Online Appendix for:

**Measuring Support for Welfare Policies:**
**Implications for the Effects of Race and Deservingness Stereotypes**

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**Contents**

**Section A. Survey Items**

*Preamble to spending questions*
"We would like to ask you about various programs on which the government spends the public's tax money. In the questions to follow, we would like to get your opinions about some of them. For each, please use the scale provided to indicate whether you think spending should be increased, decreased, or kept about the same."

*Individualism* (Feldman et al. 2020)
"Please indicate how strongly you agree or disagree with the following statements."
- Even if people try hard, they often cannot reach their goals. (reversed)
- Any person who is willing to work hard has a good chance of succeeding.
- Even if people are ambitious, they often cannot succeed. (reversed)
- If people work hard, they almost always get what they want.

The question order was randomized, and answers were coded from 1 = "Strongly disagree" to 7 = "Strongly agree."

*FIRE* (DeSante and Smith 2020)
"Please indicate how strongly you agree or disagree with the following statements."
- I am fearful of people of other races.
- White people in the U.S. have certain advantages because of the color of their skin. (reversed)
- Racial problems in the U.S. are rare, isolated situations.
- I am angry that racism exists. (reversed)

The question order was randomized, and answers were coded from 1 = "Strongly disagree" to 7 = "Strongly agree."

**Section B. Recommended Reporting Standards for Experiments**

- Specific objectives or hypotheses.
    - Discussed in the paper.

- Eligibility and exclusion criteria for participants.
    - The subject pool was similar to the replicated experiment. All U.S. adults were eligible to participate. We exclude respondents who gave exact same ratings to all conjoint profiles (because for them IMCEs cannot be estimated). Presented analyses include only non-Hispanic white respondents (similar to the replicated study). No aspects of recruitment changed after recruitment began.

- Procedures used to recruit and select participants.
    - The survey firm is mentioned in the paper. The exact recruitment procedures are proprietary and not known to the investigators.

- Recruitment dates defining the periods of recruitment and when the experiments were conducted.
    - Provided in the paper.

- Settings and locations where the data were collected.
    - Not applicable (online survey).

- Provide response rate and how it was calculated.
    - Response rate cannot be calculated.

- Details of the procedure used to generate the assignment sequence (e.g., randomization procedures).
    - Discussed in the paper.

- If random assignment used, then details of procedure (e.g., any restrictions, blocking).
    - No restrictions.

- If random assignment used, provide evidence of random assignment.
    - Not applicable (conjoint experiment).

- Were participants, those administering the interventions, and those assessing the outcomes unaware of condition assignments?
    - Not applicable (conjoint experiment).

- Description of the interventions in each treatment condition, as well as a description of the control group.
    - Described in the paper; materials provided in Section D of Online Appendix.

- How and when manipulations or interventions were administered.
    - Method of delivery and software mentioned in the paper.

- Provide precise definition of all primary and secondary measures and covariates.
    - Provided in the paper. All outcomes specified prior to the experiment.

- Participant flow.
  - The total of 1,964 respondents completed the survey. Of them 1,317 were non-Hispanic whites (the rest were excluded from the analysis, similar to the replicated study). Additionally, 46 respondents gave similar ratings to all conjoint profiles and were excluded from the analysis (for those respondents IMCEs could not be calculated). Results of the conjoint experiment are based on a sample of 1,271 respondents.

- Report sample means and standard deviations for the outcome variables using intent-to treat (ITT) analysis.
  - Not applicable (conjoint experiment).

- Note if level of analysis differs from level of randomization and estimate appropriate standard errors.
  - Not applicable (conjoint experiment).

- If there is attrition, discuss reasons for attrition and examine if attrition is related to pre-treatment variables.
  - No attrition.

- Missing data.
  - Listwise deletion for missing data was used. The effective sample for regression models was 1,147 (approximately 9.8% of cases with missing values).

- Describe in detail any weighting procedures that are used.
  - No weighting.

- Was the experiment reviewed and approved by an IRB?
  - Yes.

