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Increasing Immigrant Inclusion: Family History, Empathy, and Immigration in the United States

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Increasing Immigrant Inclusion: Family History, Empathy, and Immigration in the United States

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Abstract

Immigration is a highly polarized issue in the United States, and negative attitudes toward immigrants are common. Yet, almost all Americans are descended from people who originated outside the United States. Can this common history overcome the intense polarization that migration policy elicits? In this paper, we draw from recent studies showing that perspective-taking decreases prejudice toward outgroups to investigate whether priming Americans on their own immigration history induces more support for immigrants and immigration. We test this hypothesis with three separate survey experiments conducted over the past two years. Our findings show that priming family history – a light touch intervention – generates small but consistent inclusionary effects on attitudes toward immigrants and immigration policy. These effects are immediate, and occur even among partisan subgroups and Americans who approve of President Trump. Furthermore, we provide evidence that increased empathy for immigrants constitutes the mechanism driving these effects. Our consistent results contribute to growing experimental literatures on prejudice reduction and migration by suggesting an important role for empathy in shifting attitudes toward immigration.

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1 Introduction

In November 1938, the US Office of Education released a series of twenty-six radio programs titled “Americans All...Immigrants All.” Highlighting the numerous ways in which immigrants had contributed to American society, the series proved immensely popular around the country (Shiffman 1996). This idea of the United States as an immigrant nation has long been a powerful component of American identity, featuring prominently in both elite and popular discourse (Smith 2012; Wong 2016). In fact, advocates for more open migration policies often emphasize Americans’ immigrant roots in their efforts to increase popular support for immigration (e.g. Greenblatt 2017; Kennedy 1964).¹

In recent years, immigration has become an increasingly polarized political issue in the United States. Negative attitudes toward immigrants are particularly pronounced among Republican partisans (Wong 2016), and the current administration has implemented a set of uniquely restrictive policies – galvanizing public reaction on both sides of the spectrum. Can the strategy of emphasizing Americans’ family histories reduce this polarization and generate support for immigrants and immigration?

We address this question with evidence from three online survey experiments in which respondents were reminded about their immigrant pasts either before or after answering questions about their views of immigration. Across the three separate samples acquired by two different survey firms between 2017 and 2019, we find that our family history treatment modestly increased support for open immigration policies and improved favorability of immigrants. Furthermore, these effects occurred among Republicans and Democrats, among supporters and opponents of President Trump, and regardless of when respondents’ families came to the United States. In the third study, we also explore why these effects occur, and we find evidence that increased empathy for immigrants constitutes the mechanism driving our results.

¹This idea does not apply to Native Americans, who were forcibly displaced by such immigration; furthermore, it does not capture the experiences of Black Americans, whose ancestors were forcibly brought to the United States. We considered the implications of this point in designing our study.

These findings contribute to a growing literature that seeks to identify strategies for reducing prejudice toward migrants and increasing support for immigration in the United States and globally (e.g. Adida et al. 2018; Bonilla and Mo 2018; Dinas et al. 2019; Facchini et al. 2016; Grigorieff et al. 2016; Hopkins et al. 2019; Kalla and Broockman nd). In particular, the robustness of the results to different samples, survey contexts, and time periods stands in contrast to the limited effects of information provision on attitudes toward immigration policy (Hopkins et al. 2019). More generally, the results contribute to an extensive and important literature on prejudice reduction by providing additional experimental evidence to a field with relatively few such studies (Paluck 2016). Broadly, the paper reinforces the idea that empathy rooted in shared experiences can foster more inclusive attitudes toward members of an outgroup (e.g. Broockman and Kalla 2016; Simonovits et al. 2018), but in contrast to existing studies, it also demonstrates how a light-touch intervention can generate immediate but consistent attitudinal shifts on a polarizing political issue, with an explicit mechanism test highlighting the role of empathy.

2 Reducing Anti-Migrant Sentiment

Social science offers a rich literature on the drivers of anti-immigrant sentiment in a comparative context (Hainmueller and Hopkins 2014), highlighting how perceived threats to the economy (e.g. Bansak et al. 2016; Dancygier 2010) and cultural identity (e.g. Adida et al. 2016; Dancygier 2017) drive hostility toward migrant groups. More recently, scholars are investigating what might increase openness toward migrants instead, focusing on information interventions aimed at correcting misperceptions about migrants' impact on cultural and economic outcomes. Some of these interventions increase inclusion (e.g. Facchini et al. 2016; Grigorieff et al. 2016; Williamson 2019), but others return weak or null effects (e.g. Adida et al. 2018; Alesina et al. 2019; Hopkins et al. 2019). The difficulty of inducing attitude change with this approach may occur because misperceptions can be motivated by

negative views rather than the other way around (Hopkins et al. 2019), and because individuals selectively respond to information that does not contradict their prior beliefs (Taber and Lodge 2006).

An alternative mode of persuasion involves leveraging emotions – and especially empathy – to reduce anti-migration sentiments. A handful of studies find that the ability to understand migrants’ experiences is correlated with greater openness toward migration (Alrababa’h et al. 2019; Ghosn et al. 2018; Hartman and Morse 2018; Newman et al. 2015). In line with this finding, Adida et al. (2018) demonstrate that a perspective-taking exercise, in which respondents imagine decisions they would make as a refugee, can increase pro-refugee behaviors. These results reflect research indicating that strategies to promote understanding of minority groups can reduce prejudice effectively (e.g. Broockman and Kalla 2016; Kalla and Broockman nd; Paluck 2016; Simonovits et al. 2018). As a result, strategies that increase empathy for migrants should generate more positive attitudes toward these communities, in addition to greater support for policies that are more welcoming to migration.²

We expect that empathy for migrants can be induced by encouraging individuals to think about their families’ histories with migration, a simple perspective-taking exercise. This effect should occur for two reasons. First, challenges faced by one’s family members can lead to more reflection about what those challenges entail, which should lead to greater empathy for others who must confront them as well. For instance, Sharrow et al. (2018) argue that men become more supportive of sex-equity policies when their first child is female because these fathers become more aware of gender-related injustices. Second, reminding individuals of their own connection to migration should redefine immigrants as closer to their ingroup. Since people empathize more easily with those perceived to be like them (Sirin et al. 2017), priming family history should strengthen empathy for immigrants through this channel as well. This heightened empathy should then cause shifts in attitudes toward

²It is worth noting that some scholars view empathy as a contributor to polarization (e.g. Bloom 2016; Simas et al. 2019), though these claims are not based on causally identified evidence.

immigrants and immigration.

Two existing findings reinforce this expectation. First, Dinas et al. (2019) show that priming Greeks and Germans about historical refugee flows to their countries can improve attitudes toward contemporary refugees, but primarily among respondents whose families descended from those earlier migrants or who live in areas with high concentrations of such families. Second, Feigenbaum et al. (2019) demonstrate that American legislators whose families immigrated more recently are more supportive of open immigration policies. We extend these studies by priming family immigration history directly over the course of three surveys in two years, and by explicitly testing whether heightened empathy constitutes the relevant mechanism behind any observed effects.

