

Abstract

Universities and professional workplaces are gateway institutions in which people from working-class backgrounds can achieve upward mobility. These settings are often where cross-class interactions occur (i.e., interactions between people from different social class backgrounds). Although cross-class interactions are often beneficial for people from working-class backgrounds, such interactions are uncommon and often avoided. Experiences of increased threat may be one potential reason people avoid cross-class interactions. Therefore, we examined whether initial cross-class, compared to same-class, interactions with a stranger are more threatening and whether this is true for people from working-class and middle-class backgrounds. We measured threat using cardiovascular (Study 1) and self-report (Studies 2-4) responses during in-person and online interaction experiments. Across studies ($N_{total} = 1194$), we find that participants from middle-class backgrounds, but not participants from working-class backgrounds, experienced greater threat in cross-class compared to same-class interactions.

Keywords: Social class, intergroup interactions, threat, cardiovascular reactivity

**Crossing the Class Divide: Social Class Background Moderates Threat in Cross-Class
versus Same-Class Interactions**

Universities and professional workplaces are key gateway institutions in which people from working-class backgrounds can achieve upward mobility. These settings are some of the few locations where cross-class interactions are likely to occur (i.e., interactions between people from different social class backgrounds). Importantly, research suggests that cross-class friendships and meaningful interactions are often beneficial for people from working-class backgrounds (e.g., increased belonging and performance; Carey et al., 2021; Lessard & Jaana, 2019). Despite these potential benefits, cross-class interactions occur less frequently than chance given the diversity available in the environment (Carey et al., 2021). Indeed, people may actively avoid interacting with cross-class others in the workplace (e.g., Gray & Kish-Gephart, 2013).

In the present research, we examine one potential reason people may avoid cross-class interactions: people expect them to be, or experience them as, threatening. We examine initial, cross-class interactions with strangers, which are a necessary first step in having subsequent meaningful cross-class interactions and fostering cross-class friendships. If initial interactions are expected to be or are experienced as threatening, this may decrease people's willingness to interact with cross-class strangers (e.g., Stephan & Stephan, 1985). We use the term *threat* to refer to the perception that situational demands exceed one's personal resources to cope (Blascovich & Mendes, 2000). We examine whether people anticipate and experience greater threat in initial, cross-class, compared to same-class, interactions with strangers. Overall, we theorize that individuals' own social class backgrounds (i.e., as middle-class vs. working-class) will moderate whether they experience greater threat from initial cross-class versus same-class interactions.

Below, we first review research on interactions between members of higher and lower status social groups (i.e., *cross-group* interactions). This work focuses on groups other than social class (e.g., racial groups) and suggests that initial cross-class interactions may be more threatening than same-class interactions. Next, we review social class research to propose how people's social class backgrounds will moderate whether initial cross-class interactions are more threatening than same-class interactions. We predict that cross-class interactions will be more threatening than same-class interactions for people from middle-class backgrounds, but not for people from working-class backgrounds. Finally, we report four studies and internal meta-analyses testing our predictions.

Cross-Group Interactions are Threatening

Research suggests that cross-group interactions are experienced as more threatening than same-group interactions, and that this is generally true for members of both lower and higher status groups (e.g., Page-Gould et al., 2008; Plant, 2004). There are two main features of cross-group (vs. same-group) interactions that may lead to greater threat. First, in cross-group versus same-group interactions, people are more likely to lack a social script that can help guide their behavior (e.g., Trawalter & Brown-Iannuzzi, 2014). Second, people may have greater concerns about being evaluated according to group-based stereotypes during cross-group versus same-group interactions. Specifically, members of groups afforded relatively higher status in society (e.g., White Americans) may be concerned about being seen as prejudiced (e.g., Plant, 2004). Members of groups afforded relatively lower status in society (e.g., Black and Latinx Americans) may be concerned about being seen as unintelligent (e.g., Plant, 2004). Given the lack of a clear script and heightened evaluative concerns, individuals in cross-group (vs. same-group) interactions are often more uncertain about how they should behave as well as how their partners

will behave and perceive them (e.g., Vorauer, 2006). Such uncertainty is an additional situational demand, which is associated with greater experiences of threat (Blascovich et al., 2001).

As noted earlier, much of the research on cross-group interactions focuses not on social class, but on racial groups¹ (Davies et al., 2011). Social class has both similarities to and differences from race. Like racial group membership, social class background is a meaningful social identity that conveys status differences (e.g., Thomas & Azmitia, 2014). Therefore, cross-class interactions, like cross-race interactions, may be threatening for both members of lower and higher status social class groups. However, social class also has features that are distinct from race, which may affect experiences of threat in cross-class versus same-class interactions.

Social Class Background Moderates Threat in Cross-Class Interactions

Drawing on research examining social class, we theorize that individuals' social class backgrounds will influence the degree to which they are threatened when anticipating and engaging in initial cross-class interactions with strangers. Specifically, we propose that initial cross-class interactions with strangers will be more threatening than initial same-class interactions with strangers, but this will *only* be true for people from relatively higher social class backgrounds (i.e., those from middle-class backgrounds, which we define as people who have at least one parent with a 4-year college degree). We theorize this greater experience of threat among people from middle-class backgrounds for the same reasons cross-group interactions are threatening overall (i.e., heightened uncertainty due to lack of a clear social script and/or greater evaluative concerns). In contrast, despite reasons why cross-group interactions may be threatening, we propose that cross-class interactions will *not* be more threatening than same-class interactions for people from relatively lower social class backgrounds (i.e., those from working-

¹ We refer to cross-race and cross-ethnic interactions as “cross-race interactions.”

class backgrounds, which we define as people who have parents without 4-year college degrees). We theorize similar experiences of cross-class and same-class interactions among people from working-class backgrounds due to the context-specific beliefs and behaviors common in working-class contexts (e.g., beliefs about social class malleability and responses to uncertainty; Kraus & Keltner, 2013; Townsend et al., 2014). Below we explain our theorizing, first for people from middle-class backgrounds, then for people from working-class backgrounds.

People from middle-class backgrounds may experience greater threat in cross-class versus same-class interactions. We theorize that such threat is likely due to heightened uncertainty resulting from lacking a clear social script and/or having greater evaluative concerns, similar to experiences in other cross-group interactions. For example, people from middle-class backgrounds often lack familiarity with cross-class others due to income segregation in schools and neighborhoods (e.g., Reardon & Bishcoff, 2011), which may lead them to lack a clear script for interacting with someone from a working-class background. Further, there are stereotypes associated with social class that may create concerns about being judged unfairly in cross-class interactions (Durante et al., 2017). Specifically, people from middle-class backgrounds may have concerns around being seen as privileged or that their higher status is undeserved (Phillips & Lowery, 2020). As with other cross-group interactions, people from middle-class backgrounds may be relatively uncertain about how cross-class interactions will unfold, which may lead them to experience greater threat in these interactions compared with same-class interactions.

Although people from working-class backgrounds may also lack familiarity with people from middle-class backgrounds and simultaneously be aware of stereotypes about their social class group (e.g., being seen as incompetent; Croizet & Claire, 1998), we theorize that they may find cross-class interactions to be no more threatening than same-class interactions. We base our

theorizing on two beliefs and behaviors common in working-class contexts. First, compared to people from middle-class backgrounds, people from working-class backgrounds more strongly believe that social class is malleable (Kraus & Keltner, 2013). As a result, people from working-class backgrounds may perceive that the boundaries between social class groups are relatively weak and that people from middle-class backgrounds are similar to ingroup members. In turn, people from working-class backgrounds may experience cross-class interactions as relatively certain due to a belief that they have clear social scripts and a lack of concern about being judged unfairly based on stereotypes. Second, people from working-class backgrounds tend to cope more adaptively in uncertain situations than people from middle-class backgrounds (e.g., Townsend, et al., 2014; Young, et al., 2018). As a result, any uncertainty people from working-class backgrounds experience in cross-class interactions may not be threatening. Consistent with this suggestion, unlike their middle-class counterparts, Latinas from working-class backgrounds did not experience greater threat when interacting with a racially prejudiced versus nonprejudiced partner (Townsend et al., 2014).