- If the experimental protocol was registered, where and how can the filing be accessed?
  - Not applicable.

- What was the source of funding? What was the role of the funders in the analysis of the experiment?
  - Mentioned in the paper. Funders played no role in study implementation.

- If a replication data set is available, provide the URL.
  - Provided in the paper.

**Section C. Sample Demographics**

Table A1 presents sample demographics for this replication study and for the original MZLT study. The two samples are very close on all demographic characteristics.


**Table A1.** Respondents' demographics

|  | This study | MZLT study |
| --- | --- | --- |
| Date | August 2022 | January 2021 |
| Mean age | 49.6 | 49.9 |
| Male-to-female ratio | 50.5 / 49.5 | 46.4 / 53.6 |
| Median income | $35,000 to $39,999 | $45,000 to $49,999 |
| College-educated | 42.6% | 47.0% |
| Democrats-to-Republicans-to-independents | 32.3 / 31.7 / 35.9 | 37.5 / 34.3 / 28.2 |

**Section D. Conjoint Design Materials**

Table A2 presents all possible conjoint attributes and attribute values.

**Table A2.** Attributes for profiles in conjoint experiment

| Attribute | Values |
|---|---|
| Race/Ethnicity | White |
| | Black |
| | Hispanic |
| Gender | Male |
| | Female |
| Marital Status | Married |
| | Not married |
| Has Children | *No children*: Zero |
| | *Has children*: One, Two, Three |
| Immigration Status | U.S. citizen |
| | Green-card holder |
| | Illegal/undocumented immigrant |
| Employment Status | Has a job |
| | No job, seeking employment |
| | No job, not seeking employment |
| Criminal Record | No criminal record |
| | *Yes, drug-related*: DUI, Heroin possession, Drug sales |
| | *Yes, violent*: Aggravated assault, Robbery, Threatening with a weapon |

*Note.* Collapsed attribute values are in italics.

Figure A1 presents an example of a conjoint profile as presented to respondents.

Profile 1 of 30

Please review the description of a person below, then answer the question

| | |
|---|---|
| **Marital status** | Not married |
| **Employment status** | Has a job |
| **Race** | White |
| **Gender** | Male |
| **Has children?** | No |
| **Criminal record** | Heroin possession |
| **Immigration status** | Green-card holder |

On a scale from 0 to 10, with 0 meaning extremely nontypical and 10 meaning extremely typical, how typical do you think this person is of people on welfare?

Extremely nontypical                                                                 Extremely typical

0        1        2        3        4        5        6        7        8        9        10

**Figure A1.** Sample conjoint profile

## Section E. Confirmatory Factor Analysis

Table A3 presents results of the confirmatory factor-analytic (CFA) model for the attitude measure of welfare support (original MZLT study). The model shows a somewhat lower loading for the third item and generally acceptable (though not great) overall fit.

**Table A3.** CFA results: attitude items

|  | Factor loading |
| --- | --- |
| Most people on welfare could get by without it if they really tried[a] | 1.00[b] |
| The high cost of welfare puts too big a burden on the average taxpayer[a] | 1.05*** |
|  | (0.07) |
| When people can't support themselves, the government should help by giving them enough money to meet their basic needs | 0.56*** |
|  | (0.06) |
| Most people on welfare would rather be working than taking money from the government | 0.74*** |
|  | (0.07) |

*Note.* [a]Reversed item. [b]Factor loading constrained to achieve identification. $\chi^2_2 = 40.9$, $p < .001$. RMSEA $< 0.175$. CFI $= 0.929$. SRMR $= 0.054$.
$^*\,p < 0.05$, $^{**}\,p < 0.01$, $^{***}\,p < 0.001$

Table A4 presents results of the CFA model for the spending measure of welfare support (replication study). The model shows very high factor loadings and extremely good fit according to all indicators.