3 Research Design

We designed an experiment to test whether priming Americans on their own immigrant histories would increase support for open immigration policies and improve views of immigrants. The experiment was implemented in three separate studies using online surveys. The first was conducted by YouGov on an omnibus survey with a nationally representative sample of 1,000 Americans in the spring of 2017. The second was run by Lucid in the spring of 2019 on an omnibus survey with a sample of 1,299 Americans that was representative on age, gender, income, ethnicity, and region. The third was also implemented by Lucid, with a sample of 3,840 Americans in the fall of 2019. This last survey focused exclusively on refugees and other migration-related issues. The first two studies were not pre-registered: that they consistently showed an effect of priming family history led us to develop an explicit test of the effect and of the role that empathy might play as mediator on new data. We developed our third study with that objective in mind and pre-registered it with REDACTED³

In each survey, respondents were randomly assigned with equal probability to receive a question about their family history either before or after the outcome questions. In other

³The pre-analysis plan can be found here: REDACTED. The study was approved by IRB at REDACTED.

words, those in the treatment group were primed to think about their families' own immigrant past before describing their attitudes toward immigration, while those in the control group were asked to express their views of immigration before being reminded of their family history. The family history question asked: *Which was the first generation in your family to arrive in America?*⁴ Respondents could select "my generation," "my parents' generation," "my grandparents' generation," "my great-grandparents' generation," or "my great-great-grandparents' generation or earlier."

The first outcome question was intended to gauge respondents' support for more open immigration policies. Specifically, they were asked: *Do you agree or disagree that the United States should limit the number of immigrants entering the country?* Responses ranged from strongly agree to strongly disagree on a 7-point Likert scale. We code higher values to reflect greater support for open immigration. On the second and third surveys, we included an additional outcome question in which respondents were asked to describe their views of immigrants on a feeling thermometer. This question stated: *On a scale from 0 to 100, how do you feel about immigrants in the United States?* Respondents were told that a value of 0 meant viewing immigrants "completely unfavorably" and a value of 100 meant viewing immigrants "completely favorably."

For the third survey, we also evaluate whether the family history treatment effects are mediated by greater empathy for immigrants. Prior to the outcome questions, respondents were asked to rate their agreement with a statement designed to measure their empathy toward immigrants: *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.* We use these responses to conduct mediation analysis with the methods defined by Baron and Kenny (1986) and

⁴The first study asked about the first generation to immigrate. The second and third studies used the language above to reflect the experiences of Black Americans as well. Native Americans were not included in the experiment. In the third survey, the question included an additional sentence, stating: *Take a moment to think about your own family history. Which was the first generation in your family to arrive in America?* Respondents were also asked in the third survey if they knew why their families had come to the United States. We used these slight variations in design to check whether the treatment is robust to different wording.

Imai et al. (2010) to assess whether empathy mediated the treatment's effects on attitudes toward immigration.

We also collected information about respondents' demographic characteristics and political leanings, including their gender, age, race, education, employment, geographic region, partisan affiliation, approval of President Trump, and baseline levels of dispositional empathy as measured by Davis (1980). Indeed, in our pre-analysis plan, we offered to test whether our treatment would be more effective among respondents predisposed to feel empathy toward others in the first place and, separately, among respondents who oppose President Trump. Summary statistics, balance tests, tests of heterogeneous treatment effects, and additional details on the survey are included in the Online Appendix.

4 Results

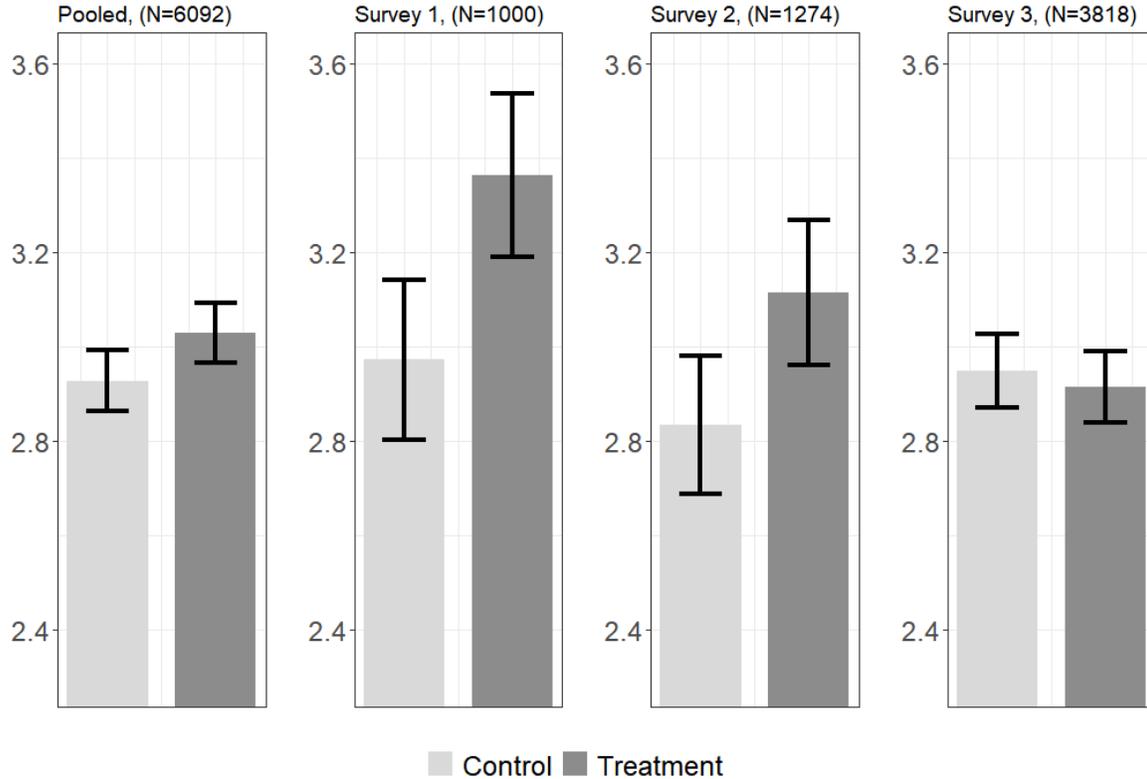
We estimate main effects by assessing the difference in means with two-sample t-tests. In the Online Appendix, we show that the results are consistent when using OLS regression with control variables and robust standard errors.⁵

Figure 1 presents the difference in means for the open immigration outcome. For the pooled data across all three studies, the family history treatment increased support for more open immigration policies from an average of 2.93 in the control group to 3.03 in the treatment group ($p = 0.025$), a change of 0.06 standard deviations. In the first study, average support increased from 2.97 to 3.36 ($p = 0.001$), a difference of 0.39 indicating a change of 0.20 standard deviations. Likewise average responses in the second study increased from 2.83 to 3.11 ($p = 0.008$), a difference of 0.28 and an increase of 0.15 standard deviations. The treatment effect is not statistically different from zero on this outcome in the third study.

Figure 2 displays the difference in means for the feeling thermometer outcome included in the second and third studies. These results indicate improved perceptions of immigrants. For the pooled data, the average response increased from 56.74 in the control

⁵Both analyses were pre-registered for the third study.