Research on the likelihood of cross-class affiliation and experiences with meaningful cross-class interactions is consistent with our theorizing that cross-class interactions will be uniquely threatening for people from middle-class backgrounds (Carey et al., 2021; Côté et al., 2017). Although research on cross-class (vs. same-class) affiliation does not examine threat directly, if people experience cross-class interactions as more threatening than same-class interactions, then they should engage in lower rates of affiliation with cross-class versus same-class partners. Indeed, Côté and colleagues (2017) found that people from middle-class backgrounds engage in cross-class affiliation less often than people from working-class backgrounds. Similarly, recent work found that the frequency with which undergraduates

engaged in meaningful cross-class interactions relative to chance was far lower among students from middle-class backgrounds than students from working-class backgrounds (Carey et al., 2021).²

Current Research

In four studies, we examine experiences of threat when anticipating or engaging in initial cross-class versus same-class interactions with strangers. In Studies 1 and 2, we examine threat when participants are anticipating an in-person cross-class or same-class interaction. Using a similar procedure, in Study 3, we examine threat when participants are anticipating a virtual interaction. Finally, in Study 4, we examine threat after participants engaged in a virtual interaction. In Studies 1-3, we manipulated participants' perceptions of the social class backgrounds of (confederate) partners. In Study 4, we measured participants' perceptions of the social class background of (participant) partners. We measure threat using cardiovascular (Study 1) and self-report responses (Studies 2-4). To index participants' social class backgrounds, we use parental educational attainment: participants from working-class backgrounds are those who have parents without 4-year college degrees and participants from middle-class backgrounds are those who have at least one parent with a 4-year college degree. Compared to other indicators of social class background (e.g., childhood household income, parents' occupational status), parental educational attainment is especially predictive of people's experiences and outcomes in interactions and collaborative settings (e.g., Carey et al., 2021; Dittmann et al., 2020). Further, while income affords differential access to financial resources, education affords resources that

² Although two studies examined threat when interacting with a "disadvantaged" versus "advantaged" partner, the authors did not report participants' social class backgrounds, so it is unclear which interactions were cross-class versus same-class (Blascovich et al., 2001, Study 3; Mendes et al., 2002).

are more closely associated with the context-specific beliefs and behaviors that we theorize are likely to matter for experiences in cross-class interactions (Stephens et al., 2012).

Overall, we theorize that individuals' own social class backgrounds (i.e., as middle-class vs. working-class) will moderate whether they experience greater threat anticipating or engaging in initial cross-class versus same-class interactions and propose the following:

Hypothesis 1 (H1): Participants from middle-class backgrounds will experience greater threat when their partner is from a working-class background (i.e., a cross-class interaction) compared to a middle-class background (i.e., a same-class interaction).

Hypothesis 2 (H2): Participants from working-class backgrounds will experience similar levels of threat when their partner is from a middle-class background (i.e., a cross-class interaction) compared to a working-class background (i.e., a same-class interaction).

We find support for our hypotheses in Studies 1, 2, and 4, and internal meta-analyses (Study 3 did not support these hypotheses but was included in the meta-analyses). We also examine potential mediators for the effect of cross-class versus same-class interaction on experiences of threat in Studies 2 and 3, which we describe in those studies.

Study 1

In Study 1, we measured threat using cardiovascular responses while participants anticipated engaging in an in-person collaborative task with a cross-class or same-class stranger. We also examined whether anticipating a cross-class or same-class interaction affected performance on an individual task.

Method

Participants

Over three semesters, we recruited 228 first-year undergraduates. Using data from university records, we recruited students who have parents without 4-year college degrees (i.e., students from working-class backgrounds; $n = 117$) and a similar number of students who have at least one parent with a 4-year college degree (i.e., students from middle-class backgrounds; $n = 111$). We excluded four participants due video equipment malfunctions (all were in the working-class partner condition), $N_{final} = 224$. A sensitivity power analysis using G*Power (Faul et al., 2007), specifying an alpha of 0.05 for a two-tailed test, indicated that we had 80% power to detect an interaction effect size of $\eta_p^2 = .034$. We report all measures, manipulations, and exclusions for all studies. All data and syntax are available at https://osf.io/cexjz/?view_only=f08416b119ab46e684e958ef8846662e.

Procedure

Participants arrived at the laboratory for a study on physiological responses during introductions and tasks. Participants learned that they would: (a) meet another participant who would be their partner (i.e., a confederate), (b) complete a task individually, and (c) work with their partner on a collaborative task.

Cardiovascular Equipment Set-Up. The experimenter attached cardiovascular sensors to participants, then left the room and recorded participants' cardiovascular responses for 5 minutes.

Manipulation and Video Introductions. Participants then completed an introduction questionnaire containing questions about parental educational attainment and family income along with several filler items. We used this questionnaire, along with an introduction via video,

to manipulate participants' perceptions of their partners' social class backgrounds. Participants were randomly assigned to a middle-class or working-class partner who was not actually present. Participants ostensibly exchanged questionnaires with this partner and learned their social class background. To create strong manipulations that would clearly convey partners' social class backgrounds, we manipulated both parental educational attainment and family income. Specifically, participants in the working-class partner condition ($n = 115$) read that neither of their partner's parents had a 4-year college degree and their family's income was less than \$100,000 (the lowest option provided). Participants in the middle-class partner condition ($n = 109$) read that their partner's parents both had 4-year college degrees and their family's income was greater than \$300,000 (the highest option provided).

Participants then watched their partners introduce themselves for 1 minute via video. Specifically, their partners reiterated information from the introduction questionnaire. Although the experimenter led participants to believe the videos were live, they were prerecorded and depicted one of four confederates (2 male, 2 female). Each confederate recorded an introduction video for each condition. To bolster the partner's social class background manipulation, confederates mentioned their parents' educational attainment in their introduction and said, "...neither of my parents went to college" (working-class partner condition) or "...both of my parents went to college" (middle-class partner condition). Participants then introduced themselves by speaking into a video camera for 1 minute. Experimenters instructed participants to elaborate on the introduction questionnaire to give their partner "a better idea of who you are."

Individual Task. Subsequently, experimenters told participants that they would complete a task (i.e., 12 Graduate Record Examination (GRE) questions) individually for 5 minutes before the collaborative task. To increase engagement, participants learned that performance on the

individual task would impact their overall team score, which determined whether the team would win two \$50 gift cards. This task also provided an initial motivated performance situation, which is important when using cardiovascular responses as a measure of threat (see below). We examined performance on this task given that experiences of threat may be associated with poorer performance (Seery et al., 2010).

Collaborative Task Anticipation and Post-Task Questionnaires. Experimenters then asked participants to wait 5 minutes before the interaction could begin to allow for individual task scoring. While participants were anticipating the interaction, experimenters recorded participants' cardiovascular responses. After completing a questionnaire which included manipulation check items, the experimenter asked participants about the study's purpose, and debriefed them.

Measures

Participant Social Class Background. We used participants' generation status according to university records as our index of social class background. We categorized first-generation college students (those who have parents without a 4-year college degree) as participants from working-class backgrounds and continuing-generation college students (those who have at least one parent with a 4-year college degree) as participants from middle-class backgrounds.

In the Supplemental Materials, we report additional exploratory analyses using a composite index of social class background that mirrored our manipulation of partners' social class backgrounds (i.e., including participants' reports of the educational attainment of each parent and their family's income while in high school). We describe these measures, the creation

of the composite, and the results of exploratory analyses for Studies 1-3 in the Supplemental Materials. Results are similar to those using generation status alone.

Height and Weight Questionnaire. Participants indicated their height and weight, which we used to calculate body mass index (BMI, a covariate in our analyses).

Threat. To measure threat, we followed the biopsychosocial model, which holds that the experience of threat (vs. challenge) reliably leads to specific patterns of cardiovascular responses (Blascovich & Mendes, 2000). We followed guidelines established by the Society for Psychophysiological Research (Sherwood et al., 1990). We used impedance cardiography, electrocardiography, and blood pressure measures (see Supplemental Materials for details). We used psychophysiology analysis software by Mindware Technologies (Lafayette, OH) and Acqknowledge (Biopac; Goleta, CA) to prepare the cardiovascular responses for data analysis.

We measured participants' cardiac output (CO), i.e., the amount of blood pumped out of the heart, and total peripheral resistance (TPR), i.e., the overall vasoconstriction in the periphery of the body. Higher TPR and lower CO indicate greater threat relative to challenge (Blascovich & Mendes, 2000). We followed previous research to calculate our measure of threat (e.g., Townsend et al., 2010). First, we created reactivity scores for CO and TPR for each of the 5 minutes of the anticipation period. Then, we standardized these scores, subtracted CO from TPR for each minute, and then averaged across the 5 minutes to create the threat composite, $M = 0.01$, $SD = 1.55$. Higher values indicate greater threat. We report analyses on CO and TPR separately in the Supplemental Materials. We also tested whether participants were adequately engaged during the 5-minute interaction anticipation period by examining heart rate (HR) and left ventricle contractility (VC) reactivity. We created reactivity scores by subtracting participants' HR and VC during the last minute of baseline from their HR and VC during each of the 5

minutes of the anticipation period. We then created composites across these two sets of five reactivity scores and conducted one-sample t tests to compare the composites to zero to indicate engagement (Mendes et al., 2002). VC reactivity was significantly greater than zero, $t_{VC}(156) = 3.64, p < .001$, and although HR reactivity was not significantly different from zero, $t_{HR}(183) = 1.49, p = .138$, it was in the right direction (i.e., above zero).