**Table A4.** CFA results: spending items

|  | Factor loading |
| --- | --- |
| TANF | 1.00[a] |
| Medicaid | 0.89*** |
|  | (0.02) |
| Food stamps | 1.02*** |
|  | (0.03) |
| Housing | 1.02*** |
|  | (0.03) |

*Note.* [a]Factor loading constrained to achieve identification. $\chi^2_2 = 0.72$, $p = .698$. RMSEA $< 0.001$. CFI $=$ 1.000. SRMR $= 0.002$.
$^*$ $p < 0.05$, $^{**}$ $p < 0.01$, $^{***}$ $p < 0.001$

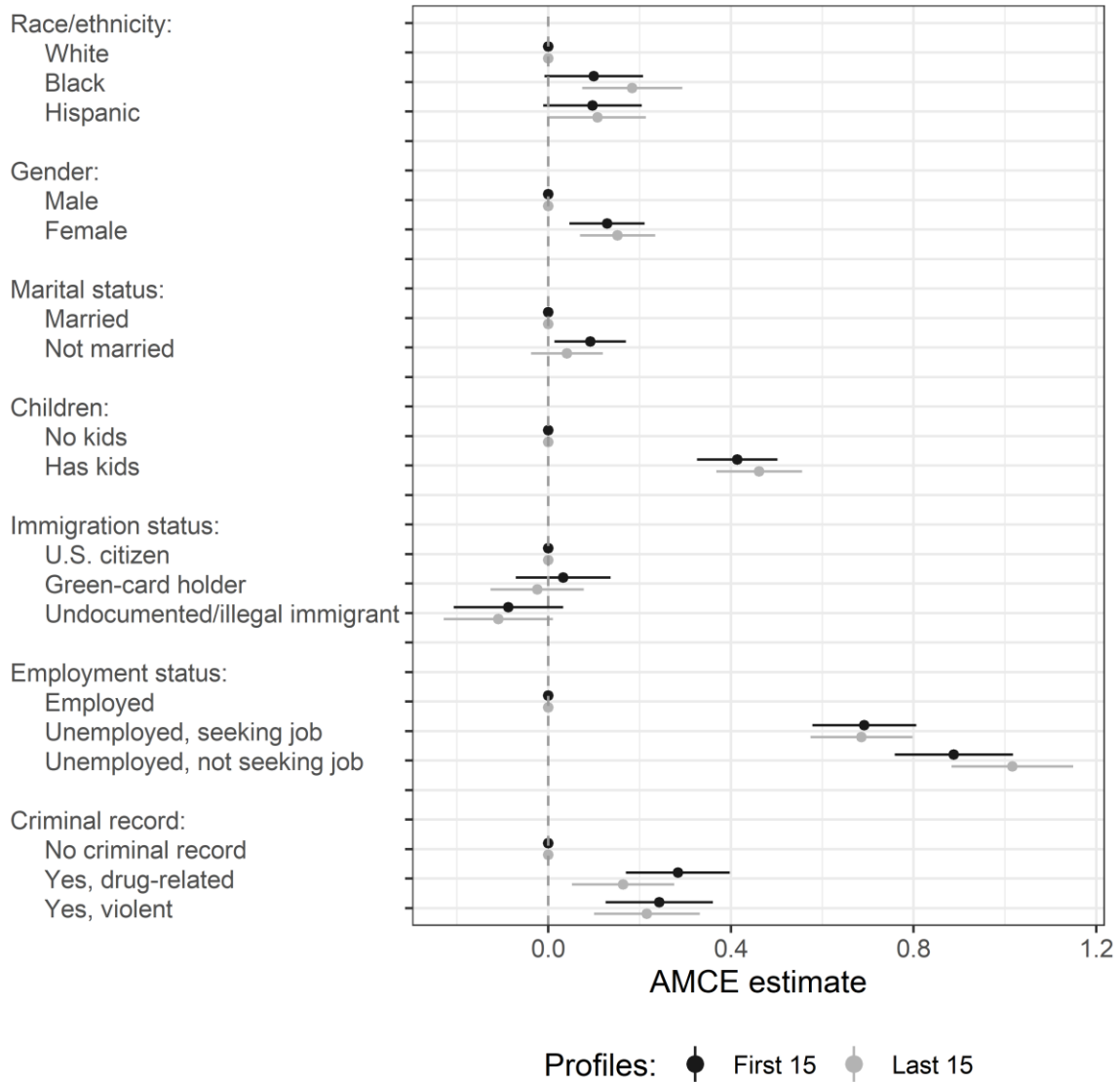## Section F. Conjoint Results: AMCEs

Figure A2 presents average marginal component effects (AMCEs) from the replication conjoint experiment. They confirm the original MZLT results that employment status attribute values have the highest AMCEs meaning that they make the most pronounced component of stereotypes about welfare recipients.
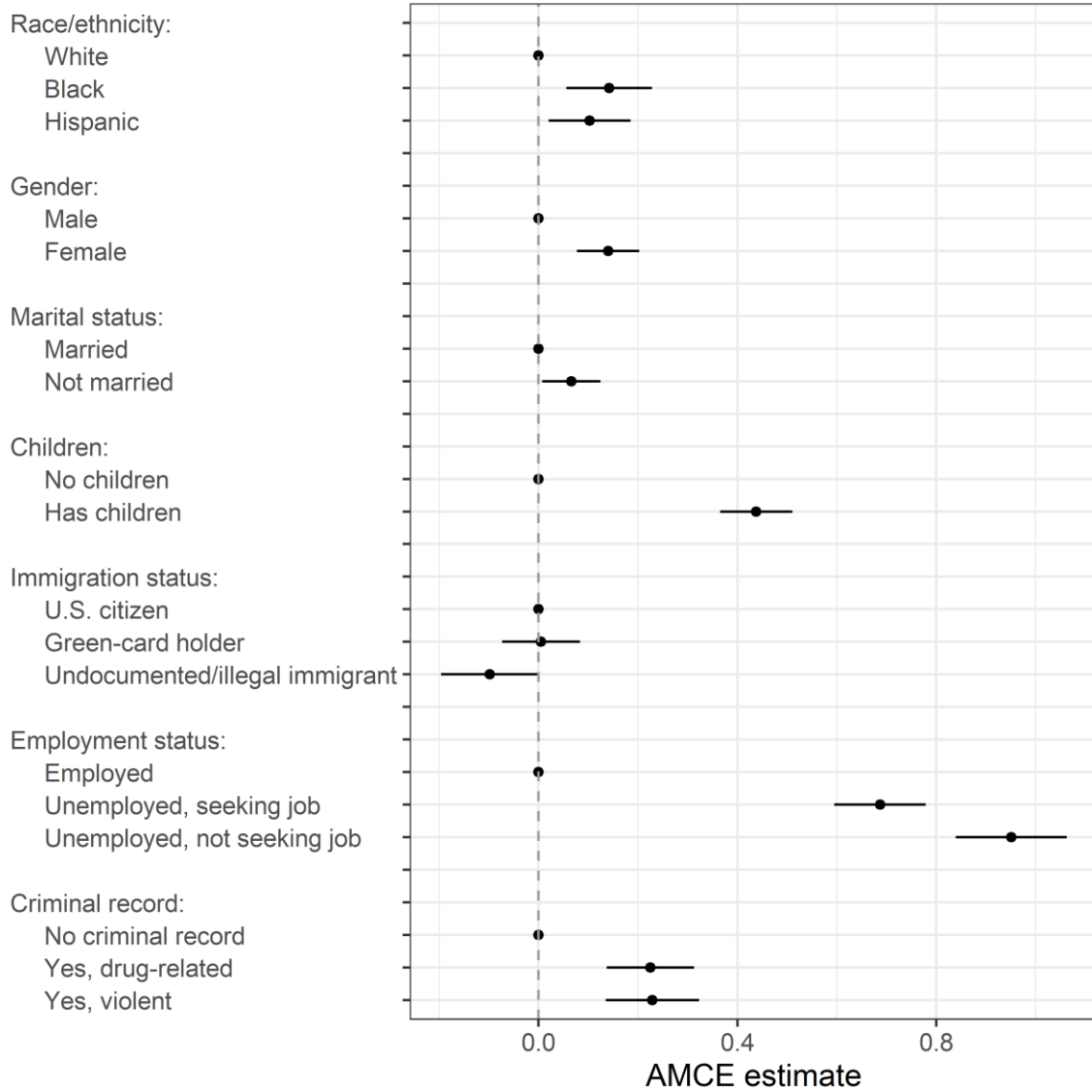


