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Shared Disadvantage as a Determinant of the Relationship Between White Americans'

Socioeconomic Status and Racial/Ethnic Prejudice

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ABSTRACT

The present studies examined the conditions under which low subjective socioeconomic status (SES) is associated with greater racial/ethnic prejudice among White Americans. Based on theories of intergroup threat and inclusive victim consciousness, we predicted that describing racial/ethnic minorities as disadvantaged (versus as competitive or in neutral terms) would increase empathy and reduce prejudice among White Americans who consider themselves low in SES. Study 1 provided correlational evidence that White Americans who perceived themselves as low-SES (but not high-SES) were less prejudiced against racial/ethnic minorities the more they perceived minorities as disadvantaged. In Study 2, portraying the target outgroup (Arab immigrants) as disadvantaged increased outgroup empathy, and in turn reduced prejudice, among participants induced to think of themselves as low-SES. Study 3 conceptually replicated these results using a different outgroup (Mexican Americans) and a behavioral measure of prejudice. Implications for reducing prejudice among White Americans of different socioeconomic backgrounds are discussed.

Keywords: socioeconomic status, prejudice, subjective SES, stereotypes, outgroup empathy

Income inequality in North America and Western Europe has been growing since the 1970s. Within France and the US, respectively, the top 1 percent of earners took home approximately 8% and 11% of the national income in 1978. However, these proportions rose to 10% and 20% in 2014 (Piketty et al., 2017). At the same time, racial/ethnic diversity has surged, with minorities projected to outnumber Whites in the US by 2042, mostly as a result of immigration from Latin American and Asian countries (Tavernise, 2018). Minorities are also predicted to comprise almost one-third of the British population (up from 14% in 2011) by 2050 (Chapman, 2014). Such demographic changes attracted much attention in the wake of the 2016 and 2020 US Presidential elections and the 2016 “Brexit” vote for the UK to exit the European Union. Many accounts of both events suggest that Whites – particularly those who perceived themselves as lower-SES compared to others – developed more anti-immigration sentiment (e.g., support for building the US-Mexico border wall), and hence greater support for Donald Trump (in the US; Gest, 2016) or Brexit (in the UK; Carreras et al., 2019), due to frustration with the supposed advantages being conferred upon racial/ethnic minorities at their group’s expense.

Though research generally demonstrates that lower SES is associated with greater outgroup prejudice (Carvacho et al., 2013; Halperin et al., 2007; Manstead, 2018), much of this work has not taken boundary conditions into account and has not examined possible ways to reduce prejudice among individuals who consider themselves lower in SES. In the current studies, we test a potentially important moderator of the SES-prejudice relationship among White Americans: perceptions of the position of the outgroup(s) in society. Based on theories of inclusive victim consciousness (Vollhardt, 2015) and intergroup threat (Rios et al., 2018; Stephan et al., 2015), we argue that White Americans who perceive themselves to be lower-SES

(but not higher-SES) will report greater empathy, and in turn less prejudice, toward racial/ethnic minorities described as disadvantaged than against minorities not so described.

We focus on subjective perceptions of SES (i.e., one's own judgments about his/her social status) rather than objective measures of SES (e.g., household income, education level). Subjective perceptions of SES predict many attitudes and behaviors more accurately than, but still correlate with, objective measures (Adler et al., 2000; Brown-Iannuzzi et al., 2015; Piff et al., 2010). Furthermore, subjective measures of SES better capture how individuals perceive their status *relative to others*, which is our primary construct of interest. For example, an individual might be below-average in SES compared to most others in their country but above-average in SES compared to most others in their local community, making it difficult to gauge whether they are “objectively” high or low in SES. For these reasons, we both measure and (in two of our three studies) experimentally manipulate participants' subjective SES.

SES and Prejudice

Previous research provides indirect evidence that dominant group members (e.g., White Americans) who perceive themselves to be on the lower end of the socioeconomic spectrum, or who perceive their economic position as precarious, might be most likely to exhibit prejudice against racial/ethnic minority groups. According to Intergroup Threat Theory (Stephan et al., 2015; see also Rios et al., 2018), simply *believing* that the ingroup's power and resources are in jeopardy, regardless of reality, can trigger negative attitudes toward outgroups, particularly those viewed as competitive with the ingroup (e.g., Butz & Yogeeswaran, 2011; Maddux et al., 2008). Relatedly, perceived zero-sum relations – in other words, that more resources and better prospects for the outgroup indicate fewer resources and worse prospects for the ingroup – have been found to heighten anti-immigration sentiment (Esses et al., 2001) and discriminatory

behavior toward outgroup members in economic games (Krosch & Amodio, 2014). Furthermore, prejudice and discrimination toward Blacks in the US are more pronounced during times of economic hardship (Bianchi et al., 2018). Finally, a central tenet of Relative Deprivation Theory is that prejudice arises from feeling as though one's own group is worse off than other groups (Smith & Pettigrew, 2015).

By nature, low subjective SES involves the perception that one has limited access to economic resources. Thus, the above findings could be interpreted as suggesting that low SES engenders outgroup prejudice, and indeed, some prior work points to this possibility. One set of multi-national studies found that income and education level had separate, negative effects on prejudice toward various target groups (Carvacho et al., 2013). In another study, lower levels of education were associated with more hostile attitudes toward minorities among Israeli Jews, and this relationship was driven in part by perceived economic threat (Halperin et al., 2007). The SES-prejudice relationship is not entirely straightforward, however. For instance, although education level consistently predicted prejudice in the multi-national studies, the predictive power of income was less reliable (Carvacho et al., 2013). Similarly, in the study of Israeli Jews, education level was the only indicator of SES associated with prejudice; income and employment status had no relationships to outgroup attitudes (Halperin et al., 2007). It is therefore critical to examine the conditions under which lower SES will be associated with greater racial/ethnic prejudice, and to do so using operationalizations of *subjective* rather than objective SES.

The Role of the Outgroup's Position

In the present studies, we test whether the relationship between subjective SES and White Americans' prejudice toward racial/ethnic outgroups depends in part on perceptions of the

outgroup's position in society. If lower-SES White Americans exhibit more outgroup prejudice in part because they see themselves as lacking more resources than other groups, then outgroups that are seen as similarly lacking in resources may elicit less prejudice. In other words, the tendency for lower-SES White Americans to be more prejudiced than their higher-SES counterparts may be attenuated when the target outgroup is described or stereotyped as disadvantaged. In line with previous research that has either measured (e.g., Duckitt, 2006; Duckitt & Sibley, 2007) or experimentally manipulated (e.g., Cohrs & Asbrock, 2009; Sibley & Duckitt, 2010) perceptions of outgroup disadvantage, we define "disadvantaged" as low in social influence and prestige (i.e., subordinate).

The notion that lower-SES White Americans may exhibit less prejudice against disadvantaged outgroups is consistent with research on inclusive victim consciousness (Vollhardt, 2015). According to this research, viewing an outgroup as having faced similar hardships to the ingroup can reduce bias toward the outgroup. For example, people who have experienced different forms of suffering (e.g., natural disasters, physical violence) are more likely than those without such experiences to empathize with and help outgroups in need (Vollhardt & Staub, 2011). In a study that manipulated inclusive victim consciousness, Latinos were more willing to engage in collective action on behalf of Blacks in the US after reading about their shared disadvantaged status (Glasford & Calcagno, 2012; see also Craig & Richeson, 2012). These effects emerge even among groups that are disadvantaged on different identity dimensions, such as racial/ethnic minorities who demonstrate more positive attitudes toward same-sex marriage following reminders of the similarities between racism and heterosexism (Cortland et al., 2017).