Figure 1: Priming Family History Increase Support for Open Immigration

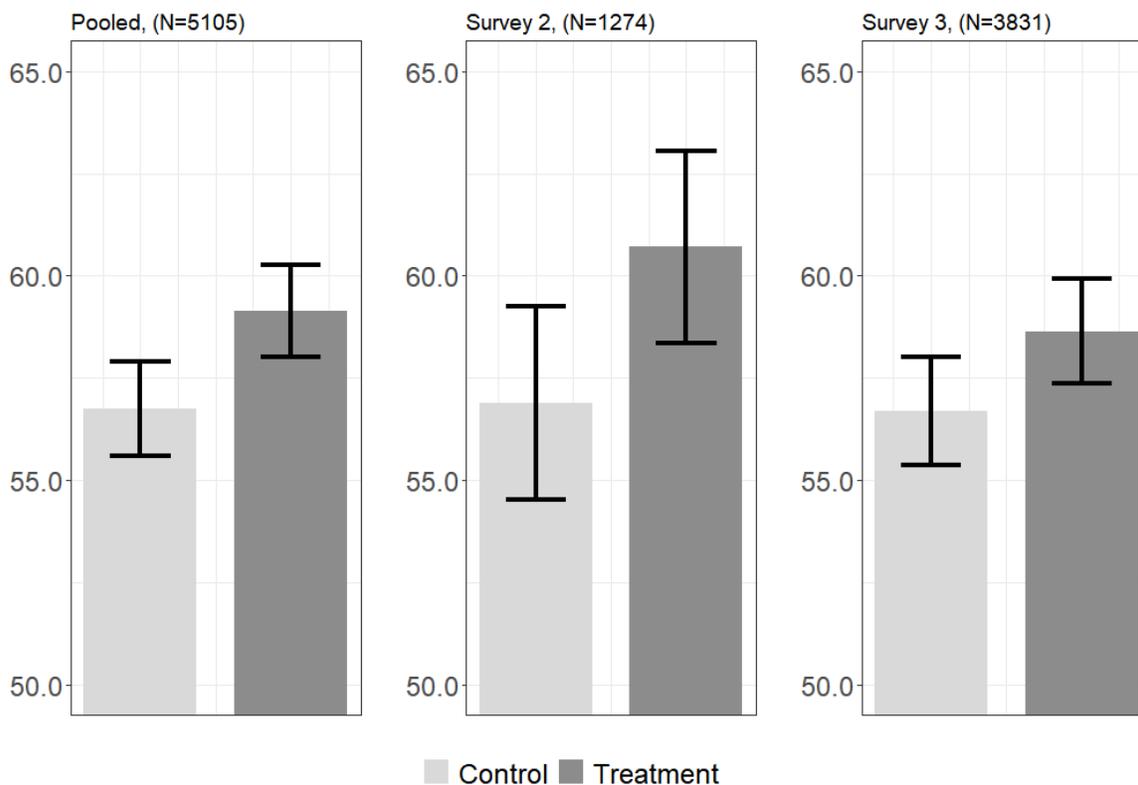


Note: Displays mean responses by treatment group for question: Do you agree or disagree that the United States should limit the number of immigrants entering the country? Scale ranges from 1 to 7, with 7 indicating support for more open immigration policies. 95% c.i.

group to 59.14 in the treatment group ($p = 0.003$), a 2.40 point increase equivalent to 0.08 standard deviations. This result is mirrored in both individual studies. For the second, the average rating on the thermometer increased by 3.82 points ($p = 0.022$), from 56.89 in the control group to 60.71 in the treatment group. Likewise, in the third study, the treatment led to an increase of 1.95 points on the thermometer ($p = 0.034$). These effect sizes reflect increases of 0.13 and 0.07 standard deviations respectively.

While the effects appear relatively small, they are similar in magnitude to those identified in related experiments (e.g. Dinas et al. 2019; Grigorieff et al. 2016), particularly in the first and second studies. They also represent meaningful shifts in respondents' attitudes. For instance, the effect on the open immigration outcome is equivalent to approximately

Figure 2: Priming Family History Improves Favorability of Immigrants



Note: Displays mean responses by treatment group for question: On a scale from 0 to 100, where 0 means “completely unfavorable” and 100 means “completely favorable,” how would you describe your views of immigrants in the United States? 95% c.i.

one-third of the baseline difference between Republicans and Independents in the first study and one-fourth of the difference in the second study, while the effect on the thermometer outcome is equivalent to approximately one-third of the baseline difference between Republicans and Independents in the second study and more than two-thirds of the difference in the third study. Finally, it should be noted that these effects occur despite our reliance on a relatively weak treatment constituting a brief survey question.

Our treatment was less effective in the third study. We believe this difference may have occurred because the survey was significantly longer than the other two, and entirely about political attitudes toward migrants: the experiment occurred at the conclusion of the study, such that answering prior questions about migrants may have anchored respondent

attitudes. Nonetheless, even in this third study, the treatment produced a statistically significant and substantively meaningful increase for the thermometer outcome, which is precisely where we would expect to see the strongest treatment effects. Indeed, the perspective-taking encouraged by our family history treatment has been found to most consistently affect positive changes in explicit evaluations, “that is, greater self-reported positivity toward the specific person whose perspective is taken” (Todd and Galinsky 2014, 375).

As shown in the Online Appendix, the treatment also generated effects among a number of important subgroups. In general, both Republicans and Democrats responded to the treatment, and effects were particularly pronounced for strong partisans. Likewise, the treatment effects were not conditional on support for President Trump. These findings indicate that the treatment can induce attitudinal shifts among respondents who are more likely to hold negative attitudes in the first place and who have partisan reasons to resist changing their views. The treatment effect also does not appear to be conditional on baseline levels of empathy, suggesting it is sensitive to neither ceiling nor floor effects. Finally, the treatment increased support for open immigration policies and improved favorability of immigrants regardless of when respondents’ families came to the United States. In other words, one’s family does not need to have immigrated within living memory for the treatment to raise support for immigrants and immigration. In sum, the average treatment effect of priming family history on immigration outcomes seems not to be driven by conditional effects.

5 Testing the Empathy Mechanism

Our family history treatment encouraged perspective-taking: did it change immigration attitudes via empathy? To our knowledge, no other study has explicitly tested whether empathy mediates the relationship between a perspective-taking treatment and attitudes

toward out-groups.⁶ In our third study, we explicitly designed our survey experiment to perform such a test. This section reports on our mediation analysis, which utilizes Baron and Kenny's (1986) analytical approach as well as the method designed by Imai et al. (2010). While the Imai et al. analysis was not preregistered, it constitutes a more generalized version of Baron and Kenny, and importantly it allows us to conduct sensitivity analyses.⁷

The Baron and Kenny approach requires that three conditions be met: (1) The treatment (T) must have a statistically significant effect on the outcome (Y); (2) The treatment (T) must have a statistically significant effect on the mediator (M); and (3) the effect of the treatment (T) on the outcome (Y) has to be significantly reduced when the mediator (M) is included. The first condition is met for the thermometer outcome, which was significantly affected by the family history treatment. In Table 1, we show that the second and third conditions for mediation are met as well: the treatment (T) increases empathy for immigrants (M), and this empathy eliminates the treatment effect on the thermometer (Y) when incorporated into the regression model reported in column 3.

But this approach also requires that two key assumptions hold: there must be no omitted variable bias in either column (2) or (3) in Table 1. We know that this is the case for column (2), since our family history treatment is randomly assigned. But for column (3), the sequential ignorability assumption is unverifiable. Instead, we offer two solutions. First, we control for all possible observable confounds, including gender, partisanship, age, and education. Second, we implement the more generalized method proposed in Imai et al. (2010) allowing us to conduct sensitivity analyses to assess just how large the omitted variable

⁶Todd and Galinsky (2014) provide a helpful overview of the mechanisms linking perspective-taking to out-group attitudes. Beyond empathy, perspective-taking can encourage a shift in attributional thinking (respondents are less likely to blame migrants for their own plight) or it can increase self-outgroup merging (respondents are more likely to see migrants as themselves).

