

Student Interaction Across Race and Outcomes in College

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abstract

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The racial diversity of American college campuses has been increasing steadily over the last 20 years. With that diversity comes the opportunity for students to socialize, learn, and develop among others of a different race, ethnicity, and culture. But while higher education leaders tout the benefits of diversity for developing culturally knowledgeable, civic leaders, our understanding of these benefits, and in particular, the role of interracial interaction in realizing them, is still emerging. In this study, differences between the effects of interracial contact among students that are close friends versus more casual interracial interactions are examined for their effect on students' leadership skills and cultural knowledge and understanding. Findings suggest that casual interracial interaction is particularly beneficial among students with more racially homogeneous friendship circles, especially with regard to developing leadership skills. In addition, findings indicate that frequent interracial interaction among students may be more important in developing

cultural knowledge than involvement in formal activities such cultural awareness workshops.

INTRODUCTION

Through the efforts of the Civil Rights Movement, the implementation of programs such as affirmative action, and the rapidly changing makeup of the overall U.S. population, many of today's college campuses are not the near exclusively-white environments that they were in 1950s and 1960s. For example, by 1988 white student enrollments had steadily declined to less than 80 percent of all undergraduates nationally (Chronicle of Higher Education, 1992). However, predominantly white campuses are not simply becoming black and white. Asian American and Latino populations have grown particularly fast and contemporary college campuses are quickly evolving into racially and ethnically diverse environments (Justiz, 1994; Levine and Associates, 1989).

Ethnic and racial campus diversity, however, is not without controversy. Increasing diversity on campus in the 1980s seemed to have come at the expense of renewed racial tension and hostilities (Altbach and Lomotey, 1991; Dalton, 1991; Farrell and Jones, 1988; Hively, 1990; Sowell, 1989a). Furthermore, diversity was blamed for another “problem,” campus balkanization. Balkanization, or the self-segregation of students on campus by race and ethnicity, was an image of the Berkeley campus described by Troy Duster and his colleagues (1991) in their study of diversity at the University of California. While these images were not a new social phenomenon to higher education, Duster’s description shattered idyllic images of how unprecedented levels of racial diversity were shaping many of America’s colleges. Further, those segregated images were subsequently picked up by the national media as one of the foremost criticisms of diversity (Duster, 1991).

Many within and outside of higher education continue to debate the issue of racial diversity. On the one hand, many higher education leaders support campus diversity for its educational efficacy. For example, former UCLA Chancellor Charles F. Young, in defense of race-based affirmative action and a diverse student body, has stated that "a diverse learning environment is vital to a quality education and to producing students capable of leading in a diverse society" (Young, 1995). Similarly, Neil Rudenstine, Harvard University president, views the development of "forms of tolerance and mutual respect on which the health of our civic life depends" as a primary outcome fostered by a diverse college environment (Rudenstine, 1996, B1). Detractors of diversity contest the validity of these claims. They argue that ethnic and racial diversity in our colleges is the result of misguided affirmative action policies which have led not only to balkanized campuses, but also to the development of ethnocentrism and the reinforcement of racial stereotypes in students (D'Souza, 1991; Sowell, 1989b).

The difficulty with assessing these conflicting claims is that there exists only a handful of empirical studies that address racial diversity and its effect on students, especially with respect to the development of outcomes such as ethnocentrism and leadership ability. The present study seeks to broaden our empirical knowledge in this area by examining the role of interracial interaction in the development of leadership skills and cultural knowledge and understanding among college students.

CONTACT THEORY AND STUDENT INTERRACIAL INTERACTION

For over forty years, Gordon W. Allport's (1954) Contact Theory for reducing prejudice has been used in many sectors of education to inform educational policy with

respect to issues concerning racial diversity. Allport's theory contends that cross-cultural contact may or may not lead to understanding and reduced prejudice across racial lines; certain conditions must characterize the context of the contact to achieve a positive effect. According to Allport, prejudice reduction and understanding as a result of cross-cultural interaction are enhanced when the individuals involved are of equal status, when the encounter requires cooperation and the pursuit of a common goal, and when the contact is supported by those in positions of authority (Allport, 1954). The college campus setting appears to be one in which the satisfaction of each of those conditions is possible.

Implicit in the arguments on both sides of the diversity debate is the ultimate success or failure of the fulfillment of the conditions for positive interracial or interethnic contact. Critics of diversity (e.g., D'Souza, 1991; Sowell, 1989b) have pointed out that the disparate academic abilities among students on a racially diverse campus are patterned by race and in that way, students of different racial and ethnic groups meet and interact under conditions of unequal status. Other researchers contend that racial minority students experience feelings of isolation and cultural alienation on predominantly white campuses (Allen, 1985, 1992; Loo and Rolison, 1986; Smedley, Meyers, and Harrell, 1993) which may preclude possibilities for equal-status interracial interaction. On the other hand, one may argue that on a college campus, outside of the structure of the classroom or lecture hall, students who interact across race do so voluntarily. In that context, contact arguably occurs under conditions of equal status.

It is likely that interracial contact on a college campus may encompass, in total, various conditions of status, cooperation, and institutional sanction. However, college

student development and socialization theories (Astin, 1984; Pascarella, 1985; Tinto, 1975; Weidman, 1989) as well as an enormous body of empirical data (Astin, 1977, 1993a; Feldman and Newcomb, 1969; Pascarella and Terenzini, 1991) suggest that at minimum, frequent interaction with other students in college contributes to the development of a whole host of positive outcomes including social self-confidence, leadership skills, and many other interpersonal and cognitive outcomes. In other words, while we may not know exactly how students are experiencing diversity on campus, we do know that student-student contact on some level is beneficial to students' psychosocial development.