Individual Task Performance. Participants completed an individual task made up of five verbal and seven math GRE questions. We measured performance as the number of correct responses (Range 0–10, $M = 3.15, SD = 1.69$).

Manipulation Check. To ensure that we successfully manipulated participants' perception of their partners' social class backgrounds, participants reported their partner's parents' highest education level (0 = *less than a 4-year college degree*, 1 = *4-year college degree or higher*).

We also included exploratory measures that are tangential to threat. See Supplemental Materials for description and analyses.

Results

Analysis Plan

We conducted a 2 (condition: working-class partner vs. middle-class partner) \times 2 (participant social class background: working-class vs. middle-class) analysis of covariance (ANCOVA) controlling for gender, race, BMI (for cardiovascular data only), and Scholastic Aptitude Test scores (SAT; for individual task performance only). We included a gender covariate to control for gender differences in approaches to interactions (Carli, 1989). We included a race covariate to control for whether the anticipated interaction would be cross-race or same-race. That is, the study confederates were White, so the interaction would be same-race for

White participants but cross-race for non-White participants. We controlled for BMI because it is associated with cardiovascular responses (Steptoe & Wardle, 2005). We included a SAT covariate to control for individual differences in aptitude test performance. Excluding the covariates does not change the significance and direction of the effects on threat. The sample sizes varies between dependent variables because some participants' cardiovascular data were unscorable due to noisy or lost signals. See Table 1 for statistical results and Table 2 for means and standard deviations.

Table 1*Results of ANCOVAs for Dependent Variables (Study 1)*

<i>Dependent Variables</i>					
Predictor	<i>df</i>	<i>F</i>	<i>p</i>	η^2	95% CI
<i>Threat</i>					
Gender		0.38	.537	.003	-0.73, 0.38
Race		1.00	.319	.008	-0.31, 0.95
BMI		0.04	.841	<.001	-0.08, 0.07
Condition		2.50	.116	.020	-0.62, 0.87
Participant Social Class Background		1.60	.208	.013	0.12, 1.66
Condition × Social Class Background	1, 124	4.20	.042	.033	-2.16, -0.04
<i>Individual task performance</i>					
Gender		4.17	.043	.019	0.01, 0.82
Race		2.36	.126	.011	-0.11, 0.85
Test Score		61.76	<.001	.225	0.00, 0.01
Condition		0.10	.750	<.001	-0.17, 0.89
Participant Social Class Background		0.09	.762	<.001	-0.06, 1.03
Condition × Social Class Background	1, 213	4.72	.031	.022	-1.60, -0.08

Note. BMI = body mass index.

Manipulation Check

The manipulation was successful: 98% of participants in the working-class partner condition and 97% of participants in the middle-class partner condition correctly indicated their partner's parental educational attainment (no significant differences by condition, $\chi^2(1, N = 228) = 0.33, p = .567$). Given that excluding these participants does not change the significance or direction of results, we include them in our analyses to maintain power.

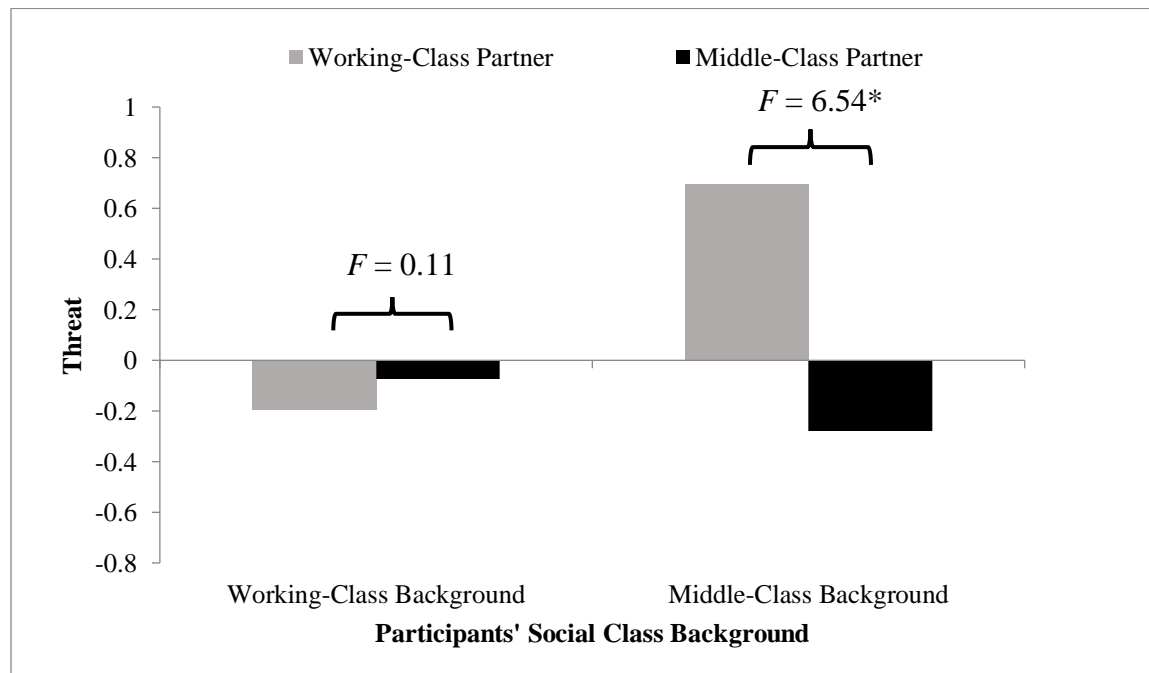
Threat

Due to unscorable cardiovascular data, the sample for threat is $N = 127$. We conducted additional sensitivity analyses with this sample size, which indicated that we had 80% power to detect an interaction effect size of $\eta^2 = .059$. Neither main effect of condition nor social class

background was significant. The interaction was significant (see Figure 1). Participants from middle-class backgrounds exhibited greater threat in the working-class partner condition (i.e., a cross-class interaction) than the middle-class partner condition (i.e., a same-class interaction; H1), $F(124) = 6.54$, 95% CI [0.22, 1.73], $\eta_p^2 = .050$, $p = .012$. This was not true among participants from working-class backgrounds. Participants from working-class backgrounds exhibited similar threat across conditions (H2), $F(124) = 0.11$, 95% CI [-0.87, 0.62], $\eta_p^2 = .001$, $p = .742$. When assigned a working-class partner, participants from middle-class backgrounds exhibited greater threat than participants from working-class backgrounds, $F(124) = 5.30$, 95% CI [-1.66, -0.13], $\eta_p^2 = .041$, $p = .023$. When assigned a middle-class partner, participants from middle-class backgrounds and working-class backgrounds exhibited similar levels of threat, $F(124) = 0.31$, 95% CI [-0.53, 0.95], $\eta_p^2 = .002$, $p = .582$.

Figure 1

Condition by Participant's Social Class Background on Threat Results (Study 1)



Note. * $p < .05$.

Individual Task Performance

Neither main effect of condition nor social class background was significant. Although the interaction was significant, none of the simple effects reached significance, $F_s < 3.02$, $p_s > .084$.

Table 2

Means and Standard Deviations for Threat and Individual Task Performance (Study 1)

	<i>Variable</i>			
	Threat		Individual Task Performance	
	Partner Condition		Partner Condition	
<i>Raw Means and Standard Deviations</i>	WK N; <i>M (SD)</i>	MD N; <i>M (SD)</i>	WK N; <i>M (SD)</i>	MD N; <i>M (SD)</i>
Participants from MD backgrounds	29; 0.73, (1.32)	36; -0.26 (1.64)	51; 3.78 (1.98)	62; 2.76 (1.47)
Participants from WK backgrounds	35; -0.24 (1.59)	31; -0.08 (1.43)	54; 3.20 (1.50)	53; 2.94 (1.65)

Note. MD = middle-class, WK = working-class.