⁷We also pre-registered a parallel encouragement design-based method developed by Imai et al. (2013), which requires researchers to manipulate the mediator experimentally via an encouragement intervention. This is acknowledged to be difficult under many contexts, to which ours was not an exception. As such, we randomly assigned a set of emotion regulation questions in an attempt to "turn off" empathy (Kirman et al. 2010) for a subset of respondents. However, this manipulation of the mediator did not function as intended, with our emotion regulation treatment failing to encourage lower levels of empathy. As a result, we are unable to identify a causal mediation effect in this setting. These results are reported in the Online Appendix.

Table 1: Empathy for Immigrants Mediates Family History Treatment Effect

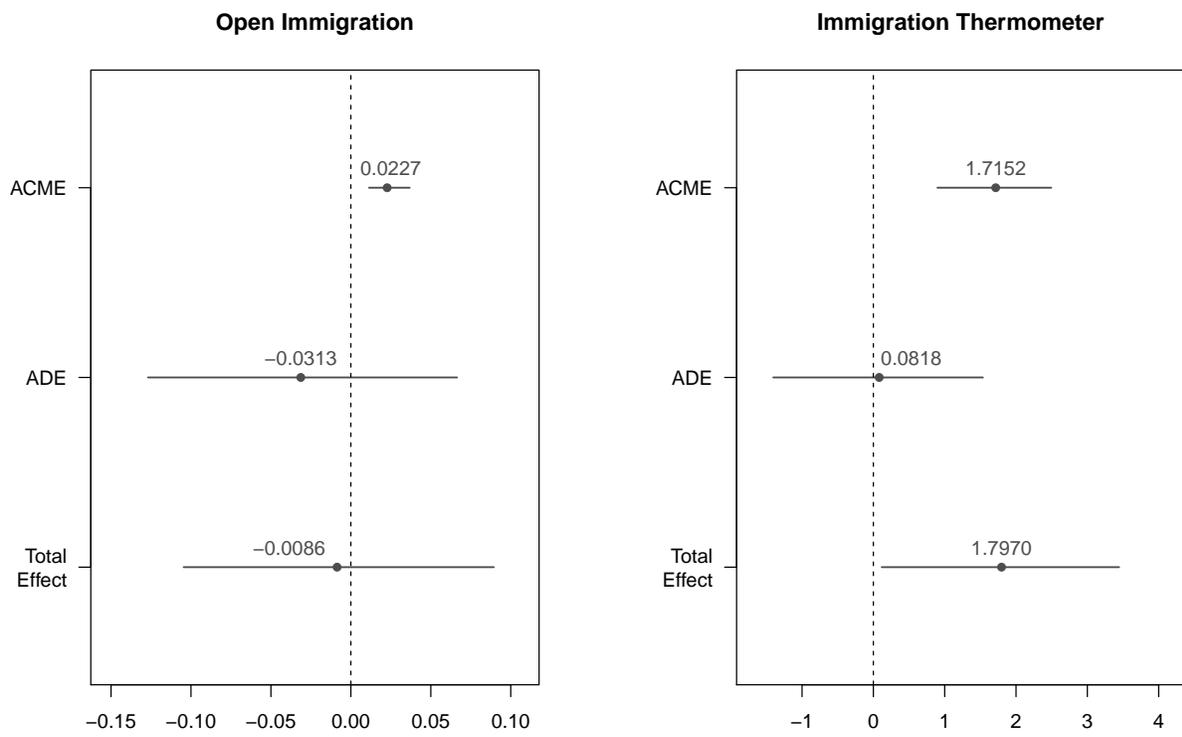
	Stage 1: Treatment Effect on Thermometer	Stage 2: Treatment Effect on Mediator	Stage 3: Treatment Effect Controlling for Mediator
Outcome Variable:	Thermometer	Empathy Mediator	Thermometer
Family History Treatment	1.774* (0.873)	0.171*** (0.042)	0.074 (0.768)
Empathy Mediator			9.635*** (0.338)
Constant	29.454* (11.665)	4.734*** (0.445)	-15.805 (14.540)
Controls	✓	✓	✓
Observations	3,831	3,816	3,816

*** p<0.001, ** p<0.01, * p<0.05, † < 0.10 - OLS regressions with robust standard errors.

bias would have to be to erase our average causal mediation effect. Another advantage of this approach is that we can analyze the empathy mediator’s effect on support for open immigration, despite the absence of a total effect from the family history treatment on this outcome in the third study.

In Figure 3, we present results from Imai et al.’s generalized approach. It shows a statistically significant average causal mediation effect for the immigration thermometer outcome (ACME), confirming that the treatment effect on favorability of immigrants is mediated by empathy. This method also shows a statistically significant and positive ACME on the open immigration policy outcome, implying that the treatment’s ability to raise empathy for immigrants increased support for open immigration even while the treatment’s total effect was null. Additionally, in the Online Appendix, we present the results of our sensitivity analysis. For the immigration policy outcome, we find that our sensitivity parameter would have to be $\rho = 0.11$ for our ACME to drop to zero, while for our immigrant warmth outcome, our sensitivity parameter would have to be $\rho = 0.5$. In sum, while the sequential ignorability assumption seems rather fragile for our immigration policy outcome, it is likely to hold for

Figure 3: Empathy Mediation of Family History Treatment



our immigrant warmth outcome. Taken together, these results suggest that increased empathy for immigrants constitutes an important mechanism by which priming family history generates more inclusive immigration attitudes.

6 Conclusion

In this paper, we find that priming Americans on their family histories can modestly increase support for open immigration policies and improve favorability of immigrants. These effects occur across a range of subgroups, including Republicans and supporters of President Trump. We also provide evidence that the treatment changes attitudes in part by increasing empathy for immigrants.

These results contribute to a nascent body of research suggesting that individuals who are exposed to migrants and their struggles more frequently, or who possess a shared connection to the migrant experience, are more likely to hold positive attitudes toward migrants (e.g. Alrababa'h et al. 2019; Dinas et al. 2019). We build on this research by providing direct evidence that this relationship is rooted in heightened empathy for migrants, and by showing that even a light-touch treatment such as a short prime can meaningfully generate more inclusionary attitudes. These results align with prejudice reduction studies indicating that more positive attitudes toward an outgroup can be induced by drawing attention to – or creating – shared experiences between different communities.

Our treatment is unlikely to produce longer-term effects, given that it was designed to remind respondents temporarily about their own immigration histories. Nonetheless, even relatively small and short-term effects could be relevant for practitioners prior to an election or an important vote in Congress, and high-profile politicians who emphasize this message in their rhetoric may be capable of moving the needle for a large number of Americans. Furthermore, the evidence in this paper can inform efforts to create larger-scale interventions capable of generating more lasting changes, such as the “Americans All...Immigrants All”

series that motivated this study. And, combining our findings with those of Feigenbaum et al. (2019) suggests that this type of priming could directly impact legislation by shaping the voting behavior of legislators themselves.

Finally, our findings have implications for the comparative study of attitudes toward migration. Despite the polarization in public opinion toward immigrants and refugees in the United States, Americans tend to hold more favorable attitudes toward migrants than do citizens of many other developed and developing countries (e.g. Gonzalez-Barrera and Connor 2019). The commonality of immigrant family histories in the United States may partially explain this pattern.

