

INNOVATIONS IN SOCIAL PSYCHOLOGY

Is Diversity Enough? Cross-Race and Cross-Class Interactions
in College Occur Less Often Than Expected, but Benefit Members
of Lower Status Groups When They OccurRebecca M. Carey¹, Nicole M. Stephens², Sarah S. M. Townsend³, and MarYam G. Hamedani⁴¹ Department of Psychology, Princeton University² Kellogg School of Management, Northwestern University³ Marshall School of Business, University of Southern California⁴ SPARQ, Department of Psychology, Stanford University

More than ever before, institutions of higher education are seeking to increase the racial and social class diversity of their student bodies. Given these efforts, the present research asks two broad questions. First, how frequently do intergroup interactions occur across the lines of race and social class, and to what extent do these interactions reflect the diversity of a setting? Second, when cross-race and cross-class interactions occur, how do individuals experience them and what consequences do they have for their outcomes in these settings? Leveraging a longitudinal design and daily diary methods, we conducted the first large study ($N_{\text{interactions}} = 11,460$) which tracks the frequency, experience, and consequences of meaningful cross-race and cross-class interactions. We found that students reported far fewer cross-race and cross-class interactions than would occur at chance given the racial and social class diversity of their student bodies. Furthermore, students experienced less satisfaction and perspective-taking in cross-race and cross-class interactions compared to same-race and same-class interactions, respectively. Nevertheless, these cross-group interactions predicted better academic performance for underrepresented racial minority students and students from working and lower class backgrounds. They did so, in part, by increasing students' feelings of inclusion (i.e., increased belonging and reduced social identity threat). Together, these findings suggest that the mere presence of diversity is not enough to foster meaningful intergroup interactions. Furthermore, fostering intergroup interactions may be one important pathway toward reducing racial and social class disparities.

Keywords: diversity, race, social class, intergroup interactions, academic outcomes

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On November 19, 1960, Ruby Bridges became the first African American student to integrate William Frantz Elementary School in New Orleans, Louisiana. Protected by a police escort, she was met by an angry crowd throwing threats and rocks in equal measure. Ruby's experience of integration was one of complete isolation—she was taught separately, ate separately, and played separately from other students. Ruby's experience is an extreme one, but it highlights how diversifying a space is not always enough to engender meaningful intergroup interactions. It raises two important questions. First, how frequently do intergroup interactions occur, and to what extent do these interactions

reflect the diversity of a setting? Second, when these intergroup interactions do occur, how do individuals experience them, and what consequences do they have for individuals' outcomes in these settings?

To address these questions, the present research examined the frequency, experience, and consequences of cross-race and cross-class interactions in higher education. We specifically focused on meaningful interactions with the goal of examining students' most substantive and involved intergroup interactions. Our findings ultimately revealed that students reported fewer cross-race and cross-class interactions than would occur at chance given the racial

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and social class diversity of their student bodies. Furthermore, students experienced less satisfaction and perspective-taking in these interactions than same-race and same-class interactions, respectively. Despite their relatively worse experience, cross-race and cross-class interactions led to better academic performance—that is, higher grade point averages (GPAs)—for racial minority students and those from working and lower social class backgrounds, in part, by increasing feelings of inclusion.

In the sections that follow, we draw on the intergroup literature in psychology, sociology, and education to develop theoretically driven hypotheses about the frequency, experience, and consequences of cross-race and cross-class interactions in higher education.

Higher Education and Cross-Race Interactions

Frequency of Cross-Race Interactions

Prior research suggests that students' interactions are persistently organized by race. For example, examining social network data, Wejnert (2010) found that students report fewer cross-race interactions than would occur at chance given the racial diversity of the student body at their schools. In another study, researchers found that while White students gained cross-race friendships after entering college, Black and Latinx students did not (Stearns et al., 2009). An examination of MBA students' social networks at the beginning and end of an academic term revealed that, despite institutional advocacy for diversity, the racial diversity of students' friendship networks did not change, and instead stayed relatively homophilous over time (Mollica et al., 2003). Given these findings, we expect that students' interactions in our study will also be organized by race. We specifically hypothesize that

Hypothesis 1: Students will report fewer meaningful cross-race interactions than would occur at chance given the racial diversity of their student body.

Experience of Cross-Race Interactions

Much of the literature on the experience of cross-race interactions demonstrates that interacting across racial status divides can elicit stress, threat, and anxiety (Mendes et al., 2002; Stephan & Stephan, 1985; Trawalter et al., 2012, 2009). A meta-analysis of research on interracial interactions found that participants in cross-race interactions reported less positive attitudes toward their partners, more negative affect, and showed less friendly nonverbal behavior compared to those in same-race interactions (Toosi et al., 2012). In higher education settings, students experience increased levels of discomfort, blood pressure, and cortisol reactivity during cross-race (vs. same-race) interactions (e.g., Littleford et al., 2005; West et al., 2017). College students also report feeling less understood in cross-race interactions and are less likely to experience positive emotions and intimacy in these interactions compared to same-race interactions (Shelton et al., 2014; Trail et al., 2009). While the experience of cross-race interactions can improve over time with repeated interactions and friendship development, the initial interactions that precede these experiences are likely to be stressful and threatening (Gudykunst & Shapiro, 1996; Mendoza-Denton & Page-Gould, 2008; Toosi et al., 2012). We consequently hypothesize that

Hypothesis 2: Students will experience more threat, less satisfaction, and less perspective-taking in cross-race interactions compared to same-race interactions.

Consequences of Cross-Race Interactions

The research reviewed so far highlights several challenges to cross-race interactions in terms of their frequency and how they are experienced. Although these interactions can feel difficult or anxiety-provoking, when they occur, research shows that they can have positive long-term consequences for learning and academic growth (Hodson et al., 2018). This reality—that is, that cross-race interactions can be experienced negatively but have positive consequences—may seem contradictory on the surface. However, it is consistent with many psychological theories that describe difficulty, discomfort, and challenge as necessary and important parts of the process of growth, development, and learning (e.g., Dweck, 2010; Elliot & Devine, 1994; Joseph & Linley, 2006).

In the current research, we theorize that participating in more cross-race interactions can improve students' objective academic performance (i.e., GPA). We theorize that one primary way through which they do so is by increasing students' *feelings of inclusion*—that is, students' sense of comfort and compatibility in their college environment (Bowman & Park, 2015; Chang, 1999; Mendoza-Denton & Page-Gould, 2008; Strayhorn, 2008a; Villalpando, 2002). Indeed, decades of research demonstrate that feelings of inclusion can improve students' academic performance and persistence in college by catalyzing a range of experiences and behavior (Ostrove & Long, 2007; Tinto, 1988; Walton & Cohen, 2007). When students feel included, they experience reduced anxiety and stress, which facilitates their performance and well-being (Pittman & Richmond, 2007; Terenzini & Wright, 1987). They also engage more in their learning environments (Astin, 1999; Stephens, Brannon, et al., 2015), which can facilitate the acquisition of cultural capital—that is, an understanding of the rules of the game and how to succeed in college (Ahn, 2017; Soria & Stebleton, 2013). For example, when students feel included, they are more likely to seek out extra help and to take full advantage of the resources available to them (Hausmann et al., 2009; Stephens et al., 2014; Won et al., 2018, 2021). Consistent with this possibility, research demonstrates that cross-race interactions can improve skill-based outcomes that should facilitate academic performance, including intellectual engagement, cognitive growth, and critical thinking (Bowman, 2010; Denson & Chang, 2009; Gurin et al., 2002; Pascarella et al., 2014).

In the present research, we examine two aspects of inclusion: *Sense of belonging* and *social identity threat*. While sense of belonging captures more diffuse feelings of inclusion, social identity threat captures the extent to which students feel that their particular social groups are accepted in their college environments (Locks et al., 2008; Murphy & Zirkel, 2015). We consequently hypothesize that

Hypothesis 3: Cross-race interactions will improve students' academic performance (i.e., college GPA), and they will do so by increasing students' feelings of inclusion in their universities (i.e., increase sense of belonging and decrease social identity threat).

Categorization of Cross-Race Interactions

Consistent with previous research (Bergsieker et al., 2010; Dovidio et al., 2006; Trawalter et al., 2009), we use the term *cross-race interactions* to refer to those that occur between individuals who are members of racial groups that differ in terms of status and representation in higher education settings. Thus, we distinguish between students from three different racial groups: (a) White students, who are members of a *racial majority* group afforded relatively *higher status* in higher education; (b) Asian students, who are members of a *racial minority* group afforded relatively *higher status* in higher education; and (c) Black, Latinx, and Native students, who are members of *racial minority* groups afforded relatively *lower status* in higher education.

We group Black, Latinx, and Native students together because these groups have multiple comparable experiences (e.g., stereotypes, obstacles) in the context of higher education due to their similar status and representation (Berger & Fişek, 2006; Berger et al., 2002; Ridgeway, 2014). Indeed, compared to their White and Asian peers, Black, Latinx, and Native college students tend to encounter more negative stereotypes about their academic abilities and are less likely to feel included in college than White and Asian students (Engle & Tinto, 2008; Pascarella et al., 2004; Soria & Stebleton, 2013). As a result of these shared barriers, Black, Latinx, and Native students tend to earn lower grades and are less likely to persist in college compared to their White and Asian peers (Gándara & Maxwell-Jolly, 1999; Musu-Gillette et al., 2016).¹

In the present research, we focus on cross-race interactions that occur across these divides in status and representation—that is, those that occur across any of the following three groups: Black, Latinx, and Native American students (i.e., *underrepresented racial minority students*; URM), Asian students, and White students (see Table 1). We do not focus on cross-race interactions between students who are afforded similar status and representation in college, such as those between Black and Latinx students.

Does Students' Race Impact the Frequency, Experience, and Consequences of Cross-Race Interactions?