Empathy, an emotional response to another person's pain and suffering that involves imagining how s/he must feel (Batson et al., 1991), is particularly relevant to experiences of inclusive victim consciousness (Vollhardt & Staub, 2011). Simply describing an outgroup as similar to the ingroup in general does not in itself trigger a sense of solidarity and, in some cases, may backfire. In one set of studies, White Americans demonstrated more prejudice against Mexican immigrants who were described as similar to the ingroup on work-related traits (e.g., intelligence, motivation), presumably because such similarities increased the likelihood that Mexican immigrants would be competitive with the ingroup for jobs and other resources (Zarate et al., 2004). Indeed, one common anti-immigration sentiment is that immigrants will take jobs from other Americans, particularly jobs lower in prestige or wages (Zou & Cheryan, 2017) – in other words, jobs for which lower-SES White Americans are most likely to compete. To elicit a sense of inclusive victim consciousness, the outgroup must be viewed as similar to the ingroup in ways relevant to their shared disadvantage, and hence in ways likely to result in empathy for the outgroup (see Shnabel et al., 2013).

In the context of increasing outgroup empathy and thus reducing prejudice among White Americans who are low in subjective SES, describing the target outgroup as also low in status – but without references to potential competition – may be critical. Such a description may trigger lower-SES White Americans to consider parallels between their own economic disadvantages and those of the outgroup. Given that lower-SES individuals on average tend to feel more empathy and compassion for others than do their higher-SES counterparts (Kraus et al., 2009; Piff et al., 2010), appealing to these empathetic tendencies via depictions of the target outgroup as disadvantaged could be a particularly effective route to prejudice reduction.

Overview of Studies

The primary goal of the present studies was to investigate whether White Americans who perceive themselves as lower-SES (but not higher-SES) are in fact more empathetic and less prejudiced toward minorities described as disadvantaged, relative to minorities not so described. In Study 1, the relationship between subjective SES, perceived disadvantaged status of racial/ethnic minorities, and prejudice was tested correlationally. In Study 2, we experimentally manipulated both subjective SES and the perceived disadvantaged status of the target outgroup (Arab immigrants), and we assessed outgroup empathy as a potential mediator of prejudice effects. In Study 3 (preregistered), we conceptually replicated the results of Study 2 using a different outgroup (Mexican Americans) and a behavioral as well as self-reported measure of prejudice. Our samples were socioeconomically diverse. Participants in Studies 1-2 were undergraduates at Ohio University, where approximately one-third of students are the first in their families to attend college (First-Gen, 2021) and which is located in Athens, a county with a poverty rate that exceeds 30% (DataUSA, 2021). Participants in Study 3 were recruited from the crowdsourcing platform Prolific, where the median highest level of education completed and annual individual income are Bachelor's degree and \$25,000-50,000, respectively, but 31% of participants have not attained more than a high school diploma and 26% of participants earn less than \$10,000 per year (Peer et al., 2017).

Study 1

Method

Participants. One hundred and eighty-one college undergraduates received credit in their psychology courses in exchange for participation; we kept the study running until the end of the semester. For the purpose of investigating racial/ethnic minorities as targets of prejudice, only data from those who identified as White/European American ($n = 159$) were included in the

analyses. Additionally, three statistical outliers whose Cook's D scores on the prejudice dependent measure ($\geq .08$) were more than 4 SD above the sample mean were omitted, leaving 156 participants in the final sample (110 women, 46 men; $M_{\text{age}} = 18.86$, $SD = 1.02$). A sensitivity power analysis conducted using G*Power 3.1 (Faul et al. 2009) revealed that 156 participants in the equivalent of a 2 (participant SES: high vs. low) x 2 (outgroup stereotype: not disadvantaged vs. disadvantaged) were sufficient to detect a small to medium-sized effect ($f = .23$) with 80% power and an alpha of .05.

Materials and Procedure. We measured both objective and subjective SES, though we focused our predictions and analyses on the latter. Objective SES was assessed in two ways: (1) by asking participants for the highest educational attainment of each parent (participants were classified as “first-generation” if neither parent had obtained a four-year college degree, $n = 52$, and as “continuing generation” if at least one parent had obtained a four-year college degree, $n = 104$), and (2) by asking participants for their family's combined annual income before taxes (less than \$15,000, \$15,001-\$25,000, \$25,001-\$35,000, \$50,001-\$75,000, \$75,001-\$100,000, \$100,001-\$150,000, greater than \$150,000; *Mode* = \$75,001-\$100,000).

Subjective SES was measured with the MacArthur Scale (Adler et al., 2000), which depicted a 10-rung ladder. The lowest rung was labeled 1 and the highest rung was labeled 10. Participants were instructed to indicate the rung on which they believed they stood relative to most Americans, where the lowest rung corresponded to worst off and the highest rung corresponded to best off in terms of money, education, and employment. The mean was slightly higher than the midpoint of 5.5 ($M = 5.97$, $SD = 1.47$), but 37% of participants placed themselves on the bottom half of the ladder (between 1 and 5), indicating substantial variation in subjective SES among participants in this sample.

Prejudice was measured by asking participants to report their general feelings of warmth towards several different outgroups on a sliding scale from 0 (*no warmth*) to 100 (*extreme warmth*). Feelings of warmth were measured in relation to many outgroups, but we decided a priori to only look at feelings of warmth toward racial/ethnic minorities (Asians, Blacks, Hispanics, Native Americans) due to the relevance of these measures to the central research questions. These four items were combined into a composite ($M = 71.90$, $SD = 21.39$, $\alpha = .91$). Feelings of warmth toward White Americans were also assessed and analyzed as an exploratory outcome variable ($M = 72.41$, $SD = 24.41$). “Feeling thermometers” such as these have been used in past research to assess outgroup prejudice (Esses et al., 1993; Richeson & Nussbaum, 2004).

Perceived outgroup disadvantage was measured by asking participants to rate on a nine-point scale (1 = *definitely not*, 9 = *definitely*) the extent to which each outgroup was “socially disadvantaged, subordinate, and low in power, influence, and prestige in the United States” ($M = 5.91$, $SD = 1.59$, $\alpha = .82$; see Duckitt, 2006).

Results

See Table 1 for correlations among all measured variables.

A moderated multiple regression analysis was conducted using PROCESS model 1 (Hayes, 2017), with warmth toward minorities as the outcome variable, perceived disadvantaged status of minorities as the predictor, and subjective SES as the moderator. There were no main effects ($ps > .130$). However, the predicted subjective SES x outgroup disadvantage interaction was significant ($b = -2.03$, $SE = .65$, 95% CI [-3.31, -.75]), $t(152) = -3.14$, $p = .002$ (see Figure 1). We decomposed this interaction using the Johnson-Neyman technique (Hayes & Matthes, 2009), which identifies regions of statistical significance rather than analyzing effects at specific values of the moderator. The advantage of the Johnson-Neyman technique is that it identifies a

range of values of the moderator at which the focal predictor becomes or ceases to be significant rather than using arbitrary values (e.g., 1 SD above or below the mean), thus providing more information about the scope of the effects (Carden et al., 2017).

Decomposition of the interaction revealed that participants whose subjective SES scores were equal to or less than 6.72 felt significantly more warmth (less prejudice) toward minorities the more disadvantaged they perceived minorities to be (effect at 6.72: $b = 2.13$, $SE = 1.08$, 95% CI [0, 4.25]), $t(152) = 1.98$, $p = .050$). There was no level of subjective SES at which the relationship between perceived minority disadvantage and warmth toward minorities was negative and significant. Looking at the interaction another way, lower SES predicted significantly more warmth toward minorities (i.e., less prejudice) among participants whose scores on the minority disadvantage measure were at or above 6.45 ($b = 3.96$, $SE = 2.01$, 95% CI [0, 7.93]), $t(152) = 1.98$, $p = .050$), and significantly less warmth toward minorities (i.e., more prejudice) among participants whose scores on the minority disadvantage measure were at or below 3.37 ($b = -2.28$, $SE = 1.16$, 95% CI [-4.57, 0]), $t(152) = -1.98$, $p = .050$).

