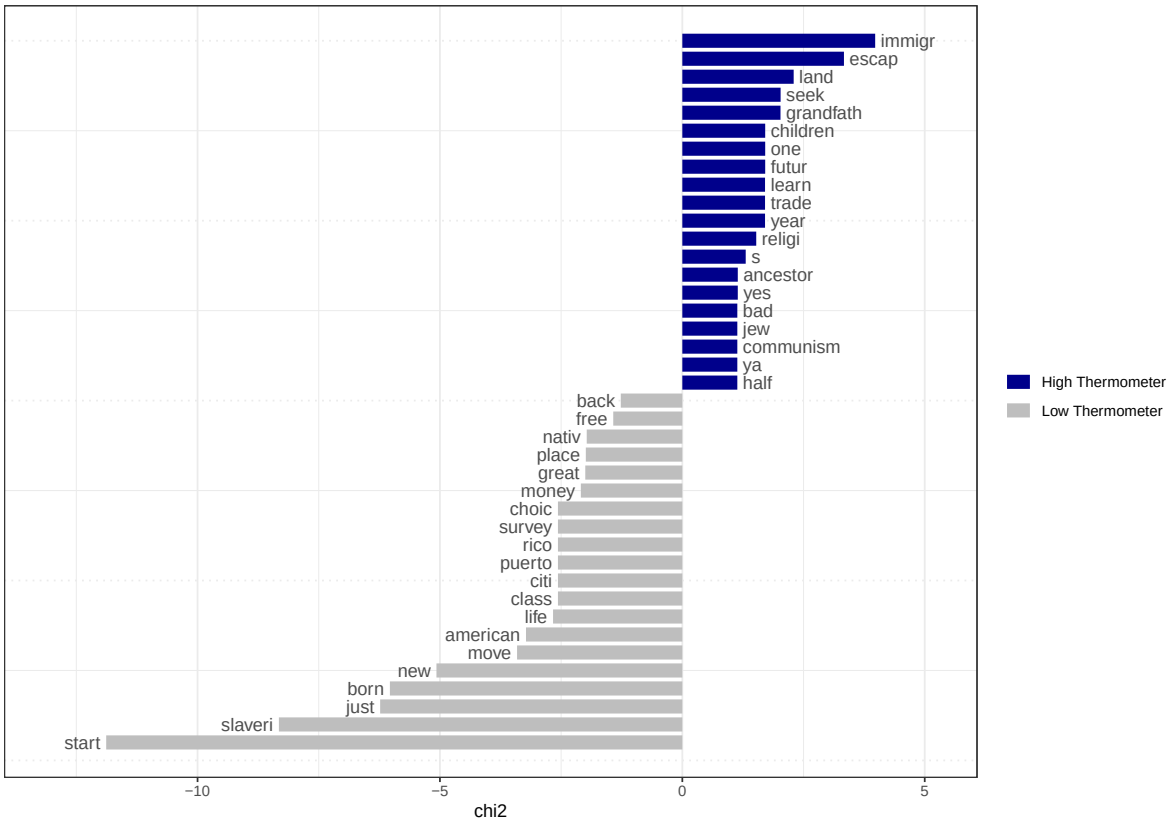
such as war or natural disasters, as the family history reason for coming the U.S. Table J18 presents the proportion of times such references are made, the number of observations, and example texts. Roughly 12% of the texts include a reference to an uncontrolled circumstance.

We hand code a variable for whether a text references some aspect of "nativeness", where respondents highlight their connection to the country sans immigration. Examples of nativeness language include references to Native American heritage, or that the respondent's family has lived in the United States for some period of time. The distribution of proportion, number, and examples of texts coded as referencing "nativeness"are presented in Table J19. The likelihood of a text containing references to nativeness is 4.7%.

Finally, we machine code a sentiment indicator for whether the text is "negative", "neutral" or "positive" using the `SentimentAnalysis` package in `R`, using the included QDAP dictionary. The distribution of proportion (and number) of texts among the three sentiments leans neutral/positive, with the modal text (half of the total texts) presenting positive sentiments. These are presented in Table J20.

We explore whether there is a relationship between the sentiments of text and thermometer ratings in Figures J12 and J13. Regression coefficient of thermometer ratings on sentiment (coded -1 for negative, 0 for neutral and 1 for positive) is not significantly different

Figure J11: Family history textual description differences by thermometer ratings, *treated* group.



from zero.

Figure J12: Barplots of thermometer ratings, by text sentiment type.