The literature reviewed above suggest clear hypotheses about the frequency, experience, and consequences of cross-race interactions,

Table 1
Description of Cross-Race and Cross-Class Interactions

Participant's race	Interaction partner's race
Asian	URM
URM	Asian or White
White	Asian or URM
Participant's social class background	Interaction partner's social class background
Working and lower social class (i.e., first-generation and/or low-income)	Middle and higher social class (i.e., continuing-generation and middle-to-high-income)
Middle and higher social class (i.e., continuing-generation and middle-to-high-income)	Working and lower social class (i.e., first generation and/or low-income)

Note. URM = underrepresented racial minority students (i.e., Black, Latinx, or Native).

but are less clear in whether these effects will depend on the status and representation of one's specific racial group (i.e., URM, Asian, or White; see Mendoza-Denton & Page-Gould, 2008; Mollica et al., 2003; Stearns et al., 2009; Strayhorn, 2008a, 2008b). To identify potential differences based on the status and/or representation of one's specific racial group, we compared the frequency, experience, and consequences of cross-race interactions among URM, Asian, and White students. Given that we did not have any specific hypotheses, we conducted these analyses in an exploratory manner.

Higher Education and Cross-Class Interactions

Compared to the well-developed literature on cross-race interactions, we know relatively little about interactions between people from different social class backgrounds. Because research has not yet examined the frequency or consequences of cross-class interactions in higher education (or elsewhere), we develop and present new theory on these interactions. We do so by considering how the intergroup experiences associated with social class are likely to be similar to or different from intergroup experiences associated with race.

Social Class and Race in the Context of Higher Education

Do cross-class interactions in college show the same pattern as cross-race interactions? On the one hand, social class and race differ in several respects that suggest they may not organize intergroup interactions in the same way. First, social class is less visible than race, or at the very least, can typically be more readily concealed (Aries, 2008; Wilkins, 2014). Second, given prevalent cultural narratives in the U.S. that emphasize how hard work and individual effort—rather than one's social class background—shape life outcomes, social class in the U.S. may be a less defined or central social identity for students compared to race (Banks, 2007; Dimaggio, 2012; Ostrove & Cole, 2003). Lastly, compared to race, social class is often less institutionalized on campus in that there are fewer communities and resources specific to social class (Whitley et al., 2018). This relative dearth of institutional recognition may further render social class as less visible and salient than race. To the extent that students' social class backgrounds are not meaningful identities or are not salient to others, then cross-class interactions are likely to differ from cross-race interactions in their frequency, experience, and consequences.

On the other hand, despite these differences in visibility and recognition, there is also evidence that social class may organize interactions in ways that are similar to race. First, research demonstrates that people are better at detecting social class than one might expect. With only minimal information (e.g., facial cues), individuals can identify others' social class with some degree of accuracy (Bjornsdottir & Rule, 2017; Côté et al., 2017; Kraus et al., 2009, 2019). Second, like race, social class can be a meaningful identity that shapes students' experiences in school (Aries & Seider, 2005; Martin et al., 2018). For example, similar to race, students' social class backgrounds can be a source of stereotype threat that

¹ Not all Asian and Asian-American students have higher academic attainment and achievement. For example, students who are members of several Southeast Asian groups (i.e., Cambodian, Laotian, Hmong, and Vietnamese) are far less likely to obtain a college degree than their East Asian counterparts (Ngo & Lee, 2007). In the present study, we do not have the demographic data necessary to disaggregate between the different subgroups of Asian or Asian-American students.

undermines their performance in school (Croizet & Claire, 1998; Goudeau & Croizet, 2017). Students from lower social class backgrounds also report experiencing classism from their university and peers (Langhout et al., 2009). Lastly, colleges and universities are increasingly creating departments and programs dedicated to addressing the issues that first-generation and low-income students frequently confront (Piper, 2018), which may serve to increase the salience of social class in higher education. To the extent that students' social class backgrounds are meaningful identities and are salient to others, then cross-class interactions are likely to mirror cross-race interactions in their frequency, experience, and consequences.

Frequency, Experience, and Consequences of Cross-Class Interactions

Together, these findings suggest that although social class is less externally visible, salient, and institutionally recognized than race, it is still likely to organize intergroup interactions in a similar manner. We therefore expect that the frequency, experience, and consequences of cross-class interactions in college will mirror those of cross-race interactions. Accordingly, we hypothesize that

Hypothesis 4: Students will report fewer meaningful cross-class interactions than would occur at chance given the social class diversity of their student body.

Hypothesis 5: Students will experience more threat, less satisfaction, and less perspective-taking in cross-class interactions compared to same-class interactions.

Hypothesis 6: Cross-class interactions will improve students' academic performance (i.e., college GPA), and they will do so by increasing students' feelings of inclusion in their universities (i.e., sense of belonging and social identity threat).

Categorization of Cross-Class Interactions

As with cross-race interactions, we use the term *cross-class interactions* to refer to those that occur between individuals whose social class backgrounds differ in terms of status and representation in higher education settings. Thus, we distinguish between students from two different social class backgrounds: (a) students from *middle and higher social class* backgrounds (from here on referred to as *MD students*), and (b) students from *working and lower social class* backgrounds (from here on referred to as *WK students*). We categorized students as coming from middle and higher social class backgrounds if they were *both* continuing-generation students (i.e., at least one parent had a 4-year college degree) *and* middle-to-high-income. We categorized students as coming from working and lower social class backgrounds if they were *either* first-generation students (i.e., neither parent had a 4-year college degree) *or* low-income.

We group first-generation and low-income students together because these students are less represented and afforded lower status in higher education compared to their peers, and consequently, share similar experiences and challenges in these contexts (Berger & Fişek, 2006; Berger et al., 2002; Ridgeway, 2014). For example, compared to continuing-generation and high-income students, first-generation and low-income students are often minorities on college campuses, subject to negative stereotypes about their abilities, and more likely to

confront messages and practices that challenge their sense of inclusion in college (Dittmann et al., 2020; Goudeau & Croizet, 2017; Ostrove & Long, 2007; Pascarella et al., 2004; Phillips et al., 2020; Stephens et al., 2012; Walpole, 2003). Consequently, as with URM students, these students often earn lower grades and are less likely to persist in college compared to continuing-generation, high-income students (Chen & Carrol, 2005; Martinez et al., 2009).

We consequently focus on cross-class interactions that occur across these status and representation divides—that is, those between first-generation and low-income students (i.e., WK students) and continuing-generation and middle-to-high-income students (i.e., MD students; see Table 1).

Does Students' Social Class Background Impact the Frequency, Experience, and Consequences of Cross-Class Interactions?

As with cross-race interactions, it is unclear whether these experiences and effects will depend on the status and representation of an individual's social class background. To identify any differences between students based on their own social class backgrounds, we compared the frequency, experience, and consequences of cross-class interactions between WK and MD students. Given that we did not have any specific hypotheses, we conducted these analyses in an exploratory manner.

Intersectionality Between Social Class Background and Racial Group Membership in the Context of Higher Education

Although we largely focus on racial group membership and social class background as separate constructs in the current article, we acknowledge the reality that race and social class are intersectional constructs that are inextricably linked in American society and also in higher education (de Brey et al., 2019). Indeed, people's experiences of race and social class are shaped by their unique position at the intersection of these identities, such that the experience of one's race is likely to depend on one's social class and vice versa (Cole, 2009; Crenshaw, 1991; Harackiewicz et al., 2016). To examine the *intersectionality* between race and social class, we conducted exploratory analyses to compare students based on their membership in both groups.

Study Overview

In the present study, we investigated three aspects of meaningful cross-race and cross-class interactions in higher education. First, we investigated the *frequency* of cross-race and cross-class interactions to determine whether students report these interactions at a rate that is proportional to the diversity of their student body. Second, we investigated the *experience* of cross-race and cross-class interactions to determine the extent to which students experience threat, satisfaction, and perspective-taking in these interactions compared to same-race and same-class interactions. Third, we investigated the *consequences* of cross-race and cross-class interactions for students' feelings of inclusion in college (i.e., sense of belonging and social identity threat) and academic performance (i.e., GPA). Furthermore, we explored whether each of these effects depended on students' race and social class background, as well as the intersection of the two. To address these questions, we leveraged a longitudinal design

and daily diary methods to capture students' interactions, experiences, and outcomes during their first year of college.

This study provides a critical contribution to the literature on intergroup relations in two ways. First, the current research provides the first examination of the frequency and consequences of meaningful cross-class interactions in real-world, social class-diverse settings. While a small number of studies in psychology have examined cross-class interactions, they have exclusively focused on interactions between strangers in highly controlled lab settings (Côté et al., 2017; Truong et al., n.d.). In doing so, these studies provide insight into the psychological experience (e.g., affiliation, threat) of cross-class interactions among strangers. However, prior studies do not tell us how frequently cross-class interactions occur, how they are experienced, nor the long-term consequences that they are likely to produce. These questions are especially important given that many colleges and universities have pushed to increase social class diversity in recent years (Chetty et al., 2017; Hoxby & Turner, 2019).

Second, this study is the first to simultaneously examine both students' cross-race and cross-class interactions. Research on cross-race interactions predominates the literature on intergroup interactions, and as a consequence, other types of intergroup interactions are often assumed to operate in a similar manner to cross-race interactions. The present research allows us to extend and broaden theories of intergroup interactions by examining the particular processes that shape cross-race and cross-class interactions.

Method

Participants and Procedure

Students were recruited from two universities as part of a larger study on belonging and academic achievement in college.² To obtain a desired power of .90, we recruited as many participants as possible from the original study to participate in the daily diary study. With a power of .90, an a priori power analysis indicated a sample size of 413 participants was required to detect a small ($\eta_p^2 = .030$) linear interaction effect (i.e., the main analysis for our outcomes of interest). Of the 824 students who participated in the larger study, we successfully recruited 552 (69%) students to participate in an additional daily diary study. Our analyses involved predicting end-of-year survey outcomes from the daily diary survey data, and therefore required data from both the daily diary and end-of-year survey. We therefore only included participants who completed at least one daily diary survey and the end-of-year survey, yielding a final sample of 416 participants.

Students in the sample had a mean age of 18.12 years ($SD = .60$). The sample included: 297 women, 117 men, and two gender-nonconforming students; 138 Asian/Asian American students (referred to as Asian from here on), 22 Black students, 110 Latinx students, five Native American students, and 135 White students; 254 first-generation or low-income students (i.e., WK students) and 162 continuing-generation and middle-to-high-income students (i.e., MD students).

