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Asian American Leadership Development:
Examining the Impact of Collegiate Environments and Personal Goals

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A theme throughout the research on college students and higher education discourse on race is that Asian Americans¹ are an understudied group (Hune & Chan, 1997). Furthermore, the understanding of leadership for this population is limited because few studies have concentrated on leadership and Asian Americans (Liang, Lee, & Ting, 2002; Yammarino & Jung, 1998). One reason underlying the absence of attention toward Asian American leadership might be due to stereotypes that Asian Americans are unassertive, passive, and quiet (Zane, Sue, Hu, & Kwon, 1991), and therefore lacking leadership skills. Another reason may be due to the narrow definitions of leadership based on characteristics of those traditionally in positions of power, reflecting a predominantly White, male, upper- or middle-class leadership orientation (Kezar & Moriarty, 2000).

Illuminating Asian American student development needs and outcomes will help scholars, practitioners, and policy makers better understand and serve this growing undergraduate population. Indeed, Asian American student enrollment at a range of postsecondary institutions in the U.S. has risen dramatically over the last two decades, more than doubling from 500,000 in 1990 to over one million in 2004; in comparison, the enrollment for Whites during that same time period grew from nearly 10.7 million to 11.4 million (National Center for Education Statistics, 2005). Such educational enrollment figures underscore Asian Americans' strong college-going trends and point to the significance of studying this group in higher education.

¹ The author acknowledges the limited utility of "Asian American" as a fixed umbrella category in research and policy making. However, the data in this study could not be disaggregated by specific ethnic subgroups, and it is unclear whether Pacific Islander students identified themselves as "Asian/Asian American" in the survey. Thus, the term "Asian American" is used to describe this student population.

Given this backdrop, the main purpose of this study is to examine the influences of collegiate environments and personal goals on leadership self-assessments among Asian Americans, using Whites as a comparison peer group. Furthermore, by integrating perspectives from theories of social cognition (Fiske, 1998; Lin, Kwan, Cheung, & Fiske, 2005), trait-based leadership (Zaccaro, 2007), and college impact (Astin, 1984), this study also explores a conceptualization of leadership based on combined competence and sociability skills, and contrasts it with a more traditional, social skills-oriented leadership conceptualization. To the extent that leadership skills are shaped by students' various experiences during college, this study aims to provide insights into how leadership development might be addressed for Asian American undergraduates in particular.

Leadership Development in College

Research in higher education has documented that student participation in leadership activities in college positively affects several student outcomes, including satisfaction, long-term community service, and retention (Astin, 1993c; Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001). Moreover, leadership development and training programs have demonstrated relative success in their positive influence on college students generally (Astin, 1993c), as well as Asian American students specifically (Liang et al., 2002). Some researchers, however, have questioned the effectiveness of traditional leadership programs based on hierarchical conceptions of leadership that might marginalize students of color (Ortiz, Ah-Nee Benham, Cress, Langdon, & Yamasaki, 1999).

Given the improved racial and ethnic diversity on many college and university campuses, a number of leadership models have emphasized the importance of cross-cultural competencies as a critical component of effectual leadership (Higher Education Research Institute, 1996; Komives, Lucas, & McMahon, 1998). For students of color especially, learning how to navigate

cultural differences is a crucial skill for balancing their strengths and achievements against potential academic and social challenges (Tan, 1996). Thus, cultural awareness – both the knowledge of one’s own culture and the competencies to interact across different cultures – has consistently been found to be a vital part of the leadership development among people of color (Martinez-Cosio, 1996; Ortiz et al., 1999; Tan, 1996). Along similar lines, the development of cultural knowledge and understanding, as well as leadership skills, has been linked to students’ amount of interracial interactions (Antonio, 2001).

Within the research context of leadership development in college, Asian American leadership is an emergent area. Only a handful of empirical studies have examined Asian American undergraduates’ leadership perceptions or development (e.g., Balón, 2004; Liu & Sedlacek, 1999). Thus, additional research on this topic can help identify the key factors that may play a role in fostering Asian American leadership skills. This study addresses the gap in empirical research by identifying specific college environments that influence Asian American leadership self-assessments.