**Figure A2.** Effects of profile attribute values on stereotype ratings

Figure A3 presents AMCEs for the first vs. the second half of profiles as a test of effects' stability. Results show no substantial and/or unidirectional change in reported stereotypes across profiles rated early vs. late in the conjoint experiment thus confirming effects' stability.



**Figure A3.** AMCE stability: effects of attribute values on stereotype ratings in the first 15 vs. the last 15 conjoint profiles

## Section G. Regression Results

Table A5 presents the full results of the regression analysis that are partially displayed in Figure 1 in the manuscript.

**Table A5.** Regression results

| | Attitudes, 4 items | Attitudes, 2 items | Spending, 1 item | Spending, 4 items |
|---|---|---|---|---|
| IMCE: | | | | |
| Black | -0.05 | -0.05 | -0.17*** | -0.09* |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Hispanic | -0.00 | -0.01 | 0.06 | 0.00 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Female | 0.01 | 0.06 | 0.01 | -0.03 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Not married | -0.04 | -0.02 | -0.06 | -0.02 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Has kids | 0.01 | 0.00 | 0.03 | 0.05 |
| | (0.03) | (0.03) | (0.04) | (0.03) |
| Green-card holder | -0.01 | -0.03 | 0.01 | 0.02 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Illegal/undocumented immigrant | -0.09** | -0.07* | -0.05 | 0.01 |
| | (0.03) | (0.03) | (0.04) | (0.03) |
| Unemployed, seeking job | 0.03 | 0.01 | 0.06 | 0.05 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Unemployed, not seeking job | -0.07** | -0.05 | -0.12** | -0.08* |
| | (0.03) | (0.03) | (0.04) | (0.03) |
| Drug-related crime | -0.06 | -0.07 | -0.00 | 0.01 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Violent crime | 0.01 | 0.03 | -0.06 | -0.05 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Controls: | | | | |
| Racial conservatism (FIRE) | -0.29*** | -0.26*** | -0.15*** | -0.25*** |
| | (0.05) | (0.05) | (0.04) | (0.04) |
| Individualism | -0.28*** | -0.29*** | -0.19*** | -0.12*** |
| | (0.04) | (0.04) | (0.04) | (0.03) |
| Partisanship (Republican) | -0.11*** | -0.11*** | -0.19*** | -0.14*** |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| Age | -0.00 | -0.01*** | -0.02*** | -0.01* |
| | (0.00) | (0.00) | (0.00) | (0.00) |
| Female | 0.00 | -0.02 | 0.02 | 0.05 |
| | (0.09) | (0.10) | (0.09) | (0.08) |
| Education | -0.02 | -0.00 | -0.01 | -0.01 |
| | (0.03) | (0.03) | (0.03) | (0.02) |
| Income | -0.02** | -0.02** | -0.01 | -0.02** |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| N | 589 | 589 | 1,147 | 1,147 |

*Note.* Standard errors in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A6 presents the tests and $p$-values for differences in regression coefficients of IMCE: Black across the four measures of support for welfare. They show that all tested differences are not statistically significant on the 95% confidence level. At the same time, test results are consistently better for the one-item spending measure (differences significant on the 90% confidence level).