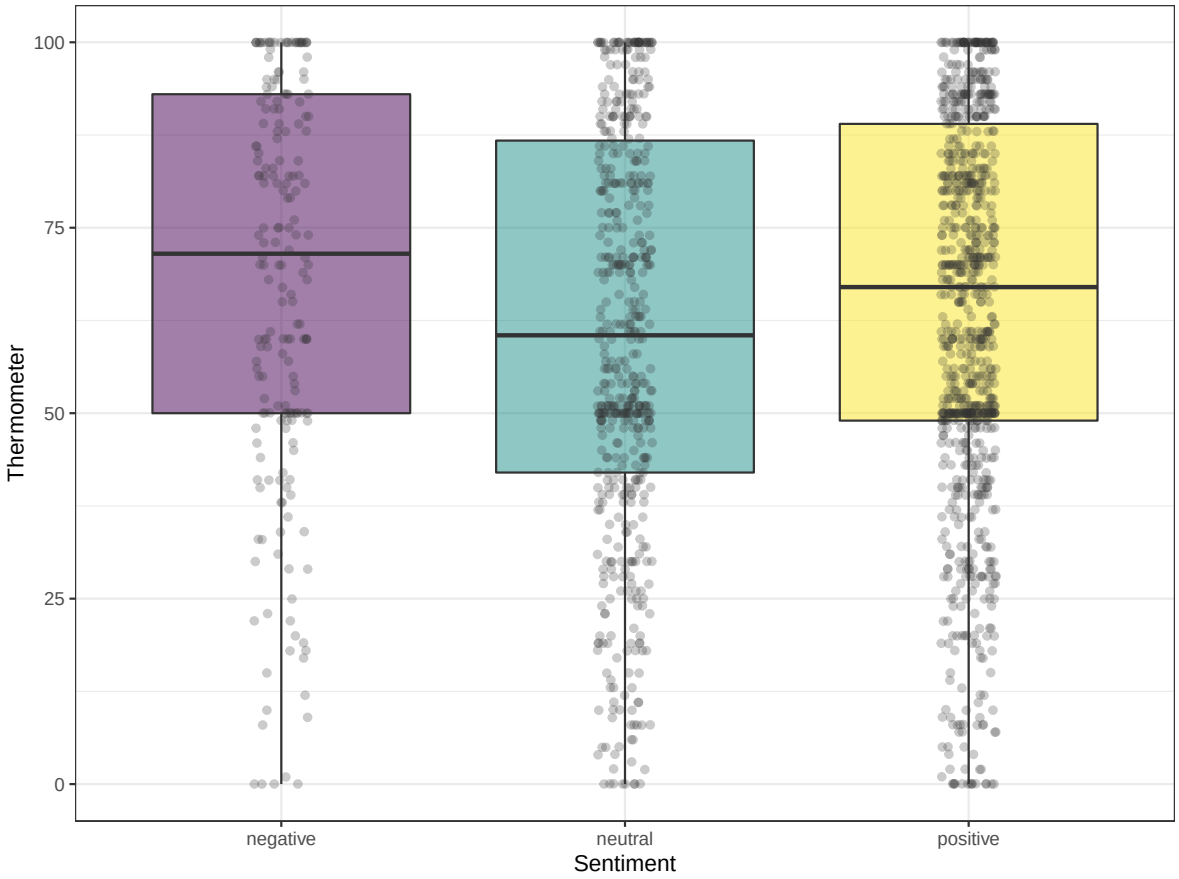


Table J15: Exploring respondents who write open-ended text

	DV: Write Open-ended text
(Intercept)	**.258** (.069)
Family_History_Treatment	.136 (.103)
partyid2Democrat	.037 (.028)
partyid2Republican	.026 (.029)
raceAfrican American	**.111** (.035)
raceAlaska Native	−.188 (.215)
raceAmerican Indian	.135 (.098)
raceAsian	**.301** (.054)
raceNative Hawaiian	−.043 (.216)
raceOther	**.262** (.061)
racePacific Islander	.153 (.153)
genderMale	**.063** (.023)
genderOther	−**.652** (.246)
age	−.001 (.001)
educAssociates degree (2-year college)	.122 (.066)
educBachelors degree	**.205** (.062)
educHigh school graduate	−.017 (.062)
educPost-graduate degree	**.264** (.066)
educSome college, but no degree	**.144** (.062)
Family_History_Treatment:partyid2Democrat	.005 (.040)
Family_History_Treatment:partyid2Republican	.002 (.041)
Family_History_Treatment:raceAfrican American	.022 (.050)
Family_History_Treatment:raceAlaska Native	.482 (.358)
Family_History_Treatment:raceAmerican Indian	.064 (.141)
Family_History_Treatment:raceAsian	−.123 (.071)
Family_History_Treatment:raceNative Hawaiian	.463 (.305)
Family_History_Treatment:raceOther	−.041 (.089)
Family_History_Treatment:racePacific Islander	−.192 (.265)
Family_History_Treatment:genderMale	.032 (.033)
Family_History_Treatment:genderOther	**.687** (.319)
Family_History_Treatment:age	−.000 (.001)
Family_History_Treatment:educAssociates degree (2-year college)	−.180 (.098)
Family_History_Treatment:educBachelors degree	−.145 (.094)
Family_History_Treatment:educHigh school graduate	−.088 (.093)
Family_History_Treatment:educPost-graduate degree	−.071 (.099)
Family_History_Treatment:educSome college, but no degree	−.176 (.093)
R^2	.081
Adj. R^2	.073
Num. obs.	3829

Coefficients with $p < 0.05$ in **bold**.