Conceptual Framework

Social Cognition Theories and Trait Approaches to Leadership

Previous person perception research found that trait ratings configure around intellectual versus social traits (Rosenberg, Nelson, & Vivekananthan, 1968). More recently, systematic patterns of stereotyping also indicate competence and sociability/warmth dimensions, as outlined in the Stereotype Content Model (SCM) (Fiske, 1998; Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999). The SCM principles assert that social groups typically fall into mixed clusters: paternalized groups who are liked as warm personalities but disrespected as incompetent (e.g., elderly people), and envied groups who are respected as competent but disliked as lacking warmth (e.g., female professionals).

Empirical tests of the SCM have revealed that Asian Americans are often characterized as highly competent, hard workers, but this representation does not allow for corresponding levels of sociability (Lin et al., 2005). Consequently, the “model minority” image reinforces stereotypes of Asian Americans lacking interpersonal skills and not often participating in social situations, let alone serving as capable leaders. If the dimensions of competence and sociability operate together to determine the stereotypic content that supports tendencies to overlook Asian American leadership potential, it stands to reason that high characterization along both dimensions is one way to define leadership for Asian Americans. Indeed, the notion that these twin dimensions apply to leadership is not new, as researchers have suggested that leadership performance is affected by cognitive ability along with social aptitude (see Zaccaro, 2007).

Higher education research also points to the relevance of the sociability components underlying leadership. Astin’s (1993b) typology of a student leader describes the prototypic or ideal leader as being popular with the opposite sex and socially self-confident, as well as demonstrating general leadership ability and public speaking ability. However, this typology has limitations due to its tendencies toward a culture-specific (i.e., ascribing to Western values) and gender-specific (i.e., ascribing to qualities more commonly associated with males) characterization of leadership (Liu & Sedlacek, 1999).

Turning to the field of leadership studies, one major category of leadership theories and models includes trait theories that define leadership according to prototypical attributes and skills (Yukl, 2006; Zaccaro, 2007; Zaccaro, Kemp, & Bader, 2004). The literature on such trait-based perspectives of leadership highlights two important critiques informing the present study. First, the lists of key leader traits in studies are rarely organized in a coherent and meaningful conceptual construction (Zaccaro, 2007). Second, studies tend not to consider adequately how the combination of leadership attributes may influence leadership perceptions (Yukl, 2006;

Zaccaro et al., 2004). Proponents of a more integrative method of assessing leadership emphasize that “leadership perceptions are grounded within a larger social, cultural, task, and interpersonal environment” (Lord, Brown, Harvey, & Hall, 2001, p. 332).

Connecting social cognition theories on stereotyping and person perception with trait theories of leadership, this study examines a definition of leadership that combines high self-ratings along sociability and competence dimensions, and compares it to a more traditional definition based mainly on sociability (see e.g., Astin, 1993b; Judge, Bono, Ilies, & Gerhardt, 2002). Applying both of these leadership conceptualizations to Asian American undergraduates in comparison to White undergraduates, the study includes two measures of leadership based on multiple, conceptually linked attributes and skills.

College Impact Theories and Leadership Development

College impact theories that address student development outcomes are also tied to this study’s conceptual framework. Astin’s (1984) theory of student involvement is based on the idea that the more students are academically and socially involved in college, the more they will gain in their intellectual and personal development. As a construct, involvement is the level of physical and psychological energy that students direct toward their college experience (Astin, 1984). This includes not only their academic endeavors such as studying, but also social pursuits such as peer interactions and extracurricular activities.

Many scholars studying the impact of college on students agree that what occurs outside of the classroom contributes immensely to valued outcomes of college (Astin, 1993a, 1993c; Feldman & Newcomb, 1969; Pascarella & Terenzini, 1991). These “out-of-class” experiences that are not explicitly related to academic courses and instruction have been found to influence student learning and personal development in multiple respects (Terenzini, Pascarella, & Blimling, 1999). For example, academic activities beyond the classroom setting, such as

independent study or faculty contact, facilitate students' development of cognitive complexity or interpersonal competence (Kuh, 1995). Life skills training experiences, such as community service participation, substantially improve students' academic development, sense of civic responsibility, and leadership ability among other critical skills (Astin & Sax, 1998). And social activities, such as peer interactions, are instrumental in the development of interpersonal competence, humanitarianism, and cognitive complexity (Kuh, 1995).