The interaction between subjective SES and perceived disadvantaged status of minorities was not significant with warmth toward Whites as the outcome variable ($b = -.88$, $SE = .77$, 95% CI [-2.39, .64]), $t(152) = -1.14$, $p = .255$. We also analyzed warmth toward Whites as an exploratory moderator of the relationship between subjective SES, perceived disadvantaged status of minorities, and warmth toward minorities. This analysis revealed no effects involving warmth toward Whites, except for a two-way minority disadvantage x warmth toward Whites interaction on warmth toward minorities ($b = -.12$, $SE = .03$, 95% CI [-.18, -.05]), $t(148) = -3.63$, $p < .001$. Specifically, the relationship between perceived minority disadvantage and warmth toward minorities was positive and significant when warmth toward Whites was at or below

95.84 out of 100 ($b = 8.04$, $SE = 4.37$, 95% CI [0, 17.04]), $t(148) = 1.98$, $p = .05$. There was no value of warmth toward Whites at which the relationship between perceived minority disadvantage and warmth toward minorities was negative.

When first-generation student status was used as the measure of SES rather than subjective SES, the interaction between SES and perceived outgroup disadvantage was not significant ($p = .882$). When family income was used as the SES measure, the two-way interaction was significant ($b = -1.20$, $SE = .59$, 95% CI [-2.37, -.03]), $t(152) = -2.03$, $p = .044$. Decomposition of this interaction indicated that perceiving minorities as more disadvantaged predicted significantly greater feelings of warmth toward minorities among participants with income scores (on the 8-point scale) of 6.12 or below ($b = 2.28$, $SE = 1.15$, 95% CI [0, 4.55]), $t(152) = 1.98$, $p = .050$. There was no level of income at which the relationship between perceived minority disadvantage and warmth toward minorities was negative and significant. Additionally, lower income predicted greater feelings of warmth toward minorities among participants who rated minorities at least 8.61 on the perceived disadvantage measure ($b = -3.30$, $SE = 1.68$, 95% CI [-6.83, 0]), $t(152) = -1.98$, $p = .050$. There was no level of perceived minority disadvantage at which the relationship between income and warmth toward minorities was positive and significant.

Discussion

In this study, White Americans low in subjective SES reported more warmth (i.e., less prejudice) toward outgroups rated as disadvantaged than toward outgroups rated as advantaged. Study 1 thus provided preliminary evidence that the content of outgroup stereotypes predicts prejudice among lower-SES, but not higher-SES, White Americans. However, the correlational

nature of the data limits our ability to determine causality, which is why we experimentally manipulated subjective SES and the content of outgroup stereotypes in Study 2.

Unexpectedly, a significant perceived outgroup disadvantage x warmth toward Whites interaction on warmth toward minorities emerged, such that perceived outgroup disadvantage positively predicted warmth toward minorities *except* at extremely high levels of warmth toward Whites (the ingroup). Although feelings toward the ingroup were not assessed in subsequent studies, rendering it impossible to determine whether this effect would replicate, one potential explanation is that people who feel extreme warmth for their ingroup are less likely to be empathetic toward outgroups, even those perceived as disadvantaged. This possibility could be tested in future research.

Study 2

In this experiment, participants were induced to think of themselves as either relatively high or relatively low in SES. Participants then read an article depicting a racial/ethnic outgroup (Arab immigrants) as either disadvantaged or competitive in American society, followed by measures of outgroup empathy and prejudice. We described the outgroup as competitive, rather than advantaged, in our control condition because although some racial/ethnic minority groups in the US are stereotyped as more competitive than others (e.g., the “model minority” portrayal of Asian Americans; Maddux et al., 2008), it may not have been believable to describe any minority group as truly advantaged. This is especially the case for Arab immigrants, who are subject to greater prejudice and more negative stereotypes than many other minority groups in the US (Bushman & Bonacci, 2004). We hypothesized that participants in the low (but not high) SES condition would demonstrate more empathy and less prejudice toward outgroups described as disadvantaged than toward outgroups described as competitive.

Method

Participants and Design. We recruited 246 Ohio University undergraduate students, who received partial credit in their psychology courses in exchange for participation, and we kept the study running until the end of the semester. As in Study 1, only the data from participants who self-identified as White/European American ($n = 200$) were included in the analyses. One participant who suspected that the article about Arab immigrants was not real and 23 participants who failed a basic attention check question (i.e., “Please select ‘Somewhat Agree’ as your response to this item”) were omitted from analyses, as were three participants whose Cook’s D scores on the empathy measure were at least .03 (more than 4 SD above the sample mean), leaving 173 individuals in the final sample (62 men, 111 women; $M_{\text{age}} = 19.19$, $SD = 1.33$). As in Study 1, the modal reported annual household income ($n = 42$) was \$75,001-\$100,000. A sensitivity analysis using G*Power 3.1 (Faul et al., 2009) indicated that 173 participants in a 2 x 2 design was a sufficient sample size to detect a small-to-medium effect ($f = .21$) with an alpha of .05 and 80% power.

Participants were randomly assigned to either the low-SES ($n = 88$) or high-SES ($n = 85$) condition, and to either the disadvantaged ($n = 93$) or competitive ($n = 80$) condition.

Materials and Procedure. Participants first completed the SES manipulation (see Piff et al., 2010), in which they viewed a ladder with ten rungs and think of it as representing where people stand in the United States. In the high-SES [low-SES] condition, participants were instructed to compare themselves to those at the very bottom [top] of the ladder – who have the least [most] money, least [most] education and least [most] respected jobs – and to list three examples of people or groups of people at the very bottom [top] of this ladder. Participants also

indicated on a 10-point scale (1 = *very bottom*, 10 = *very top*) where they would place themselves on the ladder ($M = 5.73$, $SD = 1.57$), which served as the manipulation check.

Participants then completed the outgroup stereotype manipulation, in which they read a fabricated op-ed article depicting Arab immigrants as either disadvantaged or competitive and were asked to briefly summarize the article's main points (see Cohrs & Asbrock, 2009; Sibley & Duckitt, 2010). In the "disadvantaged" condition, participants read that Arab immigrants were low in status and influence compared to other groups, and that they would likely have trouble becoming self-sufficient and gaining employment in the U.S. in the future. In the "competitive" condition, participants read that Arab immigrants were likely to compete with other Americans, particularly those from lower- to middle-class backgrounds, for employment, housing, and education. As a manipulation check, participants responded to three questions about the status of Arab immigrants ("How prestigious/economically successful/well-educated are Arab immigrants?"; $M = 3.56$, $SD = 1.08$, $\alpha = .85$) (Fiske et al., 2002).

After the manipulation check, participants indicated to what extent they felt six empathy-related emotions toward Arab immigrants on a scale from 1 (*not at all*) to 5 (*very much*): *sympathetic*, *warm*, *tender*, *moved*, *soft-hearted*, and *compassionate* ($M = 3.21$, $SD = .99$, $\alpha = .94$; see Batson et al., 1997). These emotions were interspersed with items assessing other, empathy-irrelevant emotions to reduce suspicion.

Next, participants completed three measures of prejudice toward Arab immigrants: a three-item, 9-point semantic differential scale (*very bad-very good*, *very negative-very positive*, *dislike very much-like very much*; $M = 6.60$, $SD = 1.51$, $\alpha = .94$) (see Rios, 2013); the feeling thermometer measure from Studies 1 and 2 ($M = 66.18$, $SD = 25.81$); and an 11-item prejudice measure (e.g., "It is wrong for Arab immigrants and White Americans to intermarry"; $M = 2.45$,

$SD = 1.12$, $\alpha = .95$) (Bushman & Bonacci, 2004). Higher scores on the first two measures reflected less prejudice, and lower scores on the third measure reflected more prejudice, toward Arab immigrants. Because these three prejudice measures were highly correlated ($|r|s > .52$, $ps < .001$), and to minimize redundancy in reporting results, we standardized and averaged them into a composite and reverse coded the third measure so that higher scores reflected less prejudice toward Arab immigrants. The pattern and significance of results did not change when each measure was analyzed separately.

Finally, participants completed measures of general demographics (e.g., age, gender, political views, income), were probed for suspicion, and were fully debriefed.

Results

See Table 2 for correlations among all measured variables.

To test whether participants in the low-SES condition would exhibit more empathy and in turn less prejudice toward Arab immigrants who were described as disadvantaged (relative to competitive), we conducted a 2 (SES condition: low vs. high) x 2 (outgroup stereotype condition: disadvantaged vs. competitive) between-participants analysis of variance (ANOVA) on each measure, including the manipulation checks.