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Online Appendix for Increasing Immigrant Inclusion: Family History, Empathy, and Immigration in the United States

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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
<i>Restrict Immigration</i>			
Mean	4.83	5.03	5.07
SD	1.93	1.89	1.68
Range	1 to 7	1 to 7	1 to 7
<i>Feeling Thermometer</i>			
Mean	–	58.80	57.69
SD	–	29.80	28.38
Range	–	1 to 100	0 to 100

For *restrict immigration*, 7 = strongly agree.
For *feeling thermometer*, 100 = completely favorable.

A.3 Pretreatment Covariates

Table A3: Descriptive Statistics for Pretreatment Covariates

	Survey 1	Survey 2	Survey 3
<i>Age</i>			
Mean	46.27	45.04	45.63
SD	17.14	16.55	16.48
Range	19 to 100	18 to 99	18 to 93
<i>Male</i>			
Mean	0.48	0.48	0.49
SD	0.50	0.50	0.50
Range	0 to 1	0 to 1	0 to 1
<i>College</i>			
Mean	0.56	0.67	0.73
SD	0.50	0.47	0.44
Range	0 to 1	0 to 1	0 to 1
<i>White</i>			
Mean	0.73	0.73	0.70
SD	0.44	0.45	0.46
Range	0 to 1	0 to 1	0 to 1
<i>Republican</i>			
Mean	0.26	0.29	0.36
SD	0.44	0.45	0.48
Range	0 to 1	0 to 1	0 to 1
<i>Democrat</i>			
Mean	0.30	0.37	0.37
SD	0.46	0.48	0.48
Range	0 to 1	0 to 1	0 to 1
<i>Employed</i>			
Mean	0.47	0.55	–
SD	0.50	0.50	–
Range	0 to 1	0 to 1	–

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 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 3.

Table C5: Balance for Family History Treatment

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

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

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

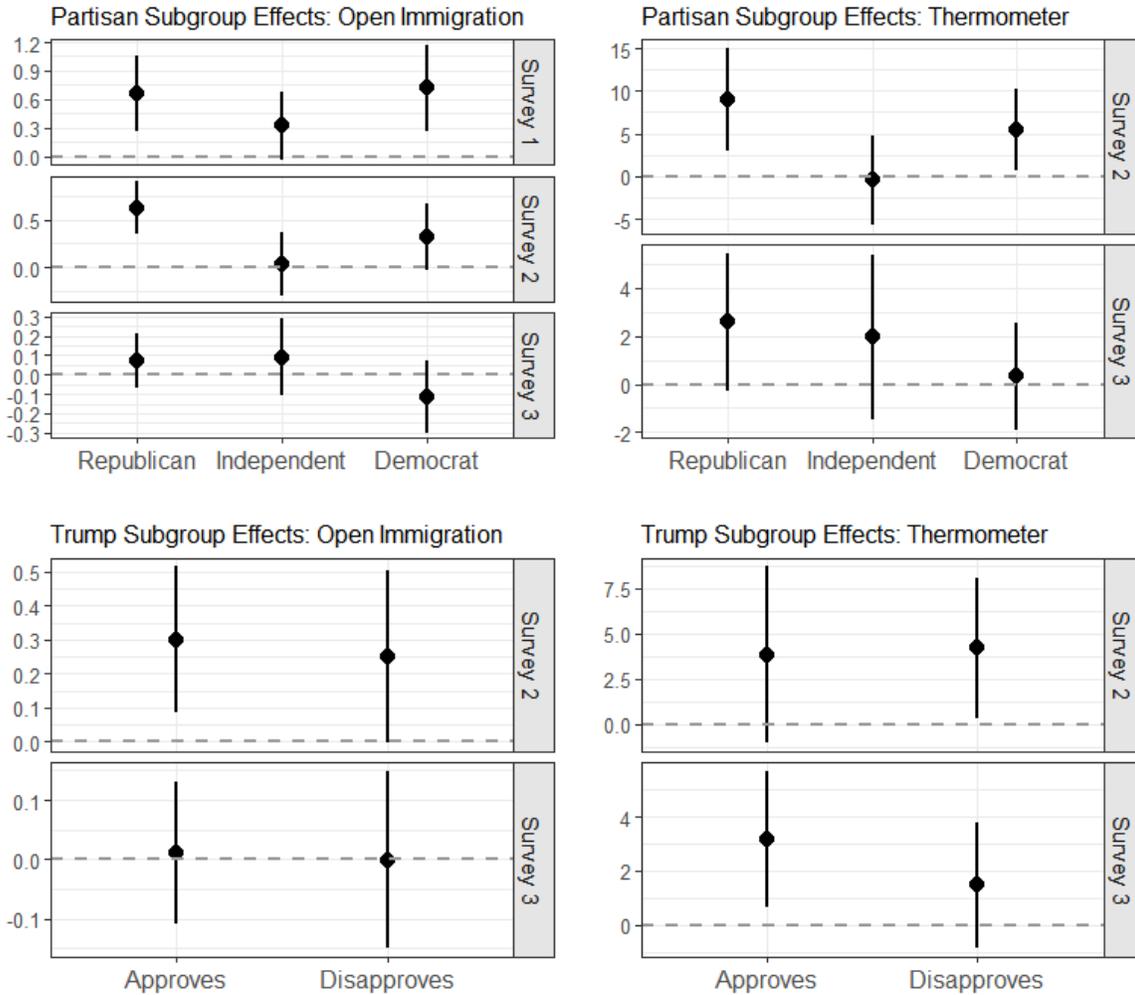
Note:

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

E Subgroup Effects

E.1 Subgroup Effects by Partisanship and Trump Approval

Figure E1: Family History Treatment Effects by Partisanship and Trump Approval



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

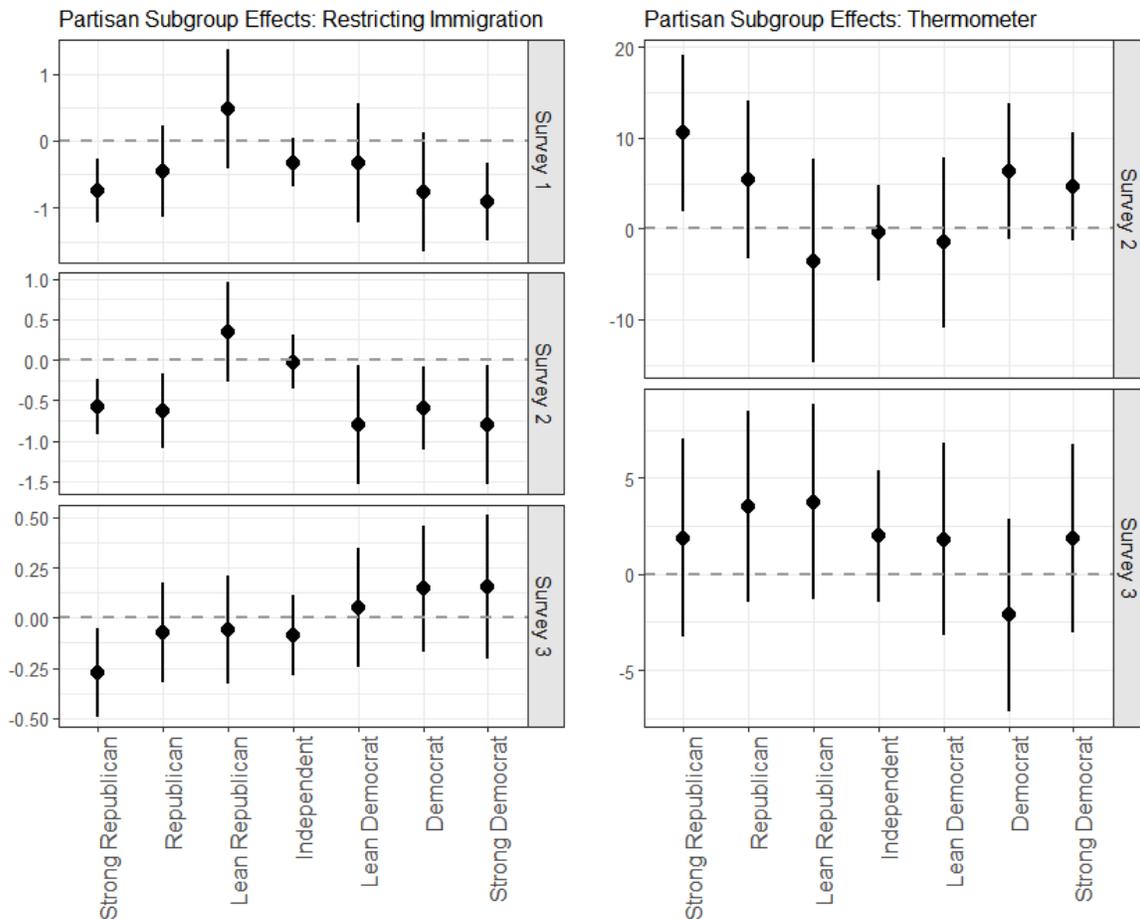
Because Republicans and Trump supporters hold more negative views of immigrants and immigration on average (Wong 2016), we assess whether the treatment moves attitudes among these groups, or if effects are limited to Democrats and Independents who already demonstrate relatively positive views. To estimate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

¹These control variables were pre-registered. Employment status is not available in the third study. The

Figure E2 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. In fact, Republicans demonstrated more responsiveness to the treatment than Democrats and Independents in some cases, particularly in survey 2. In the Appendix, we show that these effects are more pronounced for Republicans who identify strongly with the party. 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

Figure E2: Family History Treatment Effects by Partisanship

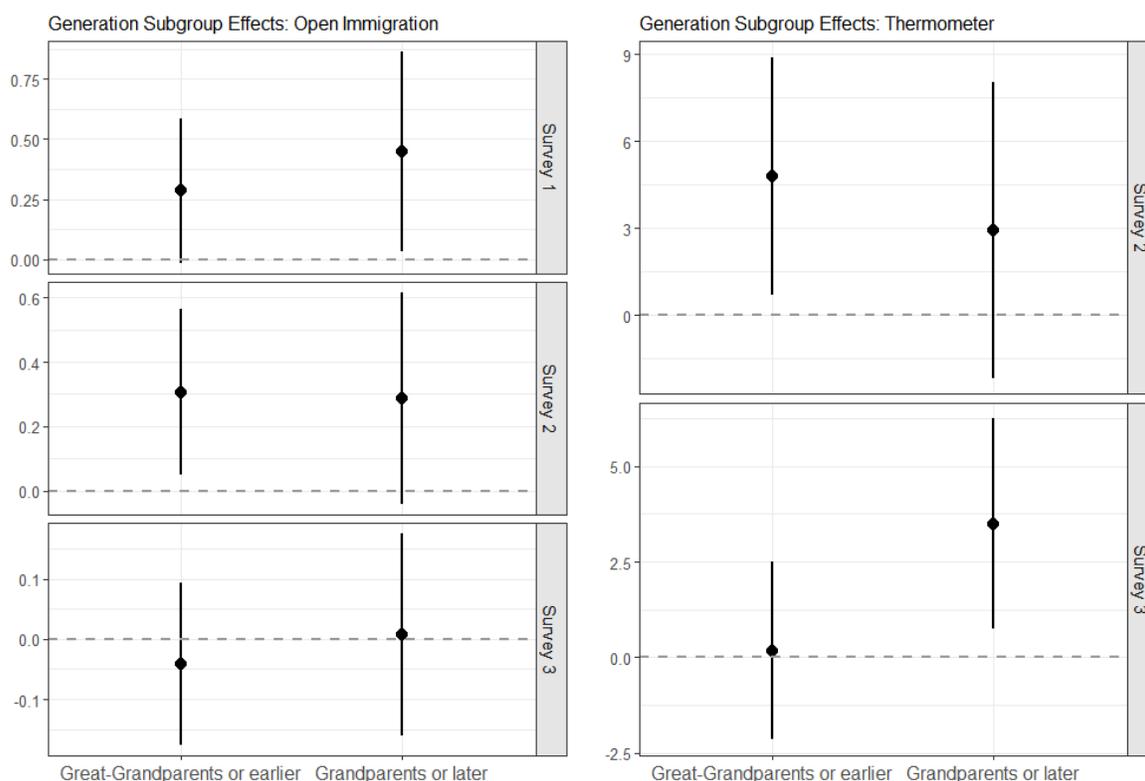


location variable is an indicator for state in the first study, an indicator for region in the second study, and an indicator for birth state in the third study.

E.3 Generational Subgroup Effects

Our sample demonstrates significant variation in which generation of respondents' families first arrived in the United States.² 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 E3: 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 E3 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

²See the Appendix for full details.

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

	<i>Dependent variable:</i>	
	Open Immigration (1)	Immigration Thermometer (2)
(Family History) Treatment	0.349 (-0.471,1.169)	4.183 (-9.251,17.618)
Baseline Empathy	0.023*** (0.015,0.031)	0.705*** (0.577,0.833)
Treatment*Baseline Empathy	-0.005 (-0.016,0.006)	-0.032 (-0.214,0.151)
Constant	1.247*** (0.670,1.824)	5.104 (-4.337,14.546)
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

Are high empathy types are more politically engaged (more likely to read newspapers, want to contact president) and that they want to limit immig more/less likely to give high thermometer ratings? 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

	<i>Dependent variable:</i>	
	Open Immigration	Immigration Thermometer
	(1)	(2)
(Family History) Treatment	0.321 (-0.727,1.369)	16.340* (-1.552,34.231)
Empathy (Baseline)	0.012** (0.002,0.022)	0.611*** (0.440,0.782)
(Would Submit) Comments	-0.861 (-1.937,0.216)	11.444 (-6.931,29.820)
Democrat	0.406*** (0.279,0.533)	11.945*** (9.776,14.114)
Republican	-0.966*** (-1.094,-0.838)	-3.590*** (-5.781,-1.399)
Empathy*Comments	0.008 (-0.006,0.023)	-0.099 (-0.348,0.149)
Treatment*Empathy	-0.004 (-0.019,0.010)	-0.194 (-0.438,0.049)
Treatment*Comments	0.327 (-1.200,1.855)	-28.889** (-54.986,-2.792)
Treatment*Empathy*Comments	-0.004 (-0.025,0.016)	0.384** (0.030,0.737)
Constant	2.385*** (1.651,3.119)	6.913 (-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

F Mediation Analysis

F.1 Sensitivity of Mediation Analysis (observational design)

Sensitivity Analysis on ρ 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:

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

And we assume the unobserved (pre-treatment) confounder formulation:

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

and we ask how much does U_i have to explain in order for our identified ACMEs to become 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.

