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**Section S1**

**Description of Intervention Conditions in Broader Study**

**Intervention Materials**

In each of the three intervention conditions, participants first read a series of six stories that were ostensibly told by an older successful student at that university. Each story was accompanied by a picture of a student (3 women and 3 men), along with the student’s name and college major. The stories were balanced in terms of the students’ gender and ethnicity. At least two of the six students were White, and at least one student was Latinx, East Asian, and Black. We did our best to ensure that the 6 stories were of comparable length across conditions: the stories were an average of 239 words in the difference-education condition, 213 words in the social belongingness condition, and 234 words in the control condition.

For all conditions, stories were carefully tailored to each university based on a series of interviews conducted by the research team. To ensure that themes mentioned in the stories (e.g., large class sizes, moving away from home, cost of college) were relevant and made sense in the context of each school, we interviewed several first-generation and continuing-generation students at each of the schools. To ensure that the stories accurately and proportionately represented the diversity of the student body at each school, we adapted the racial composition of the pictures that accompanied the stories. For example, students from schools with relatively higher Latinx population read a higher number of stories from Latinx students. We also adapted the stories to reflect the specific names of clubs, organizations, or activities on each campus.

**Difference-education stories.** As noted above, the goal of the difference-education stories was to convey a contextual theory of social group difference. Adapted from online materials used by Townsend and colleagues (2019), the difference-education stories were designed to show how students’ backgrounds can shape their experiences in college in both positive and negative ways. Specifically, the stories began by mentioning students’ backgrounds (both first-generation and continuing-generation) and then linking their particular backgrounds to their experiences in college—both in terms of challenges and strengths. After describing a challenge or a strength, the story would then described how the student overcame the challenge or leveraged the strength. For example, one story from a first-generation student started by mentioning her background: “Ending up in college made me and my parents proud since my parents didn’t have that opportunity.” The student then linked her background to her challenge: “As an engineering major, I felt overwhelmed with the expectations and I felt like I didn’t know as much as other students because they had better opportunities than I did in high school.” Finally, the student described how she overcome that challenge: “I started going to my professors’ office hours, reaching out to other students, and just trying to get advice about how I could do better.”

The stories of first-generation and/or lower-income students were contrasted with those of continuing-generation and/or higher-income students, who had their own set of background-specific challenges and strategies for success. For example, a continuing-generation story mentioned the students’ background and linked it to his challenge: “My plan was to study biology and to some day go to med school. After I took a few biology classes, I realized I absolutely couldn’t stand the sight of blood and would probably make a pretty terrible doctor. At first I was afraid to tell my parents because I thought they really wanted me to become a doctor.” The student then described how he overcome the challenge: “I talked to my dad and he encouraged me to pursue my interests in college. […] He suggested that I try out different classes and talk to a professor to get advice. […] I took his advice and figured out that I wanted to do psychology. Even though it wasn’t what I planned to do, I feel good about psychology because I really enjoy the classes and think that it’s an area that will work well for my career goals.” In sum, the stories from first- and continuing-generation students varied systematically by students’ social class backgrounds in a way that helped students understand how their social class backgrounds could shape their own current experiences in college.

**Social belonging stories.** The goal of the social belonging intervention was to convey that challenges in college are shared in common with other students and will improve in time. These materials were adapted directly from the original “social belonging intervention” guide provided by Walton, Murphy, Logel, Yeager, and The College Transition Collaborative (2017). We kept the materials as close as possible to the original stories to ensure that our effects could be compared to previous social belonging interventions.

The social belonging stories did not mention students’ backgrounds nor their social group memberships, and likewise, the content of the stories did not vary based on students’ social group membership (i.e., generation status, race, gender). Each story began by the student mentioning a challenge or obstacle that she faced, which could be interpreted as a signal of not belonging. The stories then concluded with a description of the student overcoming that obstacle and gaining a sense of belonging. For example, one student said: “The transition to college can be difficult, and it was for me. During my freshman year, I sometimes didn’t know what I was doing—I made a lot of casual friends at in my dorm and other places and I avoided interacting with professors in class and office hours. I think I was intimidated by them. I got some low grades early on, which stressed me out, and sometimes I worried I wouldn’t make close friends like I had in high school.” The student then described how she overcame these challenges and found a sense of belonging over time: “But these things all got better over time. I began to make friends through classes and lab and sophomore year I started to get involved in research with one of my professors. My grades also got better as I started working in study groups and asked for help from my teaching assistants. Now I am happier than I have ever been at [school]. It is really rewarding for me to feel like I belong in the academic community here.”