A final component of the conceptual framework involves using Astin's (1993a) input-environment-outcome (I-E-O) model to organize the study's variables in analyzing possible predictors of Asian American leadership self-ratings. The I-E-O approach assumes student background characteristics and various collegiate environments influence student outcomes. For the purposes of this study, two types of environments are highlighted. First, given the positive effects of racial/ethnic diversity and cultural awareness on leadership skills development (Antonio, 2001; Higher Education Research Institute, 1996; Komives et al., 1998), the potential role of diversity-related experiences or involvement in Asian American leadership development is taken into account. Second, because students' self-selected environments in college may be linked to the types of goals they aim to achieve, this study also includes measures of students' goal orientations to control for their potential intermediary influence on leadership self-ratings.

Objectives

This study investigates the academic and social environments and the goal orientations that might affect Asian American leadership self-assessments four years after college entry. The study also examines two distinct types of leadership. Based on a theoretical foundation that supports one conceptualization of leadership as a combination of sociability and competence, this leadership type is operationalized by a measure of sociability and competence self-ratings. A second, more traditional leadership type is operationalized by a measure of mainly sociability

self-ratings. Four core research questions guide the investigation: (a) How will engagement in various academic and social environments affect Asian American leadership self-ratings compared to White leadership self-ratings? (b) What effects will students' level of diversity experiences have on their leadership self-ratings? (c) What influence will students' goal orientations have on leadership self-ratings above and beyond other environmental factors? (d) What differences will appear in the variables predicting sociability-competence leadership self-ratings as opposed to traditional-sociability leadership self-ratings?

Method

Data Sources and Samples

Data for the study were from two national surveys of the Cooperative Institutional Research Program (CIRP) directed by the UCLA Higher Education Research Institute. The 1994 Student Information Form (SIF) collected data from first year undergraduates, and the 1998 College Student Survey (CSS) captured data during those students' senior year. Participating institutions administered both surveys locally to gather information on students' background traits, self-ratings, attitudes, behaviors, and aspirations. A total of 247 four-year colleges and universities (84% private; 16% public) are represented in this study.

The Asian American undergraduate sample of 916 (62% female) includes all those who self-identified on the 1994 SIF as Asian/Asian American. Because respondents were able to check more than one option for their race/ethnicity, those who indicated they were Asian/Asian American and another race/ethnicity were also included. The comparative White undergraduate sample of 1,889 (63% female) was formed by randomly selecting approximately 10% of the respondents who self-identified on the 1994 SIF as White only.

Variables in the Study

The first dependent variable is a 7-item self-rated measure of sociability-competence (SC) leadership composed of three sociability items and four competence items loading at .55 or greater on two separate factors in an exploratory factor analysis using varimax rotation (see Table 1). The SC leadership measure yielded alpha reliabilities of .81 for Asian Americans and .78 for Whites. For each item, students rated themselves in relation to their peers on a five-point scale from 1, “lowest 10%,” to 5, “highest 10%.” Self-ratings were summed to create a total SC leadership score ranging from 7 to 35. The second dependent variable is a self-rated measure of traditional-sociability (TS) leadership consisting of the three sociability items from the SC leadership scale. Alpha reliabilities for the TS leadership measure were .76 for Asian Americans and .71 for Whites. After summing the self-ratings, TS leadership scores ranged from 3 to 15.

 Insert Table 1 about here

Independent variables were categorized by type and followed a blocked sequence reflecting increased quality and depth of collegiate and personal experiences possibly affecting leadership development: (1) student background characteristics; (2) leadership pre-test; (3) institutional environment; (4) curricular environments; (5) student involvement environments; (6) interaction environments; and (7) goal orientations (see Appendix for the full list of independent variable definitions and coding schemes).

The first input block of student background characteristics included gender, acculturation status, parents' education and income, and high school grades. The second input block was the leadership pre-test from the 1994 SIF. Blocks 3 through 7 included distinct measures of college environment, starting first with institutional type and control. Block 4 contained curricular measures, such as choice of major, types of courses taken, special educational projects, and

college grades, which were meant to capture key academic environments. Similarly, Block 5 contained student involvement measures that would capture influential social environments, such as level of diversity activism, community service, and political engagement. The interaction environments of Block 6 included the amount of positive interactions with faculty, frequency of interactions with peers of a different race/ethnicity, and a measure of one's diversity awareness that could stem from students' interactions with others. The final block involved the intermediate outcome variables of students' goal orientations. Individual survey items were selected to reflect four different goal orientations toward social change, political change, personal status, and professional expertise. Reliability analyses yielded alphas for these composite variables ranging from .64 to .75.