Manipulation checks. Participants in the low-SES condition perceived their subjective status ($M = 5.42$, $SD = 1.79$) as lower than did those in the high-SES condition ($M = 5.92$, $SD = 1.48$), $F(1, 169) = 4.43$, $p = .037$, $\eta^2_p = .026$ ($M_{\text{difference}} = .53$, $SE = .25$, 95% CI [.03, 1.03]). Neither the main effect of outgroup stereotype condition nor the two-way interaction reached significance ($ps > .135$). We also conducted this analysis controlling for household income, which correlated significantly with subjective SES ratings ($r = .33$, $p < .001$). Including income

as a covariate strengthened the effect of SES condition on subjective SES ratings, $F(1, 169) = 7.87, p = .006, \eta^2_p = .045$ ($M_{\text{difference}} = .67, SE = .24, 95\% \text{ CI } [.20, 1.14]$).

The outgroup stereotype manipulation was also successful, with Arab immigrants perceived as lower in status in the disadvantaged condition ($M = 3.21, SD = 1.08$) than in the competitive condition ($M = 3.91, SD = 1.00$), $F(1, 169) = 19.00, p < .001, \eta^2_p = .101$ ($M_{\text{difference}} = .69, SE = .16, 95\% \text{ CI } [.38, 1.01]$). Neither the main effect of SES condition nor the two-way interaction reached significance ($ps > .137$).

Empathy. Overall, participants reported more empathy toward Arab immigrants in the high-SES condition ($M = 3.42, SD = 1.01$) than in the low-SES condition ($M = 3.01, SD = .94$), $F(1, 169) = 7.96, p = .005, \eta^2_p = .045$, and in the disadvantaged condition ($M = 3.44, SD = .90$) than in the competitive condition ($M = 2.94, SD = 1.04$), $F(1, 169) = 10.70, p = .001, \eta^2_p = .060$. Critically, the two-way interaction was also significant, $F(1, 169) = 4.59, p = .034, \eta^2_p = .026$. Simple effects tests indicated that participants in the low-SES condition reported more empathy toward Arab immigrants who were portrayed as disadvantaged ($M = 3.39, SD = .87$) than competitive ($M = 2.61, SD = .84$), $F(1, 169) = 15.04, p < .001, \eta^2_p = .082$ ($M_{\text{difference}} = .78, SE = .20, 95\% \text{ CI } [.38, 1.17]$); whereas participants in the high-SES condition did not differ in empathy /according to how Arab immigrants were portrayed (disadvantaged: $M = 3.49, SD = .92$; competitive: $M = 3.32, SD = 1.13$), $F(1, 169) = .62, p = .432, \eta^2_p = .004$ ($M_{\text{difference}} = .16, SE = .21, 95\% \text{ CI } [.24, .57]$). Further, participants in the low-SES and high-SES conditions reported statistically equivalent levels of empathy toward disadvantaged Arab immigrants, $F(1, 169) = .25, p = .618, \eta^2_p = .001$ ($M_{\text{difference}} = .10, SE = .20, 95\% \text{ CI } [.48, .29]$), but participants in the low-SES condition reported less empathy toward competitive Arab immigrants than did participants

in the high-SES condition, $F(1, 169) = 11.44, p = .001, \eta^2_p = .063$ ($M_{\text{difference}} = .71, SE = .21, 95\% \text{ CI } [.30, 1.13]$).

Prejudice. Participants in the high-SES condition ($M = .26, SD = .75$) reported less prejudice (i.e., greater positivity toward Arab immigrants) than did participants in the low-SES condition ($M = -.08, SD = .84, F(1, 169) = 8.62, p = .004, \eta^2_p = .049$ ($M_{\text{difference}} = .35, SE = .12, 95\% \text{ CI } [.14, .58]$); and participants reported less prejudice against disadvantaged immigrants ($M = .21, SD = .75$) than competitive immigrants ($M = -.06, SD = .82, F(1, 169) = 4.47, p = .036, \eta^2_p = .026$ ($M_{\text{difference}} = .25, SE = .12, 95\% \text{ CI } [.02, .48]$). The predicted interaction was also significant, $F(1, 169) = 8.01, p = .005, \eta^2_p = .045$. Simple effects tests revealed that low-SES participants exhibited less prejudice against disadvantaged immigrants ($M = .21, SD = .76$) than competitive immigrants ($M = -.38, SD = .82, F(1, 169) = 12.54, p = .001, \eta^2_p = .069$ ($M_{\text{difference}} = .58, SE = .17, 95\% \text{ CI } [.25, .91]$); but high-SES participants did not differ in prejudice according to outgroup stereotype condition (disadvantaged: $M = .22, SD = .82$; competitive: $M = .31, SD = .66, F(1, 169) = .251, p = .617, \eta^2_p = .001$ ($M_{\text{difference}} = .09, SE = .17, 95\% \text{ CI } [.25, .42]$). In addition, whereas participants who read about disadvantaged immigrants had statistically equivalent levels of prejudice in the low-SES and high-SES conditions, $F(1, 169) = .006, p = .938, \eta^2_p = .00004$ ($M_{\text{difference}} = .013, SE = .16, 95\% \text{ CI } [.30, .33]$), participants who read about competitive immigrants were more prejudiced in the low-SES than high-SES condition, $F(1, 169) = 15.43, p < .001, \eta^2_p = .084$ ($M_{\text{difference}} = .68, SE = .17, 95\% \text{ CI } [.34, 1.02]$).

Mediated moderation analyses. We conducted mediated moderation analyses using PROCESS model 8 (Hayes, 2017). In these analyses, outgroup stereotype condition was the predictor, SES condition was the moderator, the standardized prejudice measure was the outcome, and empathy was the mediator. A bootstrapping analysis with 5,000 estimates revealed

a significant overall indirect effect ($b = .32$, $SE = .15$, 95% CI [.02, .62]). As predicted, the conditional indirect effect was significant in the low-SES condition ($b = -.40$, $SE = .10$, 95% CI [-.60, -.22]) but not in the high-SES condition ($b = -.08$, $SE = .12$, 95% CI [-.32, .15]). Thus, among participants in the low-SES condition, disadvantaged Arab immigrants elicited greater empathy and, consequently, less prejudice than competitive Arab immigrants. Figure 2 depicts this mediation.

Discussion

Using experimental manipulations of both subjective SES and outgroup stereotype content, Study 2 showed that low-SES (but not high-SES) participants demonstrated less prejudice against outgroups portrayed as disadvantaged than against outgroups portrayed as less disadvantaged (i.e., as competitive). Furthermore, this effect was driven by low-SES participants' greater empathy toward disadvantaged than competitive outgroups.

Study 3

In Study 3, we expanded upon Study 2 in several ways. First, we recruited participants from an adult sample (Prolific Academic) instead of a college student sample, and we used Mexican Americans rather than Arab immigrants as the target outgroup, both to increase generalizability and because of the relevance of US-Mexico relations to discussions of economic inequality and anti-immigration rhetoric during the Trump presidency (Gest, 2016). Second, we included a behavioral measure of bias against the outgroup – specifically, money donated to an organization targeted at helping the outgroup versus money donated to a neutral organization. Third, we preregistered our hypotheses and data analysis plans (https://osf.io/34y2w/?view_only=95fcb225bfc642829afc55d257a56ca9), and recruited a larger sample, to bolster confidence in the robustness of the findings.

Finally, as a more conservative test of predictions, we changed our control condition so that the target outgroup was described as similar to, rather than competitive with, the ingroup. This description has been used as a control condition in prior research on outgroup stereotypes (e.g., Cohrs & Asbrock, 2009). Describing the target outgroup as similar to the ingroup enabled us to test whether even a neutral portrayal of the outgroup would reduce empathy and hence increase prejudice among participants induced to think of themselves as low in SES – that is, whether the outgroup must be explicitly portrayed as disadvantaged in order to attenuate socioeconomic differences in intergroup emotions and attitudes.