PREVIOUS RESEARCH ON INTERRACIAL INTERACTION

A handful of recent studies have examined interracial interaction in college within student development and/or college socialization frameworks. In the first of these, Astin (1993a, 1993b) found that, independent of students' entering characteristics and different types of college environments, frequent interracial interaction in college was associated with increases in cultural awareness, commitment to racial understanding, and commitment to cleaning up the environment. Further, he found higher levels of academic development (critical thinking skills, analytical skills, general and specific knowledge, and writing skills) and satisfaction with college to be associated with more frequent socialization across race.

Hurtado, Dey, and Treviño (1994) focused specifically on the issue of self-segregation on campus. They conducted a longitudinal study of the college behaviors most strongly associated with interracial interaction in college. On a descriptive level, Hurtado and her colleagues found that students of color (who are numerical minorities on most campuses) were more likely than white students to interact across race. Furthermore, they

found that not only were various activities predictive of interracial interaction, they determined that the nature of those activities varied by race. For example, more frequent interracial interaction was related to involvement in: academic activities for whites and Chicanos; social activities for whites and African Americans; intercollegiate sports for whites and Asian Americans; residence hall advising and participation in Greek organizations for Chicanos; and participation in racial or ethnic student organizations for whites. In essence, their study showed how student involvement in college -- a widely recognized correlate to retention, satisfaction, and cognitive and affective development (Astin, 1993a, 1984) -- goes hand-in-hand with interracial interaction among students.

The most recent study addressing interracial interaction concentrated on the degree of racial diversity of a campus population and its effect on student outcomes. Chang's (1996) study indicated that in general, greater racial diversity in the undergraduate student population positively affects the frequency of socialization across race. In addition, he found that socialization across race was associated with discussing racial issues in college, taking ethnic studies courses, attending racial/cultural awareness workshops, and promoting racial understanding.

One limitation of each of these longitudinal studies is that the context of the interactions across race or the type of relationship involved in the interaction is rarely specified. Allport (1954) distinguished the effects of at least two different types of interracial contact. Negative results such as the reinforcement of racial stereotypes are likely to occur if the contact is casual. These contacts may be less frequent and less meaningful for the participants. Acquaintance contacts, on the other hand, may be more

frequent and characterized by more established relationships between participants. These contacts are more likely to be beneficial in reducing prejudice and increasing cross-cultural understanding. In the Chang and Astin studies, interracial interaction was measured simply as the frequency in which a student “socialized with someone of a different race/ethnicity” while in college. Clearly, we cannot determine whether interracial interactions were “casual” or of an “acquaintance” nature. Furthermore, we do not know whether the benefits of socializing across race in college are limited to acquaintance contacts or are reaped through casual contacts as well. The Hurtado et. al. study utilized an improved measure. Interracial interaction was operationalized as the frequency in which a student had studied, dined, or roomed with someone of a different race/ethnicity. Depending on the specific persons with whom a student engages in these activities (close friends, new acquaintances, assigned roommates, etc.), it is somewhat arbitrary to interpret these interactions as either casual or acquaintance contacts. Our interpretive lenses, then, remain cloudy with respect to findings on interracial interaction.

A second limitation of these relatively few studies concerns the status of our understanding of the linkages between interracial interaction and two of the presumed outcomes of a diverse campus reported above, the development of cultural awareness and preparation for leadership in a diverse society. Astin’s work (1993a, 1993b) identified interracial interaction as a contributor to cultural awareness, but from the standpoint of practice, we do not know whether such interactions need only be casual for students to benefit. The relationship with leadership ability or activities has yet to be examined but is recognized as an important outcome of having a diverse student body. As Bok and Bowen

(1998) have noted, the active recruitment of minority students was motivated not only by convictions to enhance the educational process through the creation of a diverse study body, but also by a recognized need for producing diverse leaders as well. Evidence as to the extent to which diversity does or does not contribute to leadership is currently lacking.

In the present study, I attempt to contribute to our understanding of the role of interracial interaction in students' college experiences by taking into account the racial diversity of students' close friends. In this way, we can infer differences in the effects of interracial contact between those that are of an acquaintance nature and those that are more casual. For example, if a student's close friends are all of a different race from herself, then it is highly likely that she has frequent and positive interracial interactions, regardless of whether those contacts are through dining, studying, or rooming together (Antonio, 1998a). Interracial interaction among students who normally only associate with people of his own race – a white student whose close friends are all white, for example – may be affected quite differently as a result of those experiences because they are leaving the familiar interpersonal environment of their best friends to interact. In the following analysis I consider two groups of students, those with many and those with relatively few racially homogeneous friendships. For each group, I examine the effects of interracial interaction on the development of leadership ability and cultural knowledge and understanding.

DATA AND METHODOLOGY

The data utilized in this study are drawn from a national longitudinal study of college students conducted by the Higher Education Research Institute between 1991 and 1996. Two freshman cohorts from 1991 and 1992 were administered the Student Information

Form (SIF), a pre-college survey conducted under the auspices of the Cooperative Institutional Research Program sponsored by the American Council on Education. Both cohorts were followed up in 1996 and administered the College Student Survey (CSS). The specific sample analyzed for this study include 8,877 first-time, full-time students attending 115 four-year, predominantly white institutions across the country. The small number of students attending two-year institutions were excluded from the analysis. The sample is not nationally-representative, but primarily represents students attending private four-year colleges (70%) and private universities (15%).

The primary variables of interest include two dependent measures, two measures of student involvement (independent variables), and a measure of the racial composition of a student's close friends, each derived from the CSS follow-up survey. The dependent variables are composites derived from an exploratory, principal components factor analysis of CSS items measuring self-rated abilities and self-rated changes in college.