**Control stories**. The goal of the control condition was to mirror the content (i.e., challenges, strengths, and strategies for success) of the difference-education condition as much as possible, but without providing a contextual theory of social group difference. The control condition stories did not link students’ backgrounds to their current experiences in college (adapted from Townsend et al., 2019)

Each story began with a student describing a challenge (e.g., finding college hard). The stories then described how the student overcame that challenge (e.g., visiting a tutoring center on campus). For example, one student described his challenges as follows: “When I first got to school I thought I wanted to study some area of engineering. One reason I was so interested in this major was because you can have a great career after graduating. My parents liked that plan and are proud of me for pursuing this area of study. However, once I took some engineering classes during my first quarter, I quickly realized that the classes here were much harder than my classes in high school, and that I was having a hard time keeping up with the quarter system and all of the quizzes and midterms. For this reason, sometimes I just felt overwhelmed with the expectations and with figuring out how to fit everything into my schedule. And, I also didn’t feel like I had enough time to do all the classwork required by my professors.” The student then went on to describe how he overcame that challenge: “I realized though that I could figure some things out along the way, and that I could also get advice about how I could do better. And so, I started looking for people to help me out and to get the advice that I needed. For example, I started going to my professors’ office hours and reaching out to other students. Realizing this and seeking the advice I needed helped me figure out how to study efficiently and do well in class without feeling overwhelmed.”

**Section S2**

**Frequency of Overlap between Cross-Race and Cross Class Interactions**

There was significant overlap between the perceived race and social class background of students’ interaction partners. The majority of interaction partners perceived to be URM were also perceived as coming from lower-social class backgrounds (59%), whereas the majority of interaction partners perceived to be White and Asan were also perceived as coming from higher-social class backgrounds (87%). Interaction partners perceived to be from lower-social class backgrounds were disproportionately perceived as URM (69%), while those perceived to be from higher-social class backgrounds were disproportionately perceived as White and Asian (81%).

Tables S1 and S2 display the overlap between students’ same/cross-race and same/cross-class interactions. Overall, only a small portion of students interactions were both cross-race and cross-class (15%). The majority of students interactions were both same-race and same-class (46%), although there was marked variability within each subgroup. For example, while Asian students from working- and lower-class backgrounds reported that 27% of their interactions were both cross-race and cross-class, Asian students from middle- and higher-class backgrounds reported only 4% of their interactions were both.

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| Table S1  *Number of interactions by interaction type (cross- vs. same-race; cross- vs. same-class) and students’ race and social class background* | | | | | | |
| **Race** | **Social Class** | **Interaction Type** | | | |  |
|  |  | *Same-race/ Same-class* | *Cross-race/ Cross-class* | *Same-race/ Cross-class* | *Cross-race/ Same-class* | *Total* |
| *Asian* | *WK* | 383 | 491 | 761 | 212 | 1847 |
|  | *MD* | 1276 | 97 | 214 | 681 | 2268 |
| *White* | *WK* | 310 | 233 | 701 | 134 | 1378 |
|  | *MD* | 1242 | 157 | 216 | 524 | 2139 |
| *URM* | *WK* | 1785 | 693 | 564 | 154 | 3196 |
|  | *MD* | 159 | 41 | 71 | 114 | 385 |
| *Total* |  | 5155 | 1712 | 2527 | 1819 | 11213 |
| *Notes*. URM = underrepresented racial minority students; WK = lower and working and lower-class students; MD = middle and higher-class students | | | | | | |

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| Table S2  *Frequency of interactions by interaction type (cross- vs. same-race; cross- vs. same-class) and students’ race and social class background* | | | | | |
| **Race** | **Social Class** | **Interaction Type** | | | |
|  |  | *Same-race/ Same-class* | *Cross-race/ Cross-class* | *Same-race/ Cross-class* | *Cross-race/ Same-class* |
| *Asian* | *WK* | 0.21 | 0.27 | 0.41 | 0.11 |
|  | *MD* | 0.56 | 0.04 | 0.09 | 0.30 |
| *White* | *WK* | 0.22 | 0.17 | 0.51 | 0.10 |
|  | *MD* | 0.58 | 0.07 | 0.10 | 0.24 |
| *URM* | *WK* | 0.56 | 0.22 | 0.18 | 0.05 |
|  | *MD* | 0.41 | 0.11 | 0.18 | 0.30 |
| Total |  | 0.46 | 0.15 | 0.23 | 0.16 |
| *Notes*. URM = underrepresented racial minority students; WK = lower and working and lower-class students; MD = middle and higher-class students | | | | | |