Discussion

Consistent with our predictions, people from middle-class backgrounds experienced greater threat when anticipating an initial interaction with a cross-class versus same-class partner (H1), however, people from working-class backgrounds showed similar levels of threat anticipating these two types of interactions (H2). Additionally, when assigned a working-class partner, participants from middle-class backgrounds exhibited greater threat than those from working-class backgrounds. Although this effect is not central to our theorizing, it is consistent with our thinking and suggests that experiences of threat among people from middle-class backgrounds anticipating an interaction with a working-class partner are not due to the partner's

lower status alone, but the cross-class nature of the interaction. Therefore, we propose Hypothesis 1b (H1b) as an extension of H1: When participants have a partner from a working-class background, participants from middle-class backgrounds will experience greater threat than participants from working-class backgrounds. We examine H1b in exploratory analyses in Studies 2 and 3 and in a preregistered analysis in Study 4.

We also found a significant interaction on individual task performance. Although the simple effects were not significant, we visually inspected the means (see Table 2) and saw that participants from middle-class backgrounds performed directionally better when assigned a working-class (vs. middle-class) partner, and participants from working-class backgrounds showed no differences by condition. We preregistered these predictions for individual task performance in Study 2.

Study 2

Study 2 (preregistered; https://osf.io/9f2ws/?view_only=5b8ee52cf69446e7856fee062086a3f5) goes beyond Study 1 in three ways. First, we sought to replicate the results using a self-report measure of threat. Second, we examined individual task performance with the larger sample size and greater power. Third, we tested potential mechanisms for why participants from middle-class backgrounds experience greater threat when anticipating initial cross-class (vs. same-class) interactions. As mentioned, research suggests that threat in cross-group (vs. same-group) interactions may be due to evaluative concerns (e.g., Vorauer, 2006). Therefore, we examined two mediators related to evaluative concerns among members of higher status groups: status concerns and concerns about being perceived as overprivileged (i.e., “overprivileged concerns;” Phillips & Lowery, 2020). Additionally, lacking social scripts due to inexperience with outgroup others can affect threat in

cross-group interactions (Trawalter & Brown-Iannuzzi, 2014). Therefore, we examine experience in cross-class contexts as the third mediator. See Supplemental Materials for summary of preregistered hypotheses in Studies 2-4.

Method

Participants

We recruited 307 undergraduates over two semesters.³ Like Study 1, we recruited participants based on parental educational attainment (159 participants from working-class backgrounds and 148 participants from middle-class backgrounds). We excluded two participants who participated in Study 1 (one in the working-class partner condition and one in the middle-class partner condition) and two due to procedural errors (both in the middle-class partner condition; no significant differences by condition, $\chi^2(1, N = 307) = 2.03, p = .155$), $N_{final} = 303$. We conducted the same sensitivity power analyses as Study 1, which indicated that we had 80% power to detect an interaction effect size of $\eta_p^2 = .025$.

Procedure

The procedure was largely identical to Study 1 with three exceptions: participants were not connected to cardiovascular recording equipment because we measured threat through self-report, introductions were conducted via audio, not video, and participants were given 8 minutes instead of 5 minutes to complete the individual task.

Manipulation and Audio Introductions. Participants completed the introduction questionnaire and saw their partner's social class background (working-class partner condition, $n = 153$; middle-class partner condition, $n = 150$). Then, participants listened to their partner's

³ Despite our preregistered plan of recruiting first-year undergraduates, we also recruited second- and third-year undergraduates due to the small number of first-generation college undergraduates on campus. Controlling for year in school does not change the significance or direction of our results.

prerecorded 1-minute introduction, which used the same script as Study 1. Afterward, participants gave their own 1-minute introduction.

Individual Task. After learning that performance on the individual task would impact their overall team score, participants completed the task for 8 minutes.

Collaborative Task Anticipation. Subsequently, participants reported their demand and resource appraisals with respect to working with their partners on the upcoming collaborative task as well as their status concerns and overprivileged concerns.

End of Study Questionnaires. Subsequently, experimenters told participants that there was not enough time for the collaborative task and asked them to complete the remaining questionnaires on which participants indicated their experience in working-class and middle-class contexts in the demographic section.

Measures

Participant Social Class Background. Participants reported the educational attainment of their parents (and guardian if they were not raised by either parent) using six categories: (1) Less than high school, (2) High school diploma, (3) Some college, (4) Two-year degree (e.g., Associates), (5) 4-year college degree (B.A. or B.S.), (6) Professional degree (MD., Ph.D., J.D., M.B.A., etc.). We categorized participants' social class background as working-class if they indicated that neither parent nor guardian had a 4-year degree (i.e., 1-4) and as middle-class if they indicated that at least one parent or guardian had a 4-year degree (i.e., 5 or 6).

Manipulation Check. Participants completed the same manipulation check as Study 1.

Threat. To measure threat, participants reported their demand and resource appraisals of “the upcoming task of working together with [their] partner” on 10 items adapted from Mendes and colleagues (2007) using a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). Five items

assessed demand appraisals (e.g., “This task is threatening”), $\alpha = .766$, $M = 3.57$, $SD = 1.07$.

Five items assessed resource appraisals (e.g., “This task is a positive challenge”), $\alpha = .756$, $M = 4.47$, $SD = 0.97$. Following Mendes and colleagues (2007), we created a threat ratio by dividing demand by resource appraisals. Larger values indicate greater threat, $M = 0.85$, $SD = 0.35$. We report analyses on demand and resource appraisals separately in the Supplemental Materials for Studies 2-4.

Individual Task Performance. To examine performance, participants completed the same individual task consisting of the twelve GRE questions from Study 1 (Range 0–8, $M = 2.83$, $SD = 1.69$). To maintain power, we included 5 participants who had 5 minutes instead of 8 minutes to complete the individual task. Excluding these participants does not change the significance or direction of results.

Status Concerns. Drawing on research that shows people value status more when they are concerned about their status (Pettit et al., 2010) we asked participants to report how important it was to maintain their status (i.e., “How important is it to you that you maintain your current status at [University]?”) using a 1 (*not at all*) to 7 (*very much so*) scale, $M = 5.15$, $SD = 1.77$. Additionally, we reasoned that people might inflate their status if they perceived it to be more valuable, so we asked participants to indicate where they stand in their university’s status hierarchy on a 10-rung ladder (1 = bottom, 10 = top), $M = 6.13$, $SD = 1.66$. We standardized and averaged the scores on these two items together, $r = 0.46$, $M = 0.00$, $SD = 0.85$.⁴

Overprivileged Concerns. To measure concerns about appearing overprivileged, participants responded to one item: “I worry that my partner may think that I am overprivileged” on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale, $M = 2.47$, $SD = 1.75$.

⁴ We combined these two items to be consistent with our preregistration. We examined the items separately in exploratory analyses and find similar results.

Experience in Cross-Class Contexts. To measure experience in cross-class contexts, participants reported how often they spend their time around people who are considered: (a) “middle/upper-class (i.e., those who have 4-year college degrees and/or have relatively high incomes or higher status occupations)” and (b) “working-class (i.e., those who do not have 4-year college degrees and/or have relatively low incomes or lower status occupations).” For participants from working-class backgrounds, we used their response item (a), $M = 4.94$, $SD = 1.41$. For participants from middle-class backgrounds, we used their response to item (b), $M = 3.95$, $SD = 1.56$.

We also measured exploratory outcomes (e.g., warm-up task performance, threat regarding individual task; see Supplemental Materials).

Results

Analysis plan

We conducted a 2×2 ANCOVA controlling for gender, race, and self-reported SAT scores (for individual task performance only). We included SAT scores to control for individual ability. If participants only reported their ACT scores, we converted their score into an SAT score following the College Board Concordance Guide (2018). If participants reported both, we used the best score. Fifty-three participants did not report either score, lowering the degrees of freedom for these analyses. See Table 3 for statistical results and Table 4 for means and standard deviations.