 Insert Table 1 about here

The first dependent variable was termed Leadership Ability and represents a student's objective rating of interpersonal skills generically associated with leadership. The individual variables that make up this composite measure were each identically pretested in the 1991 and 1992 SIF. The two items that measure growth in Cultural Knowledge and Understanding were not pretested. Previous research, however, has shown validity with measures of self-rated growth in assessing the impact of college on students (Anaya, 1992; Astin, 1993a). As self-rated measures, these variables should not necessarily be

understood as proxies for more direct measures of leadership skills or cultural awareness (Pike, 1995, 1996). However, self-reports of academic ability have been found to be adequate in their ability to measure similar constructs as do traditional academic tests (Pike, 1996). In addition, self-rated measures of non-academic traits such as artistic ability, leadership, and music have been found to be predictive of future accomplishment and behavior and therefore useful as measures of student characteristics (Baird, 1976).

The key independent variables include two similarly derived measures from the CSS. These measures reflect the reported frequency of a number of items related to racial diversity on campus, specifically interracial interaction and feeling excluded racially in

 Insert Table 2 about here

college. The third primary independent variable of interest is a measure of the racial diversity of a student's "close friends." This variable measures whether "none," "a few," "most," or "all," of a student's close friends are of the same race or ethnicity as the respondent. Together these variables allow the investigation of interracial interaction while controlling for the relative diversity or homogeneity of students' interpersonal environment and further, taking into account an affective sense of the interpersonal racial climate.

Descriptive and regression analyses were conducted on two subsamples of the data, students who reported that "all" or "most" of their close friends were of their same race or ethnicity (n=7236) and students who reported that "a few" or "none" of their close friends were of their same race or ethnicity (n=1641). Crosstabulations comparing these two

groups were conducted with respect to frequency of interracial interactions and the two measures of racial exclusion.

Separate OLS regressions were conducted for each group to determine the role of interracial interaction in the development of Leadership Ability and Cultural Knowledge and Understanding. Independent variables were entered in three discrete blocks for all equations, in accordance with the college impact and socialization models of Astin (1984) and Weidman (1989). Weidman conceptualizes the major influences on student change in college to be pre-college or student background characteristics, the academic and social normative context of an institution, and the impact of parental and non-college reference groups. Astin's conception is similar but emphasizes the central importance of student involvement (behaviors) in assessing how students change in college.

Since students are not randomly assigned to different college environments and student characteristics tend to be correlated with specific outcomes, both authors stress the need to take into account students' backgrounds before examining impacts of the college environment. The Leadership Ability pretest, demographic characteristics, and pre-college variables were all taken from the SIF surveys and were controlled in the first equation. These and all additional independent variables were chosen based on previous research on interracial interaction (Astin, 1993a, 1993b; Chang, 1996; Hurtado, Carter, and Sharp, 1995; Hurtado, Dey, and Treviño, 1994), all of which utilize the conceptual college impact models of either Astin (1984) or Weidman (1989). Pre-college variables included: gender, age, race (white/student of color), socioeconomic status (SES), high school grades, academic self-concept, hours per week socializing with students in high school, liberal political

orientation, understanding of others (self-rating), and commitment to racial understanding. The pre-college variables also included two composite measures of value orientations, Social Activism and Materialism and Status orientation. These measures were derived from an exploratory factor analysis of student values, the details of which can be found in the Appendix. Scoring for all of the variables in the model are shown in the Appendix.

Since students in different types of institutions vary in terms of their perceptions of the campus racial climate {students in universities perceive less communication among students of different ethnic groups compared to those in four-year colleges (Hurtado, 1992)}, institutional characteristics were added to the equation in the second model. Institutions were distinguished as being public universities, private universities, and private four-year colleges (public four-year colleges are the reference group), and for further stratification, institutional selectivity was also included. Two institutional variables were used to control for differential opportunities to interact across race. The size of the institution (total FTE enrollment) and the combined percentage of African American, American Indian, Asian American, and Latino students were taken from IPEDS (Integrated Postsecondary Education Data System) data and controlled in the second model.

Finally, in accordance with college impact and socialization models, a block of variables containing a number of relevant student involvement activities were controlled. These measures were taken from the follow-up survey (CSS) and included: the measure of Racial Exclusion; three measures of involvement with other students (frequency of working on group projects, studying with other students, and the number of hours per week spent socializing with friends); and dichotomous measures of participation in student

government, campus demonstrations and protests, ethnic student organizations, fraternities or sororities, and racial/cultural awareness workshops while in college. Interracial Interaction was entered into regression equations last to examine its association with the dependent variable after all other independent variables are controlled. Table A1 in the appendix provides a complete listing of variables used in the regression analyses.

LIMITATIONS

There are two primary limitations of this study that should be kept in mind when reviewing the results. First, the longitudinal dataset used in the study, while being a national sample, is not necessarily representative of all institution types. Although the scope of the development issues investigated in this paper pertain to the chosen population of institutions in the sample (predominantly white, four-year colleges and universities), within that given population the sample primarily represents students attending private four-year colleges and private universities. While it is not possible to fully assess the extent to which the findings in this study do not apply to socialization in public universities and colleges, two factors with respect to generalizability are relevant. First, statistical controls were used in the multivariate analyses to attempt to adjust for possible bias due to institution type and entering student characteristics. In addition, previous research has found no relationship between the central variable of this study, interracial interaction, and institution type (Hurtado, Carter, and Sharp, 1995; Hurtado, Dey, and Treviño, 1994).

Secondly, while this study improves upon previous work on interracial interaction by taking into account the racial diversity of a student's close friends, the research remains

unable to determine exactly with whom students are socializing across race (e.g., best friends, classmates, a teaching assistant) and the exact conditions of interracial contact. It is likely that the interracial interactions reported by students in this study occurred under many different combinations and degrees of satisfaction of Allport's (1954) conditions for beneficial cross-cultural contact. The extent to which the results presented here inform the applicability of Contact Theory to college student interaction, therefore, is neither the objective nor warranted. Rather, the results can only provide insight into some of the ultimate outcomes related to interracial interaction and cannot speak to the necessary conditions that characterize interactions that are positively associated with such outcomes.