**Section S3**

**Institution Demographics**

|  |  |
| --- | --- |
| Table S3 | |
| *Composition of student body at University A for the 2017-2018 academic year* | |
| Racial Composition | |
| International | 11.76% |
| American Indian or Alaskan Native | 0.53% |
| Asian or Pacific Islander | 31.64% |
| Black Non-Hispanic | 5.23% |
| Hispanic | 21.30% |
| Unstated, Unknown, Other | 3.48% |
| White Non-Hispanic | 26.06% |
| Social Class Composition |  |
| First-Generation | 35.93% |
| Continuing-Generation | 64.07% |
| Unknown | 3.08% |
|  |  |
| Pell Grant recipients | 36.08% |

|  |  |
| --- | --- |
| Table S4 | |
| *Composition of student body at University B for the 2017-2018 academic year* | |
| Racial Composition |  |
| International | 10.39% |
| American Indian or Alaskan Native | 0.10% |
| Asian or Pacific Islander | 5.23% |
| Black Non-Hispanic | 4.47% |
| Hispanic | 6.01% |
| Unstated, Unknown, Other | 0.26% |
| White Non-Hispanic | 69.60% |
| Social Class Composition |  |
| First-Generation | 12.30% |
| Continuing-Generation | 87.70% |
| Unknown | 2.88% |
|  |  |
| Pell Grant recipients | 19.00% |

**Section S4**

**Moderation of Study Effects by University**

Participants were recruited from two universities: University A—a large, public university on the West Coast—and University B—a large, public university in the Midwest. These two universities differ meaningfully in the make-up of their student bodies. Of key relevance to the present research, University A has more racial and socioeconomic diversity than University B. To determine whether the frequency, experience, and consequences of cross-race and cross-class interactions differed across these two institutions, we repeated all analyses with university included as a moderator. Overall, we found that the frequency of cross-race and cross-class interactions were moderated by university, such that students reported lower rates of cross-race and cross-class interactions than would occur at chance at the more-diverse University A compared to the less-diverse University B. The pattern of cross-race and cross-class interactions among racial and social class subgroups also differed across the universities. There was largely no evidence that university moderated the experience or consequences of cross-race and cross-class interactions.

The sections below provide detailed description of these results.

**University as a Moderator of the Frequency of Cross-Group Interactions**

Table S5 displays the differences between at-chance and reported rates of cross-race and cross-class interactions within each University.

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| Table S5 | | |
| *Difference Between At-Chance and Reported Rates of Cross-Race and Cross-Class Interactions* | | |
| **Cross-race Interactions** | | |
|  | University B | University A |
| *Total* | -0.23\*\*\* | -0.31\*\*\* |
| *URM* | -.46\*\*\*a | -.45\*\*\*a |
| *Asian* | -.41\*\*\*a | -.25\*\*\*b |
| *White* | -.13\*\*\*b | -.22\*\*\*b |
| **Cross-class Interactions** | | |
|  | University B | University A |
| *Total* | -0.12\*\*\* | -0.18\*\*\* |
| *WK* | -.12\*\*\*a | -.07\*\*\*a |
| *MD* | -.16\*\*\*a | -.33\*\*\*b |
| *Note*. Difference scores were calculated by subtracting expected rates of cross-race/cross-class interaction from reported rates of interaction. Significant differences between the subgroups are indicated by different superscripted letters. URM = underrepresented minority students; WK = lower and working and lower-class students; MD = middle and higher-class students; †.05<p<.10; \*.01<p<.05; \*\*.001<p<.01; \*\*\*p<.001 | | |

**Cross-race interactions.** University was a significant predictor (i.e. moderator) of the difference between at-chance and reported rates of cross-race interactions. Specifically, students from University A showed significantly more disparity in cross-race (31%) interactions than students at University B (23%), *b* = .08, *t* = 2.79, *p* = .006.

University was also a significant moderator of the effect of students’ race on the difference between at-chance and reported rates of cross-race interactions, *F*(2, 398) = 5.39, *p* = .005. In particular, Asian students reported different patterns of interactions across the two institutions. With the full sample, Asian students fell in between underrepresented racial minority (URM) and White students, reporting less disparity between at-chance and reported rates of cross-race interactions than URM students, but more disparity than White students. However, At University A, Asian students did not significantly differ from White students. Instead, both White and Asian students reported less disparity between at-chance and reported rates of cross-race interactions (-.25 and -.22, respectively) than URM students (-.45). At University B, Asian students did not differ from URM students. That is, both URM and Asian students reported significantly more disparity between at-chance and reported rates of cross-race interactions (-.46 and -.41, respectively) than White students (-.13).

**Cross-class interactions.** As with race, university was a significant predictor (i.e. moderator) of the difference between at-chance and reported rates of cross-class interactions. Specifically, students from University A showed significantly more disparity in cross-class (18%) interactions than students at University B (12%), *b* = .06, *t* = 2.11, *p* = .04.