Reflecting broader societal trends (de Brey et al., 2019), there was significant dependence between students' race and social class background in the sample, $\chi^2 = 83.06$, $p < .001$. Specifically, URM students were disproportionately also WK students (92.0%), whereas White and Asian students were more evenly divided between WK students (45.4%) and MD students (54.6%). Moreover, WK

students were evenly divided between URM students (50.4%) and White and Asian students (49.6%), whereas MD students were disproportionately also White and Asian students (93.1%).³ Ultimately, given the overlap between students' race and social class background in this sample, any differences in how race and social class organize interactions should be more difficult to observe. These data therefore provide a conservative test for observing these differences. That is, our analyses may underestimate differences in how race and social class organize interactions, but any differences we do observe are likely to be meaningful. Nevertheless, to disentangle the overlap between students' race and social class background, we conduct additional exploratory analysis and further consider the potential limitations of this overlap in the general discussion.

Students participated at three time points during their first year of college. First, students completed a survey at the beginning of the first term of the academic school year (Time 1). In this survey, they reported demographic information, as well as baseline measures of academic performance (i.e., high school grades) and baseline measures of feelings of inclusion in college. Second, students completed eight daily diary surveys over the course of the first term of the academic year (Time 2). The daily diaries followed methods used in previous daily diary studies (Birditt et al., 2005; Ferguson et al., 2017; Nezlek, 1993). The first four diaries were completed during the first half of the term, and the last four diaries were completed during the second half of the term. Third, students completed a final survey at the end of the academic year (Time 3). This survey included outcome measures assessing feelings of inclusion in college.⁴

The daily diary methods we used to measure meaningful⁵ cross-race interactions were closely adapted from methods used by Trawalter et al. (2012). Following Trawalter et al. (2012), for each of the eight daily diary surveys, students were prompted to report up to five of "the most meaningful" interactions they had within the past 24 hr. After listing relevant individuals using their initials, participants rated their experience of each interaction.

² In this larger study, students were assigned to one of three intervention conditions aimed at improving their academic experiences and outcomes (see Supplemental Materials, Section S1). These intervention conditions did not affect any of the measures explored in the present study. Nevertheless, whenever possible, we entered intervention condition into our models as a control variable. Notably, results did not differ from models that did not control for condition.

³ To a lesser extent, there was also significant overlap between the perceived race and social class background of students' interaction partners. However, the overlap between students' cross-race and cross-class interactions was relatively small. On average, students reported that only 15% of their interactions were both cross-race and cross-class. See the Supplemental Materials, Section S2 for additional details and summary statistics.

⁴ The end-of-year survey contained a broad array of measures of interest to the larger intervention study, including university diversity climate, self-construal, intergroup warmth, respect and comfort, and multiethnic group identification. Our specific focus on measures that captured feelings of inclusion in the present research were theoretically driven by previous research demonstrating the importance of cross-group interactions for these experiences (e.g., Bowman & Park, 2015; Mendoza-Denton & Page-Gould, 2008; Strayhorn, 2008a).

⁵ We focused on meaningful interactions (e.g., substantive, involved, back and forth communication), rather than brief or transactional interactions (i.e., saying hello to someone, buying a product), because the literature suggests that more substantive interactions (e.g., friendships, roommates) are the types of interactions that are most likely to shape students' academic experiences and outcomes (MacInnis & Page-Gould, 2015; Mendoza-Denton & Page-Gould, 2008; Shook & Clay, 2012).

Participants then reported the perceived gender, race, and social class background of each interaction partner. To report the social class background of their interaction partner, students indicated whether their partner, (a) “Does not have college-educated parents and/or is low income,” (b) “Has college-educated parents and is middle income” or (c) “Has college-educated parents and is wealthy.” Lastly, students reported their sense of belonging for each day. We documented a total of 11,460 interactions in the daily diaries.

Measures

Frequency of Interactions

The frequency of interactions was assessed in the daily diaries administered at Time 2. To capture the frequency of cross-race and cross-class interactions, we categorized each interaction as (a) either same-race or cross-race and (b) either same-class or cross-class. Because these classifications relied on students’ self-reports of their partners’ social group memberships, they captured students’ *perceived* same- or cross-race and same- or cross-class interactions. While perceptions of others’ social group memberships can be subject to error, such perceptions play a major role in shaping students’ experiences of their everyday interactions in college (e.g., feelings of threat, acceptance; Crisp & Turner, 2009; Dovidio et al., 2011). Given our focus on students’ everyday interactions in college, it is therefore ecologically valid to use their perceptions of their interaction partners to assess cross-race and cross-class interactions.

To categorize same-race and cross-race interactions, we distinguished between interactions that occurred among White students ($n = 135$), Asian students ($n = 138$), and URM students ($n = 137$). For URM students, *same-race interactions* were those with other URM students; *cross-race interactions* were those with White or Asian students. For Asian students, *same-race interactions* were those with other Asian students and *cross-race interactions* were those with URM or White students. For White students, *same-race interactions* were those with other White students and *cross-race interactions* were those with URM or Asian students. For clarity, Table 1 summarizes our categorization of cross-race interactions. Of the 11,460 interactions, we were able to categorize 11,368 as either same-race or cross-race.

Following the ways in which previous research operationalized students’ social class backgrounds (Townsend et al., 2019; Truong et al., n.d.), same-class or cross-class interactions were categorized using both students’ parental education and household income.⁶ These two indicators have both been shown to meaningfully shape students’ experiences and outcomes in college (Engle & Tinto, 2008; Pascarella et al., 2004). The same criteria were used to classify the social class of participants and their interaction partners. As described earlier, we classified students as coming from working and lower social class backgrounds if they met *at least one* of the following criteria: They were the first in their families to attend college *or* they had low household incomes ($n = 254$). We classified students as coming from middle and higher social class backgrounds if they met *both* of the following criteria: They had at least one parent with a college degree *and* they had middle-to-high household incomes ($n = 162$).

For WK students, *same-class interactions* were those with students who either did not have college-educated parents or who had

low household incomes; *cross-class interactions* were those with students with both a college-educated parent and middle-to-high household incomes. For MD students, *same-class interactions* were those with students with both a college-educated parent and middle-to-high household incomes; *cross-class interactions* were those with students who either did not have college-educated parents or who had low household incomes. Of the 11,460 interactions, we were able to code 11,370 as either same-class or cross-class. For clarity, Table 1 summarizes our categorization of cross-class interactions.

Experience of Interactions

Students’ experiences of interactions were assessed in the daily diaries administered at Time 2. To capture the experience of interactions, we asked students how much threat, satisfaction, and perspective-taking they experienced in each interaction. To capture *threat*, students indicated to what extent they agreed (1 = *strongly disagree*, 7 = *strongly agree*) that “the interaction was stressful” and “the interaction was threatening.” To capture *satisfaction*, students indicated to what extent they agreed that “the interaction went well” and “I felt like we understood each other.” To capture *perspective-taking*, students indicated to what extent they agreed that “I felt empathy for the other person” and “I took the other person’s perspective.” Confirmatory factor analyses supported these categories, factor loadings $>.67$.

Consequences of Interactions

We examined two potential consequences of cross-race and cross-class interactions: Academic performance and feelings of inclusion. Baseline measures of these outcomes were obtained in the beginning-of-year survey administered at Time 1, while the dependent variables of interest were assessed in the daily diaries administered at Time 2 and in the end-of-year survey administered at Time 3.

Academic Performance. We examined students’ GPA scores as objective indicators of their academic performance. To measure baseline academic performance, students reported their high school GPAs in the beginning-of-year survey. Students’ end-of-year GPAs were obtained directly from each university’s registrar’s office at the end of the academic year.

Feelings of Inclusion. We examined students’ feelings of inclusion in their college environment as a potential mediator of the positive effect of cross-race and cross-class interactions on academic performance. Feelings of inclusion were assessed with two related but conceptually distinct constructs: *Sense of belonging* and *social identity threat*.

Sense of belonging captured diffuse feelings of inclusion in the college environment. To measure baseline sense of belonging, in the Time 1 survey, students completed a 15-item scale that assessed the extent to which students generally felt that they belonged at their college ($\alpha = .90$; Walton & Cohen, 2007). For example, students indicated the extent to which they agreed that “[This university] is a place for students like me” and that “I feel like an outsider at

⁶ Consistent with previous research (e.g., Stephens, Townsend, et al., 2015; Stephens et al., 2019, 2014) high and low household income was determined using students’ Pell Grant status. Students who were received Pell Grants were classified as having low income households and students who did not receive Pell Grants were classified as having middle-to-high-income households.

[this university].” Items were on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). To measure belonging as a dependent variable, students completed this measure again at the end of the year (Time 3). In addition, as another measure of belonging as dependent variable, we assessed students’ daily experience of belonging via the eight daily diaries (Time 2). For each day, students indicated whether, overall, they felt like they *belonged* (1) or *did not belong* (0) that day. Responses were averaged such that scores represented the percent of days students reported feeling like they belonged. For example, if a student reported feeling they belonged in four out of the eight daily diaries, her final score would be 0.5, or a feeling of daily belonging 50% of the time and of not belonging 50% of the time. We collapsed general feelings of belonging and daily feelings of belonging into a single variable labeled sense of belonging, $r = .44$.

Social identity threat assessed the extent to which students felt their social backgrounds were included or a source of threat in their college environments. While social identity threat and sense of belonging capture students’ feelings of inclusion in college, social identity threat is more explicitly tied to students’ social group memberships. To measure baseline social identity threat, students completed three items in the beginning-of-year survey (Time 1). To measure social identity threat as a dependent variable, students then completed the same items in the end-of-year survey (Time 3). The three items measuring social identity threat showed poor reliability with each other, $\alpha = .52$. An exploratory factor analysis indicated that one item loaded poorly onto the single factor (i.e., “Students at my college are accepting of people who have diverse backgrounds,” *factor loading* = .11). We subsequently dropped this item and averaged the remaining two items ($r = .62$). These items included: “Professors at my college to make unfair assumptions about me based on my background” and “Other students at my college make unfair assumptions about me based on my background.” Items were on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

Results and Discussion

Frequency of Cross-Race and Cross-Class Interactions

Analytic Approach

To assess the degree to which interactions were organized by race and social class, we focused on the extent to which students’ cross-race and cross-class interactions were proportional to the diversity of their student bodies. That is, we compared the rate of cross-race and cross-class interactions that students *reported* to the rate of interactions that would occur *at chance based on the diversity of the student body* (e.g., Chang et al., 2004). “At-chance” rates of interaction thus served as a useful benchmark for comparison in order to better understand the frequency of cross-race and cross-class interactions.