Data Analyses

Descriptive analyses were conducted first to examine the changes over time in Asian American and White undergraduates' leadership self-ratings based on percentage differences and cross-tabulations. Next, forward-entry blocked multiple regression analyses were conducted separately for Asian Americans and Whites to identify background characteristics and college environments that contribute to students' sociability-competence leadership self-ratings. All of the variables that entered into either the model for Asian Americans or the model for Whites, or for both models, were then force-entered in blocks for each sample to compare predictors of sociability-competence leadership across racial groups. This same procedure was performed on the student samples using traditional-sociability leadership as the outcome variable.

Limitations

This study has at least three limitations. First, students in each group were randomly sampled and not matched according to institutional characteristics. Second, even though student background and environmental variables were conceived from a clear, conceptual framework,

the specific measures included in this study were derived under the constraints of the data sources. Future studies can include other reliable and valid measures of the variables under investigation. Lastly, because separate analyses were not conducted to test for possible gender differences, the results should be cautiously interpreted to represent the predictors of leadership self-ratings across genders for each racial group.

Results

Asian Americans and Whites demonstrate fairly consistent leadership self-assessments and changes over time. Table 2 shows the percentages of Asian American and White students who rate themselves as “below average,” “average,” or “above average” on the SC and TS leadership measures. As might be expected, significant within-group mean differences for both racial groups confirm that leadership self-ratings improve from college entry to four years later, regardless of how leadership is defined. However, Asian Americans rated themselves, on average, significantly lower in traditional-sociability leadership compared to Whites in 1994 and in 1998. This trend suggests that despite leadership gains during college for many Asian American students, special efforts may be necessary to support their leadership development and especially to reach those Asian Americans who begin their college experience with already low self-assessments. Indeed, research in counseling psychology has found that Asian American undergraduates attending selective universities demonstrate the lowest levels of self-esteem and self-efficacy compared to their White, Black, and Latino peers (Gloria & Ho, 2003).

 Insert Table 2 about here

Regression Analyses: Sociability-Competence (SC) Leadership Outcome

Table 3 lists the variables entering the SC leadership regression equation for Asian Americans, their corresponding simple correlations, and the final standardized regression

coefficients. To illustrate the effects of change for each entering variable as other variables are controlled throughout the regression, the beta coefficients are reported at the step after the input blocks are controlled, and at the final step for the regression model.

 Insert Table 3 about here

Only two student background characteristics remain in the final model as significant predictors of SC leadership self-ratings for Asian Americans. Student's gender has the greatest impact on self-ratings, with being female leading to lower SC leadership self-ratings. Showing an opposite effect, father's level of education has a moderately positive influence on leadership self-ratings. Notably, acculturation level, as measured by whether the student was born in the U.S. or the age at which the student came to the U.S., does not have any impact on SC leadership for Asian Americans, despite 40% of the sample being born outside the U.S. This stands contrary to previous studies citing the role of cultural factors in leadership self-concept for Asian Americans (Kim, Atkinson, & Yang, 1999; Yammarino & Jung, 1998). More than any of the student background characteristics, the SC leadership pre-test for Asian Americans is highly associated ($r = .62$) with their SC leadership outcome. This finding points to the reliability of students' leadership self-assessments, and also to the remarkably robust predictive power of students' leadership skill level at college entry.

Only one of the institutional environment variables originally enters the equation, signaling that attendance at a private four-year college has a positive effect on SC leadership for Asian Americans. However, this variable loses significance and remains non-significant once the measure of positive faculty interactions enters the model in the interaction environment block. This suggests that perhaps much of the effect of institutional control and type is tied to the nature of Asian American students' relationships with the faculty at their institution.

Turning to other environmental measures, curricular environments positively influence Asian American SC leadership self-ratings. Specifically, college GPA demonstrates the strongest effect among the curricular measures with twice the predictive power of the other two measures: being a business major and having worked on an independent study project. In fact, the effect of earning higher college grades is the next strongest positive predictor of SC leadership self-ratings after controlling for Asian Americans' initial SC leadership self-ratings.

The student involvement environments reflect diversity activism, community service, and political engagement. Among the five specific measures of these involvement variables, only one comes into the equation as having a positive effect on Asian American SC leadership: discussed politics. Yet this variable drops to a non-significant level after two more regression steps when diversity awareness is controlled. Interestingly, the two measures of diversity activism (participated in a racial/ethnic student organization, and attended a racial/cultural awareness workshop) are individually correlated with diversity awareness ($r = .17, p < .001$ in each case), which is included in the next environmental block. This might raise the multicollinearity flag, but because tolerance levels remain high (above 0.8) and the goal is to predict leadership from diversity experiences or involvement in general, some degree of overlap among these diversity-related variables is acceptable.