**Table A6.** Tests for differences in regression coefficients of IMCE: Black across the four measures of support for welfare

|  | $\chi_1^2$ | $p$-value |
|---|---|---|
| Attitude measure, 4 items vs. spending measure, 1 item | 3.40 | .065 |
| Attitude measure, 2 items vs. spending measure, 1 item | 3.12 | .077 |
| Attitude measure, 4 items vs. spending measure, 4 items | 0.62 | .431 |
| Attitude measure, 2 items vs. spending measure, 4 items | 0.55 | .460 |

Table A7 presents the full results of the interactive regression analysis that are displayed as marginal effects in Figure 2 in the manuscript.

**Table A7.** Interactive regression results

| | Attitudes, 4 items | Attitudes, 2 items | Spending, 1 item | Spending, 4 items |
|---|---|---|---|---|
| IMCE: | | | | |
| Black | 0.05 | 0.12 | 0.06 | 0.06 |
| | (0.09) | (0.10) | (0.09) | (0.08) |
| Hispanic | -0.00 | -0.01 | 0.06 | 0.01 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Female | 0.01 | 0.06 | 0.00 | -0.04 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Not married | -0.04 | -0.03 | -0.06 | -0.02 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Has children | 0.01 | 0.00 | 0.03 | 0.05 |
| | (0.03) | (0.03) | (0.04) | (0.03) |
| Green-card holder | -0.01 | -0.03 | 0.02 | 0.03 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Illegal/undocumented immigrant | -0.09** | -0.08* | -0.05 | 0.01 |
| | (0.03) | (0.03) | (0.04) | (0.03) |
| Unemployed, seeking job | 0.03 | 0.01 | 0.06 | 0.06 |
| | (0.04) | (0.04) | (0.05) | (0.04) |
| Unemployed, not seeking job | -0.07** | -0.04 | -0.12** | -0.08* |
| | (0.03) | (0.03) | (0.04) | (0.03) |
| Drug-related crime | -0.06 | -0.08 | -0.01 | -0.00 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Violent crime | 0.01 | 0.04 | -0.05 | -0.05 |
| | (0.04) | (0.05) | (0.05) | (0.04) |
| Controls: | | | | |
| Racial conservatism (FIRE) | -0.29*** | -0.26*** | -0.14** | -0.24*** |
| | (0.05) | (0.05) | (0.04) | (0.04) |
| Individualism | -0.28*** | -0.30*** | -0.20*** | -0.12*** |
| | (0.04) | (0.04) | (0.04) | (0.03) |
| Partisanship (Republican) | -0.11*** | -0.11*** | -0.19*** | -0.14*** |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| Age | -0.00 | -0.01*** | -0.02*** | -0.01* |
| | (0.00) | (0.00) | (0.00) | (0.00) |
| Female | -0.00 | -0.02 | 0.01 | 0.04 |
| | (0.09) | (0.10) | (0.09) | (0.08) |
| Education | -0.02 | -0.00 | -0.00 | -0.01 |
| | (0.03) | (0.03) | (0.03) | (0.02) |
| Income | -0.02** | -0.02** | -0.01 | -0.02** |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| Interaction: | | | | |
| IMCE: Black × FIRE | -0.03 | -0.06 | -0.07** | -0.05* |
| | (0.03) | (0.03) | (0.02) | (0.02) |
| N | 589 | 589 | 1,147 | 1,147 |

*Note.* Standard errors in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

**Section H. Research Ethics**

The experimental design did not use deception and did not expose participants to potential harms. Before agreeing to participate in the survey, respondents read information about the study's goals and content. Since we did not use deception, there was no special debriefing. Participants did not receive compensation directly from the investigators. There are no other issues that are pertinent to the principles of respect of persons, beneficence, and justice as outlined by the Belmont Report that we are aware of.

# References

DeSante, Christopher D., and Candis Watts Smith. 2020. "Fear, Institutionalized Racism, and Empathy: The Underlying Dimensions of Whites' Racial Attitudes." *PS: Political Science and Politics* 53(4): 639–45.

Feldman, Stanley, Leonie Huddy, Julie Wronski, and Patrick Lown. 2020. "The Interplay of Empathy and Individualism in Support for Social Welfare Policies." *Political Psychology* 41(2): 343–62.