DESCRIPTIVE RESULTS

Analysis of the frequency of interracial interactions clearly illustrate potential differences in the nature of students' interracial contacts in college (see Table 3). While dining and studying are the two most common types of interracial activities among all students, students with higher degrees of diversity among their close friends dine, study, date, and room with students of a different racial or ethnic group at two to five times the rate of their peers. While this is not a terribly surprising or unexpected result, it is clear that interracial friendship characterizes the majority of frequent interracial contact among students. It should be noted, however, that although frequent interracial interaction appears

Insert Table 3 about here

to coincide with diverse friendships, the vast majority of students in this sample (~80%) report having fairly homogeneous friendships with respect to race and ethnicity. It remains to be seen whether the less frequent and presumably more casual interracial contact experienced by these students has the same impact on educational outcomes as for those students with diverse friendships.

The counter-argument to interracial interaction on a diverse campus is the presence of an environment where students feel pressure not to socialize with someone of a different race or ethnicity or feel excluded on campus because of their racial and ethnic backgrounds. Table 4 indicates that a relatively small proportion of students report feeling such pressures. Differences on these items between students with more or less racially diverse close friends, however, are evident and statistically significant. Almost one in four students who have no or just a few close friends of their same race felt excluded from school activities because of their racial/ethnic background. In contrast, just one in ten students with same-race friends reported similarly. A similar pattern is evident with respect to feeling pressure not to socialize with students from other racial/ethnic groups. Interestingly, these results suggest that those students who have made the greatest efforts to engage cultural difference and develop relationships with people different from themselves are the same students who suffer most often from exclusionary experiences based on race. These results may indicate that students are in a “learning period” when it

comes to establishing interracial friendships on campuses that are (1) still predominantly white and (2) dominated by a cultural norm defined by racially homogeneous friendships.

Insert Table 4 about here

Despite higher instances of negative feelings of racial exclusion among the aforementioned students, these students also report greater gains in cultural knowledge and understanding in college. The two items measuring growth in knowledge of other cultures and in the ability to get along with people of different races and cultures are shown in Table 5. Though the differences between groups do not appear to be as great as compared to the items in the previous two tables, they are statistically significant.

Insert Table 5 about here

In previous studies of interracial interaction, researchers have generally found that students of color socialize across race more often than white students on predominantly white campuses (Hurtado, Carter, and Sharp, 1995; Hurtado, Dey, and Treviño, 1994). While it is not the focus of this study, popular conceptions of students clustering or “self-segregating” by race can also be investigated through the current focus on the racial diversity of close friends. The next table (Table 6) provides data on the issue of self-segregation among white students and students of color at the level of friendship.

Insert Table 6 about here

Only about 16% of all students report that all of their close friends are of the same race/ethnicity as themselves. Among students of color this proportion is even smaller – about one in twenty. The majority of students of color (56%) report that only “a few” or “none” of their close friends share their same race or ethnicity. In contrast, over 85% of white students report having all or mostly white close friends. These patterns suggest that the higher incidence of feeling racially excluded in mixed-race friendship groups may be due to the predominance of students of color who report having diverse friendships. Furthermore, they highlight the importance of controlling for race when estimating the impact of interracial interaction in college.

THE IMPACT OF INTERRACIAL INTERACTION IN COLLEGE

Leadership Ability

The first set of regression analyses examines the role of interracial interaction in the development of Leadership Ability in college. Tables 7 and 8 contain the regression coefficients for three regression models. Model 1 includes the freshman survey pretest and pre-college variables in the equation, Model 2 adds (structural) institutional variables to the equation, and Model 3 incorporates the measures of college involvement.

 Insert Tables 7 and 8 about here

For both groups of students, pre-college characteristics (primarily the entering level of Leadership Ability) appear to be the prime determinants of Leadership Ability four or five years after college entry (Model 1). Regardless of the racial diversity of close friends, men, those who socialized frequently prior to college, and those who enter college with

high levels of materialism are more likely to increase their Leadership Ability scores in college. Having a strong commitment to racial understanding is also associated with increased Leadership Ability, but only for students with few same-race friends. For students with primarily homogeneous friendships, higher socioeconomic status, more conservative political leanings, and greater understanding of others appear to enhance Leadership Ability. Higher academic ability (indicated by grades and self-concept) among these students, however, is associated with decreases in Leadership Ability.

Structural characteristics of institutions appear to be important factors affecting Leadership Ability, especially for students whose close friends are of their same race (see Model 2). Relative to public four-year colleges, private institutions and public universities have a negative effect on Leadership Ability. This finding is consistent with earlier research which did not control for diversity of friendships (Astin, 1993a). In the analysis of students with few same-race friends, the same relationships were not statistically significant in Model 2. Institutional selectivity and private four-year colleges do exhibit a negative effect after controlling for college involvement variables in the final model.

The third column in Tables 7 and 8 contain the coefficients for Model 3, which includes the additional block of college involvement measures. Many involvement activities are associated with Leadership Ability, especially in the case of students with primarily same-race friends. With the exception of participating in an ethnic student organization, higher levels of Leadership Ability for these students are associated with every measure of student involvement: socializing with friends, working on group projects, studying with others, and participating in student government, protests, Greek

organizations, and cultural awareness workshops. Students having few friends of their same race also exhibit positive associations with student-student interaction, but effects were evident for only four of the measured activities.