Two of the three interaction environment variables appear in the final model as having positive impacts on Asian American SC leadership: interactions with faculty and diversity awareness, with the former displaying more than twice the predictive power than the latter. Even though the measure of diverse peer interactions initially enters the model as a significant predictor, it loses its significance when the measure of faculty interactions is controlled. Thus, it seems that these two types of interactions may be competing in their predictive power to account for variations in Asian American SC leadership self-ratings. Such may be the case because this

type of leadership differentiates a sociability component, which peer interactions might affect more, and a competence component, which faculty interactions instead might affect more. This explanation, however, is speculative and warrants further investigation.

Looking at the effects of intermediate outcomes, or goal orientations, it appears that possessing goals related to political change, personal status, and professional expertise all contribute to higher levels of SC leadership self-ratings for Asian Americans. This finding was expected, considering that other environmental factors may have helped students form their goal orientations, which in turn, prompted them to engage in experiences or activities during college that would influence their leadership development. It is noteworthy that the social change goal orientation does not remain in the final model, despite its significant simple correlation with SC leadership self-ratings ($r = .17, p < .001$) and its stable significance throughout the majority of regression steps. Social change goal orientation becomes non-significant once the effect of personal status goal orientation is controlled. This final result should not necessarily be interpreted as clear evidence that social change is unimportant to Asian American undergraduates. Rather, the pattern of beta changes illustrates that perhaps for those whose goals are most strongly oriented toward elevating one's status in society, having social change goals is less central to their SC leadership development. But for others, their orientations toward status, social change, and other goal types are more balanced, as these different goals are not mutually exclusive.

Table 4 lists the relevant statistics and variables entering the final SC leadership regression model for Whites. Two student background characteristics affecting White SC leadership self-ratings are the same as those for Asian Americans. Specifically, being female has a negative effect on SC leadership self-ratings, as does having a higher GPA in high school, but only after controlling for SC leadership pre-test and college GPA. The only background

characteristic positively influencing SC leadership for Whites is parental income. Comparable to what was found for Asian Americans, the SC leadership pre-test is highly correlated ($r = .64$) with the SC leadership outcome and is the strongest predictor variable in the final model.

 Insert Table 4 about here

Among the various environmental measures, college GPA enters as the strongest positive predictor for Whites in the curricular environments block. This variable has more than four and five times the predictive power compared to the other two curricular measures of having worked on an independent study project or worked on a group project in class, respectively. None of the student involvement variables appear in the final regression equation, despite the initial entry of the two political engagement measures. The only interaction environment measure showing a positive impact on White SC leadership self-ratings is positive faculty interactions. Finally, the findings for intermediate outcomes show that Whites, like their Asian American peers, are positively affected by their goal orientations toward personal status, professional expertise, and political change.

Comparing Results for Asian Americans and Whites on Sociability-Competence (SC) Leadership

To compare directly the SC leadership predictors for the two samples, Table 5 displays the final unstandardized regression coefficients for the variables entering the equations for Asian Americans and Whites. Only 10 variables entered the regression equations for both groups, and another 8 entered the regression for Asian Americans or for Whites. Of these 18 variables that were force-entered, 11 are significant predictors of SC leadership in the final model for Asian Americans, accounting for 53.6% of the variance. Similarly, the final model for Whites also has 11 significant predictors accounting for 52.9% of the leadership variance.

Insert Table 5 about here

Among all significant input variables, the two with the same effects for Asian Americans and Whites are student's gender (female) and SC leadership pre-test scores. These two variables show the greatest extreme influences. Regardless of race, being female is the largest negative predictor of SC leadership, while the pre-test measure is the largest positive predictor.

After controlling for gender, the original positive simple correlation between high school GPA and SC leadership self-ratings shows a sign reversal by the final model for both groups, and ultimately is not a significant predictor in the Asian American model. For both Whites and Asian Americans, high school and college grades are positively correlated. The fact that the effect of earning high grades in high school becomes negative (but still significant) for Whites at the point when college GPA is controlled suggests that perhaps White students earn college grades that are actually lower than what they are expected to based on their high school GPA. A similar pattern looks to be the case for Asian Americans, but the effect of high school GPA loses significance once and for all when the faculty interactions variable enters the model.