To conduct these analyses, we computed three scores for each student. First, we computed students’ *at-chance* rate of cross-race and cross-class interaction. This score represented the rate of cross-race/cross-class interactions that would occur at chance for each student given the race/social class diversity of the student body⁷ and the race/social class background of the student. For example, if Sam is a White student at University A, where 43% of the student body is composed of URM or Asian students, then we would expect that,

at chance, 43% of their interactions would be cross-race interactions with these students (*at-chance rate* = .43).

Second, we computed students’ *reported* rate of cross-race and cross-class interaction by taking the ratio of interactions that students reported as cross-race/cross-class to the total number of interactions reported. For example, if eight out of 40 of Sam’s interactions were with URM or Asian students, then 20% of Sam’s interactions were cross-race (*reported rate* = .20).

Third, we computed the *difference* between reported and at-chance rates of cross-race and cross-class interactions for each student. In the case of Sam, their reported rate of cross-race interactions was .20, but their at-chance rate of cross-race interactions was .43. The difference between the two scores is $-.23$, meaning that Sam reported 23% fewer cross-race interactions than would occur at chance.

To analyze difference scores, we used intercept-only regression models to determine if the mean difference between at-chance and reported rates of cross-race and cross-class interactions was significantly different than zero. To compare lower and higher status groups, we entered race (URM vs. Asian vs. White) and social class background (WK vs. MD) into their respective models. This allowed us to first test whether, within each group, the mean difference between at-chance and reported rates of cross-race and cross-class interactions was significantly different from zero. It also allowed us to test whether rates depended on students’ race (i.e., URM vs. Asian vs. White students) or social class background (i.e., WK vs. MD students). For each model, we controlled for students’ gender, university, race (when examining cross-class interactions), and social class background (when examining cross-race interactions).

Cross-Race Interactions

We hypothesized that students would report fewer cross-race interactions than would occur at chance given the racial diversity of their student body (Hypothesis 1). The mean at-chance rate of cross-race interactions was .57, indicating that if students were to interact at random, 57% of their interactions would be cross-race interactions. However, the mean reported rate of cross-race interactions was only .30, indicating that only 30% of students’ interactions were reported as cross-race. Supporting our hypothesis, the intercepts-only regression model revealed that the difference between reported and at-chance rates of cross-race interactions was statistically significant (see Table 2 for statistics). That is, overall, students reported fewer cross-race interactions than would occur at chance in their institutions.

Next, we sought to determine whether patterns of cross-race interaction depended on students’ race. As illustrated in Figure 1, the difference between at-chance and reported rates of cross-race interactions was significant for all three groups (see Table 2 for statistics). While URM, White, and Asian students all reported fewer cross-race interactions than would occur at chance, this difference was greater for URM students (46% difference) compared to Asian students (27% difference), $b = .19$, $t = 6.05$, $p < .001$, 95% CI [.13, .25], and White students (16% difference), $b = .30$, $t = 8.69$, $p < .001$, 95% CI [.23, .36]. This difference was also greater

⁷ See the Supplemental Materials, Section S3 for full breakdown of race and social class diversity at each university.

Table 2
Difference Between At-Chance and Reported Rates of Cross-Race and Cross-Class Interactions

Interaction type	Difference score	<i>t</i> -value	95% CI
Cross-race interactions			
Total	-.27	-18.88***	[-.30, -.24]
URM students	-.46 ^a	-18.14***	[-.50, -.41]
Asian students	-.27 ^b	-11.58***	[-.31, -.22]
White students	-.16 ^c	-7.68***	[-.20, -.12]
Cross-class interactions			
Total	-.15	-10.91***	[-.18, -.12]
WK students	-.08 ^a	-4.93***	[-.11, -.05]
MD students	-.27 ^b	-12.41***	[-.31, -.23]

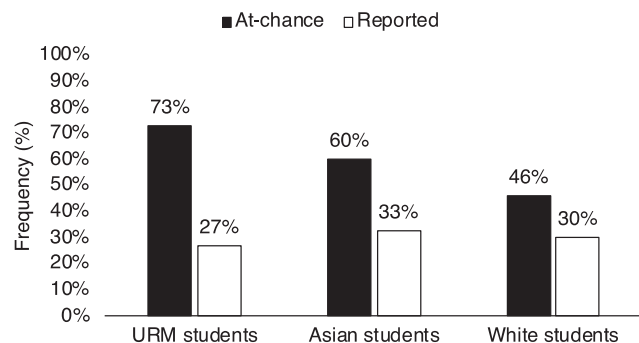
Note. Difference scores were calculated by subtracting at-chance rates of cross-race/cross-class interaction from reported rates of interaction. Significant differences between the subgroups are indicated by different superscripted letters. URM = underrepresented racial minority; WK = working and lower social class background; MD = middle and higher social class background.
*** $p < .001$.

for Asian students compared to White students, $b = .11$, $t = 3.28$, $p = .001$, 95% CI [.04, .17].⁸

Cross-Class Interactions

We hypothesized that social class would organize college students' interactions in a manner similar to race. Specifically, we hypothesized that students would report fewer cross-class interactions than would occur at chance given the social class diversity of their student body (Hypothesis 4). The mean at-chance rate of cross-class interactions was .56, indicating that if students were to interact at random, 56% of their interactions would be cross-class interactions. However, the mean reported rate of cross-class interactions was .41, indicating that only 41% of students' interactions were cross-class. Supporting our hypothesis, the intercepts-only regression model revealed that the difference between reported and at-chance rates of cross-class interactions was statistically significant (see Table 2 for statistics). Demonstrating a pattern similar to race, students overall reported fewer cross-class interactions than would occur at chance.

Figure 1
At-Chance Versus Reported Rates of Cross-Race Interactions for URM, Asian, and White Students



Note. The difference between at-chance and reported rates was significant for all three groups. URM = underrepresented racial minority.

Next, we sought to determine whether patterns of cross-class interaction depended on students' specific social class background. As illustrated in Figure 2, the difference between at-chance and reported rates of cross-class interactions was significant for both groups (see Table 2 for statistics). Although both WK and MD students reported fewer cross-class interactions than would occur at chance, this difference was far greater for MD students (27% difference) compared to WK students (8% difference), $b = .19$, $t = 6.88$, $p < .001$, 95% CI [.13, .24].⁹

Overall, we found that all students—regardless of their own race or social class background—reported fewer cross-race and cross-class interactions than would occur at chance given the diversity of their student body. Students specifically reported rates of cross-race interactions that were 27% lower than would occur at chance, and rates of cross-class interactions that were 15% lower than would occur at chance.

Although race and social class organized interactions in similar ways (i.e., fewer cross-group interactions than would occur at chance based on diversity of student bodies), our subgroup analysis revealed one way in which they diverged. For cross-race interactions, members of lower status groups (i.e., URM students) reported fewer cross-race interactions than would occur at chance (46% fewer) compared to members of higher status groups (i.e., Asian and White students; 27% and 16% fewer, respectively). This pattern was reversed for social class background, in which members of the higher status group (i.e., MD students) reported fewer cross-class interactions than would occur at chance (27% fewer) compared to members of the lower status group (i.e., WK students; 8% fewer). These results could reflect meaningful differences in how status (in terms of race vs. social class) organizes students' interactions. We discuss these differences further in the general discussion.

Experience of Cross-Race and Cross-Class Interactions

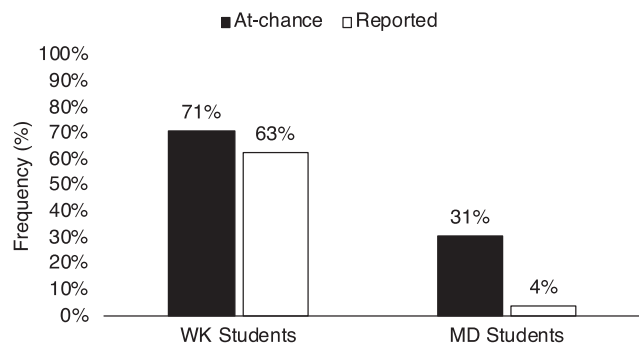
Analytic Approach

To examine the experience of students' cross-race and cross-class interactions, we compared students' experiences of threat, satisfaction, and perspective-taking in cross-race/cross-class interactions versus same-race/same-class interactions. To do so, we calculated mean ratings of threat, satisfaction, and perspective-taking for cross-race/cross-class interactions and same-race/same-class interactions. We then utilized linear mixed models in which average ratings of threat, satisfaction, and perspective-taking were regressed on the fixed effect of interaction-type (cross-race vs. same-race; cross-class vs. same-class). To examine whether the experience of cross-race and cross-class interactions depended on students' own race or social class background, in the second series of linear mixed

⁸ We examined university as a potential moderator of these effects and found that the frequency of cross-race interactions differed across the two universities. In particular, the difference between at-chance and reported cross-race interactions was significantly larger at the more racially diverse university compared to the less racially diverse university. See the [Supplemental Materials, Section S4](#) for full details of these analyses.

⁹ As with their racial diversity, we examined university as a potential moderator of these effects and found that the frequency of cross-class interactions differed across the two universities. In particular, the difference between at-chance and reported rates of cross-class interactions was significantly larger at the more socioeconomically diverse university. See the [Supplemental Materials, Section S4](#) for full details.

Figure 2
At-Chance Versus Reported Rates of Cross-Class Interactions for WK and MD students



Note. The difference between at-chance and reported rates was significant for both WK and MD students. WK = working and lower social class background. MD = middle and higher social class background.

models we included the interaction between students' race/social class background and interaction-type as a fixed effect. For all models, we controlled for students' race, social class background, gender, and university; we assigned the intercepts of subjects as random effects to account for repeated data points from each participant (e.g., both same-race and cross-race ratings). Degrees of freedom were estimated using Satterthwaite's approximation method.