The primary focus of this study is on the effects of the remaining independent variable, Interracial Interaction. Interracial Interaction has significant and positive partial correlations with Leadership Ability after pre-college characteristics and institutional variables are controlled for both students with few same-race friends (partial correlation = .05, $p < .05$) and students with mostly same-race friends (partial correlation = .04, $p < .001$). In other words, the potential effect of interracial interaction is positive for all students. After controlling for all involvement variables, Interracial Interaction has a significant and positive relationship with Leadership Ability in Table 8 only. In other words, Leadership Ability appears to be enhanced by socializing and studying with students of a different race or ethnicity, but especially so for those students who are the least likely to have close, interracial friendships. The lack of evidence for a similar relationship in Table 7 suggests that interracial contact with other students may be most beneficial when students interact more casually and outside of their friendship groups, at least with respect to the development of leadership skills.

Cultural Knowledge and Understanding

The regression models were less successful in predicting gains in Cultural Knowledge and Understanding in college (see Tables 9 and 10). Independent variables explained approximately 10% of the variance in the dependent variable for both groups of students. Interesting differences between the two analyses are evident, however. First, the results

for Model 1 show only three common relationships between pre-college variables and the outcome measure. For both groups, higher socioeconomic backgrounds are associated with lower gains in cultural knowledge, while students rating themselves high in understanding of others and those with a social activist orientation tend to report higher gains. Two additional pre-college characteristics contribute to lower gains in cultural knowledge for students with primarily same-race friends, a high level of academic self-confidence and a liberal political identification. Age only appears to be a factor for students with more diverse friendships, in that being older is associated with higher gains in Cultural Knowledge and Understanding.

Perhaps the most interesting of the pre-college variables in this analysis is race itself. Relative to white students, students of color are more likely to experience increases in their level of cultural knowledge in college. This relationship is statistically significant only in Table 10, however. After controlling for institutional and involvement measures, the relationship becomes nonsignificant in Table 10 and in Table 9, being a student of color becomes negatively associated with gains in cultural knowledge and understanding. The meaning of these relationships will be explored more fully below in the discussion of the impact of involvement variables.

 Insert Tables 9 and 10 about here

The coefficients for Model 2 illustrate the institutional effects. In both tables, the percentage of minority students has a positive effect on gains in Cultural Knowledge and Understanding. For students with primarily same-race friends, the meaning of this effect

becomes clear in Model 3 with the addition of involvement measures to the equation. The regression coefficient becomes nonsignificant, indicating that students who have few close friends of another race benefit from more diverse campuses by engaging in activities that likely expose them to diverse students: group projects, student demonstrations, ethnic student organizations, cultural workshops, and informal interracial socializing. Two additional institutional level effects are evident for these students. Public universities and more selective institutions exhibit negative effects. The effect of selectivity on the outcome is significant only after involvement variables are controlled, however. These results may be explained by research that found more hostile racial climates at universities and more selective institutions (Hurtado, 1992) on the one hand, and positive effects of selectivity on interracial interaction (Hurtado, Dey, and Treviño, 1994) on the other. According to those studies, the higher levels of student body diversity present in universities and more selective institutions contribute negatively to the racial climate but also allow more frequent interaction across race. In other words, more hostile racial climates by themselves may inhibit the development of skills related to interacting with people of different cultures, but interracial interaction within those same institutions likely reduces those negative effects. The results presented here suggest that such interpretations may be more applicable to students with close friends of primarily the same race.

In terms of organized student activities in college, involvement in ethnic student organizations and racial/cultural awareness workshops are associated with gains in Cultural Knowledge and Understanding for students in both Tables 9 and 10. As mentioned above, gains for students with primarily same-race friends are also associated with working on

group projects. Participation in student government is associated with gains in Cultural Knowledge and Understanding for students with few same-race friends.

The importance of socializing across race for the development of cultural knowledge and understanding is evident for all students, regardless of the racial diversity of their close friends. In both tables, Interracial Interaction has the strongest association with gains in Cultural Knowledge and Understanding among all measures of pre-college characteristics, institutional characteristics, and student involvement.

Also evident in Model 3 is the change in the coefficients for student of color status evident for both groups of students. The negative coefficient in Table 9 indicates that after holding constant engagement in activities that enhance Cultural Knowledge and Understanding, white students who have non-white friends are significantly more likely to report gains in cultural knowledge compared to students of color. On the other hand, we might expect students of color with primarily same-race friends to report lower gains in cultural knowledge because of some “insulating” aspect of their more culturally homogeneous interpersonal environments. Instead, the nonsignificant coefficient in Model 3 of Table 10 suggests that students of color with same-race friends experience gains in cultural knowledge because, compared to white students, they are more likely to engage in activities that enhance cultural knowledge and understanding.

DISCUSSION

The purpose of this study was to provide additional understanding into the benefits of interracial interaction in college. The positive effects of interracial interaction on both outcomes in the study also speak to claims on the role of a diverse student body in

preparing students for multicultural citizenship. Though widely assumed, this study provides empirical evidence that socializing across race not only contributes to development in an area where it is expected (i.e., cultural awareness), but also in the domain of one of the earliest objectives of higher education in this country, leadership (Brubacher and Rudy, 1976).