Table 3*Results of ANCOVAs for Dependent Variables (Study 2)*

<i>Dependent Variables</i>					
Predictor	<i>df</i>	<i>F</i>	<i>p</i>	η^2	95% CI
<i>Threat</i>					
Gender		6.23	.013	.021	-0.18, -0.02
Race		2.19	.140	.007	-0.17, 0.02
Condition		2.42	.121	.008	-0.10, 0.11
Participant Social Class Background		1.62	.205	.005	0.01, 0.23
Condition × Social Class Background	1, 295	2.98	.086	.010	-0.29, 0.02
<i>Individual task performance</i>					
Gender		1.31	.254	.005	-0.17, 0.65
Race		0.09	.767	<.001	-0.57, 0.42
Test Score		38.94	<.001	.141	0.00, 0.01
Condition		0.65	.423	.003	-0.59, 0.55
Participant Social Class Background		0.31	.578	.001	-0.63, 0.50
Condition × Social Class Background	1, 238	0.83	.363	.003	-0.42, 1.15
<i>Status concerns</i>					
Gender		8.05	.005	.027	0.08, 0.48
Race		6.24	.013	.021	0.06, 0.52
Condition		1.57	.211	.005	-0.18, 0.34
Participant Social Class Background		7.46	.007	.025	-0.04, 0.49
Condition × Social Class Background	1, 295	0.15	.696	.001	-0.30, 0.45
<i>Overprivileged concerns</i>					
Gender		1.34	.248	.005	-0.60, 0.16
Race		5.15	.024	.018	0.07, 0.97
Condition		21.98	<.001	.071	-1.13, -0.01
Participant Social Class Background		35.18	<.001	.110	0.84, 1.87
Condition × Social Class Background	1, 295	1.81	.180	.006	-1.23, 0.23
<i>Experience in cross-class contexts</i>					
Gender		0.60	.439	.002	-0.21, 0.48
Race		8.34	.004	.027	0.19, 1.01
Condition		0.12	.731	<.001	-0.34, 0.58
Participant Social Class Background		36.94	<.001	.111	-1.33, -0.39
Condition × Social Class Background	1, 296	1.11	.293	.004	-1.02, 0.31

Manipulation Check

The manipulation was successful: 97% of participants in the working-class partner condition and 95% of participants in the middle-class partner condition correctly indicated their partner's parental educational attainment (no significant difference by condition, $\chi^2(1, N = 307) = .743, p = .389$). To maintain power, we included 13 participants who failed the manipulation check in our analyses (excluding them did not change the significance or direction of results).

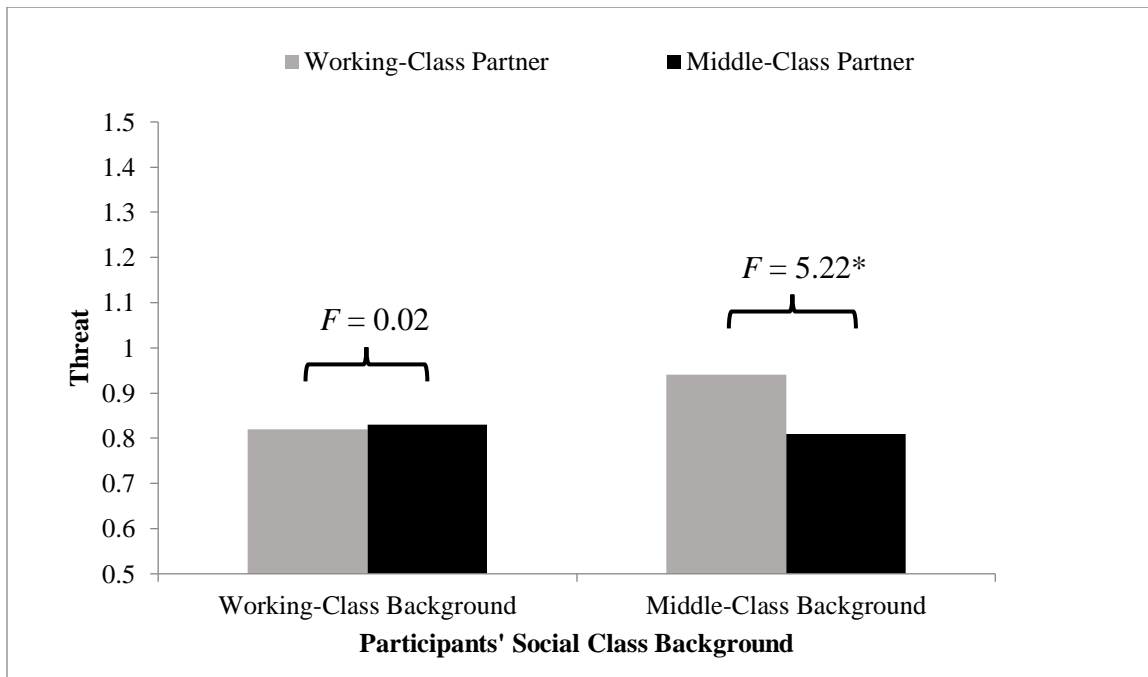
Threat

Neither the main effect of condition nor social class background was significant. The interaction was marginally significant (see Figure 2). Although the interaction did not reach significance, we examine the simple effects to test our preregistered primary predictions. Participants from middle-class backgrounds reported greater threat in the working-class partner condition than the middle-class partner condition (H1), $F(295) = 5.22, 95\% \text{ CI } [0.02, 0.24], \eta_p^2 = .017, p = .023$. Participants from working-class backgrounds reported similar levels of threat across conditions (H2), $F(295) = 0.02, 95\% \text{ CI } [-0.12, 0.10], \eta_p^2 < .001, p = .902$.

Additionally, when assigned a working-class partner, participants from middle-class backgrounds reported greater threat than participants from working-class backgrounds, $F(295) = 4.49, 95\% \text{ CI } [-0.23, -0.01], \eta_p^2 = .015, p = .035$. This is consistent with our exploratory H1b, which was not included in our preregistration. When assigned a middle-class partner, participants from middle-class and working-class backgrounds reported similar levels of threat, $F(295) = 0.20, 95\% \text{ CI } [-0.09, 0.13], \eta_p^2 < .001, p = .754$.

Figure 2

Condition by Participant's Social Class Background on Threat Results (Study 2)



Note. * $p < .05$

Individual Task Performance

No main or interactive effects were significant.

Status Concerns

Neither the main effect of condition nor the interaction was significant. However, the main effect of social class background was significant. Participants from middle-class backgrounds reported greater status concerns than participants from working-class backgrounds.

Overprivileged Concerns

The main effect of condition was significant. Participants reported greater overprivileged concerns in the working-class (vs. middle-class) partner condition. The main effect of social class background was also significant. Participants from middle-class backgrounds reported

greater overprivileged concerns than participants from working-class backgrounds. The interaction was not significant.

Experience in Cross-Class Contexts

Neither the main effect of condition nor interaction was significant. However, the main effect of social class background was significant. Participants from middle-class backgrounds reported less experience in cross-class contexts than participants from working-class backgrounds.

For each of these potential mediators (status concerns, overprivileged concerns, and experience in cross-class contexts), we ran moderated mediation analyses, in line with our preregistered analysis plan. However, because these analyses did not yield significant results, we report them in the Supplemental Materials.

Table 2

Raw Means and Standard Deviations for Threat and Individual Task Performance (Study 2)

	<i>Variable</i>									
	Threat		Individual Task Performance		Status Concerns		Overprivileged Concerns		Experience in Cross-Class Contexts	
	Partner Condition		Partner Condition		Partner Condition		Partner Condition		Partner Condition	
<i>Raw Means and Standard Deviations</i>	WK <i>N;</i> <i>M (SD)</i>	MD <i>N;</i> <i>M (SD)</i>	WK <i>N;</i> <i>M (SD)</i>	MD <i>N;</i> <i>M (SD)</i>	WK <i>N;</i> <i>M (SD)</i>	MD <i>N;</i> <i>M (SD)</i>	WK <i>N;</i> <i>M (SD)</i>	MD <i>N;</i> <i>M (SD)</i>	WK <i>N;</i> <i>M (SD)</i>	MD <i>N;</i> <i>M (SD)</i>
Participants' Backgrounds										
MD	72; 0.93 (0.44)	74; 0.81 (0.30)	63; 3.05 (1.65)	66; 3.35 (1.68)	73; 0.08 (0.92)	74; 0.20 (0.76)	72; 3.60 (1.95)	74; 2.49 (1.60)	73; 4.08 (1.59)	74; 3.81 (1.54)
WK	79; 0.82 (0.28)	76; 0.83 (0.34)	59; 2.88 (1.73)	57; 2.79 (1.66)	78; -0.18 (0.87)	76; -0.09 (0.82)	75; 2.19 (1.62)	71; 1.58 (1.07)	79; 4.87 (1.44)	76; 5.00 (1.38)

Note. MD = middle-class, WK = working-class.