Method

Participants and Design. Three hundred and one individuals were recruited from the Prolific Academic online crowdsourcing platform to participate in exchange for \$0.75. The targeted sample size prior to exclusions was 300, or roughly 75 participants per cell. To be included in analyses, participants needed to indicate on a prescreening survey (conducted by Prolific Academic) that they were White and residents of the United States. The data from participants who self-identified as non-White ($n = 22$) or as non-U.S. residents ($n = 10$) in the study proper, 14 participants who failed a basic attention check, 12 participants who expressed suspicion that the passage about Mexican Americans was meant to influence their subsequent responses, and two statistical outliers whose Cook's D scores on both prejudice measures ($> .04$), the empathy measure (.025), and the donation measure (.025) were more than 4 SD above the sample mean were omitted, leaving 241 individuals in the final sample (129 men, 111 women, 1 nonbinary; $M_{\text{age}} = 34.86$, $SD = 11.21$). The modal reported household income levels were \$75,001-100,000 ($n = 53$) and \$50,001-75,000 ($n = 51$), and the modal highest education completed was a Bachelor's degree ($n = 108$). According to a sensitivity power analysis

conducted using G*Power 3.1 (Faul et al., 2009), 241 participants in a 2 x 2 design were sufficient to detect a small-to-medium effect ($f = .18$) with 80% power and an alpha of .05.

Participants were randomly assigned to either the low-SES ($n = 128$) or high-SES ($n = 113$) condition, and to the disadvantaged ($n = 118$) or control ($n = 123$) outgroup stereotype condition.

Materials and Procedure. After providing informed consent, participants completed the subjective SES manipulation from Study 2. Next, they completed the outgroup stereotype manipulation adapted from prior research (Cohrs & Asbrock, 2009; Sibley & Duckitt, 2010), which involved reading a short passage about an ostensibly randomly assigned subgroup of Mexican Americans (the target outgroup). In both conditions, participants read that many Mexican Americans were similar to other Americans in terms of lifestyle, culture, and money spent on consumer goods. However, participants in the disadvantaged condition also read that many other Mexican Americans were socially and economically disadvantaged in society and would have a hard time becoming self-sufficient in the United States. Immediately following the manipulation, participants responded to two questions about how high in status Mexican Americans were ($M = 3.26$, $SD = 1.24$ out of 7) and how similar Mexican Americans were to other Americans ($M = 5.41$, $SD = 1.52$ out of 7) according to the passage they had just read, which served as the manipulation checks.

Next, participants responded to the six outgroup empathy items from Study 2 on 5-point scales (1 = *not at all*, 5 = *very much*; $M = 3.06$, $SD = .91$, $\alpha = .89$), again interspersed with other items assessing empathy-irrelevant emotions.

Participants then completed the semantic differential ($M = 7.15$, $SD = 1.38$, $\alpha = .93$) and feeling thermometer ($M = 73.22$, $SD = 20.55$) prejudice measures from Study 2, worded to

pertain to Mexican Americans. As in Study 2, these two measures were standardized and averaged due to their high correlation ($r = .75, p < .001$); higher scores indicated greater positivity (less prejudice) toward Mexican Americans. However, the pattern and significance levels of results did not change when the measures were analyzed separately.

Participants also completed a behavioral measure of bias against the target outgroup. Specifically, they were told that they could choose to have the researchers donate up to 75 cents on their behalf, and hence match their study earnings they were already guaranteed, to one or both of the following university charities: Phi Beta Kappa (a race-neutral honor society) or the Latino Heritage Achievement Awards (which grants scholarships to Hispanic students). The participants were made aware of the fact that no actual donation was made after the selection process, during the debriefing. The difference between the amount donated to the latter and former charities was computed as an indicator of relative favorability toward the target outgroup ($M = 21.76, SD = 36.90$).

At the end of the study, participants completed a demographic survey, were probed for suspicion, and were fully debriefed.

Results

See Table 3 for correlations among all measured variables.

Manipulation checks. There was a nonsignificant trend for participants in the high-SES condition ($M = 5.73, SD = 1.75$) to rate themselves significantly higher on the ladder than participants in the low-SES condition ($M = 5.35, SD = 1.73$), $F(1, 237) = 2.89, p = .091, \eta^2_p = .012$ ($M_{\text{difference}} = .38, SE = .22, 95\% \text{ CI } [.06, .82]$). Notably, however, this effect was significant when controlling for household income and highest level of education achieved, both of which correlated with subjective SES ratings ($r_s > .35$), $F(1, 239) = 8.44, p = .004, \eta^2_p = .035$ ($M_{\text{difference}}$

= .55, $SE = .19$, 95% CI [.18, .92]). Neither the main effect of outgroup stereotype condition ($p = .858$) nor the two-way interaction ($p = .054$) reached conventional levels of significance. Though the pattern of the interaction suggested that participants in the high-SES condition rated themselves higher (and participants in the low-SES condition rated themselves lower) on the ladder if they were assigned to read the outgroup disadvantage than control passage, participants reported their subjective SES prior to the outgroup stereotype manipulation. Thus, this interaction was likely the product of a Type 1 error.

Participants who read the disadvantage passage rated Mexican Americans as lower in status ($M = 2.58$, $SD = 1.14$) than did participants who read the control passage ($M = 3.93$, $SD = .93$), $F(1, 237) = 98.93$, $p < .001$, $\eta^2_p = .295$ ($M_{\text{difference}} = 1.34$, $SE = .13$, 95% CI [1.07, 1.60]). Neither the main effect of SES condition nor the two-way interaction was significant ($ps > .166$).

Participants who read the disadvantage passage rated Mexican Americans as less similar to other Americans ($M = 5.16$, $SD = 1.74$) than did participants who read the control passage ($M = 5.66$, $SD = 1.25$), $F(1, 237) = 7.22$, $p = .008$, $\eta^2_p = .030$ ($M_{\text{difference}} = .52$, $SE = .19$, 95% CI [.14, .89]). There was no main effect of SES condition ($p = .140$). Additionally, the two-way interaction was significant, $F(1, 237) = 6.97$, $p = .009$, $\eta^2_p = .029$. Although this interaction was unexpected, simple effects tests indicated that participants who read the disadvantage passage perceived Mexican Americans as more similar to other Americans in the low-SES than high-SES condition, $F(1, 237) = 8.36$, $p = .004$, $\eta^2_p = .034$, whereas participants who read the control passage perceived Mexican Americans as no more or less similar to other Americans according to SES condition, $F(1, 237) = .68$, $p = .409$, $\eta^2_p = .003$.

Empathy. Participants tended to report more empathy toward Mexican Americans after reading the disadvantage passage than the control passage, though this effect did not reach

conventional significance levels ($p = .068$). There was no main effect of SES condition ($p = .294$).¹ The two-way interaction between SES condition and outgroup stereotype condition was significant, $F(1, 237) = 5.09$, $p = .025$, $\eta^2_p = .021$. Simple effects tests revealed that participants in the low-SES condition reported significantly more empathy toward Mexican Americans after reading the disadvantage passage ($M = 3.25$, $SD = .87$) than the control passage ($M = 2.78$, $SD = .88$), $F(1, 237) = 8.90$, $p = .003$, $\eta^2_p = .036$ ($M_{\text{difference}} = .47$, $SE = .16$, 95% CI [.16, .78]). Participants in the high-SES condition, however, did not differ in empathy depending on whether they read the disadvantage passage ($M = 3.11$, $SD = .90$) or the control passage ($M = 3.16$, $SD = .89$), $F(1, 237) = .085$, $p = .771$, $\eta^2_p = .0004$ ($M_{\text{difference}} = .05$, $SE = .17$, 95% CI [.28, .38]). Looking at the interaction another way, whereas participants who read the control passage were less empathetic toward Mexican Americans in the low-SES condition than in the high-SES condition, $F(1, 237) = 5.56$, $p = .019$, $\eta^2_p = .023$ ($M_{\text{difference}} = .38$, $SE = .16$, 95% CI [.06, .70]), this difference was attenuated among participants who read the disadvantage passage, $F(1, 237) = .72$, $p = .399$, $\eta^2_p = .023$ ($M_{\text{difference}} = .14$, $SE = .16$, 95% CI [.18, .46]).