Experience of Cross-Race Interactions

We hypothesized that students would experience more threat, less satisfaction, and less perspective-taking in cross-race interactions compared to same-race interactions (Hypothesis 2). As hypothesized, we found a main effect of interaction-type on satisfaction, $F(1, 372.29) = 8.63, p = .004$, and perspective-taking, $F(1, 367.64) = 10.13, p = .002$, such that students reported less satisfaction and less perspective-taking in their cross-race interactions ($M_{satisfaction} = 5.66; M_{perspective} = 5.39$) compared to their same-race interactions ($M_{satisfaction} = 5.79; M_{perspective} = 5.54$). Results did not reveal an effect of interaction-type (cross-race vs. same-race) on threat, $p = .17$. Furthermore, there were no significant interactions between interaction-type and students' race for any of the ratings, p 's $> .91$, suggesting that these findings were consistent for URM, Asian, and White students.¹⁰

Overall, these results generally supported our hypotheses. Participants experienced less satisfaction and perspective-taking in cross-race versus same-race interactions. However, counter to our hypotheses, we did not find any differences in students' experience of threat in their cross-race versus same-race interactions. This may be due to the fact that students reported interactions that were largely nonthreatening (i.e., the median response to threat items indicated that students "strongly disagreed" that their interactions were threatening). It is possible that, in recalling meaningful day-to-day interactions, students may have drawn on experiences with those with whom they were relatively more familiar and comfortable than the typical types of encounters studied in research on intergroup interactions (e.g., interactions with strangers).

Experience of Cross-Class Interactions

We hypothesized that students would experience more threat, less satisfaction, and less perspective-taking in cross-class interactions compared to same-class interactions (Hypothesis 5). As with race, there were significant main effects of interaction-type on both satisfaction, $F(1, 359.84) = 4.80, p = .03$, and perspective-taking, $F(1, 336.67) = 3.00, p = .08$, such that students reported less satisfaction and perspective-taking in cross-class interactions ($M_{satisfaction} = 5.71; M_{perspective} = 5.53$) compared to their same-class interactions ($M_{satisfaction} = 5.84; M_{perspective} = 5.63$). There were no significant interactions between interaction-type and students' social class background on satisfaction or perspective-taking, p 's $> .49$, suggesting that both WK and MD students reported less satisfaction and perspective-taking in cross-class interactions compared to same-class interactions.

As with race, results did not reveal a main effect of interaction-type (cross-class vs. same-class) on threat, $p = .48$. However, there was a significant interaction between interaction-type and students' social class background on ratings of threat, $F(1, 352.72) = 6.49, p = .01$. Simple effects analysis revealed that MD students experienced more threat in their cross-class versus same-class interactions, $b = -.17, t = -1.98, p = .048, 95\% \text{ CI } [-.34, -.00]$, but the same was not evident for WK students, $p = .11$.¹¹

These results provide mixed support for our hypotheses. As expected, students experienced less satisfaction and less perspective-taking in cross-class interactions than in same-class interactions. However, only MD students experienced more threat in cross-class versus same-class interactions. In fact, although nonsignificant, WK students showed the opposite trend, in which they experienced less threat in cross-class interactions than in same-class interactions. This finding is consistent with previous literature which suggests that majority groups experience intergroup interactions more negatively than minority groups (Toosi et al., 2012).

Overall, students' experience of cross-class (vs. same-class) interactions was similar to their experience of cross-race (vs. same-race) interactions. Both cross-race and cross-class interactions were rated as less satisfying and characterized by less perspective-taking than same-race and same-class interactions. Furthermore, with the exception of MD students who reported more threat in cross-class versus same-class interactions, students did not experience more threat in cross-race and cross-class interactions compared to same-race and same-class ones.

Consequences of Cross-Race and Cross-Class Interactions for Academic Performance

Analytic Approach

To examine the consequences of cross-race and cross-class interactions for academic performance, we regressed students' end-of-year GPA on their reported rates of cross-race and cross-class interactions. We calculated rates of cross-race and cross-class

¹⁰ See the Supplemental Materials, Section S5 for means, standard deviations, and simple effects of interaction-type (cross-race vs. same-race) for each race subgroup.

¹¹ See the Supplemental Materials, Section S6 for means, standard deviations, and simple effects of interaction-type (cross-class vs. same-class) for each social class subgroup.

interactions by taking the ratio of cross-race/cross-class interactions to the total number of interactions (see analytic approach in Frequency of Cross-Race and Cross-Class Interactions above). To examine whether the consequences of cross-race and cross-class interactions depended on students' own race or social class background, in the second series of regressions, we included the interaction between students' race/social class background and their reported rates of cross-race and cross-class interactions. To help to ensure that we were capturing the causal consequences of cross-race and cross-class interactions, we controlled for students' baseline academic performance (i.e., high school GPA). This helped us rule out the alternative explanation that academic benefits occurred because higher performing students were more likely to interact across race and social class. We controlled for students' race, social class background, gender, and university.

Cross-Race Interactions and Academic Performance

We hypothesized that cross-race interactions would improve students' academic performance (Hypothesis 3). We did not find a significant main effect of cross-race interactions on GPA, $F(1, 395) = 1.89, p = .17$. However, this null effect was qualified by a significant interaction with students' race, indicating that the effect of cross-race interactions on GPA differed among URM, Asian, and White students, $F(2, 392) = 3.42, p = .03$. To interpret this interaction, we examined the simple effect of cross-race interactions on GPA for each race group. These analyses revealed a positive effect of cross-race interactions on GPA only for URM students, but not for White or Asian students. Specifically, for URM students, rates of cross-race interactions during the first term of the year predicted higher GPAs at the end of the year (see Table 3 for statistics). The positive effect on GPA was evident even when controlling for baseline academic performance (i.e., students' high school GPAs), suggesting that this academic benefit was not driven by higher performing URM students having more cross-race interactions.

Cross-Class Interactions and Academic Performance

As with cross-race interactions, we hypothesized that cross-class interactions would improve students' academic performance (Hypothesis 6). Supporting this hypothesis, we found a significant main effect of cross-class interactions on GPA, such that higher rates

of cross-class interactions predicted higher GPAs at the end of the academic year, $F(1, 395) = 6.05, p = .01$.

There was not a significant interaction between students' social class background and rate of cross-class interactions on GPA, $F(1, 394) = 1.42, p = .23$. However, simple slopes analysis revealed that the positive effect of cross-class interactions on GPA was primarily driven by WK students. That is, for WK students, higher rates of cross-class interactions reported during the first term of the year predicted higher GPAs at the end of the year. However, for MD students, cross-class interactions did not predict GPA (see Table 3 for statistics). Therefore, although the positive effect of cross-class interactions on GPA did not significantly differ between WK and MD students, this effect only reached significance for WK students. Furthermore, this positive effect on GPA was evident even after controlling for students' baseline academic performance (i.e., high school GPAs), suggesting that this academic benefit was not driven by higher performing WK students having more cross-class interactions.

Together these results illustrate that both cross-race and cross-class interactions had positive consequences for academic performance, although students from lower status groups (i.e., URM and WK students) seemed to drive this effect. Cross-race and cross-class interactions did not have significant effects on the academic performance of students from White, Asian, or MD groups.

Consequences of Cross-Race and Cross-Class Interactions for Feelings of Inclusion

Analytic Approach

To examine the consequences of cross-race and cross-class interactions for feelings of inclusion in college, we regressed the sense of belonging and social identity threat on rates of cross-race and cross-class interactions. To examine whether the consequences of cross-race and cross-class interactions depended on students' own race or social class background, in the second series of regressions, we included the interaction between students' race/social class background and rates of cross-race/cross-class interactions. All analyses utilized linear regression models. To help to ensure that we were capturing the causal consequences of cross-race and cross-class interactions, we controlled for students' baseline levels of belonging and social identity threat at the beginning of the school year. This helped us rule out the alternative explanation that benefits for students' inclusion occurred because students who already felt included in college were more likely to interact across race and social class. We controlled for students' race, social class background, gender, and university.

Cross-Race Interactions and Feelings of Inclusion

We hypothesized that cross-race interactions would increase students' feelings of inclusion in college as measured by sense of belonging and social identity threat (Hypothesis 3). We did not find a significant main effect of cross-race interactions on the sense of belonging, $F(1, 398) = 1.15, p = .28$, or social identity threat, $F(1, 398) = 1.58, p = .21$.

However, the effects of cross-race interactions on both sense of belonging and social identity threat were qualified by interactions with students' race, $F(2, 396) = 2.31, p = .09$ and $F(2, 396) = 3.13, p = .04$, respectively. Simple effects analyses indicated that cross-race interactions only had a positive effect on feelings of

Table 3

Rates of Cross-Race or Cross-Class Interactions Predicting GPA

Interaction type	<i>B</i>	<i>SE</i>	<i>T</i>	95% CI	<i>R</i> ²
Cross-race					
URM students	.23	.08	2.88**	[.07, .39]	.05
Asian students	-.04	.07	-.58	[-.19, .10]	.00
White students	.01	.08	0.13	[-.15, .18]	.00
Cross-class					
WK students	.19	.07	2.73**	[.05, .33]	.04
MD students	-.04	.18	-.24	[-.41, .32]	.00

Note. GPA = grade-point averages; URM = underrepresented racial minority; WK = working and lower social class background; MD = middle and higher social class background.

** .001 < *p* < .01.

inclusion for URM students. Specifically, for URM students, higher rates of cross-race interactions significantly predicted greater sense of belonging and less social identity threat (see Tables 4 and 5 for statistics). However, for both White and Asian students, cross-race interactions had no effects on feelings of inclusion.

As with academic performance, cross-race interactions had significant positive effects on feelings of inclusion only for URM students (i.e., URM students). This was evident both for students' more diffuse sense of belonging, as well as their experiences of social identity threat that were more explicitly tied to their social group memberships. Furthermore, these effects were evident even after controlling for students' baseline belonging and social identity threat at the beginning of the academic year, suggesting that this benefit for inclusion did not occur because URM students who were high in belonging and low in social identity threat at the beginning of the year were more likely to engage in cross-race interactions.