Discussion

Consistent with Study 1, participants from middle-class backgrounds reported greater threat when anticipating initial cross-class (vs. same-class) interactions (H1), however, participants from working-class backgrounds reported similar threat in these two interactions (H2). Additionally, we again found that when assigned a working-class partner, participants from middle-class backgrounds exhibited greater threat than participants from working-class backgrounds. When assigned a middle-class partner, participants from working-class and middle-class backgrounds reported similar threat. Although Study 2 was still underpowered to detect the interaction effect, the high-impact study design, consistency with Study 1, and the preregistered nature of our threat predictions all lend confidence in our threat findings.

We did not find support for our preregistered hypothesis for individual task performance (i.e., participants from middle-class backgrounds performed similarly across conditions). It appears that anticipating an upcoming cross-class (vs. same-class) interaction, may not be a strong enough situation to reliably affect performance. It is possible that having participants' partners in the room during the individual task completion may elicit threat and affect performance (Croizet & Claire, 1998). Given our focus on experiences of threat due to cross-class interactions, we do not examine individual task performance in Studies 3 or 4.

The patterns of effects on our potential mediators were consistent with previous research (i.e., participants from middle-class versus working-class backgrounds reported greater status concerns, greater concerns about being perceived as overprivileged, and less experience in cross-class contexts; Phillips & Lowery, 2020; Carey et al., 2021). However, none of the mediators explained the greater threat that participants from middle-class backgrounds experienced when

anticipating a cross-class (vs. same-class) interaction. In Study 3, we again examine potential mediators for this effect.

Study 3: Online Interaction Study

In Study 3 (preregistered; https://osf.io/dets6/?view_only=1e60655660b7476e8e8eee8b842968e9), we sought to extend our findings to an online setting where participants anticipated an initial, virtual video interaction. We also explored whether participants' concerns about being perceived as overprivileged and perceptions of partner's typicality would mediate threat among participants from middle-class backgrounds. However, participants from middle-class backgrounds were *not* more threatened when anticipating a cross-class (vs. same-class) interaction. Given that there was no effect to mediate, we describe our potential mediators and report the preregistered mediational analyses in the Supplemental Materials.

Method

Participants

We recruited 345 undergraduates over one semester. Like Studies 1 and 2, we recruited participants based on parental educational attainment. We excluded the following participants: 28 who wanted to withdraw their data (13 in the working-class partner condition, 15 in the middle-class partner condition; no significant differences by condition, $\chi^2(1, N = 345) = 0.14, p = .844$), seven due to experimenter chat errors (five in working-class partner condition, three in middle-class partner condition; no significant differences by condition, $\chi^2(1, N = 345) = 1.33, p = .249$), and 32 who were suspicious that their partner was not an actual participant (11 in working-class partner condition, 21 in middle-class partner condition; no significant differences by condition, $\chi^2(1, N = 345) = 3.38, p = .094$), $N_{final} = 280$. We conducted the same sensitivity

power analyses as above, which indicated that we had 80% power to detect an interaction effect size of $\eta_p^2 = .027$.

Procedure

The procedure mirrored Studies 1 and 2 with the primary exception being that participants introduced themselves using ChatPlat (Brooks & Schweitzer, 2011), an online chat platform that allows participants to chat with another partner (or confederate). See Supplemental Materials for full details.

Measures

Participant Social Class Background. Participants reported their parents' educational attainment using the same categories as Study 2 and classify participants as being from working-class ($n = 126$) or middle-class ($n = 219$) backgrounds in the same way.

Manipulation Check. Participants completed the same manipulation check as Studies 1 and 2.

Threat. We used the same threat measure as Study 2 and created a threat ratio by dividing demand appraisals, $\alpha = .811$, $M = 3.42$, $SD = 1.17$, by resource appraisals, $\alpha = .824$, $M = 4.94$, $SD = 0.94$. Larger values indicate greater threat, $M = 0.74$, $SD = 0.34$.

We included exploratory measures and a filler task that were not directly related to our hypotheses regarding threat (e.g., identification with partner; see the Supplemental Materials).

Results

Analysis Plan

We conducted a 2×2 ANCOVA controlling for gender and race. Following our preregistration, we also controlled for participants' year in school because the confederate was a first-year undergraduate and participants were not all first-year undergraduates (i.e., 54 first-

years, 57 second-years, 71 third-years, and 165 fourth-years). See Table 5 for statistical results, means, and standard deviations.

Table 5

Univariate Analysis of Covariances Results for Threat (Study 3)

	<i>df</i>	<i>F</i>	<i>p</i>	η^2	95% CI
<i>Covariate</i>					
Gender		0.68	.409	.002	-0.05, 0.11
Race		0.13	.724	<.001	-0.11, 0.08
Year in School		0.46	.499	.002	-0.02, 0.05
<i>Main and Interactive Effect</i>					
Condition		8.28	.004	.029	0.09, 0.35
Participant Social Class Background		1.49	.223	.005	0.03, 0.27
Condition × Social Class Background	1, 273	5.16	.024	.019	-0.36, -0.03
<i>Raw Means and Standard Deviations</i>		<i>N; M (SD)</i>		<i>N; M (SD)</i>	
		WK Partner Condition		MD Partner Condition	
Participants from MD Backgrounds		93; 0.74 (0.33)		87; 0.77 (0.30)	
Participants from WK Backgrounds		49; 0.60 (0.24)		51; 0.81 (0.47)	

Note. MD = middle-class, WK = working-class.

Manipulation Check

The manipulation was successful: 100% of participants in both conditions correctly indicated their partner's parental educational attainment.

Threat

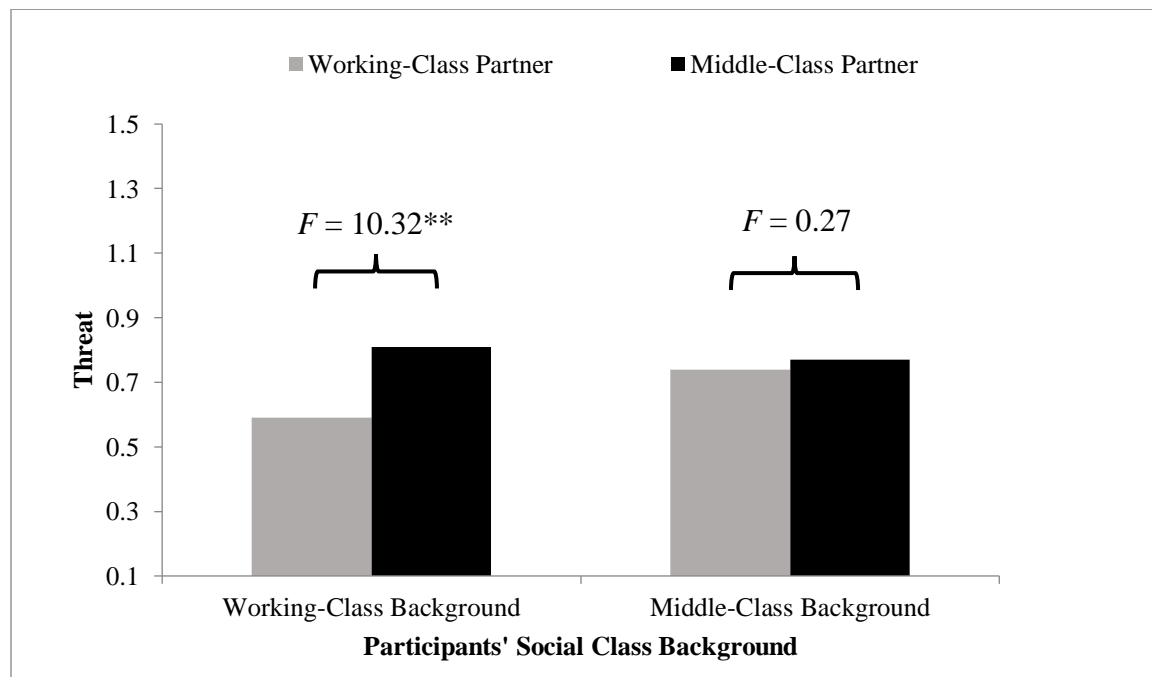
The main effect of condition was significant such that participants reported greater threat in the middle-class partner condition than the working-class partner condition. The main effect of social class background was not significant. Although the interaction was significant (see Figure 3), simple effects tests revealed that our hypotheses were not supported. Participants from middle-class backgrounds reported similar threat across conditions, $F(273) = 0.27$, 95% CI [-

0.07, 0.13], $\eta_p^2 < .001$, $p = .606$, and participants from working-class backgrounds reported greater threat in the middle-class partner condition than the working-class partner condition, $F(273) = 10.32$, 95% CI [0.09, 0.35], $\eta_p^2 = .036$, $p = .001$.

