# Supplemental Materials to: "Racialized Empathy and Attitudes Toward Refugees in the United States"

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# 1 Survey Question Wording

Table 1: Dependent Variable Question Wording

| |
|---|
| **Response Options:** *Strongly Agree, Somewhat Agree, Agree, Somewhat Disagree, Disagree, Strongly Disagree* |
| **General attitudes toward refugees** |
| Our culture gets enriched when refugees from other countries move here. |
| We should welcome refugees who have fled from problems in their own countries. |
| Refugees should have the same rights as people born in the United States. |
| **Willingness to help refugees** |
| Volunteer my time to help resettled refugees in my community. |
| Contact elected officials and ask them to support refugees. |
| Donate money to support refugee resettlement. |
| **Economic concern about refugees** |
| Refugees often take jobs from people who were born in the United States. |
| Refugees often come here just to take advantage of the welfare system in the United States. |
| I am concerned that refugees are draining resources that should be reserved for U.S. Citizens. |

Table 2: Demographics Question Wording

| **Demographic Questions** |
| --- |
| **Please choose the highest level of education that you have completed:**<br>a) Middle school<br>b) High school or high school equivalent (GED)<br>c) Associates Degree or occupational/vocational cert<br>d) Some college<br>e) Bachelor's Degree (BA, BS)<br>f) Masters Degree (MA, MS, MBA, MSW)<br>g) Professional Degree (MD, DDS, DVM, JD)<br>h) Doctoral Degree (PhD, EdD, PsyD)<br>i) Other (textbox) |
| **Generally, which of these party labels best describes you?**<br>a) Strong Democrat<br>b) Democrat<br>c) Independent, but typically vote Democrat<br>d) Independent, my vote changes regularly<br>e) Independent, but typically vote Republican<br>f) Republican<br>g) Strong Republican |
| **What is your gender?**<br>a) Female<br>b) Male<br>c) Nonbinary<br>d) Other (textbox) |

| Demographic Questions (Continued) |
|---|
| **What is your current age?**<br>a) 18-24<br>b) 25-34<br>c) 35-44<br>d) 45-54<br>e) 55-64<br>f) 65-74<br>g) 75 or older |

Table 3: Linked Fate Question Wording

| Linked Fate |
|---|
| *For this question, people who responded with "white" on question 8 will be shown "white" below, and those that responded with "Black or African American" on question 8 will be shown "Black" below. Other respondents will be randomized.*<br><br>**Do you think what happens generally to [Black/White] people in this country will have something to do with what happens in your life?**<br>a) Yes, a great deal<br>b) Yes, some<br>c) A little bit<br>d) No, not at all |

Table 4: Attention Check Question Wording

| Attention Checks |
|---|
| To show you are paying attention, please select "rarely" below. |

**How often do you talk to your friends about politics?**

a) Often

b) Sometimes

c) Rarely

d) Never

To show you are paying attention, please select the color "blue" in the next question.
**Based on the text you read above, what is your favorite color?**

a) Red

b) Orange

c) Blue

d) Violet

# 2 Racial Prime Photo Validation

We selected two photos for our treatment that are nearly identical except for race. We evaluated whether our treatment photos correctly prime race and whether they are statistically indistinguishable on a set of key, non-racial traits using an independent panel of 19 political scientists naive to the purpose of our study. Our procedure is very similar to the one used in Sirin et al. (2016). The race of each refugee was highly distinguishable. Every panelist identified the Black refugee as Black. 18 of the 19 panelists identified the non-Hispanic white refugee as non-Hispanic white, and one identified her as Hispanic white. The photos ares statistically indistinguishable on the attributes of trustworthiness, attractiveness, law-abidingness, level of education, and wealth. Panelists viewed the Black refugee as friendlier than the white refugee ($p<.04$).