Cross-Class Interactions and Feelings of Inclusion

We hypothesized that cross-class interactions would also increase students' feelings of inclusion in college, as measured by sense of belonging and social identity threat (Hypothesis 6). There were no main effects of cross-class interactions on either sense of belonging, $F(1, 398) = 2.60, p = .11$, or social identity threat, $F(1, 397) = .05, p = .83$. However, there was a significant interaction between cross-class interactions and students' social class background on the sense of belonging, $F(1, 397) = 7.97, p = .005$. Simple effects analysis revealed that, for WK students, higher rates of cross-class interactions significantly predicted greater sense of belonging. In contrast, for MD students, cross-class interactions predicted lower sense of belonging (see Table 4 for statistics). The interaction between cross-class interactions and students' social class background on social identity threat was not significant, $F(1, 396) = .31, p = .58$.

Overall, the effects of cross-class interactions on feelings of inclusion were similar to those of cross-race interactions. Specifically, as was the case for cross-race interactions, higher reported rates of cross-class interactions predicted greater sense of belonging for students from lower status groups (i.e., WK students). This effect was evident even after controlling for students' baseline sense of belonging at the beginning of the academic year, suggesting that the benefit on inclusion did not occur because WK students who were already high in sense of belonging at the beginning of the year were more likely to engage in cross-class interactions. However, unlike

Table 4

Rates of Cross-Race or Cross-Class Interactions Predicting Sense of Belonging

Interaction type	<i>B</i>	<i>SE</i>	<i>T</i>	95% CI	<i>R</i> ²
Cross-race					
URM students	.17	.07	2.39*	[.03, .31]	.03
Asian students	-.00	.06	-.07	[-.13, .12]	.00
White students	-.03	.07	-.45	[-.18, .11]	.00
Cross-class					
WK students	.16	.06	2.59**	[.04, .28]	0.03
MD students	-.32	.16	-2.05*	[-.64, -.01]	0.10

Note. URM = underrepresented racial minority; WK = working and lower social class background; MD = middle and higher social class background. * .01 < *p* < .05. ** .001 < *p* < .01.

Table 5

Cross-Race or Cross-Class Interactions Predicting Social Identity Threat

Interaction type	<i>B</i>	<i>SE</i>	<i>T</i>	95% CI	<i>R</i> ²
Cross-race					
URM students	-0.22	0.08	-2.67**	[-.38, -.06]	0.05
Asian students	-0.04	0.08	-.55	[-.05, .29]	0.00
White students	0.12	0.08	1.40	[-.19, .11]	0.01
Cross-class					
WK students	-.00	0.07	-0.01	[-.14, .14]	0.00
MD students	0.11	0.19	0.59	[-.26, .48]	0.01

Note. URM = underrepresented racial minority; WK = working and lower social class background; MD = middle and higher social class background. ** .001 < *p* < .01.

cross-race interactions, cross-class interactions did not predict less social identity threat for WK students. As social identity threat captures feelings of inclusion that are tied specifically to one's social group memberships, this finding suggests that social class is a less salient social group membership or identity for WK students compared to URM students. That is, while both WK and URM students may be likely to question their compatibility or belonging with their college, WK students may be less likely to tie this uncertainty to their specific social class background than URM students are to their specific racial group.

Additionally, cross-class interactions predicted lower sense of belonging for MD students. Given that MD students also experienced more threat in their cross-class interactions, this finding suggests that cross-class interactions are particularly challenging for MD students. We consider the implications of these results more in the general discussion.

Additional Analyses: Controlling for the Experience of Cross-Race and Cross-Class Interactions

For both cross-race and cross-class interactions, we conducted exploratory analyses to determine whether the benefits of these interactions depended on students experiencing them as relatively positive (i.e., low in threat, high in satisfaction, and perspective-taking). However, we did not find any evidence that the positive effects of students' cross-race and cross-class on GPA and feelings of inclusion were moderated by how much threat, satisfaction, or perspective-taking they experienced in these interactions (see Supplemental Materials, Section S7). In addition, threat, satisfaction, and perspective-taking in cross-race and cross-class interactions showed either nonsignificant or inconsistent main effects on GPA and feelings of inclusion. This suggests that cross-race and cross-class interactions benefitted students' academic performance and feelings of inclusion regardless of how positively or negatively students experienced these interactions.

Feelings of Inclusion Mediate the Effects of Cross-Race, Cross-Class Interactions on Academic Performance

Analytic Approach

We hypothesized that cross-race and cross-class interactions improve GPA by increasing students' feelings of inclusion.

To examine the role of feelings of inclusion in the positive impact of cross-race and cross-class interactions on students' GPA, we conducted two moderated mediation analyses. In each model, the positive effects of cross-race and cross-class interactions on GPA were mediated by greater sense of belonging and less social identity threat. Given that we only found significant effects of cross-race and cross-class interactions on GPA for URM and WK students, we expected that these mediation models would only be relevant to these students and not for White, Asian, or MD students. We consequently included moderating effects of race (URM vs. White/Asian) and social class (WK vs. MD) to their respective cross-race and cross-class mediation models. As informed by our previous findings, we included moderating effects on the "a" paths of the mediation models (i.e., cross-race/cross-class interactions predicting sense of belonging and social identity threat) and the "c" paths of the mediation models (i.e., cross-class interactions predicting GPA). All moderated mediation models were analyzed using the PROCESS macro for SPSS with 5,000 bootstrap samples (Hayes, 2013, model 8). In each model, we controlled for baseline academic performance, baseline sense of belonging, and baseline social identity threat. We also controlled for students' gender, race, social class background, and university.

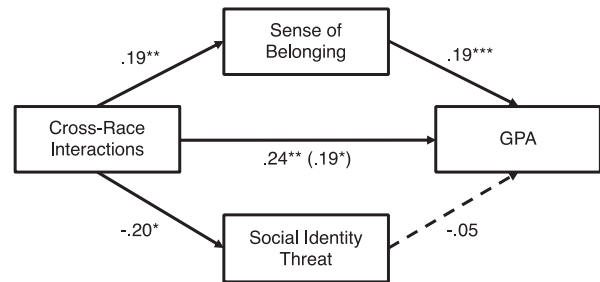
Feelings of Inclusion Mediate the Effect of Cross-Race Interactions on GPA

We hypothesized that feelings of inclusion would mediate the effect of cross-race interactions on academic performance (Hypothesis 3). Given our previous findings, we expected this mediation would only be evident for URM students, but not for White or Asian students. The index of moderated mediation for the sense of belonging, $index = .05$, 95% CI [.01, .10] confirmed our expectations that the mediation models significantly differed between URM students and their White and Asian peers.¹² As cross-race interactions only had a direct effect on GPA for URM students, we consequently only examined the mediation model for URM students.

Figure 3 shows the mediation model for URM students. Our analysis revealed that, for URM students, cross-race interactions predicted greater sense of belonging, which in turn predicted higher GPA (see Table 6 for statistics). While cross-race interactions also predicted less social identity threat for URM students, social identity threat did not significantly predict GPA. Of key importance, the indirect effect of sense of belonging on GPA was significant, $indirect\ effect = .04$, 95% CI [.01, .08]. However, the indirect effect of social identity threat did not reach significance, $indirect\ effect = .01$, 95% CI [-.006, .04]. When accounting for these indirect effects, the direct effect of cross-race interactions on GPA was significantly reduced but not completely eliminated. This indicates that feelings of inclusion only partially mediated the effect of cross-race interactions on GPA, accounting for 20% of the positive impact of cross-race interactions on students' GPA. These results demonstrate that cross-race interactions improved URM students' academic performance, in part, by increasing their feelings of inclusion. Furthermore, these results were evident even after controlling for baseline GPA, baseline sense of belonging, and baseline social identity threat, providing some support for the causal links between cross-race interactions, feelings of inclusion, and GPA.

Figure 3

Feelings of Inclusion (i.e., Sense of Belonging, Social Identity Threat) Partially Mediate the Effect of Cross-Race Interactions on GPA for URM Students



Note. GPA = grade-point averages; URM = underrepresented racial minority.

Feelings of Inclusion Mediate the Effect of Cross-Class Interactions on GPA

We hypothesized that feelings of inclusion would also mediate the effect of cross-class interactions on academic performance (Hypothesis 6). Given our previous findings, we expected this mediation would only be evident for WK students, but not for MD students. The indices of moderated mediation for the sense of belonging, $index = .10$, 95% CI [.04, .21], confirmed our expectations that the mediation models significantly differed between WK students and their MD peers. As cross-class interactions only had a direct effect on GPA for WK students, we consequently only examined the mediation model for WK students.

Figure 4 shows the mediation model for WK students. Our analysis revealed that, for WK students, cross-class interactions predicted greater sense of belonging, which in turn predicted higher GPA (see Table 7 for statistics). As we previously found, cross-class interactions did not predict social identity threat, although there was a marginally significant effect of social identity threat on GPA. Of key importance, the indirect effect of sense of belonging on GPA was significant, $indirect\ effect = .03$, 95% CI [.01, .08], although the indirect effect of social identity threat was not, $indirect\ effect = .01$, 95% CI [-.01, .04]. When accounting for these indirect effects, the direct effect of cross-class interactions on GPA was significantly reduced but not completely eliminated. This indicates that feelings of inclusion only partially mediated the effect of cross-class interactions on GPA, accounting for 15% of the positive impact of cross-class interactions on students' GPA. As with cross-race interactions, these results demonstrate that cross-class interactions improved WK students' academic performance, in part, by increasing their feelings of inclusion.

Together, these findings provide support for our hypotheses that cross-race and cross-class interactions improve students' academic performance by increasing feelings of inclusion. Specifically, cross-race and cross-class interactions improved both URM and WK students' GPAs, in part, by increasing their sense of belonging in college.

¹² The index of moderated mediation for social identity threat was not significant, $index = .01$, 95% CI [-.01, .05].