Although the positive contribution of diverse interaction among students is fairly evident, findings also indicate subtle but important distinctions regarding the benefits of interracial interaction. First, with respect to achieving gains in cultural knowledge, socializing across race is the most important college activity for all students. Moreover, the standardized coefficients indicate that frequent interracial interaction among students may be more important in developing cultural knowledge than even the activity in which gains are expected and have been documented, attending a cultural awareness workshop (Astin, 1993b; Pascarella, Edison, Nora, Hagedorn, and Terenzini, 1996; Springer, Palmer, Terenzini, Pascarella, and Nora, 1995). Second, unlike their counterparts, students with few close friends of their same race exhibited no net impact of interracial interaction on leadership ability. Initially, this result may seem counter-intuitive. One might expect students who have “acquaintance” type contacts across race to benefit the most from interracial interactions. Furthermore, students who have interracial friendships socialize across race much more frequently than other students do. For college students, however, interactions that do not take people out of their cultural comfort zones – i.e., the cultural space defined by students’ close friends – may not present the emotional, interpersonal, and intellectual challenges required for change and development (Chickering, 1969). This

study provides some evidence that casual interracial interaction is particularly beneficial among students with more racially homogeneous friendship circles because of the interpersonal challenges such interactions present.

Though not the focus of the current study, results also illustrate the possibility of the differential impact of campus diversity by race. In the analyses of cultural knowledge and understanding, the effect of race differed depending upon the racial diversity of close friends. These differences can be understood in light of the positive effects of specific kinds of student involvement in college, including engaging in interracial interaction. Compared to white students, students of color are much more likely to engage in many forms of interracial interaction on predominantly white campuses (Antonio, 1998b; Hurtado, Dey, and Treviño, 1994). For students of color with relatively homogeneous friendship groups, frequent interracial interaction appears to partially explain higher gains in cultural knowledge relative to white students. Here the results simply reflect the more frequent interracial interaction among students of color. Conversely, when examining students with few close friends of their same race, white students are predicted to report higher gains in cultural knowledge after controlling for the frequency of interracial interaction. In this case, interracial interaction by white students appears to be a benefit reaped from the presence of racial and ethnic minorities on campus in addition to having close friends of a different race. This interpretation suggests that white students develop cultural awareness in college through both interacting with students of another race and developing interracial friendships.

One institutional characteristic is particularly relevant to understanding the effects of interracial interaction, structural diversity. The percentage of minority students in an institution was positively associated with gains in cultural knowledge and understanding for all students, either as a direct effect or as a mediator to engaging in interracial interaction. Because of limits on structural diversity (white students are still the majority on most campuses), however, the benefits of socializing across race found in this study and others may be less available to white students on predominantly white institutions. Further investigation, therefore, is required to determine institutional policies that are effective in providing opportunities for interracial contact and the development of interracial friendships, especially among white students.

Findings from this study also contribute insight into practice. First, if the development of both leadership skills and cultural awareness co-exist as goals for higher education institutions, a number of additional forms of student involvement have been identified which contribute to those goals. For students with few same-race friends, participation in cultural awareness workshops and student government is associated with both outcomes, while for students with primarily same-race friends the outcomes are associated with participation in cultural awareness workshops, protests and demonstrations, group projects, as well as interracial interaction. In other words, these two goals can be mutually enhanced on campus through specific types of student interaction. And since these activities contribute to student knowledge and understanding of different races and cultures, they likely provide opportunities for positive interracial contact.

Finally, the positive effects of interracial contact of the type measured in this study (studying, dining, etc.) suggest that much of that contact occurs in a context conducive to positive individual change. The additional activities identified as contributors to cultural knowledge and understanding also suggest many other situations of positive interracial contact in college, especially for students with less diversity among their close friends. These findings imply that college and university campuses do provide students with many settings and situations in which conditions of equal status, a lack of competition, and the support of authorities are generally satisfied.

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Table 1

Dependent variables

	factor loading
<u>Leadership Ability (alpha = 0.73)</u>	
leadership ability self-rating ^a	0.74
social self-confidence self-rating ^a	0.71
public speaking ability self-rating ^a	0.71
<u>Cultural Knowledge and Understanding (alpha = 0.70)</u>	
knowledge of people from different races/cultures ^b	0.64
ability to get along with people of a different race/culture ^b	0.61

^a5 pt scale, "lowest 10%" to "highest 10%"^b5 pt scale, "much weaker" to "much stronger"

Table 2

Key independent variables

	factor loading
<u>Interracial Interaction (alpha = 0.74)</u>	
dined with someone of a different racial/ethnic group ^a	0.84
studied with someone of a different racial/ethnic group ^a	0.81
had a roommate of a different racial/ethnic group ^a	0.68
dated someone of a different racial/ethnic group ^a	0.61
<u>Racial Exclusion (alpha = 0.57)</u>	
felt pressure not to socialize with others of a different race ^a	0.79
felt excluded from school activities because of my race ^a	0.74

^a3 pt scale, "not at all" to "frequently"

Table 3

Frequency of interracial interactions in college among students with many or few close friends of their same race or ethnicity

	# of close friends of the same race/ethnicity*	
	"none" or "a few" (n = 1621)	"most" or "all" (n = 7175)
Interactions engaged in "frequently"		
Dined with someone of a diff racial/ethnic group	49	17
Studied with someone of a diff racial/ethnic group	39	10
Had a roommate of a diff racial/ethnic group	35	9
Dated someone of a diff racial/ethnic group	25	5

*The differences between groups are statistically significant ($p < .001$) for each activity.

Table 4

Feelings of racial exclusion among students with many or few close friends of their same race or ethnicity

Items marked “frequently” or “occasionally”	# of friends of the same race/ethnicity*	
	“none” or “a few” (n = 1621)	“most” or “all” (n = 7175)
Felt excluded from school activities because of your racial/ethnic background	24	11
Felt pressure not to socialize with students from other racial/ethnic groups	16	10

*The differences between groups are statistically significant ($p < .001$) for each item.

Table 5

Self-rated improvements of Cultural Knowledge/Understanding in college among students with many or few close friends of their same race or ethnicity

Items marked “much stronger”	# of friends of the same race/ethnicity*	
	“none” or “a few” (n = 1621)	“most” or “all” (n = 7175)
Knowledge of people from different races/cultures	26	19
Ability to get along with people of different races/cultures	25	17

*The differences between groups are statistically significant ($p < .001$) for each item.