Prejudice. There were no main effects ($ps > .789$). Although the interaction between outgroup stereotype condition and SES condition was not significant, $F(1, 237) = 3.23$, $p = .074$, $\eta^2_p = .013$, the pattern of the interaction was consistent with predictions. Specifically, participants in the low-SES (but not high-SES) condition tended to report greater positivity toward Mexican

¹ Although Kraus et al. (2010) found across several studies that lower-SES participants felt more empathetic toward others than did higher-SES participants, their focus was on interpersonal, not intergroup, empathy. Moreover, only SES (not outgroup stereotype content) was measured and manipulated in their studies. We therefore do not consider our null effect in this study, nor the positive main effect of the SES manipulation on outgroup empathy in Study 2, failures to replicate this prior research.

Americans after reading the disadvantage passage relative to the control passage. However, none of the simple effects reached significance ($ps > .142$).

Monetary donations. There were no significant main effects, nor was there a two-way interaction, on this measure ($ps > .392$).

Mediated moderation analyses. Although there were no significant direct effects of outgroup stereotype condition and SES condition on the prejudice or donation measures, we could still test for indirect effects (via outgroup empathy) using PROCESS model 8 (Hayes, 2017), as in Study 2 and consistent with our preregistration. The overall indirect effects were significant with the prejudice composite ($b = .28$, $SE = .13$, 95% CI [.04, .54]), and the donation measure ($b = 5.38$, $SE = 2.77$, 95% CI [.73, 11.62]) as outcomes. In each case, a conditional indirect effect emerged among participants in the low-SES condition (prejudice: $b = -.25$, $SE = .09$, 95% CI [-.44, -.09]; donation: $b = -4.87$, $SE = 2.06$, 95% CI [-9.40, -1.38]), but not among participants in the high-SES condition (prejudice: $b = .03$, $SE = .09$, 95% CI [-.15, .20]; donation: $b = .51$, $SE = 1.82$, 95% CI [-3.04, 4.22]). See Figures 3 and 4 for depictions of these mediated moderation analyses.

Discussion

Study 3 conceptually replicated the effects of low subjective SES and disadvantaged outgroup stereotypes on empathy obtained in Study 2, as well as the indirect effects on prejudice reduction via empathy, with a different target outgroup (Mexican Americans). Furthermore, these increased feelings of outgroup empathy had downstream consequences for White Americans' willingness to donate to an organization targeted at helping Hispanics/Latinos. Unlike in Study 2, however, the interaction between subjective SES and outgroup stereotype

condition did not directly impact prejudice. We review potential reasons for this discrepancy in results in the General Discussion.

As noted above, the subjective SES manipulation check in this study did not reach conventional levels of significance. One possible explanation is that participants' subjective SES ratings were influenced not only by the experimental manipulation, but also by factors such as their household income and highest level of education attained. Indeed, when controlling for these more objective indicators, the effect of the manipulation on participants' subjective SES ratings became stronger and statistically significant, suggesting that it may be important to include objective SES measures as covariates in future research.

General Discussion

Using two different participant populations (college students and Prolific Academic workers), the present studies examined how the relationship between White Americans' subjective SES and their prejudice toward racial/ethnic outgroups depends on the outgroups' perceived position in society. In Study 1, lower-SES (but not higher-SES) White Americans expressed less prejudice against minorities whom they stereotyped as relatively disadvantaged. In Study 2, we manipulated both participants' subjective SES and stereotypes of the target outgroup (Arab immigrants), and we assessed outgroup empathy as a potential mediator. The results demonstrated that lower-SES White Americans' reduced prejudice against Arab immigrants described as disadvantaged (versus competitive) was mediated by greater feelings of empathy. In Study 3, we found that outgroup empathy mediated the tendency for lower-SES White Americans to express less prejudice against Mexican Americans portrayed as disadvantaged, as opposed to simply similar to other Americans. For control conditions, we described the outgroup as competitive in Study 2 and similar to the ingroup in Study 3 because

both of these descriptions have been used in prior research (e.g., Cohrs & Asbrock, 2009). Although an advantaged stereotype condition may have been interesting to include, we were concerned about both the plausibility and ethical implications of describing any racial/ethnic minority group in the US as truly “advantaged.”

These findings have implications for the relationship between socioeconomic status and racial/ethnic prejudice, which prior research suggests is not entirely robust (e.g., Carvacho et al., 2013; Halperin et al., 2007). Notably, however, these prior studies assessed objective rather than subjective SES, whereas our focus was on measuring and especially manipulating the latter. Given the widespread discourse about whether lower-SES White Americans are more prejudiced than their higher-SES counterparts (Gest, 2016) and whether Whites who perceive themselves as lower in SES are most likely to harbor anti-immigration and pro-Brexit sentiments in the UK (Carreras et al., 2019), it is important to consider boundary conditions of the SES-prejudice relationship. In particular, the position not only of the ingroup (White Americans) but also of the target outgroup(s) – in this case, racial and ethnic minorities – and how the outgroups are depicted must be taken into account to advance understanding of the factors that exacerbate versus attenuate prejudice. At least among White Americans who consider themselves lower-SES, racial/ethnic outgroups that are portrayed as disadvantaged will elicit greater empathy and, in turn, less prejudice than racial/ethnic outgroups not so portrayed.

The present findings, particularly the mediation through outgroup empathy, also have implications for the role of inclusive victim consciousness in improving lower-SES White Americans’ intergroup attitudes. Prior research has found that highlighting ways in which both the ingroup and outgroup have suffered can reduce bias and increase prosocial behavior (e.g., Cortland et al., 2017; Craig & Richeson, 2012; Glasford & Calcagno, 2012; Shnabel et al.,

2013), as reminders of shared disadvantage help to foster intergroup empathy (Vollhardt, 2015; Vollhardt & Staub, 2011). However, our studies are the first to show that White Americans who perceive themselves as low in SES can exhibit empathy toward racial/ethnic minorities portrayed as similarly disadvantaged. Indeed, past studies on inclusive victim consciousness have focused on shared hardships in the form of discrimination (Cortland et al., 2017; Craig & Richeson, 2012) or violence (Shnabel et al., 2013), rather than on low socioeconomic status. Importantly, though, simply viewing one's group as similar to the outgroup in general does not increase empathy and reduce prejudice, as our control condition in Study 3 shows (see also Shnabel et al., 2013). The perceived similarity must be related to a common sense of plight in order to be effective.

In our studies, we did not directly assess how participants perceived their SES *relative to the target outgroup*. Thus, it may be that participants in the disadvantaged stereotype conditions saw themselves as more advantaged than the outgroup. We consider this unlikely, however, particularly in the lower-SES conditions in Studies 2-3 whereby participants were instructed to compare themselves to those at the very top of the social hierarchy. Furthermore, according to the V-curve hypothesis, both relative deprivation (i.e., feeling worse off than others) and relative gratification (i.e., feeling better off than others) can trigger outgroup prejudice (Anier et al., 2016). Given that our participants in the lower-SES, outgroup disadvantage conditions exhibited greater empathy and less prejudice, these participants likely perceived themselves as sharing disadvantaged status with the target outgroup – in other words, as neither more advantaged nor more disadvantaged. The unexpected SES x outgroup stereotype interaction on the perceived similarity manipulation check in Study 3 supports this possibility. Specifically, participants in the lower-SES (relative to higher-SES), outgroup disadvantage condition viewed Mexican

Americans as more similar to other Americans. Again, though, because the control condition in this study involved describing the outgroup as similar and did not produce the same pattern of results as the outgroup disadvantage condition, perceived similarity *per se* may be necessary but not sufficient to reduce prejudice against disadvantaged outgroups among those who consider themselves lower-SES.