# 3 Descriptive Statistics

Table 5: Descriptive Statistics

| **Descriptive Statistics:** | **Min:** | **Max:** | **Median:** | **Mode:** |
|---|---|---|---|---|
| Age (ordinal): | 18-24 | 75+ | 35–44 | 25–34 |
| Education (ordinal): | Middle School | Ph.D. | Associates Degree | Some College |
| Partisanship (ordinal): | Strong Democrat | Strong Republican | Independent | Strong Democrat |
| Female (dichotomous): | Male | Female | N/A | Female |

Figure 1: Histograms of Age & Education Level

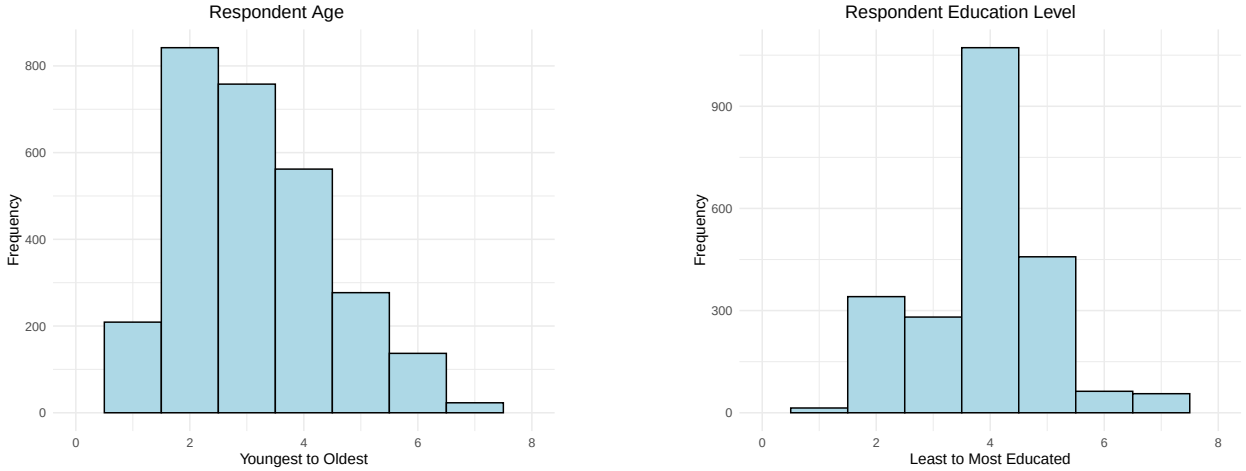
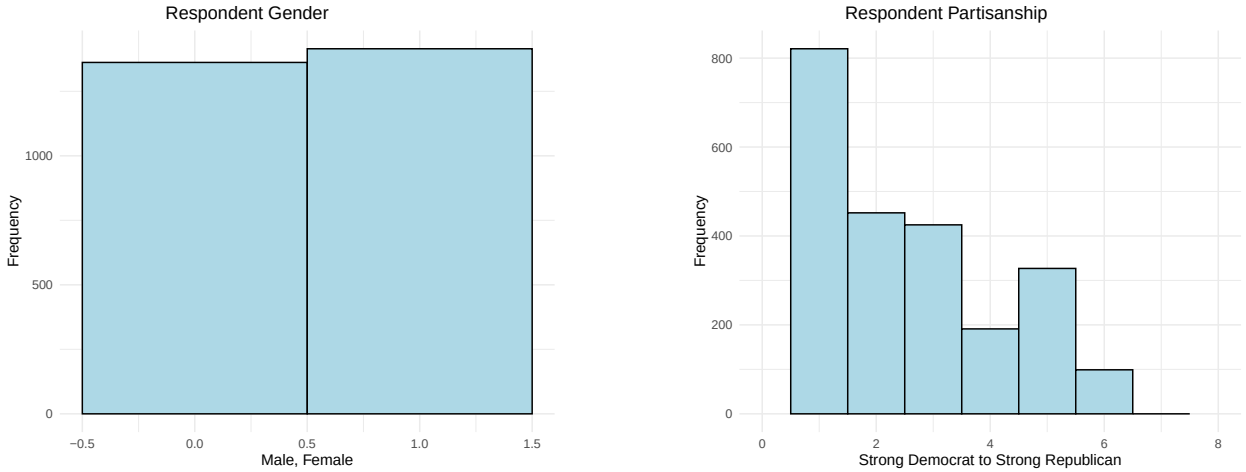



Figure 2: Histograms of Gender & Party ID



# 4 Complete Models

Table 6: Support for Refugees Comparison

| **Welch Two-Sample T-Test, Support for Refugees** | |
|---|---|
| **White Respondents** | **Black Respondents** |
| 36.58 | 37.86 |
| *t = -3.3422, df = 2595, p-value = 0.0008* | |

Table 7: Group Empathy Index Score Comparison

| **Welch Two-Sample T-Test, Group Empathy Index Score** | |
|---|---|
| **White Respondents** | **Black Respondents** |
| 63.36 | 64.73 |
| *t = -2.931, df = 2640, p-value = 0.0034* | |