University was also a significant moderator of the effect of students’ social class background on the difference between at-chance and reported rates of cross-class interactions, *F*(1, 399) = 16.22, *p* < .001. In particular, students from middle class backgrounds (MD) reported different patterns of interactions across the two institutions. At University A, MD students showed far more disparity between at-chance and reported rates of cross-class interactions (-.33) than students from working-class backgrounds (WK; -.07). However, this difference was not evident at University B, where MD students and WK students showed similar disparities between at-chance and expected rates of cross-class interactions (-.16 and -.12, respectively).

**University as a Moderator of the Experience of Cross-Group Interactions**

Table S6 shows differences in the experience of threat, satisfaction, and perspective-taking in cross-group versus same-group interactions across the two universities.

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| Table S6 | | | | | | |
| *Experience of Cross-Group versus Same-Group Interactions* | | | | | | |
|  | Threat | | Satisfaction | | Perspective-Taking | |
|  | University B | University A | University B | University A | University B | University A |
| *Cross-race (1) vs. Same-race (0)* | 0.06 | -0.11\* | -.23\*\* | -0.07 | -0.19\*\* | -.09† |
| *Cross-class (1) vs. Same-class (0)* | -0.08 | 0.02 | -0.09 | -.12\* | -.18\*\* | -0.06 |
| *Note*. Values represent standardized beta coefficients; †.05<p<.10; \*.01<p<.05; \*\*.001<p<.01; \*\*\*p<.001. | | | | | | |

C**ross-race interactions.** Overall, universitydid not significantly moderate the experience of cross-race versus same-race interactions. However, university did reach marginal levels of significance for experiences of threat and satisfaction, threat: χ2 = 3.58, *p* = .06; satisfaction: χ2 = 3.05, *p* = .08. For threat, students at University A reported significantly less threat in cross-race compared to same-race interactions while students at University B showed a nonsignificant trend in the opposite direction, reporting more threat in cross-race versus same-race interactions. For satisfaction, students at University A and B both reported less satisfaction in cross-race compared to same-race interactions, but this difference only reached significance at University B. University was not a significant moderator for perspective-taking, χ2 = 1.70, *p* = .19.

University did not moderate the effect of students’ race on experiences of cross-race versus same-race interactions, threat: χ2 = .08, *p* = .96; satisfaction: χ2 = 2.62, *p* = .27; perspective-taking: χ2 = .84, *p* = .66.

**Cross-class interactions.** University did not significantly moderate the experience of cross-class versus same-class interactions (threat: χ2 = .79, *p* = .37; satisfaction: χ2 = .08, *p* = .78; perspective-taking: χ2 = 1.66, *p* = .20). University also did not moderate the effect of students’ social class background on experiences of threat, χ2 = .37, *p* = .54, or satisfaction, χ2 = 2.24, *p* = .13.

However, university did significantly moderate the effect of students’ social class background on perspective-taking: χ2 = 4.58, *p* = .03. For the complete sample, students reported less perspective-taking in cross-class versus same-class interactions, and this did not significantly vary by students’ social class background. While the interaction between students’ social class background and interaction type (cross-class versus same-class) did not reach significance when looking within each university separately, the pattern for WK and MD students were in the opposite direction at each school. At University A, WK students reported less perspective-taking in cross-class versus same-class interactions, [*b* = -.14, *t* = 1.71, *p* = .08], but MD students showed a nonsignificant trend in the opposite direction, reporting more perspective-taking in cross-class interactions [*b* = .09, *t* = .76, *p* = .45]. At University B, WK students again reported less perspective-taking in cross-class versus same-class interactions, but this trend did not reach significance, [*b* = -.15, *t* = -1.31, *p* = .19]. In comparison, MD students reported significantly less perspective-taking in cross-class versus same-class interactions, *[b* = -.48, *t* = 2.53, *p* = .01].

**University as a Moderator of the Consequences of Cross-Group Interactions**

Table S7 shows differences in the consequences of cross-group interactions on feelings of inclusion (i.e., sense of belonging and social identity threat) and academic performance (i.e., GPA) across the two universities.