Table 6
Feelings of Inclusion Mediate the Effects of Cross-Race Interactions on GPA for URM Students

Mediation path	<i>B</i>	<i>SE</i>	<i>t</i>	95% CI
c path				
GPA ~ cross-race interactions	.24	.08	2.89**	[.08, .40]
a path				
Sense of belonging ~ cross-race interactions	.19	.07	2.67**	[.05, .33]
Social identity threat ~ cross-race interactions	-.20	.08	-2.34*	[-.36, -.03]
b path				
GPA ~ sense of belonging	.19	.06	3.44***	[.08, .31]
GPA ~ social identity threat	-.05	.05	-1.05	[-.15, .04]
c' path				
GPA ~ cross-race interactions	.19	.08	2.31*	[.03, .35]

Note. GPA = grade-point averages; URM = underrepresented racial minority.

*.01 < *p* < .05. ** .001 < *p* < .01. *** *p* < .001.

Exploratory Analyses

To further examine the links between race and social class, we conducted two sets of exploratory analyses. First, to explore the intersectional effects of membership in two social groups afforded relatively lower status in higher education, we examined the frequency, experience, and consequences of cross-class interactions for URM, WK students compared to their White and Asian, WK peers. Second, to help disentangle the particular effects of cross-race versus cross-class interactions, we examined the experience and consequences of (a) cross-race interactions that occurred between individuals from the same social class background (i.e., with same-class partners) and (b) cross-class interactions that occurred between individuals of the same race (i.e., with same-race partners).

Doubly Disadvantaged Students: Exploring the Intersectional Effects of Race and Social Class

Throughout our analyses, we separately examined how students' race and social class backgrounds organize their cross-race and cross-class interactions. Doing so allowed us to explore the degree to which social class functions in the same way as race in shaping the frequency, experience, and consequences of interactions. However, considering them separately did not allow us to address the question

of how the intersection of race and class might function together to organize interactions. The question of how race and social class interact is important given that (a) URM students are disproportionately from working and lower social class backgrounds and (b) these students are potentially "doubly disadvantaged" given their membership in two social groups that are afforded relatively lower status in higher education (Alon, 2007). To examine the intersectionality between race and social class, we conducted exploratory analyses comparing students from two lower status social groups (i.e., doubly disadvantaged students) to students from only a single lower status group.

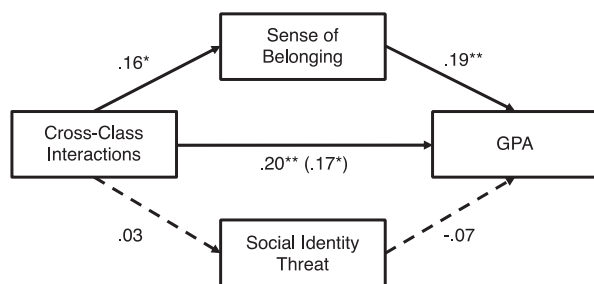
The specific comparisons we could make were limited. The sample contained an adequate number of doubly disadvantaged students (i.e., URM, WK students; *n* = 126) and students who were solely social class-disadvantaged (i.e., White and Asian, WK students; *n* = 128). However, the sample had only a small number of students who were solely race-disadvantaged (i.e., URM, MD students; *n* = 11). Therefore, we were only able to examine differences in the frequency, experience, and consequences of *cross-class interactions* for students who were doubly disadvantaged versus cross-class interactions for those who were solely social class disadvantaged. We could not conduct the equivalent analysis for *cross-race* interactions; that is, examine differences in cross-race interactions for students who were doubly disadvantaged versus cross-race interactions for those who were solely race-disadvantaged students.

Our exploratory analysis asked whether the frequency, experience, and consequences of cross-class interactions differed between students who were doubly disadvantaged (i.e., URM, WK students) and those who were solely social class disadvantaged (i.e., White and Asian, WK students). The only significant difference that emerged between students was in the frequency of cross-class interactions. URM, WK students reported significantly fewer cross-class interactions than White and Asian, WK students, *p*'s < .001. In fact, while reported rates of cross-class interactions were 26% lower than would occur at chance for URM, WK students, rates of cross-class interactions did not differ from chance for White and Asian, WK students. There were no significant differences between URM, WK students and White and Asian, WK students in the experience or consequences of cross-class interactions.

Overall, these exploratory analyses suggest that cross-class interactions were equally beneficial for doubly disadvantaged and solely

Figure 4

Feelings of Inclusion (i.e., Sense of Belonging, Social Identity Threat) Partially Mediate the Effect of Cross-Class Interactions on GPA for WK Students



Note. GPA = grade-point averages; WK = working and lower social class background.

Table 7
Feelings of Inclusion Mediate the Effects of Cross-Class Interactions on GPA for WK Students

Mediation path	<i>B</i>	<i>SE</i>	<i>t</i>	95% CI
c path				
GPA ~ cross-class interactions	.20	.07	2.76**	[.06, .34]
a path				
Sense of belonging ~ cross-class interactions	.16	.06	2.62**	[.04, .29]
Social identity threat ~ cross-class interactions	.03	.07	.37	[-.12, .17]
b path				
GPA ~ sense of belonging	.19	.06	3.21**	[.08, .30]
GPA ~ social identity threat	-.07	.05	-1.43	[-.17, .03]
c' path				
GPA ~ cross-class interactions	.17	.07	2.35*	[.03, .31]

Note. GPA = grade-point averages; WK = students from working and lower social class backgrounds.

*.01 < *p* < .05. ** .001 < *p* < .01.

class-disadvantaged students, but that doubly disadvantaged students were far less likely to engage in them. These findings suggest that, for doubly disadvantaged students, barriers to cross-class interactions may be tied to the fact that these interactions are also likely to be cross-race.

Disentangling Cross-Race and Cross-Class Interactions

As described earlier (see Methods), there was significant overlap between students' race and social class background in the sample. Although we control for race and social class background in our analyses, the overlap between the two introduces potential confounds and may lead us to underestimate the differences between cross-race and cross-class interactions. To help disentangle cross-race and 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.¹³

We briefly summarize these findings here, but a full description of the results can be found in the [Supplemental Materials, Section S8](#). Overall, these findings largely supported our initial analyses. Specifically, for all students, cross-race interactions with same-class partners were still experienced as less satisfying than same-race interactions with same-class partners; furthermore, for URM students, cross-race interactions with same-class partners still predicted lower social identity threat and higher GPAs. At the same time, for MD students, cross-class interactions with same-race partners were still experienced as more threatening than same-class interactions with same-race partners; furthermore, for WK students, cross-class interactions with same-race partners still predicted a greater sense of belonging and higher GPAs.

Together, these findings provide additional support that cross-race and cross-class interactions differ from each other in higher education settings. First, these findings emphasize that individuals from higher status social class backgrounds experience cross-class interactions as more threatening than same-class interactions, while the same is not evident for individuals from higher status

racial groups engaging in cross-race interactions. Second, these findings provide additional evidence that cross-race interactions increase feelings of inclusion by reducing social identity threat for URM students, while cross-class interactions increase feelings of inclusion by increasing the general sense of belonging for WK students.

General Discussion

More than ever before, institutions of higher education are seeking to increase the racial and social class diversity of their student bodies. Given these efforts, the present research asked (a) how frequently do intergroup interactions occur across the lines of race and social class, and to what extent do these interactions reflect the diversity of a setting? and (b) when these cross-race and cross-class interactions occur, how do individuals experience them and what consequences do they have for their outcomes in these settings? Addressing these questions, the present study leveraged an extensive longitudinal design and daily diary methods to examine the frequency, experience, and consequences of meaningful, real-world cross-race and cross-class interactions in higher education institutions.

Together, our results show that race and social class persistently organize interactions. College students at two different institutions reported fewer cross-race and cross-class interactions than would occur at chance given the diversity of their student bodies. Furthermore, these students reported less satisfaction and less perspective-taking in their cross-race and cross-class interactions compared to their same-race and same-class interactions, respectively. Despite these experiential barriers, cross-race and cross-class interactions nevertheless improved the academic performance of students from historically marginalized and underrepresented social groups, that is, URM and students from working and lower social class backgrounds. They did so, in part, by increasing these students' feelings of inclusion in college.

¹³ We could not replicate the analysis examining the frequency of cross-race and cross-class interactions, as universities do not provide the intersectional demographic data necessary to calculate expected rates of cross-race/same-class or cross-class/same-race interactions.

Theoretical Contributions

How Frequently Do People Interact Across Social Class?

Critically, the present research is the first to examine the frequency and consequences of cross-class interactions in real-world, social class-diverse settings. Previous research has examined cross-class interactions between strangers in highly controlled lab settings (Côté et al., 2017; Truong et al., n.d.) and cross-class interactions in spaces that largely lack social class diversity (Smith et al., 2014). However, prior research did not answer the question of whether and to what extent people have meaningful interactions across social class when they have ample opportunity to do so. We find that students from both relatively lower and higher social class backgrounds interact across social class less frequently than would occur at chance given the social class diversity in their student bodies. This disparity was starker for students from middle and higher social class backgrounds, who reported only 4% of their interactions were across class (compared to the 31% expected at chance). Ultimately, our findings suggest that even though social class background is less visible, salient, and institutionally recognized than other social group identities (e.g., race), it nevertheless powerfully influences with whom people interact.

How Do Cross-Class Interactions Differ From Cross-Race Interactions?

The present research provides the first analysis of the frequency, experience, and consequences of both cross-race and cross-class interactions, and in doing so, highlights some potential ways in which these interactions can differ. Such insight is important given that our understanding of intergroup interactions is largely informed by research on cross-race interactions. While the current results should be interpreted with caution given the overlap between race and social class in our sample, our findings point to two differences between cross-race and cross-class interactions. These differences suggest that although race and social class may share certain features (e.g., conferring status and one's social rank relative to others), they are social groups which are likely to afford distinct experiences and consequences.

The first way that cross-race and cross-class interactions differed was in their impact on members of higher status groups. That is, students from *higher status social class backgrounds* (i.e., middle and higher social class backgrounds) had more negative intergroup outcomes than students from *higher status racial groups* (i.e., White and Asian students). For example, students from middle and higher social class backgrounds reported far fewer cross-class interactions compared to their peers from working and lower social class backgrounds; experienced more threat in their cross-class versus same-class interactions; and experienced less belonging as they interacted more across class. In comparison, White and Asian students showed more positive or neutral intergroup outcomes. For example, White and Asian students reported *more* cross-race interactions compared to their URM peers; experienced equally low levels of threat in cross-race and same-race interactions; and did not experience less belonging as they interacted more across race. These differences introduce the possibility that different mechanisms may be responsible for shaping the frequency with which people participate in cross-race versus cross-class interactions. For example,

if their cross-class interactions are more threatening than their same-class interactions, students from middle and higher social class backgrounds may be more likely to actively avoid cross-class interactions than White and Asian students are to avoid cross-race interactions. Alternatively, students from middle and higher social class backgrounds may be more likely to select into activities that do not afford them opportunities for cross-class interactions than White and Asian students are to select into activities that do not afford opportunities for cross-race interactions.