Table 8: The Effect of Group Empathy and Racial Priming on Support for Refugees

| | *Dependent variable:* | | | |
|---|---|---|---|---|
| | Support for Refugees | | | |
| | (White Respondents) | (Black Respondents) | (White Respondents) | (Black Respondents) |
| Group Empathy | 0.569*** | 0.492*** | 5.839*** | 5.644*** |
| | (0.023) | (0.024) | (0.203) | (0.224) |
| Black Racial Prime | −4.910** | 0.683 | −0.234 | 0.076 |
| | (2.044) | (2.255) | (0.196) | (0.205) |
| Group Empathy * Racial Incongruence | 0.069** | | | |
| | (0.032) | | | |
| Group Empathy * Racial Congruence | | −0.009 | | |
| | | (0.034) | | |
| Party Identification (Republican) | | | −3.758*** | −1.410*** |
| | | | (0.204) | (0.218) |
| Age | | | −0.475*** | −0.677*** |
| | | | (0.184) | (0.231) |
| Female | | | 0.011 | −0.604*** |
| | | | (0.201) | (0.206) |
| Education Level | | | 0.886*** | 1.086*** |
| | | | (0.192) | (0.216) |
| Linked-Fate (White) | | | −0.465** | |
| | | | (0.198) | |
| Linked-Fate (Black) | | | | 0.606*** |
| | | | | (0.210) |
| Constant | 0.827 | 5.994*** | 37.470*** | 37.522*** |
| | (1.483) | (1.547) | (0.198) | (0.208) |
| Observations | 1,353 | 1,332 | 1,083 | 1,080 |
| $R^2$ | 0.523 | 0.379 | 0.653 | 0.422 |
| Adjusted $R^2$ | 0.522 | 0.377 | 0.651 | 0.418 |
| Residual Std. Error | 7.533 (df = 1349) | 7.026 (df = 1328) | 6.427 (df = 1075) | 6.705 (df = 1072) |
| F Statistic | 492.621*** (df = 3; 1349) | 269.996*** (df = 3; 1328) | 289.544*** (df = 7; 1075) | 111.754*** (df = 7; 1072) |

*Note:* *p<0.1; **p<0.05; ***p<0.01

# 5 Mediation Analyses

In our main analysis, we found that respondents reported slightly higher levels of support for refugees who shared their race. We hypothesized that group empathy moderates responses to refugees based on racial identity. In this analysis, we explore whether group empathy is a mechanism or mediating factor that explains how race influences attitudes toward refugees. To do so, we conducted a causal mediation analysis to see whether respondents reported higher levels of support for refugees when they were primed to associate a shared racial identity *because* they experienced more empathy for them. This methodological approach allows us to test whether the treatment–priming respondents to associate a particular race with refugee– affects the outcome–attitudes toward refugees– through the mediator– group empathy.

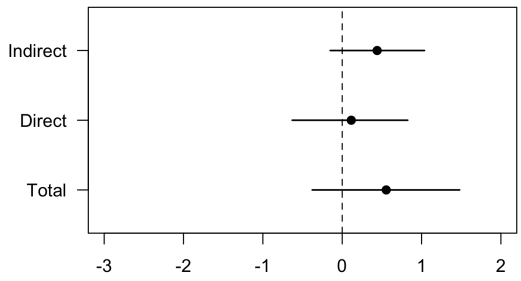
We report both the sequence of models and the formal mediation analyses for the Black and white samples in turn. Overall, we do not find evidence that the racial prime is mediated by group empathy. Rather, group empathy has a strong, independent effect on support for refugees. Regardless of refugee race, individuals with higher levels of group empathy for refugees reported more supportive attitudes toward refugees. In the main analysis we showed that the first condition of mediation is not met and in Table 9 we show that the second condition of mediation is not met. As a reminder, the treatment variable is coded as 0 for the white prime and 1 for the Black prime. Thus, we would expect a positive coefficient for the Black sample and a negative coefficient for the white sample. The coefficients are in the expected direction, but they are not statistically significant.

Interestingly, when we introduce the mediator (group empathy) and the treatment (racial prime) into the same model to predict support for refugees, the coefficient on the racial prime does decrease and group empathy is statistically significant across the models. We find that regardless of the race of the respondent and the race associated with refugees, people with higher levels of group empathy are more supportive of refugees across each outcome. That is, people vary in their group empathy, and this predicts their support for refugees.