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| Table S7 | | | | | | | |
| *Feelings of Inclusion and Academic Performance Predicted by Cross-Race and Cross-Class Interactions* | | | | | | | |
|  | GPA | | | Belonging | | Social Identity Threat | |
|  | University B | | University A | University B | University A | University B | University A |
| *Cross-Race Interactions* | |  |  |  |  |  |  |
| URM | 0.14 | | .27\*\* | .29\* | 0.11 | -.27† | -.21\* |
| Asian | -0.15 | | -0.03 | .25† | -0.04 | 0.15 | -0.09 |
| White | -0.03 | | -0.03 | -0.003 | 0.03 | 0.05 | 0.11 |
| *Cross-Class Interactions* | | |  |  |  |  |  |
| WK | 0.09 | | .23\*\* | 0.19† | .15\* | -0.02 | 0.003 |
| MD | -0.26 | | 0.02 | -.67\* | -.23 | -0.16 | 0.19 |
| *Note*. URM = underrepresented racial minority students; WK = students from working and lower-class backgrounds; MD = students from middle and higher-class backgrounds; †.05<p<.10; \*.01<p<.05; \*\*.001<p<.01; \*\*\*p<.001 | | | | | | | |

**Cross-race interactions.** University did not significantly moderate the consequences of cross-race interactions on sense of belonging, *F*(1, 397) = 1.23, *p* = .27, social identity threat, *F*(1, 397) = .72, *p* = .40, or GPA, *F*(1, 393) = .42, *p* = .52. University also did not moderate the effect of students’ race on the consequences of cross-race interactions for sense of belonging, *F*(2, 391) = 1.02, *p* = .36, social identity threat, *F*(2, 391) = .80, *p* = .45, or GPA, *F*(2, 387) = .15, *p* = .86.

**Cross-class interactions.** University did not significantly moderate the consequences of cross-race interactions on sense of belonging, *F*(1, 397) = .003, *p* = .96, social identity threat: *F*(1, 397) = .002, *p* = .96, or GPA, *F*(1, 393) = 1.84, *p* = .18. University also did not moderate the effect of students’ social class background on the consequences of cross-class interactions for sense of belonging, *F*(1, 394) = 1.42, *p* = .23, social identity threat, *F*(1, 394) = .42, *p* = .52, or GPA, *F*(1, 390) = .08, *p* = .77.

**Section S5**

**Means, SEs, and Simple Effects of Interaction-Type (Cross-Race vs Same-Race) on the Experience of Threat, Satisfaction, and Perspective-Taking by Students’ Race**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table S8 | | | | |
| *Conditional means and SEs of stress, satisfaction, and perspective-taking in cross-race and same-race interactions* | | | | |
|  | Cross-Race | | Same-Race | |
|  | *Mean* | *SE* | *Mean* | *SE* |
| *Stress* |  |  |  |  |
| Asian | 1.42 | 0.07 | 1.46 | 0.06 |
| URM | 1.42 | 0.08 | 1.49 | 0.06 |
| White | 1.51 | 0.07 | 1.57 | 0.07 |
| *Satisfaction* |  |  |  |  |
| Asian | 5.49 | 0.09 | 5.63 | 0.08 |
| URM | 5.74 | 0.09 | 5.86 | 0.07 |
| White | 5.76 | 0.09 | 5.88 | 0.06 |
| *Perspective-Taking* |  |  |  |  |
| Asian | 5.14 | 0.11 | 5.29 | 0.10 |
| URM | 5.54 | 0.11 | 5.70 | 0.08 |
| White | 5.48 | 0.11 | 5.62 | 0.08 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table S9 | | | | |
| *Simple effects of cross-race versus same-race interactions on experience of stress, satisfaction, and perspective-taking* | | | | |
|  | beta | t-value | p-value | 95% CI |
| *Threat* |  |  |  |  |
| Asian | -0.03 | -0.50 | 0.62 | [-.16, .09] |
| URM | -0.07 | -1.08 | 0.28 | [-.20, .06] |
| White | -0.05 | -0.64 | 0.53 | [-.18, .08] |
|  |  |  |  |  |
| *Satisfaction* |  |  |  |  |
| Asian | -0.14 | -1.88 | 0.06 | [-.28, .01] |
| URM | -0.12 | -1.61 | 0.11 | [-.26 .03] |
| White | -0.12 | -1.60 | 0.11 | [-.27, .03] |
|  |  |  |  |  |
| *Perspective-Taking* |  |  |  |  |
| Asian | -0.14 | -1.80 | 0.07 | [-.29, .01] |
| URM | -0.16 | -2.00 | 0.05 | [-.32, -.00] |
| White | -0.14 | -1.71 | 0.09 | [-.30, .02] |

**Section S6**

**Means, SEs, and Simple Effects of Interaction Type (Cross-Class versus Same-Class) on the Experience of Threat, Satisfaction, and Perspective-Taking by Students’ Social Class Background**