The second way that cross-race and cross-class interactions differed was in their impact on members of lower status groups. Specifically, cross-race and cross-class interactions had different consequences for these students' feelings of inclusion. We found that both cross-race and cross-class interactions increased the sense of belonging for URM students and students from working and lower social class backgrounds, respectively. However, cross-race interactions also decreased URM students' social identity threat, while cross-class interactions had no impact on social identity threat for students from working and lower social class backgrounds. Though conceptually linked, social identity threat is an experience more directly tied to an identity or social group membership (e.g., "Other students at my college make unfair assumptions about me based on my background"), whereas the sense of belonging is a more diffuse experience that need not be tied to a particular identity or social group membership (e.g., "I feel like an outsider . . ."). These divergent patterns of results suggest that race may play a more salient role in shaping how members of lower status race groups make sense of and respond to their intergroup interactions. For example, URM students may be especially likely to attribute feelings of exclusion to their racial groups, whereas students from working and lower social class backgrounds may be less likely to attribute these experiences to their social class backgrounds.

When Are Intergroup Interactions Beneficial?

The present research demonstrates that both cross-race and cross-class interactions can be highly beneficial for individuals. While previous research has demonstrated the benefits of cross-race interactions, this work is the first to show the positive consequences of *cross-class* interactions and the first to show the benefits of both cross-race and cross-class interactions for objective academic performance (i.e., GPA). This work also provides important insight into the extent to which the benefits of intergroup interactions depend on (a) the status and representation of one's social groups and (b) the experience of the interactions (i.e., whether they are characterized by threat, satisfaction, or perspective-taking).

First, our findings suggest that some of the benefits of cross-race and cross-class interactions are specific to students from groups with lower status and less representation in college—that is, URM students and students from working and lower social class backgrounds. For these students, cross-race and cross-class interactions respectively led to more feelings of inclusion in college and better academic performance. These same benefits were not evident for majority group members (i.e., White and Asian students, students from middle and higher social class backgrounds). This may be due to the particular outcomes we examined in this study—that is, feelings of inclusion. As [Mendoza-Denton and Page-Gould \(2008\)](#) explain, the majority of students have "less reason to doubt their acceptance in such institutions and are less likely to see

minority-group friends as representative of the institution” (p. 937). If this study had instead examined outcomes that have been shown to emerge for majority group members, such as cognitive complexity or civic engagement (Bowman, 2010, 2011), it may have found evidence of the benefits of intergroup interactions for all groups or majority groups in particular.

Second, our findings suggest that the benefits of cross-race and cross-class interactions are evident even when individuals have less-positive experiences in these interactions (e.g., less satisfaction) compared to same-race and same-class interactions. That is, although students reported less satisfaction and perspective-taking in cross-race and cross-class interactions compared to same-race and same-class interactions, cross-group interactions nevertheless had positive consequences for URM students and students from working and lower social class backgrounds. Indeed, the experience of cross-race and cross-class interactions neither moderated nor diminished the benefits of cross-race and cross-class interactions. By examining both the frequency and experience of cross-race and cross-class interactions at the same time, this study helps to integrate two often-distinct research paradigms on intergroup interactions: One that shows that intergroup interactions can evoke anxiety and threat (e.g., Toosi et al., 2012) and one that shows that intergroup interactions can have positive consequences for personal growth and development (e.g., Hodson et al., 2018).

Practical Implications

The primary implication of the current research is that creating diverse spaces is not enough to engender meaningful intergroup interactions. This is particularly critical given that many of the benefits of diversity rely on individuals effectively interacting with members of social groups different from their own (Bowman, 2010; Hurtado, 2005). Furthermore, our findings demonstrate that intergroup interactions may be one important pathway toward reducing race and social class disparities in students’ experiences and academic outcomes in college. Therefore, any efforts to diversify spaces and recruit members of underrepresented social groups are likely incomplete without strategies to encourage meaningful intergroup interactions. For example, students in courses that have cooperative assignments are more likely to engage in positive intergroup interactions and build intergroup friendships (Slavin, 1995).

Another important implication of the current research is that intergroup interactions can be valuable and beneficial in the long term even if they are uncomfortable or unpleasant in their immediate experience. Indeed, we found that cross-race and cross-class interactions were situationally experienced as less positive than same-race and same-class interactions, yet they still yielded important benefits in the long term for inclusion and academic outcomes. This paradox is perhaps not surprising when recognizing that many psychological theories describe difficulty, discomfort, and challenge as a necessary and important part of the process of growth, development, and learning that occurs over time. Nevertheless, the relatively worse experience of intergroup interactions compared to *intragroup* interactions can act as a barrier to cross-race and cross-class interactions. Efforts to promote intergroup interactions therefore likely require addressing feelings of discomfort.

Limitations and Future Directions

One limitation of the present study is that classifications of interactions as “cross-race” or “cross-class” depended on students’ reports of their interaction partners’ race and social class. Although this method is common in research on intergroup interactions (e.g., Trawalter et al., 2012), we cannot be certain that our results reflect students’ *actual* intergroup interactions or whether they instead reflect students’ *perceived* intergroup interactions. Nevertheless, we believe that focusing on students’ perceptions is an ecologically valid starting point, as interactions in the real world are based on people’s perceptions of their interaction partners, irrespective of the accuracy of those perceptions. Furthermore, anticipating an intergroup interaction can have powerful effects on individuals’ experiences (Crisp & Turner, 2009; Truong et al., n.d.), suggesting that, in some ways, perceived intergroup interactions may be just as impactful as actual intergroup interactions.

Indeed, the perceived intergroup interactions captured in the present study had real consequences on students’ feelings of inclusion and academic performance. Furthermore, the fact that these real-world consequences were consistent for both cross-race and cross-class interactions—despite differences in the visibility and salience of race versus social class—suggest that students’ perceptions and subjective experiences of these interactions are impactful. Nevertheless, we acknowledge that some of the more objective or concrete benefits of intergroup interactions are likely to be specifically tied to interactions with individuals who are actually members of different social groups. For example, members of higher status groups are likely to have more network ties and cultural capital that they can impart to students from lower status groups when they engage in intergroup interactions. Future research should extend the current findings by using indicators of an interaction partner’s social class background that are likely to be even more accurate than students’ perceptions, such as the partner’s own self-report.

Although there are various pathways through which intergroup interactions can improve academic performance, our study focused on feelings of inclusion as a key mediator. As predicted, we found that inclusion mediated the effects of cross-race and cross-class interactions on academic performance, but only partially. This suggests that, beyond their effects on inclusion, there are other mechanisms through which cross-race and cross-class interactions can benefit URM students and those from working and lower social class backgrounds. One likely candidate is cultural capital—in this case, knowledge about the “rules of the game” and how to successfully navigate higher education (Jæger, 2009). Although we did not measure cultural capital in this study, we theorize that it is another key mechanism through which cross-race and cross-class interactions can benefit these students. Future research should investigate this as well as other additional mechanisms that can help explain the benefits of cross-race and cross-class interactions for these students.

Drawing on previous research, we focused on “meaningful” interactions. As such, our results may be limited to the more substantive (vs. brief or transactional) interactions that students have in college. We chose to ask about meaningful interactions because these are the interactions most relevant to our research questions. Specifically, previous research suggests that substantive, involved, back-and-forth interactions are the types of interactions most likely to shape students’ experiences (e.g., belonging) and academic outcomes in college (MacInnis & Page-Gould, 2015;

Mendoza-Denton & Page-Gould, 2008; Shook & Clay, 2012). Future research should determine the extent to which the current findings extend to different types of interactions, from those that are brief or transactional in nature to those that are less positive or meaningful.

Another limitation of this research is the high degree of overlap between race and social class in our participant sample: 92% of URM students were also from working and lower social class backgrounds and 93% of students from middle and higher social class backgrounds were also White and Asian. As noted earlier, this high level of overlap provides a conservative test of the differences that we observed between race and social class in how they organize interactions. While this increases our confidence in the differences we found, it also means we are more likely to underestimate the differences between cross-race and cross-class interactions. Although the literature on intergroup interactions often suggests that cross-status interactions are similar regardless of the specific groups involved (e.g., race or social class), future research should consider how different meanings and sets of experiences attached to these specific groups can shape the nature of intergroup interactions.

In the present research, we were not able to examine the specific mechanisms responsible for the relatively low rates of cross-race and cross-class interactions in settings with race and social class diversity. Future research should identify the specific barriers that deter cross-race versus cross-class interactions, including the extent to which mechanisms are structural in nature (e.g., students are segregated due to the courses they take, the places they live, or the activities they participate in) or psychological in nature (e.g., due to a preference for similar others, avoidance of dissimilar others, or feelings of threat and stress). Additionally, while previous research has demonstrated several benefits of cross-race interactions for majority group members, future research should examine the benefits of cross-class interactions for these individuals as well.

Conclusion

We began this article with the story of Ruby Bridges—one of the first children to help integrate racially segregated schools in the South during the Civil Rights Era. Her experiences highlight the troubled history of social integration in the U.S., where the “ideals” of laws and policies often far outpace the reality of people’s lived experiences. To shed light on these issues, we asked two broad questions. First, how frequently do intergroup interactions occur, and to what extent do these interactions reflect the diversity of a setting? Second, when intergroup interactions occur, how do individuals experience them and what consequences do they have for their outcomes in these settings? The present study suggests that while these interactions do happen, they occur far less often than they could given existing diversity. However, when they do occur, they have important experiential and academic benefits for students from historically underrepresented and marginalized groups. Therefore, an important implication of this work is that it is important to encourage students to engage in intergroup interactions to fully realize the benefits of diversity on college campuses.

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