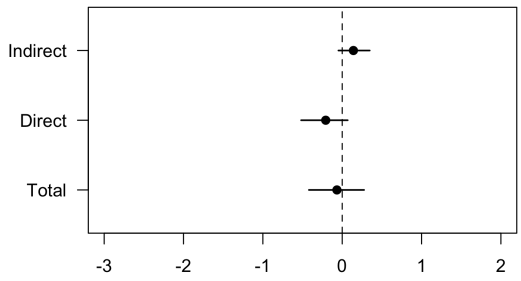
The formal mediation analysis reported in Figures 3 and 4 confirms the initial set of null

findings for mediation. The confidence intervals for the mediated effect of the race prime on support for refugees through group empathy overlap with zero as does the direct effect of the prime on our outcome. This pattern holds when we run these analyses for each subset of the dependent variable index: general attitudes about refugees, economic concern about refugees, and willingness to help refugees.

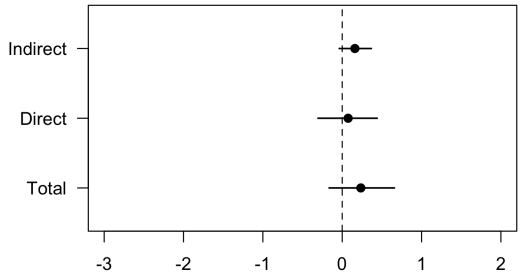
Figure 3: Race Prime → Empathy → Pro-Refugee Sentiment Mediation (Black Respondents)



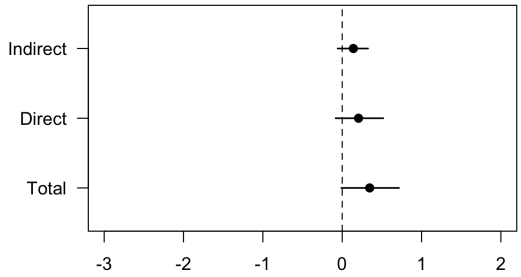

(a) DV: Full Index




(b) DV: Attitudes




(c) DV: Economic Concern




(d) DV: Willingness to Help

Table 9: Mediation Analysis: Race Prime, Group Empathy, and Support for Refugees

| | *Dependent variable:* | | | |
|---|---|---|---|---|
| | Group Empathy | Support for Refugees | Group Empathy | Support for Refugees |
| | *Black R* | *Black R* | *White R* | *White R* |
| | (1) | (2) | (3) | (4) |
| Race Prime | 0.896 | 0.087 | −0.523 | −0.536 |
| | (0.616) | (0.385) | (0.706) | (0.410) |
| Group Empathy for Refugees | | 0.487*** | | 0.605*** |
| | | (0.017) | | (0.016) |
| Constant | 64.294*** | 6.276*** | 63.630*** | −1.470 |
| | (0.434) | (1.134) | (0.506) | (1.048) |
| Observations | 1,332 | 1,332 | 1,353 | 1,353 |
| $R^2$ | 0.002 | 0.379 | 0.0004 | 0.521 |
| Adjusted $R^2$ | 0.001 | 0.378 | −0.0003 | 0.520 |
| Residual Std. Error | 11.241 (df = 1330) | 7.023 (df = 1329) | 12.987 (df = 1351) | 7.543 (df = 1350) |
| F Statistic | 2.117 (df = 1; 1330) | 405.242*** (df = 2; 1329) | 0.548 (df = 1; 1351) | 734.495*** (df = 2; 1350) |

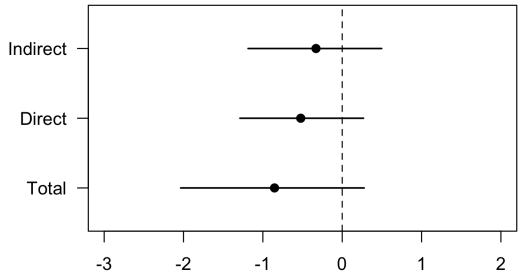
*Note:* *p<0.1; **p<0.05; ***p<0.01 ; OLS regression