Limitations and Future Directions

One limitation of the current studies is the lack of direct effects of subjective SES and outgroup stereotypes on prejudice against Mexican Americans in Study 3. A potential explanation for these null effects is that Study 3 used participants from Prolific Academic rather than the undergraduate students who participated in Study 2, meaning that participants in Study 3 were more diverse in terms of age, education level, and perhaps household income. This increased diversity may have increased variation in responses to the SES manipulation and made the interaction more difficult to detect. Additionally, Study 3 used a control condition in which the target outgroup was described as similar to the ingroup, instead of the competitive description that was used in Study 2. Because the competitive outgroup condition is closer to describing the outgroup as advantaged, it may have led to greater differences from the disadvantaged outgroup condition than were observed in Study 3. In other words, the similar outgroup condition, due to its more neutral content, may have made Study 3 a more conservative test of our hypotheses.

A final possible explanation for the inconsistency between Studies 2 and 3 involves social desirability concerns. In particular, it may be less acceptable to explicitly express bias against Mexican Americans relative to Arab immigrants (the target outgroup in Study 2) in the US. Indeed, a comparison of the mean feeling thermometer and semantic differential prejudice

scores from Studies 2 and 3 revealed that participants reported greater positivity on both measures in Study 3 (with Mexican Americans as the target group) than in Study 2 (with Arab immigrants as the target group), $t(413) = 3.09, p = .002$ for feeling thermometer and $t(413) = 3.85, p < .001$ for semantic differential. This suggests that future studies should include more unobtrusive assessments of prejudice in addition to explicit measures (e.g., self-reported attitudes, donation behaviors). Using the present experimental paradigms as a starting point, White Americans who are induced to see themselves as low-SES may be faster to associate an outgroup with positive words/concepts after reading about the outgroup's disadvantaged status. These effects may even extend to interpersonal contexts. For instance, low-SES White Americans may subsequently exhibit more friendly nonverbal behaviors toward a racial/ethnic minority interaction partner who they believe comes from a disadvantaged (relative to advantaged) background.

Another limitation of the current studies is that feelings of inclusive victim consciousness (e.g., shared disadvantage) were not assessed directly. We used outgroup empathy as an indicator of inclusive victim consciousness in order to minimize potential demand characteristics. That is, we wanted to avoid explicitly comparing participants' own SES with that of the outgroup. Nevertheless, in future research, it would be worthwhile to investigate the types of shared disadvantage that are most effective at increasing empathy (and thereby reducing prejudice) among lower-SES White Americans. For example, because SES is an easier social identity than race/ethnicity to conceal (Stephens et al., 2012), lower-SES White Americans may find it more difficult to relate to racial/ethnic minorities' experiences of discrimination than to racial/ethnic minorities' specific, class-based struggles (e.g., being unable to afford basic necessities).

Finally, in addition to considering how to reduce prejudice among lower-SES White Americans, future research could examine what exactly causes one to feel lower in subjective SES, as well as what aspects of lower subjective SES are particularly predictive of prejudice. Given that people are especially averse to losing status, more so than they enjoy gaining status (Pettit et al., 2010), perhaps newly perceiving oneself as lower-SES (e.g., after an economic disruption like a job loss, unexpected medical expense, or automotive accident) triggers greater prejudice than does being born into a lower-SES background. Consistent with this idea, recent work has shown that even higher-SES individuals exhibit feelings of collective angst (i.e., concerns about their group's livelihood) and anti-immigration sentiment when they are led to believe their position in society is unstable (Jetten et al., 2020).

Conclusion

Given the growing diversity as well as economic inequality in many Western countries, the relationship between subjective SES and racial/ethnic prejudice is all the more important to understand. Our findings are just as illustrative of the capacity for greater tolerance of outgroups (e.g., those described as disadvantaged) among White Americans who perceive themselves as lower-SES as they are of the capacity for greater prejudice (e.g., against outgroups described as competitive). Indeed, the prevalent notion that White Americans who consider themselves lower-SES are necessarily more biased than those who consider themselves higher-SES (see Gest, 2016) neglects important boundary conditions of the SES-prejudice relationship. By focusing on both the perceivers' (i.e., White Americans') status in society and their stereotypes about the targets' (i.e., racial/ethnic minorities') status, the present studies take an initial step in the direction of elucidating such conditions and determining how prejudice among White Americans across the socioeconomic spectrum can be reduced.

Conflict of Interest

The authors can confirm that they have no conflict of interest or relationship, financial or otherwise that might be perceived as influencing their objectivity.

Data Accessibility

Data sets, materials, and pre-registration are archived on OSF at <https://osf.io/34y2w/>.

Ethics Statement

The studies included were approved by the institutional review board at Ohio University.

References

- Adler, N., Epel, E., Castellazzo, G., & Ickovics, J. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology, 19*(6), 586–592.
- Anier, N., Guimond, S., & Dambrun, M. (2016). Relative deprivation and gratification elicit prejudice: Research on the V-curve hypothesis. *Current Opinion in Psychology, 11*, 96–99.
- Batson, C. D., Batson, J. G., Slingsby, J. K., Harrell, K. L., Peekna, H. M., & Todd, R. M. (1991). Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology, 61*(3), 413–426.
- Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., Klein, T. R., & Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology, 72*(1), 105–118.
- Bianchi, E. C., Hall, E. V., & Lee, S. (2018). Reexamining the link between economic downturns and racial antipathy: Evidence that prejudice against blacks rises during recessions. *Psychological Science, 29*(10), 1584–1597.
- Brown-Iannuzzi, J. L., Lundberg, K. B., Kay, A. C., & Payne, B. K. (2015). Subjective status shapes political preferences. *Psychological Science, 26*(1), 15–26.

- Bushman, B. J., & Bonacci, A. M. (2004). You've got mail: Using e-mail to examine the effect of prejudiced attitudes on discrimination against Arabs. *Journal of Experimental Social Psychology, 40*(6), 753–759.
- Butz, D. A., & Yogeeswaran, K. (2011). A new threat in the air: Macroeconomic threat increases prejudice against Asian Americans. *Journal of Experimental Social Psychology, 47*(1), 22-27.
- Carden, S. W., Holtzman, N. S., & Strube, M. J. (2017). CAHOST: An Excel Workbook for Facilitating the Johnson-Neyman Technique for Two-Way Interactions in Multiple Regression. *Frontiers in Psychology, 8*, 1293.
- Carreras, M., Irepoglu Carreras, Y., & Bowler, S. (2019). Long-term economic distress, cultural backlash, and support for Brexit. *Comparative Political Studies, 52*(9), 1396-1424.
- Carvacho, H., Zick, A., Haye, A., González, R., Manzi, J., Kocik, C., & Bertl, M. (2013). On the relation between social class and prejudice: The roles of education, income, and ideological attitudes. *European Journal of Social Psychology, 43*(4), 272–285.
- Chapman, J. (2014, 5 May). Ethnic minorities “will make up one-third of the population by 2050” as Britain’s melting pot continues to grow.
<https://www.dailymail.co.uk/news/article-2620957/Ethnic-minorities-make-one-population-2050-Britains-melting-pot-continues-grow.html>
- Cohrs, J. C., & Asbrock, F. (2009). Right-wing authoritarianism, social dominance orientation and prejudice against threatening and competitive ethnic groups. *European Journal of Social Psychology, 39*(2), 270–289.

- Cortland, C. I., Craig, M. A., Shapiro, J. R., Richeson, J. A., Neel, R., & Goldstein, N. J. (2017). Solidarity through shared disadvantage: Highlighting shared experiences of discrimination improves relations between stigmatized groups. *Journal of Personality and Social Psychology*, 113(4), 547–567.
- Craig, M. A., & Richeson, J. A. (2016). Stigma-based solidarity: Understanding the psychological foundations of conflict and coalition among members of different stigmatized groups. *Current Directions in Psychological Science*, 25(1), 21–27.
- DataUSA (2021). *Athens County, OH*. <https://datausa.io/profile/geo/athens-county-oh/>
- Duckitt, J. (2006). Differential effects of Right-Wing Authoritarianism and Social Dominance Orientation on outgroup attitudes and their mediation by threat from and competitiveness to outgroups. *Personality and Social Psychology Bulletin*, 32(5), 684– 696.
- Duckitt, J., & Sibley, C. G. (2007). Right wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality*, 21(2), 113–130.
- Esses, V. M., Haddock, G., & Zanna, M. P. (1993). Values, stereotypes, and emotions as determinants of intergroup attitudes. In D. M. Mackie & D. L. Hamilton (Eds.), *Affect, cognition and stereotyping* (pp. 137-166). San Diego, CA: Academic Press.
- Esses, V. M., Dovidio, J. F., Jackson, L. M., & Armstrong, T. L. (2001). The immigration dilemma: The role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social Issues*, 57(3), 389-412.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160.