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| --- | --- | --- | --- | --- |
| Table S10 | | | | |
| *Conditional means and SEs of stress, satisfaction, and perspective-taking in cross-class and same-class interactions* | | | | |
|  | Cross-Class | | Same-Class | |
|  | *Mean* | *SE* | *Mean* | *SE* |
| *Stress* |  |  |  |  |
| WK | 1.47 | 0.05 | 1.57 | 0.06 |
| MD | 1.61 | 0.09 | 1.44 | 0.05 |
|  |  |  |  |  |
| *Satisfaction* |  |  |  |  |
| WK | 5.75 | 0.06 | 5.86 | 0.06 |
| MD | 5.68 | 0.10 | 5.82 | 0.06 |
|  |  |  |  |  |
| *Perspective-Taking* |  |  |  |  |
| WK | 5.45 | 0.07 | 5.59 | 0.08 |
| MD | 5.61 | 0.11 | 5.67 | 0.07 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table S11 | | | | |
| *Simple effects of cross-class versus same-class interactions on experience of stress, satisfaction, and perspective-taking* | | | | |
|  | *beta* | *t-value* | *p-value* | *95% CI* |
| *Threat* |  |  |  |  |
| WK | -0.10 | -1.62 | 0.11 | [-.21, .02] |
| MD | 0.17 | 1.98 | 0.05 | [.00, .34] |
|  |  |  |  |  |
| *Satisfaction* |  |  |  |  |
| WK | -0.11 | -1.64 | 0.10 | [-.23, .02] |
| MD | -0.15 | -1.53 | 0.13 | [-.33, .04] |
|  |  |  |  |  |
| *Perspective-Taking* |  |  |  |  |
| WK | -0.14 | -2.14 | 0.03 | [-.28, -.01] |
| MD | -0.06 | -0.64 | 0.52 | [-.26, .13] |

**Section S7**

**Threat, Satisfaction, and Perspective-Taking in Interactions Moderating the Positive Consequence of Cross-Race and Cross-Class Interactions on Feelings of Inclusion and Academic Performance**

To explore the potential moderating role of the quality of interactions on the positive effects of cross-race and cross-class interactions on feelings of inclusion and academic performance, we conducted a series of linear regression models. For each model, we regressed outcome (sense of belonging, social identity threat, or GPA) on rates of cross-race/cross-class interactions, experience in cross-race/cross-class or same-race/same-class (threat, satisfaction, perspective-taking), and students’ own race/social class background. We controlled for students’ baseline levels of belonging, social identity threat, and academic performance as well as students’ race, social class background, gender and university.

Tables S12 through S17 report the three-way interaction effect for each model. Overall, we did not find any significant three-way interactions, indicating that the positive effect of cross-race and cross-class interactions for URM students and students from working-class backgrounds, respectively, did not depend on the experience of threat, satisfaction, or perspective-taking in these interactions.

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| --- | --- | --- | --- | --- |
| Table S12 | | | | |
| *Three-way interaction between students' race, percent of cross-race interactions, and quality of cross-race interactions on sense of belonging* | | | | |
|  |  |  |  |  |
| *Cross-Race Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.81* | 2 | 338 | *0.44* |
| Satisfaction | *0.15* | 2 | 338 | *0.86* |
| Perspective-Taking | *0.30* | 2 | 338 | *0.74* |
|  |  |  |  |  |
| *Same-Race Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.09* | 2 | 385 | *0.92* |
| Satisfaction | *0.76* | 2 | 385 | *0.47* |
| Perspective-Taking | *0.60* | 2 | 385 | *0.55* |

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| --- | --- | --- | --- | --- |
| Table S13 | | | | |
| *Three-way interaction between student's social class background, percent of cross-class interactions, and quality of cross-class interactions on sense of belonging* | | | | |
|  |  |  |  |  |
| *Cross-Class Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.38* | 1 | 313 | *0.54* |
| Satisfaction | *1.01* | 1 | 313 | *0.31* |
| Perspective-Taking | *1.93* | 1 | 313 | *0.17* |
|  |  |  |  |  |
| *Same-Class Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.24* | 1 | 364 | *0.62* |
| Satisfaction | *0.06* | 1 | 364 | *0.81* |
| Perspective-Taking | *0.00* | 1 | 364 | *0.95* |

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| Table S14 | | | | |
| *Three-way interaction between students' race, percent of cross-race interactions, and quality of cross-race interactions on social identity threat* | | | | |
|  |  |  |  |  |
| *Cross-Race Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *1.80* | 2 | 338 | *0.17* |
| Satisfaction | *1.62* | 2 | 338 | *0.20* |
| Perspective-Taking | *1.85* | 2 | 338 | *0.16* |
|  |  |  |  |  |
| *Same-Race Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *2.21* | 2 | 385 | *0.11* |
| Satisfaction | *0.29* | 2 | 385 | *0.75* |
| Perspective-Taking | *0.77* | 2 | 385 | *0.46* |