Figures F4 and F7 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^2 s. Define (Imai et al. 2010):

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

and

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

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

Figures F6 and F7 show sensitivity analysis in terms of R^2 for Open Immigration and Immigration Thermometer, respectively. In Figure F6, 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 product of the original variance explained by the omitted confounding is 0.0092, the point estimate for ACME would be 0. In Figure F7 the product would have to be 0.1405 for the ACME to become 0.

Figure F4: Sensitivity Analysis on ρ for Immigration Outcome

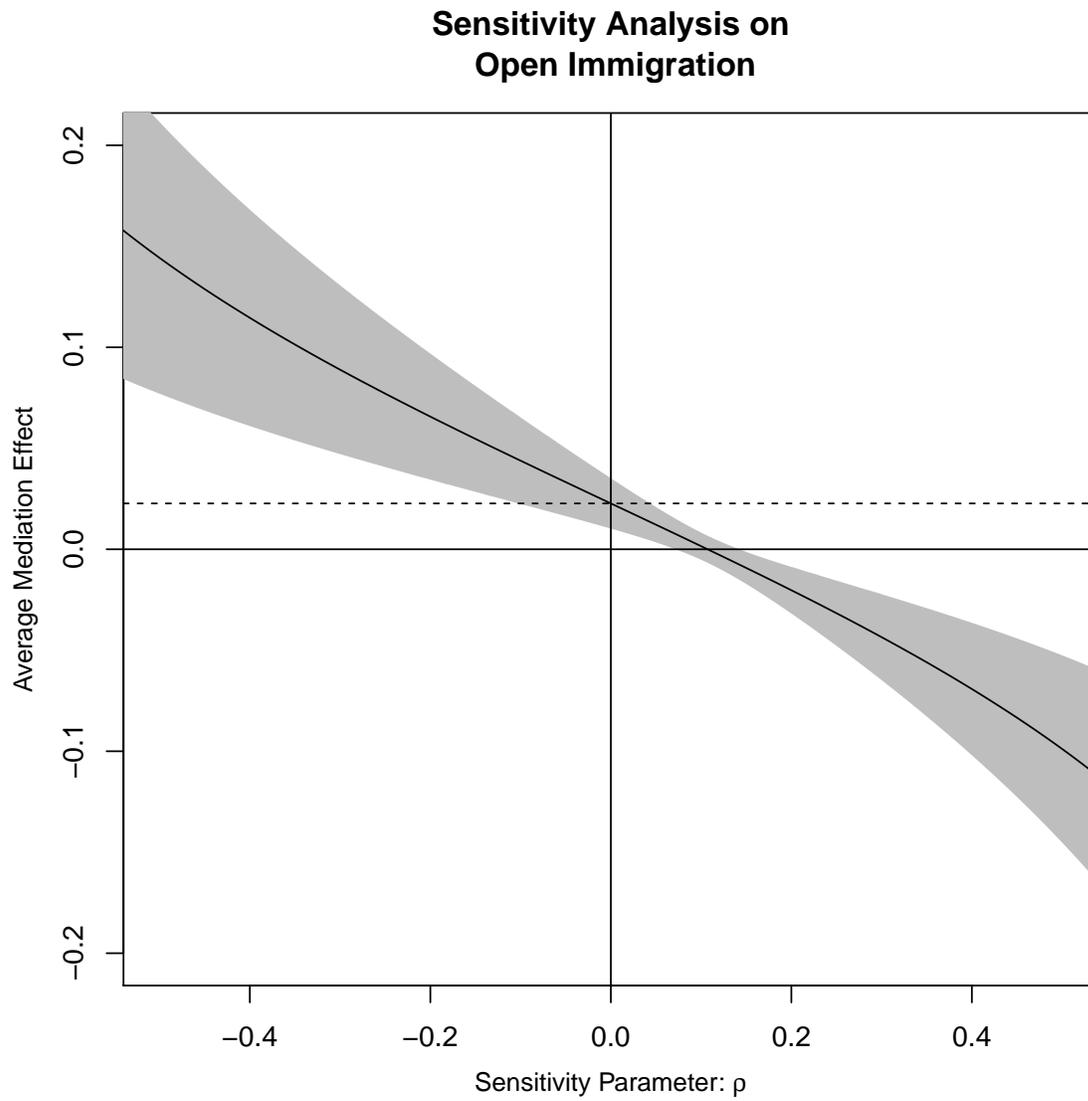


Figure F5: Sensitivity Analysis on ρ for Thermometer Outcome

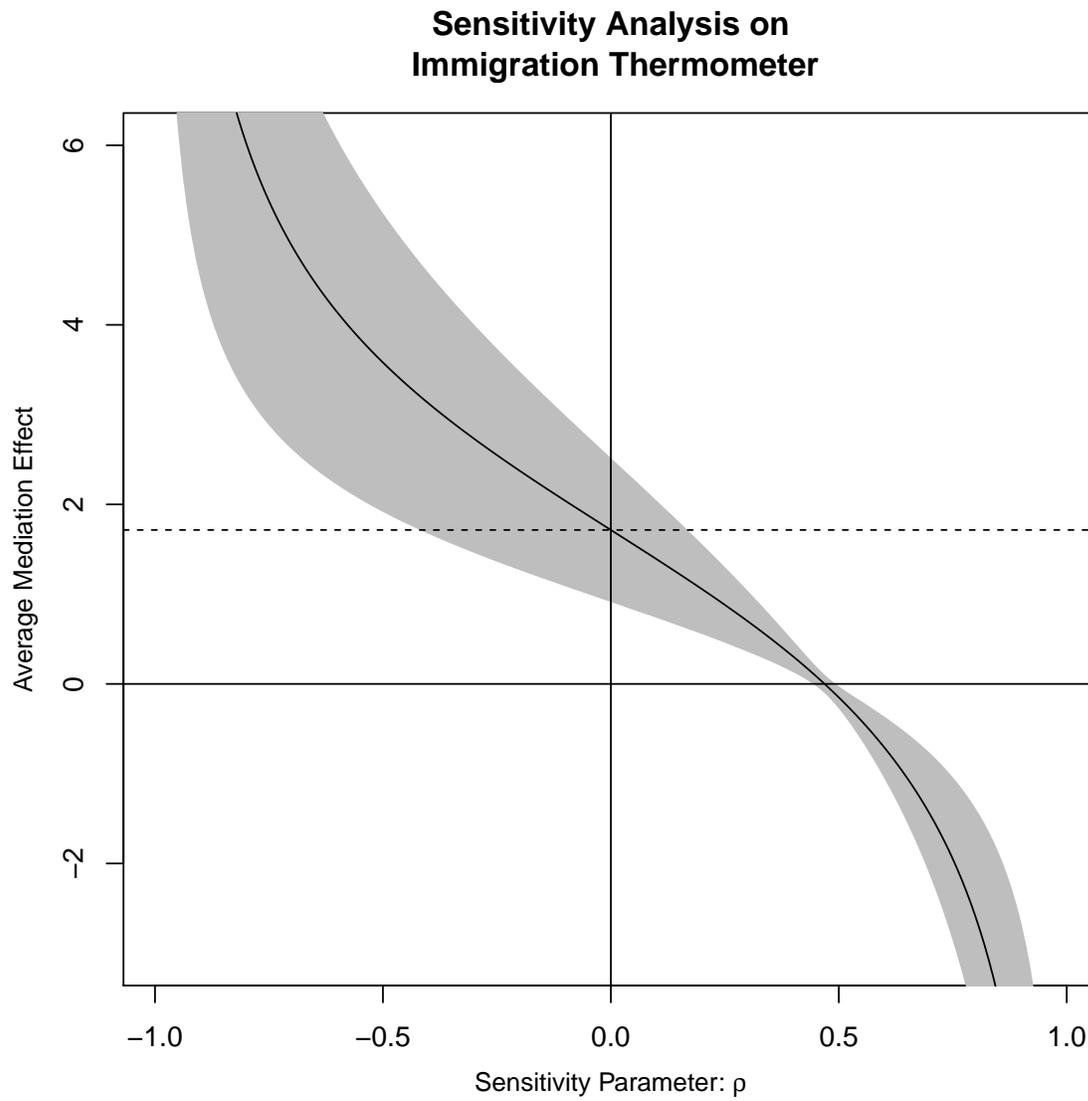


Figure F6: Sensitivity Analysis on R^2 for Immigration Outcome

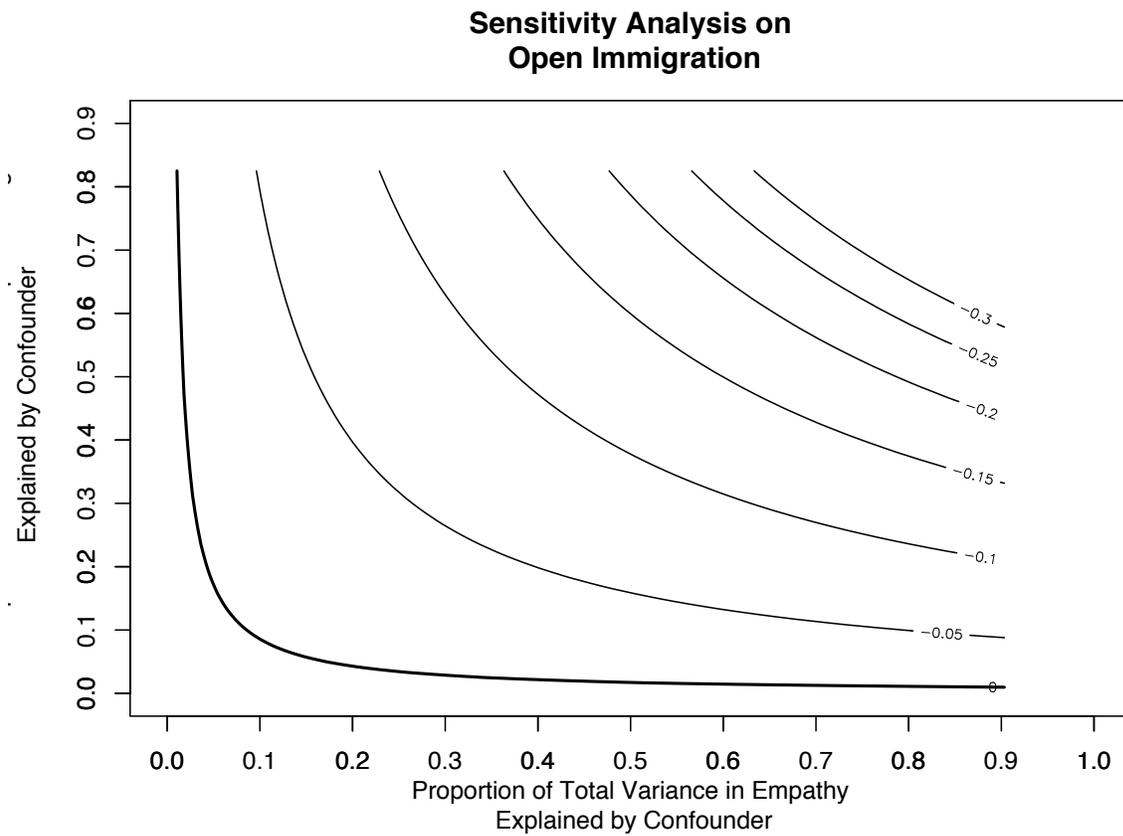
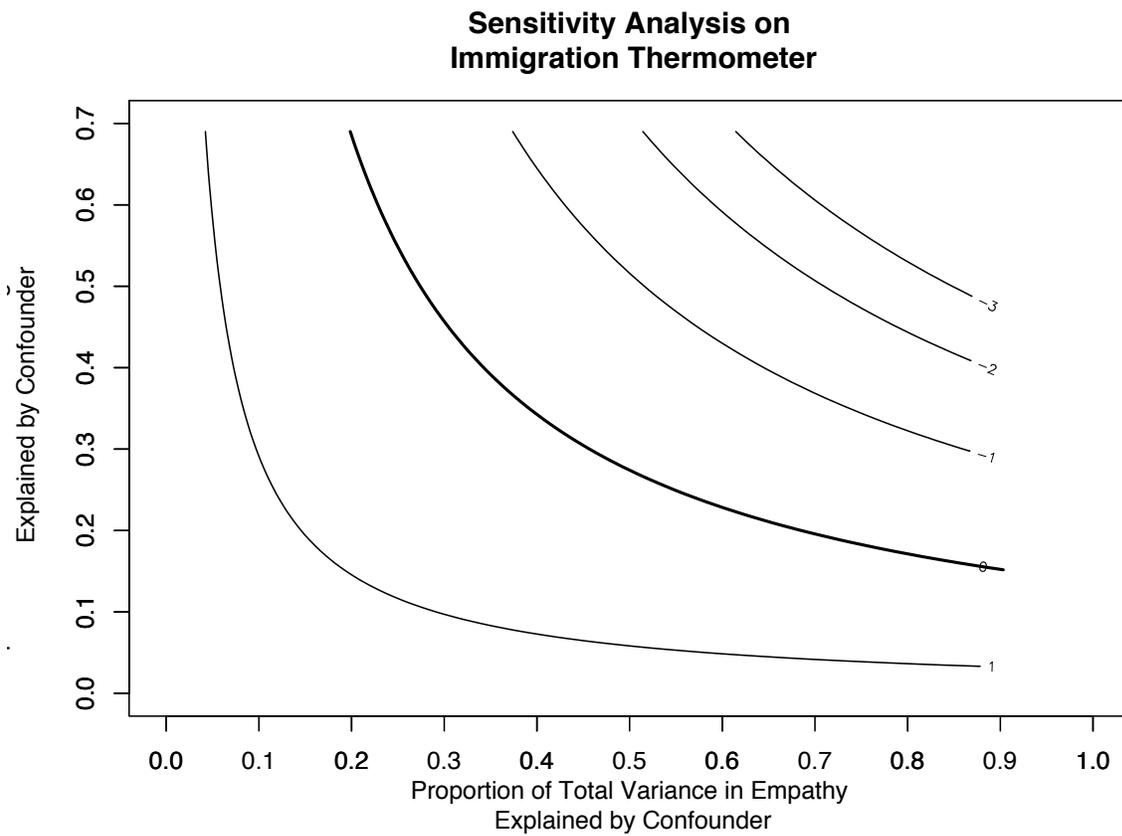


Figure F7: Sensitivity Analysis on R^2 for Thermometer Outcome



F.2 Mediation Analysis (experimental design)

Table F10: Parallel Encouragement Design

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