However, consistent with Studies 1 and 2 and our exploratory H1b, when assigned a working-class partner, participants from middle-class backgrounds reported greater threat than participants from working-class backgrounds, $F(273) = 6.07$, 95% CI [0.03, 0.27], $\eta_p^2 = .022$, $p = .014$. When assigned to a middle-class partner, participants from middle-class backgrounds and working-class backgrounds reported similar levels of threat, $F(273) = 0.53$, 95% CI [-0.16, 0.07], $\eta_p^2 = .002$, $p = .466$.

Figure 1

Condition by Participant's Social Class Background on Threat Results (Study 3)



Note. ** $p < .010$

Discussion

Inconsistent with Studies 1 and 2 and our hypotheses, participants from middle-class backgrounds reported similar threat when anticipating a cross-class (vs. same-class) interaction, while participants from working-class backgrounds were more threatened when anticipating an initial cross-class (vs. same-class) interaction. However, consistent with Studies 1 and 2 and exploratory H1b, we found that when assigned a working-class partner, participants from middle-class backgrounds experienced greater threat than those from working-class backgrounds.

Although there are several potential reasons for the divergent findings between this study and Studies 1 and 2, we find two most compelling. First, it is possible that in-person versus virtual interactions differently affect threat in cross-class interactions (e.g., Manstead et al. 2011; Studies 1 and 2 were in-person and Study 3 was virtual). Second, we conducted Study 3 during Fall 2020 when there were substantial concerns about rising COVID-19 cases and discourse about the disproportionate impact of COVID-19 on marginalized groups (e.g., working-class individuals). This may have shifted social class dynamics and affected participants' experiences in our study. In contrast, we conducted Study 4 during Summer 2021 when such concerns and discourse declined. Specifically, COVID-19 vaccinations became available in the U.S. and rates of new COVID-19 cases declined along with unemployment (Bureau of Labor Statistics, 2021; Gupta et al., 2021).

Study 4

In Study 4 (preregistered; https://osf.io/xhz78/?view_only=9680605d6e9643b89cba7bc454ee25aa), we examined experiences of threat when participants engaged in an online interaction. Across Studies 1-3, we

found that when assigned a working-class partner, participants from middle-class backgrounds experienced greater threat than participants from working-class backgrounds (H1b). We sought to replicate this finding and preregistered H1b as our primary hypothesis. We also preregistered two tentative hypotheses to disentangle *who* is more threatened in initial cross-class (vs. same-class) interactions: people from middle-class backgrounds and/or people from working-class backgrounds. First, we predicted that participants from middle-class backgrounds will be more threatened in cross-class (vs. same-class) interactions (H1; as found in Studies 1 and 2). Second, we predicted that participants from working-class backgrounds will be more threatened in cross-class (vs. same-class) interactions (as found in Study 3).

Additionally, although experiences of threat during anticipation can predict subsequent experiences in cross-group interactions (Sawyer et al., 2012), Study 4 also provided an opportunity to examine retrospective reports of threat *after* an interaction. Specifically, participants reported how threatening they experienced the interaction to be after they engaged in it. Finally, we also extended our sample beyond undergraduates and recruited adult participants using Prolific Academic.

Method

Participants

We recruited 392 participants on Prolific Academic. Five participants did not finish the survey, $N_{final} = 387$. We conducted the same sensitivity power analyses as above, which indicated that we had 80% power to detect an interaction effect size of $\eta_p^2 = .020$.

Procedure

Participants were told that they would complete a task with a partner and report their perceptions about the interaction and their partner. Participants engaged in a 4-minute activity

with their partner (i.e., another participant) over ChatPlat. After, participants read about the collaborative task and interacted with their partner over chat to complete the task. Then participants reported their perceptions about their partner and threat during the interaction.⁵

Measures

Participant Social Class Background. Participants reported their parents' highest level of education. We classify participants as being from a working-class background ($n = 94$) if their parents are without a 4-year college degree and middle-class background ($n = 298$) if their parents have a 4-year college degree.

Partner's Social Class Background. We used the participant's perception of the educational attainment of their partner's parents as a measure of their partner's social class background. We classify the partner as working-class ($n = 106$) if the participant indicated that their partner's parents are without a 4-year college degree and as middle-class ($n = 281$) if the participant indicated that the partner's parents have a 4-year college degree. We examined perceptions of the partner's social class background because during initial interactions people often make guesses about various aspects of strangers, including social class (Kraus et al., 2017). Given that social class is relatively concealable, *perceptions* of one's partner's social class background may play a substantive role in whether an interaction is experienced as cross-class or same-class, irrespective of accuracy. Indeed, research demonstrates that undergraduates' perceptions that their interactions are cross-class (vs. same-class) can impact their sense of belonging (Carey et al., 2021).

⁵ In the larger survey, participants responded to additional measures including impressions of partner and emotions. Following our preregistration, we limited our analyses to the following measures: threat, demographics, and participants' perceptions regarding their partners' parents' educational attainment.

In our preregistration, we stated that our measure of partner's social class background would be based on the partner's reported parental educational attainment and that our alternate measure would be based on the participants' perception of the educational attainment of the partner's parents. We made the decision to use participant's perception of the educational attainment of their partner's parents post hoc because it most closely mirrored our manipulation of partner social class background in Studies 1-3 (i.e., we manipulated participants' perceptions of their partner's background not the confederate's actual social class background). We did not find a significant interaction using the partner's reported parental educational attainment as the measure of social class background in the analyses. See Supplemental Materials for analyses.

Threat. We used an abbreviated version of the measure from Studies 2 and 3 to examine threat retrospectively after participants interacted with their partner. Participants completed 6 items: 3 demand appraisal items, $\alpha = .897$, $M = 2.47$, $SD = 1.40$, and 3 resource appraisal items, $\alpha = .856$, $M = 5.69$, $SD = 1.11$. We again created a threat ratio by dividing demand appraisals by resource appraisals, $M = 0.51$, $SD = 0.60$.

Results

Analysis Plan

We conducted a 2 (participant social class background: working-class vs. middle-class) \times 2 (partner's social class background (perceived): working-class vs. middle-class) ANCOVA controlling for gender, race, and age. We did not conduct multi-level model analyses because the intraclass correlation (ICC; a measure of how dependent observations within a group are) is $\rho < 0.10$, indicating low dependence of observations within dyads (Danyluck & Page-Gould, 2018). See Table 6 for statistical results, means, and standard deviations.

Table 6*Univariate Analysis of Covariances Results for Threat (Study 4)*

	<i>df</i>	<i>F</i>	<i>p</i>	η_p^2	95% CI
<i>Covariate</i>					
Gender		1.90	.169	.005	-0.04, 0.20
Race		1.38	.241	.004	-0.06, 0.24
Year in School		1.61	.205	.004	-0.01, 0.00
<i>Main and Interactive Effect</i>					
Partner's Social Class Background		3.40	.066	.009	-0.20, 0.34
Participant Social Class Background		0.42	.518	.001	0.05, 0.53
Partner \times Participant Social Class Background	1, 380	7.04	.008	.018	-0.81, -0.12
<i>Raw Means and Standard Deviations</i>		<i>N; M (SD)</i>		<i>N; M (SD)</i>	
		WK Partner		MD Partner	
Participants from MD Backgrounds		36; 0.84 (1.17)		257; 0.45 (0.36)	
Participants from WK Backgrounds		70; 0.54 (0.82)		24; 0.59 (0.51)	

Note. MD = middle-class, WK = working-class.