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| Table S15 | | | | |
| *Three-way interaction between student's social class background, percent of cross-class interactions, and quality of cross-class interactions on social identity threat* | | | | |
|  |  |  |  |  |
| *Cross-Class Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *1.22* | 1 | 313 | *0.27* |
| Satisfaction | *0.65* | 1 | 313 | *0.42* |
| Perspective-Taking | *0.02* | 1 | 313 | *0.88* |
|  |  |  |  |  |
| *Same-Class Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.05* | 1 | 364 | *0.82* |
| Satisfaction | *0.29* | 1 | 364 | *0.59* |
| Perspective-Taking | *0.00* | 1 | 364 | *0.98* |

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| Table S16 | | | | |
| *Three-way interaction between students' race, percent of cross-race interactions, and quality of cross-race interactions on GPA* | | | | |
|  |  |  |  |  |
| *Cross-Race Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.43* | 2 | 336 | *0.65* |
| Satisfaction | *0.12* | 2 | 336 | *0.89* |
| Perspective-Taking | *0.12* | 2 | 336 | *0.89* |
|  |  |  |  |  |
| *Same-Race Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.50* | 2 | 382 | *0.61* |
| Satisfaction | *0.47* | 2 | 382 | *0.62* |
| Perspective-Taking | *0.66* | 2 | 382 | *0.52* |

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| Table S17 | | | | |
| *Three-way interaction between student's social class background, percent of cross-class interactions, and quality of cross-class interactions* | | | | |
|  |  |  |  |  |
| *Cross-Class Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.01* | 1 | 310 | *0.92* |
| Satisfaction | *0.16* | 1 | 310 | *0.69* |
| Perspective-Taking | *0.77* | 1 | 310 | *0.38* |
|  |  |  |  |  |
| *Same-Class Interactions* | *F* | *DF1* | *DF2* | *p* |
| Threat | *0.02* | 1 | 361 | *0.90* |
| Satisfaction | *0.28* | 1 | 361 | *0.60* |
| Perspective-Taking | *0.13* | 1 | 361 | *0.72* |

**Section S8**

**Disentangling Cross-Race and Cross-Class Interactions**

To disentangle the particular effects of cross-race versus cross-class interactions, we performed two sets of exploratory analysis. First, we examined the experience and consequences of cross-race interactions that were also *exclusively same-class interactions*. Second, we examined the experience and consequences of cross-class interactions that were also *exclusively same-race interactions.* These analyses allowed us to examine the effects of cross-race interactions that were not confounded with social class and the effects of cross-class interactions that were not confounded with race.

**Experience and Consequence of Cross-Race Interactions in Same-Class Dyads**

To examine the effects of cross-race interactions that were not confounded with social class, we examined cross-race interactions within same-class dyads. Specifically, we examined the effects of cross-race interactions for students from working and lower-class backgrounds interacting with other students from working and lower-class backgrounds. This analysis was thus limited to 227 students and 2,978 interactions. We replicated the same analyses examining the experience and consequences of cross-race interactions reported in the main manuscript. We could not replicate the analysis examining the frequency of cross-race interactions, as universities do not provide the intersectional demographic data necessary to calculate expected rates of same-class, cross-race interactions if students were to interact at chance.

When examining the experience of cross-race interactions, we found that all students, regardless of race, reported less satisfaction and perspective-taking in cross-race compared to same-race interactions, but did not differ in their experience of threat. In our exploratory analyses, we found that a marginal effect of interaction type on satisfaction such that students reported less satisfaction in cross-race (*M* = 5.78) compared to same-race interactions (*M* = 5.97); *F*(1, 131.50) = 3.14, *p* = .08. The effect of interaction type on perspective-taking was nonsignificant, but trended in the expected direction, such that students reported less perspective-taking in cross-race (*M* = 5.70) compared to same-race interactions (*M* = 5.81), *F*(1, 135.60) = .79, *p* = .38. There were no effects of interaction type on threat and no significant interactions between interaction type and students’ race, *p’s* > .34 . Overall, examining cross-race interactions within same-race dyads provides limited support for our initial finding that cross-race interactions are experienced less positively than same-race interactions. That is, students reported marginally less satisfaction in cross-race versus same-race interactions but did not differ in how perspective-taking.