Table 6

Racial diversity of close friends among white students and students of color

# of close friends that are of a student’s same race/ethnicity	percentages among	
	white students (n = 7690)	students of color (n = 1129)
“All”	17	6
“Most”	69	38

“A few”	12	42
“None”	1	14

Table 7

Predicting the development of Leadership Ability in college: students of whom “none” or “a few” of their close friends are of their same race/ethnicity (n=1572)

variable blocks	standardized regression coefficients			B [†]
	model 1	model 2	model 3	
Leadership Ability pretest	.53***	.53***	.51***	.52
<u>Pre-college variables</u>				
Gender: female	-.14***	-.15***	-.16***	-.71
Age	.00	.00	-.00	-.00
Student of color	-.01	-.01	-.02	-.08
SES	.03	.03	.04	.01
High school grade point average	-.02	-.01	-.01	-.01
Academic ability (self-rating)	-.02	-.02	-.02	-.06
Understanding of others (self-rating)	.03	.03	.02	.06
Hours per week socializing w/friends	.08***	.08***	.07**	.10
Political orientation - liberal	-.02	-.01	-.01	-.01
Commitment to racial understanding	.05*	.05*	.04	.09
Social Activism	.03	.03	.02	.01
Materialism & Status	.06**	.05*	.04*	.03
<u>Institutional variables</u>				
Public university		-.00	-.01	-.16
Private university		-.04	-.05	-.25
Private four-year college		-.04	-.06*	-.28
Percent Minority		.03	.02	.00
Size		-.05	-.03	-9.9e-6
Selectivity		-.04	-.04*	-8.9e-4
<u>Involvement variables in college</u>				
Hours per week socializing w/friends			.03	.04
Worked on group projects			.09***	.35
Studied with other students			.06**	.22
Participated in student government			.10***	.60
Participated in protests/demonstrations			.02	.14
Joined a fraternity or sorority			.02	.10
Participated in an ethnic student organization			.01	.03
Attended a cultural awareness workshop			.06*	.25
Racial Exclusion			.00	.01
Interracial Interaction			.03	.02
Adjusted R ²	.372	.373	.406	

† Unstandardized coefficients for Model 3
***p<.001, **p<.01, *p<.07

Table 8

Predicting the development of Leadership Ability in college: students of whom “most” or “all” of their close friends are of their same race/ethnicity (n=6919)

variable blocks	standardized regression coefficients			B [†]
	model 1	model 2	model 3	
Leadership Ability pretest	.56***	.56***	.54***	.56
<u>Pre-college variables</u>				
Gender: female	-.05***	-.05***	-.06***	-.26
Age	.00	.00	.00	.02
Student of color	.01	.01	-.02	-.08
SES	.03*	.02*	.02	.01
High school grade point average	-.03**	-.04**	-.04***	-.07
Academic ability (self-rating)	-.07***	-.08***	-.05***	-.17
Understanding of others (self-rating)	.06***	.06***	.05***	.16
Hours per week socializing w/friends	.08***	.08***	.06***	.09
Political orientation - liberal	-.02*	-.02*	-.03**	-.08
Commitment to racial understanding	.00	.00	-.00	-.01
Social Activism	.02	.02	-.01	-.00
Materialism & Status	.06***	.06***	.06***	.04
<u>Institutional variables</u>				
Public university		-.03*	-.04**	-.41
Private university		-.04**	-.05**	-.29
Private four-year college		-.05**	-.06***	-.27
Percent Minority		.01	.01	.00
Size		-.03*	-.01	-2.6e-6
Selectivity		.01	.01	1.5e-4
<u>Involvement variables in college</u>				
Hours per week socializing w/friends			.04***	.06
Worked on group projects			.07***	.26
Studied with other students			.06***	.23
Participated in student government			.09***	.52
Participated in protests/demonstrations			.03**	.20
Joined a fraternity or sorority			.05***	.25
Participated in an ethnic student organization			.01	.07
Attended a cultural awareness workshop			.05***	.25
Racial Exclusion			-.01	-.03
Interracial Interaction			.03*	.03
Adjusted R ²	.362	.364	.394	

† Unstandardized coefficients for Model 3
***p<.001, **p<.01, *p<.05

Table 9

Predicting gains in Cultural Knowledge/Understanding in college: students of whom "none" or "a few" of their close friends are of their same race/ethnicity (n=1577)

variable blocks	standardized regression coefficients			B [†]
	model 1	model 2	model 3	
<u>Pre-college variables</u>				
Gender: female	.00	-.01	-.03	-.09
Age	.05*	.05*	.06*	.17
Student of color	.03	.00	-.10**	-.29
SES	-.08**	-.08**	-.07**	-.01
High school grade point average	.04	.03	.03	.03
Academic ability (self-rating)	.00	-.01	-.04	-.07
Understanding of others (self-rating)	.07**	.07**	.05*	-.10
Hours per week socializing w/friends	-.02	-.02	-.03	-.03
Political orientation - liberal	-.02	-.03	-.03	-.05
Commitment to racial understanding	.06	.06	.01	.02
Social Activism	.07*	.06*	.04	.01
Materialism & Status	.00	-.00	.01	.00
<u>Institutional variables</u>				
Public university		-.02	-.03	-.19
Private university		.03	.02	.06
Private four-year college		.03	-.00	-.01
Percent Minority		.14***	.11***	.01
Size		-.01	-.01	-2.1e-6
Selectivity		.04	-.01	-1.5e-4
<u>Involvement variables in college</u>				
Hours per week socializing w/friends			.02	.02
Worked on group projects			.03	.08
Studied with other students			.00	.00
Participated in student government			.05*	.18
Participated in protests/demonstrations			.05	.19
Joined a fraternity or sorority			-.02	-.07
Participated in an ethnic student organization			.12***	.39
Attended a cultural awareness workshop			.07*	.21
Racial Exclusion			-.04	-.08
Interracial Interaction			.16***	.10
Adjusted R ²	.032	.043	.097	