First-Gen (2021). *OHIO First Scholars*. <https://www.ohio.edu/uc/firstgen>

Fiske, S. T., Cuddy, A. J., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878.

Gest, J. (2016). *The new minority: White working-class politics in an age of immigration and inequality*. Oxford University Press.

Glasford, D. E., & Calcagno, J. (2012). The conflict of harmony: Intergroup contact, commonality and political solidarity between minority groups. *Journal of Experimental Social Psychology*, 48(1), 323-328.

Halperin, E., Pedahzur, A., & Canetti-Nisim, D. (2007). Psychoeconomic approaches to the study of hostile attitudes toward minority groups: A study among Israeli Jews. *Social Science Quarterly*, 88(1), 177–198.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: The Guilford Press.

Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods*, 41(3), 924-936.

- Jetten, J., Mols, F., & Steffens, N. K. (2020). Prosperous but fearful of falling: The wealth paradox, collective angst, and opposition to immigration. *Personality and Social Psychology Bulletin*.
- Kraus, M. W., Côté, S., & Keltner, D. (2010). Social class, contextualism, and empathic accuracy. *Psychological Science*, 21(11), 1716-1723.
- Krosch, A. R., & Amodio, D. M. (2014). Economic scarcity alters the perception of race. *Proceedings of the National Academy of Sciences*, 111(25), 9079–9084.
- Maddux, W. W., Galinsky, A. D., Cuddy, A. J. C., & Polifroni, M. (2008). When being a model minority Is good . . . and bad: Realistic threat explains negativity Toward Asian Americans. *Personality and Social Psychology Bulletin*, 34(1), 74–89.
- Manstead, A. S. (2018). The psychology of social class: How socioeconomic status impacts thought, feelings, and behaviour. *British Journal of Social Psychology*, 57(2), 267–291.
- Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, 70, 153-163.
- Pettit, N. C., Yong, K., & Spataro, S. E. (2010). Holding your place: Reactions to the prospect of status gains and losses. *Journal of Experimental Social Psychology*, 46(2), 396–401.
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: the influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99(5), 771-784.

- Piketty, T., Saez, E., & Zucman, G. (2017). Distributional national accounts: Methods and estimates for the United States. *The Quarterly Journal of Economics*, 133(2), 553–609.
- Richeson, J. A., & Nussbaum, R. J. (2004). The impact of multiculturalism versus colorblindness on racial bias. *Journal of Experimental Social Psychology*, 40(3), 417–423.
- Rios, K. (2013). Right-wing authoritarianism predicts prejudice against “homosexuals” but not “gay men and lesbians”. *Journal of Experimental Social Psychology*, 49(6), 1177–1183.
- Rios, K., Sosa, N., & Osborn, H. (2018). An experimental approach to Intergroup Threat Theory: Manipulations, moderators, and consequences of realistic vs. symbolic threat. *European Review of Social Psychology*, 29(1), 212–255.
- Shnabel, N., Halabi, S., & Noor, M. (2013). Overcoming competitive victimhood and facilitating forgiveness through re-categorization into a common victim or perpetrator identity. *Journal of Experimental Social Psychology*, 49(5), 867–877.
- Sibley, C. G., & Duckitt, J. (2010). The ideological legitimization of the status quo: Longitudinal tests of a social dominance model. *Political Psychology*, 31(1), 109–137.
- Smith, H. J., & Pettigrew, T. F. (2015). Advances in relative deprivation theory and research. *Social Justice Research*, 28(1), 1–6.
- Stephan, W. G., Ybarra, O., & Rios, M. K. (2015). Intergroup Threat Theory. *Handbook of Prejudice*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: How American universities’ focus on independence undermines

- the academic performance of first-generation college students. *Journal of Personality and Social Psychology*, 102(6), 1178.
- Tavernise, S. (2018). Why the announcement of a looming White minority makes demographers nervous. <https://www.nytimes.com/2018/11/22/us/white-americans-minority-population.html>
- Vollhardt, J. R. (2015). Inclusive victim consciousness in advocacy, social movements, and intergroup relations: Promises and pitfalls. *Social Issues and Policy Review*, 9(1), 89-120.
- Vollhardt, J. R., & Staub, E. (2011). Inclusive altruism born of suffering: The relationship between adversity and prosocial attitudes and behavior toward disadvantaged outgroups. *American Journal of Orthopsychiatry*, 81(3), 307.
- Zárate, M. A., Garcia, B., Garza, A. A., & Hitlan, R. T. (2004). Cultural threat and perceived realistic group conflict as dual predictors of prejudice. *Journal of Experimental Social Psychology*, 40(1), 99–105.
- Zou, L. X., & Cheryan, S. (2017). Two axes of subordination: A new model of racial position. *Journal of Personality and Social Psychology*, 112(5), 696–717.

Table 1*Correlations among measures, Study 1*

	Subjective SES	Outgroup Disadvantage	Warmth Minorities	Warmth Whites	Income	First- Generation
Subjective SES	-	-.14+	-.12	.02	.41***	.35***
Outgroup Disadvantage	-.14+	-	.25**	-.22**	-.22**	-.12
Warmth Minorities	-.12	.25**	-	.35***	-.09	-.08
Warmth Whites	.02	-.22**	.35***	-	.09	-.04
Income	.41***	-.22**	-.09	.09	-	.35***
First- Generation	.35***	-.12	-.08	-.04	.35***	-

+ $p < .10$ ** $p < .01$ *** $p < .001$

Table 2*Correlations among measures, Study 2*

	Subjective SES	Outgroup Status	Outgroup Empathy	Prejudice (z-score)	Income
Subjective SES	-	-.13+	.13+	-.03	-.33***
Outgroup Status	-.13+	-	.01	-.08	.14+
Outgroup Empathy	.13+	.01	-	-.67***	.14+
Prejudice (z- score)	.03	.08	.67***	-	-.13+
Income	.33***	-.14+	-.14+	.13+	-
+ $p < .10$	*** $p < .001$				

Table 3*Correlations among measures, Study 3*

	Subj SES	OG Status	OG Similar	OG Empathy	Prejudice (z-score)	Donation	Income	HighEd
Subj SES	-	.22**	-.17**	.04	.06	.05	.52***	.35***
OG Status	.22**	-	.03	.01	.07	-.14*	.12+	.11+
OG Similar	-.17**	.03	-	-.05	.20**	.16*	-.09	-.05
OG Empathy	.04	.01	-.05	-	.54***	.26***	-.02	.03
PosMin (z-score)	.06	.07	.20**	.54***	-	.29***	-.08	-.09
Donation	.05	-.14*	.16*	.26***	.29***	-	-.02	-.06
Income	.52***	.12+	-.09	-.02	-.08	-.02	-	.39***
HighEd	.35***	.11+	-.05	.03	-.09	-.06	.39***	-

+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Subj SES = Subjective SES; OG Status = Outgroup Status; OG Similar = Outgroup Similarity to Other Americans; OG Empathy = Outgroup Empathy; HighEd = highest education completed

Figure 1

Warmth toward minorities as a function of participant SES and disadvantaged outgroup stereotypes (plotted at 1 SD above and below the mean), Study 1

Figure 2

Mediated moderation analysis, Study 2 (standardized betas)

Figure 3

Mediated moderation analysis, Study 3 (standardized betas)

+ $p < .10$, * $p < .05$, *** $p < .001$

Figure 4

Mediated moderation analysis, Study 3 (standardized betas)

+ $p < .10$, * $p < .05$, *** $p < .001$