When examining the consequences of cross-race interactions, our original analyses revealed that for underrepresented racial minority (URM) students, higher rates of cross-race interactions predicted a greater sense of belonging, less social identity threat, and better academic performance. In contrast, for White and Asian students, higher rates of cross-race were unrelated to belonging, social identity threat, or academic performance. In the exploratory analyses, we replicated two out of three of these findings. For URM students, higher rates of cross-race interactions predicted less social identity threat, *b* = -.18, *t* = 1.99, *p* = .048, and higher GPAs, *b* = .27, *t* = 2.89, *p* = .004. 7, 95% CI [-.02,.47]. For White and Asian students, higher rates of cross-race interactions were unrelated to social identity threat and academic performance, *p*’s > .38. For URM, White, and Asian students, rates of cross-race interactions were unrelated to sense of belonging, *p*’s > .18. Overall, examining cross-race interactions within same-class dyads largely revealed the same pattern of effects evident in our original analysis; that is, cross-race interactions predict both social identity threat and academic performance for URM students, but not for White or Asian students. Unlike our previous findings, however, cross-race interactions were no longer predictive of sense of belonging for URM students, although there was evidence of a positive trend, *b* = .12, *t* = 1.34, *p* = .18.

**Experience and Consequence of Cross-Class Interactions in Same-Race Dyads**

To examine the effects of cross-class interactions that were not confounded with race, we examined cross-class interactions within same-race dyads. Specifically, we examined the effects of cross-class interactions for White and Asian students interacting with other White and Asian students, respectively. This analysis was thus limited to 271 students and 5,103 interactions. We replicated the same analyses examining the experience and consequences of cross-class interactions reported in the main manuscript. We could not replicate the analysis examining the frequency of cross-class interactions, as universities do not provide the intersectional demographic data necessary to calculate expected rates of same-race, cross-class interactions if students were to interact at chance.

When examining the experience of cross-class interactions, our original analyses revealed that all students, regardless of social class background, reported less satisfaction and perspective-taking in cross-class compared to same-class interactions. Additionally, MD students—but not WK students—reported more threat in cross-class compared to same-class interactions. In our exploratory analyses, we found that only MD students—and not WK students—reported less satisfaction in cross-class (*M* = 5.27) compared to same-class interactions (*M* = 5.67), *b* = -.39, *t* = 3.11, *p* = .002; interaction: *F*(1, 202.41) = 7.86, *p* = .006. Furthermore, MD students, but not WK students, reported marginally more threat in cross-class (*M* = 1.47) compared to same-class interactions (*M* = 1.33), interaction: *F*(1, 195.68) = 4.41, *p* = .04. Neither MD nor WK students reported differences in perspective-taking. Overall, examining cross-class interactions within same-race contexts provides support for our initial finding that individuals with higher-status social class backgrounds experience cross-class interactions more negatively than same-class interactions.

When examining the consequences of cross-class interactions, our original analyses revealed that for WK students, higher rates of cross-class interactions predicted a greater sense of belonging and better academic performance. In contrast, for MD students, higher rates of cross-class interactions predicted a lower sense of belonging and was unrelated to academic performance. Rates of cross-class interactions were unrelated to social identity threat for either WK or MD students. In the exploratory analyses, we replicated these findings. For WK students, higher rates of cross-class interactions predicted marginally greater sense of belonging, *b* = .16, *t* = 1.62, *p* = .10, 95% CI [-.03,.36], and marginally higher GPAs, *b* = .23, *t* = 1.80, *p* = .07, 95% CI [-.02,.47]. For MD students, higher rates of cross-class interactions predicted significantly lower sense of belonging, *b* = -.36, *t* = -2.02, *p* = .04, 95% CI [-.71,-.01], and was unrelated to GPA, *p* = .22. For both WK and MD students, rates of cross-class interactions were unrelated to social identity threat, *p*’s > .21. Overall, examining cross-class interactions within same-race contexts largely revealed the same pattern of effects evident in our original analysis; that is, cross-class interactions predict both feelings of belonging and academic performance for students from WK backgrounds, but not for students from MD backgrounds. Additionally, unlike cross-race interactions, cross-class interactions had no impact of social identity threat.

**Summary**

This exploratory analysis should be interpreted with caution. First, several effects only reached a marginal level of significance, which is likely due to reduced statistical power from our restricted sample size. Second, we cannot determine whether these findings represent the effects of cross-race/cross-class interactions when disentangled from the effects of cross-class/cross-race interactions, or whether they represent the effects of cross-race interactions specific to interactions among students from working and lower-class backgrounds or cross-class interactions specific to interactions among White and Asian students. Regardless, there are two interesting implications of these results. First, these findings emphasize that individuals from higher status social class backgrounds experience cross-class interactions as more negative than same-class interactions (i.e., less satisfaction, more threat). Second, these findings provide additional evidence for one potential way that cross-race interactions are distinct from cross-class interactions: while cross-race interactions increase feelings of inclusion by reducing social identity threat for URM students, cross-class interactions increase feelings of inclusion by increasing general sense of belonging for students from working and lower-class backgrounds.