Table 10: Mediation Analysis for **Black** Respondents

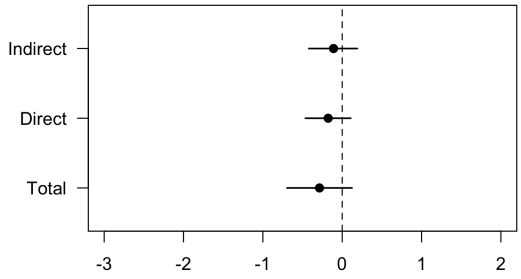
| | *Dependent variable:* | | | |
|---|---|---|---|---|
| | Group Empathy | Attitudes | Economic Concern | Willingness to Help |
| | (1) | (2) | (3) | (4) |
| Race Prime | 0.896 | −0.208 | 0.085 | 0.211 |
| | (0.616) | (0.149) | (0.182) | (0.159) |
| Group Empathy | | 0.159*** | 0.173*** | 0.155*** |
| | | (0.007) | (0.008) | (0.007) |
| Constant | 64.294*** | 3.317*** | 1.478*** | 1.481*** |
| | (0.434) | (0.439) | (0.536) | (0.467) |
| Observations | 1,332 | 1,332 | 1,332 | 1,332 |
| $R^2$ | 0.002 | 0.301 | 0.257 | 0.269 |
| Adjusted $R^2$ | 0.001 | 0.300 | 0.256 | 0.268 |
| Residual Std. Error | 11.241 (df = 1330) | 2.718 (df = 1329) | 3.316 (df = 1329) | 2.894 (df = 1329) |
| F Statistic | 2.117 (df = 1; 1330) | 286.041*** (df = 2; 1329) | 230.289*** (df = 2; 1329) | 244.686*** (df = 2; 1329) |

*Note:* *p<0.1; **p<0.05; ***p<0.01

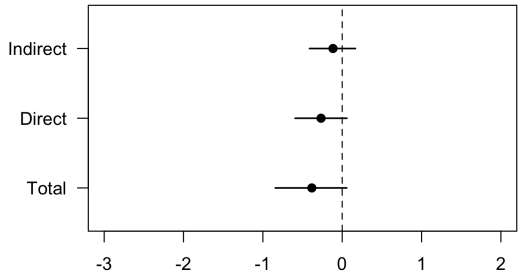
Figure 4: Race Prime → Empathy → Pro-Refugee Sentiment Mediation (White Respondents)



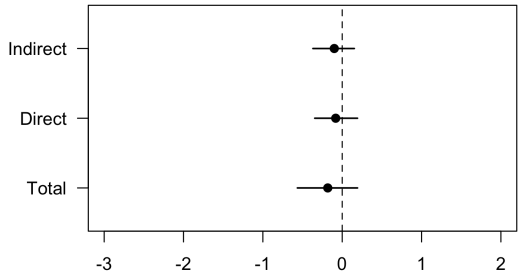

(a) DV: Full Index




(b) DV: Attitudes




(c) DV: Economic Concern




(d) DV: Willingness to Help

Table 11: Mediation Analysis for **White** Respondents

| | *Dependent variable:* | | | |
|---|---|---|---|---|
| | Group Empathy | Attitudes | Economic Concern | Willingness to Help |
| | (1) | (2) | (3) | (4) |
| Race Prime | −0.523 | −0.181 | −0.273 | −0.081 |
| | (0.706) | (0.149) | (0.178) | (0.146) |
| Group Empathy | | 0.216*** | 0.211*** | 0.179*** |
| | | (0.006) | (0.007) | (0.006) |
| Constant | 63.630*** | −0.122 | −0.511 | −0.836** |
| | (0.506) | (0.381) | (0.454) | (0.373) |
| Observations | 1,353 | 1,353 | 1,353 | 1,353 |
| $R^2$ | 0.0004 | 0.511 | 0.413 | 0.428 |
| Adjusted $R^2$ | −0.0003 | 0.511 | 0.413 | 0.427 |
| Residual Std. Error | 12.987 (df = 1351) | 2.743 (df = 1350) | 3.267 (df = 1350) | 2.684 (df = 1350) |
| F Statistic | 0.548 (df = 1; 1351) | 706.017*** (df = 2; 1350) | 475.712*** (df = 2; 1350) | 504.885*** (df = 2; 1350) |

*Note:* *p<0.1; **p<0.05; ***p<0.01

# References

Sirin, C. V., Valentino, N. A. and Villalobos, J. D. (2016), 'Group empathy in response to nonverbal racial/ethnic cues', *American Behavioral Scientist* **60**(14), 1676–1697.