Threat

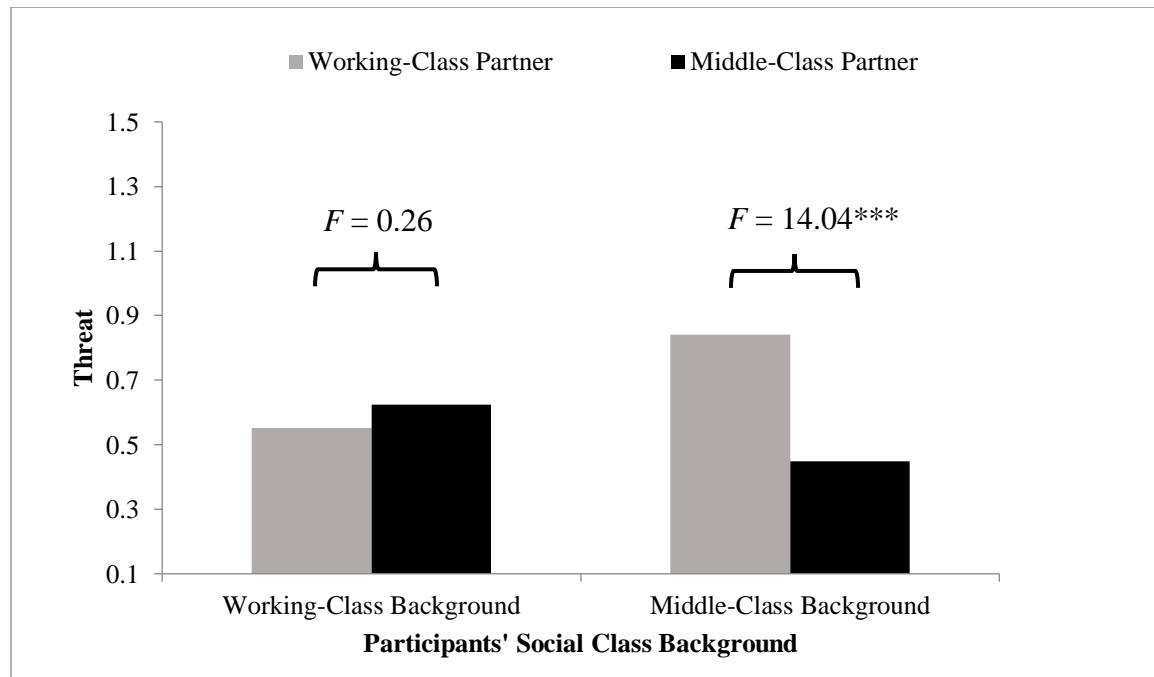
Neither the main effect of partner's social class background nor of participants' social class background was significant. The interaction was significant (see Figure 4). Participants from middle-class backgrounds reported greater threat in interactions with a working-class partner than a middle-class partner (H1), $F(380) = 14.04$, 95% CI [-0.60, -0.19], $\eta_p^2 = .036$, $p < .001$. In contrast, participants from working-class backgrounds reported similar levels of threat in interactions with a middle-class or working-class partner (H2), $F(380) = 0.26$, 95% CI [-0.20, 0.35], $\eta_p^2 = .001$, $p = .610$.

When participants had a working-class partner, participants from middle-class backgrounds reported greater threat than participants from working-class backgrounds (H1b), $F(380) = 5.72$, 95% CI [0.05, 0.53], $\eta_p^2 = .015$, $p = .017$. When participants had a middle-class

partner, participants from middle-class and working-class backgrounds reported similar levels of threat, $F(380) = 1.91$, 95% CI [-0.43, 0.07], $\eta_p^2 = .005$, $p = .168$.

Figure 4

Condition by Participant's Social Class Background on Threat Results (Study 4)



Note. *** $p < .001$

Discussion

Consistent with Studies 1 and 2, participants from middle-class backgrounds experienced greater threat when engaging in an initial cross-class (vs. same-class) interaction (H1), however, participants from working-class backgrounds experienced similar threat levels in these two interactions (H2). Consistent with Studies 1-3 and our preregistered primary hypothesis, we found that in interactions with a working-class partner, participants from middle-class backgrounds experienced greater threat than participants from working-class backgrounds (H1b).

These findings suggest that experiences of threat when people *anticipate* initial cross-class (vs. same-class) interactions and when they *engage* in these interactions are similar. Importantly, findings from our in-lab interaction studies extend to online interactions and are robust among undergraduate student and non-student participants. Given our use of participants' perceptions of their partner's social class background, Study 4 results also indicate that merely perceiving cross-class interactions can elicit threat for people from middle-class backgrounds.

Internal Meta-Analyses

To establish the significance of our effects, we conducted meta-analyses on our simple effect results reported in Studies 1-4 in which effect sizes were weighted by sample size (Goh et al., 2016). We converted the partial-eta squared values (i.e., our effect sizes) into Pearson's correlation which were then Fisher's z transformed for analyses. We conducted separate meta-analyses for each simple effect using the MEANES macro in SPSS (Wilson, 2001) and find support for our hypotheses. Specifically, across all studies, participants from middle-class backgrounds experienced greater threat when they had a working-class (vs. middle-class) partner (H1), Mean $ES = .139$, 95% CI [0.06, 0.22], $SE = .04$, $z = 3.36$, $p = .001$. Participants from working-class backgrounds had similar experiences of threat across working-class and middle-class partners (H2), Mean $ES = .058$, 95% CI [-0.04, 0.16], $SE = .05$, $z = 1.17$, $p = .241$. Additionally, when participants had a working-class partner, those from middle-class backgrounds experienced greater threat than those from working-class backgrounds (H1b), Mean $ES = .142$, 95% CI [0.05, 0.23], $SE = .05$, $z = 3.02$, $p = .003$. We also found that when participants had a middle-class partner, those from middle-class and working-class backgrounds had similar experiences of threat, Mean $ES = .046$, 95% CI [-0.03, 0.12], $SE = .04$, $z = 1.15$, $p = .252$.

General Discussion

In four time-intensive and high-impact studies, using cardiovascular and self-report responses, we find evidence that people's social class backgrounds matter for experiences of threat when anticipating or engaging in initial cross-class versus same-class interactions with strangers. In Studies 1, 2, and 4, we find that people from middle-class backgrounds experience greater threat when they have a cross-class versus same-class partner (H1). In contrast, people from working-class backgrounds experience similar threat when they have cross-class or same-class partner (H2). Although Study 3 does not support H1 nor H2, internal meta-analyses across all studies reveal overall support for these hypotheses. Across all studies and the meta-analyses, we also find that when people have a working-class partner, those from middle-class backgrounds experience greater threat than those from working-class backgrounds (H1b).

In the present research, we are the first to directly examine experiences of threat when anticipating or engaging in initial cross-class interactions with strangers and make several contributions. First, our findings suggest that initial cross-class interactions with strangers are uniquely threatening for people from middle-class backgrounds. This experience of threat indicates one reason people from middle-class backgrounds may avoid cross-class interactions. In turn, this avoidance may limit the frequency of these interactions and the important benefits they can produce (Carey et al., 2021). Strategies to reduce threat during the anticipation period could help to increase people's willingness to interact across class lines (e.g., Jamieson et al., 2012).

Second, we contribute to intergroup relations research by demonstrating that findings from one type of cross-group interaction may not generalize to another type (Apfelbaum et al., 2016). We find that not everyone is threatened by cross-group interactions and that people from

different social class backgrounds have divergent experiences. Finally, we contribute to the literature on the psychology of social class and reveal that being from working-class backgrounds may buffer people from threat when crossing the class divide. That is, these findings suggest that people from working-class backgrounds may be relatively resilient in potentially threatening interpersonal contexts (e.g., Townsend et al., 2014).

Limitations and Future Directions

This work also leaves important questions for future research. Specifically, why are people from working-class backgrounds *not* more threatened when anticipating cross-class versus same-class interactions? We theorize that people from working-class backgrounds may perceived people from middle-class backgrounds as similar to ingroup members due to social class malleability beliefs or they may cope adaptively when confronted with uncertain situations (e.g., cross-group interactions; Townsend et al., 2014). Future research should examine how these possibilities affect threat in cross-class interactions.

Additionally, our participants anticipated or engaged in an interaction with their partner while working on a collaborative task (i.e., a task that requires working with others towards a shared goal). Collaborative and competitive tasks require different behaviors and are experienced differently (Dittmann et al., 2020). Importantly, these tasks are not class-neutral. For instance, compared to people from middle-class backgrounds, people from working-class backgrounds may feel more comfortable when working on collaborative tasks (Dittmann et al., 2020). Future research should examine how the level of collaboration versus competition required by the interaction might affect threat.

Finally, our participants were on equal footing with their interaction partner; they were “partners” working on a collaborative task. We did not manipulate relative power because we

were interested in threat anticipating or engaging in cross-class compared to same-class interactions with potential peers. However, power differences may be part of many cross-class interactions (e.g., supervisor–employee interactions) and may affect threat. Future research should investigate how having or lacking power impacts threat in cross-class interactions.

Conclusion

Social class shapes much of social life, however, scholars have yet to thoroughly understand how cross-class interactions are experienced. Our work suggests that people from middle-class backgrounds are uniquely threatened when anticipating or engaging in initial cross-class versus same-class interactions with strangers. Critically, this threat may deter them from initiating interactions across social class lines. Given that people from middle-class backgrounds are often gatekeepers in sites of upward mobility, their avoidance of cross-class interactions may represent an obstacle for creating equality in gateway institutions.

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