[†] Unstandardized coefficients for Model 3

***p<.001, **p<.01, *p<.07

Table 10

Predicting gains in Cultural Knowledge/Understanding in college: students of whom "most" or "all" of their close friends are of their same race/ethnicity (n=6914)

variable blocks	standardized regression coefficients			B [†]
	model 1	model 2	model 3	
<u>Pre-college variables</u>				
Gender: female	-.01	-.00	-.01	-.04
Age	.02	.02	.03*	.07
Student of color	.05***	.04**	-.02	-.11
SES	-.08***	-.08***	-.07***	-.01
High school grade point average	.02	.02	.02	.02
Academic ability (self-rating)	-.04**	-.05**	-.04**	-.09
Understanding of others (self-rating)	.04**	.04**	.03*	.05
Hours per week socializing w/friends	-.01	-.01	-.02	-.02
Political orientation - liberal	-.03*	-.03*	-.04**	-.07
Commitment to racial understanding	.01	.01	-.02	-.02
Social Activism	.10***	.10***	.07***	.02
Materialism & Status	.02	.02	.04**	.02
<u>Institutional variables</u>				
Public university		-.03*	-.02	-.17
Private university		.00	.01	.04
Private four-year college		-.02	-.00	-.00
Percent Minority		.05**	.02	.00
Size		-.01	.00	9.0e-7
Selectivity		-.00	-.04**	-5.5e-4
<u>Involvement variables in college</u>				
Hours per week socializing w/friends			.02	.02
Worked on group projects			.04**	.10
Studied with other students			.02	.05
Participated in student government			.01	.03
Participated in protests/demonstrations			.04**	.19
Joined a fraternity or sorority			-.02	-.07
Participated in an ethnic student organization			.05***	.21
Attended a cultural awareness workshop			.11***	.31
Racial Exclusion			-.02	-.04
Interracial Interaction			.21***	.17
Adjusted R ²	.026	.028	.098	

[†] Unstandardized coefficients for Model 3

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

APPENDIX

Table A1**Variables in the regression models**

Pre-college characteristics	
Leadership Ability pretest (Leadership analysis only)	3 item composite scale scored 3 to 15
Gender-female	1-male, 2-female
Student of color (reference group-white)	1-no, 2-yes
Age	6 pt scale, "16 or less" to "21 or over"
SES	3 item composite scale of:
mother's education (self-report)	8 pt scale, "grammar school or less" to "graduate degree"
father's education (self-report)	8 pt scale, "grammar school or less" to "graduate degree"
family income (self-report)	14 pt scale, "less than \$6000" to "over \$200,000"
High School GPA (self-report)	8 pt scale, "less than C-" to "A or A+"
Academic ability self-rating	5 pt scale, "lowest 10%" to "highest 10%"
Understanding of others self-rating	5 pt scale, "lowest 10%" to "highest 10%"
Hours per week socializing with friends	8 pt scale, "none" to "over 20"
Political orientation-liberal	5 pt scale, "far right" to "far left"
Commitment to racial understanding	4 pt scale, "not important" to "essential"
Social Activism (composite, see Table A2)	10 item composite scale scored 10 to 40
Materialism and Status (composite, see Table A2)	6 item composite scale scored 6 to 24
Institutional characteristics	
Public university	1-no, 2-yes
Private university	1-no, 2-yes
Private 4-year college	1-no, 2-yes
(reference group - public 4-year college)	
Minority enrollment	Total percentage of African American, American Indian, Asian American, and Hispanic enrollment (IPEDS data)
Size	Total enrollment, continuous (IPEDS data)
Institutional selectivity	Average composite SAT score of entering freshmen reported by the institution, continuous
College involvement measures	
Hours per week socializing w/friends	8 pt scale, "none" to "over 20"
Worked on group projects	3 pt scale, "not at all" to "frequently"
Studied with other students	3 pt scale, "not at all" to "frequently"
Participated in student government	1-"no," 2-"yes"
Participated in protests/demonstrations	1-"no," 2-"yes"
Joined a fraternity or sorority	1-"no," 2-"yes"
Participated in an ethnic student organization	1-"no," 2-"yes"
Attended a cultural awareness workshop	1-"no," 2-"yes"
Racial Exclusion (composite, see Table A2)	2 item composite scale scored 2 to 6
Interracial Interaction (composite, see Table A2)	4 item composite scale scored 4 to 12

Table A2
Composite Variables

<u>Social Activism (alpha = 0.80)</u>	<u>factor loading</u>
participate in a community action program ^a	0.75
become a community leader ^a	0.62
keep up to date with politics ^a	0.61
influence social values ^a	0.60
influence the political structure ^a	0.58
help others in difficulty ^a	0.55
develop a meaningful philosophy of life ^a	0.55
be involved in environmental cleanup ^a	0.54
participate in volunteer work ^b	0.51

^a4 pt scale, “not important” to “essential”

^b4 pt scale, “no chance” to “very good chance”

<u>Materialism and Status (alpha = 0.71)</u>	<u>factor loading</u>
obtaining recognition from my colleagues for contributions to my special field ^a	0.70
being very well off financially ^a	0.66
becoming an authority in my field ^a	0.64
having administrative responsibility for the work of others ^a	0.64
being successful in a business of my own ^a	0.58
the chief benefit of a college education is that it increases one's earning power ^b	0.42

^a4 pt scale, “not important” to “essential”

^b4 pt scale, “strongly disagree” to “strongly agree”