Table J17: Slavery text

	Non Slavery Text	Slavery Text
Proportion	0.939	0.061
N	1620	106
Example	we are of jewish decent & we were being killed & tortured. i have much compassion for everyone.	they were brought here as slaves from africa

Table J18: Uncontrolled Circumstance text

	Non Uncontrolled Circumstance	Uncontrolled Circumstance
Proportion	0.879	0.121
N	1516	209
Example	its a nice country	their villages were destroyed in ww1

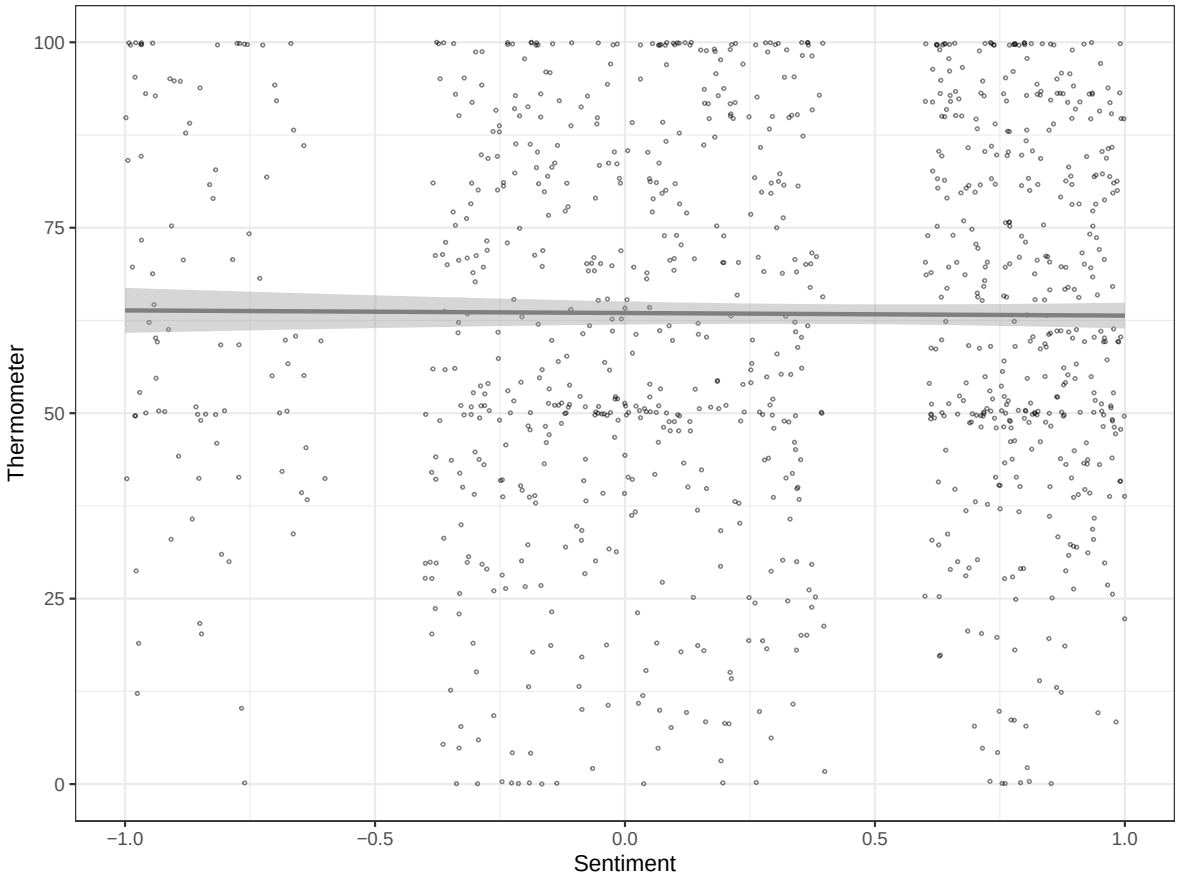
Table J19: Nativeness text

	Non Nativeness text	Nativeness text
Proportion	0.953	0.047
N	1644	81
Example	to have a better life and some life ones to flee war	original inhabitants of this land

Table J20: Sentiment text

	Negative	Neutral	Positive
Proportion	0.121	0.337	0.543
N	204	570	918
Example	the us lied to my people and had us fight in the vietnam war and left us for dead. catholic church in minnesota luckily found out and sponsored my people and got them flownats over here.	refugees after the vietnam war	to own their own land and to start their own business. to keep the family together

Figure J13: Sentiment of family history text against thermometer ratings



K Research Ethics

Our study relied on three surveys: one implemented with the survey firm YouGov, and two conducted through the online platform Lucid. In all three surveys, respondents were first provided with information about the study and asked if they consented to proceed. Respondents were reimbursed by the survey firms with standard compensation. The samples were nationally representative of American adults and so included a diverse group of respondents. No vulnerable groups were targeted explicitly.

In asking about the family history related to arrival in the United States, our surveys touched on a sensitive and troubling aspect of the American story for some respondents – specifically, Native Americans and Black Americans. We did not include Native American respondents in the experiment for studies 2 and 3: the treatment was not relevant to them. In our treatment question, we also sought to use language that would be relevant to Black Americans, allowing them to relay the negative experiences of their ancestors who were brought here as slaves.