The findings for curricular environment variables illustrate two key differences between Asian Americans and Whites. Specifically, working on an independent study project is a positive predictor of SC leadership self-ratings for both groups, but is twice as strong for Asian Americans. Furthermore, being a business major is clearly a robust predictor of higher SC leadership self-ratings for Asian Americans but does not even enter the model for Whites. Together these results point out that the nature of independent study work (which 67% of the Asian American sample participated in compared to 75% of Whites), and the experience of being in an undergraduate business major program (which was the case for 16% of Asian Americans in

the sample compared to 15% of Whites) contribute in unique ways to SC leadership development for Asian Americans.

With respect to interaction environments, both Asian American and White SC leadership self-ratings are positively influenced by faculty interactions that encourage students' educational development and provide support or guidance. However, diversity awareness is a significant predictor only for Asian Americans, as it does not enter the model for Whites.

Among the goal orientations associated with positive changes in SC leadership self-ratings, Asian Americans and Whites share the same three, but with some differences in level of effect. The largest difference is evident with the effect of personal status goals, which has a greater influence on SC leadership for Whites than for Asian Americans. The next largest difference is seen with the impact of professional expertise goal orientation, which again shows a greater effect on Whites' self-ratings than on those for Asian Americans. Lastly, the political change goal orientation has nearly identical effects on SC leadership for Asian Americans and Whites.

Regression Analyses: Traditional-Sociability (TS) Leadership Outcome

Table 6 shows the simple correlations and final beta coefficients for the variables entering the TS leadership regression model for Asian Americans. Similar to the SC leadership model for this group, being female is the strongest (and only) significant negative predictor of TS leadership self-ratings, and TS leadership pre-test scores are the strongest positive predictor, correlating very highly with the TS leadership outcome ($r = .62$). Parental income also enters as a significant positive predictor here, indicating the influence of higher household income on TS leadership development.

 Insert Table 6 about here

Among curricular environment variables, only enrollment in honors/advanced courses enters as a positive predictor of Asian Americans' TS leadership self-ratings, suggesting that such courses support this type of leadership development possibly through content, pedagogy, or socialization practices. Interestingly, college grades did not appear in the final model as a significant predictor of TS leadership, perhaps because this conceptualization of leadership does not explicitly include an academic/competence component.

With respect to student involvement and interaction environments, three variables entered as significant positive predictors of TS leadership: community service, positive faculty interactions, and diversity awareness. Among these three, faculty interactions show nearly twice the predictive power compared to the other two. This finding speaks to the important influence of faculty on Asian American students and their leadership development, even when leadership is measured by mostly socially oriented self-ratings.

The two goal orientations that contribute to Asian Americans' TS leadership self-ratings above and beyond other environmental variables are personal status and political change. Given the influence previously mentioned of community service on TS leadership self-ratings, and that "becoming a community leader" is one of the items composing the political change goal orientation factor, it is not surprising that this particular orientation affects Asian Americans' TS leadership development. Similarly, if personal status goals are linked to cultivating sociability-related skills such as social self-confidence and public speaking, then it would be expected that status goal orientation would lead to higher TS leadership self-ratings. Notably, the professional expertise goal orientation does not enter this model for Asian Americans, whereas it did in the SC leadership model.

Table 7 lists the relevant statistics and variables entering the TS leadership regression model for Whites. The same two student background characteristics influencing Asian American TS leadership self-ratings also affect White self-ratings in the same manner: being female is a negative predictor, and parental income is a positive one. In addition, the TS leadership pre-test is highly correlated with the TS leadership outcome ($r = .62$) and is by far the strongest positive predictor of TS leadership self-ratings in the final model for Whites.

 Insert Table 7 about here

Turning to the environmental variables, having worked on a group project in class or on an independent study project are the only two curricular environment predictors entering the final model, and both variables positively contribute to Whites' TS leadership self-ratings. Another positive predictor within the student involvement block is participation in student government. Like their Asian American peers, Whites are positively affected by two interaction environment variables: their interactions with faculty and their level of diversity awareness. The effect of positive faculty interactions, however, is more than twice that of diversity awareness. Regarding the impact of goal orientations, having political change goals and personal status goals leads to higher levels of TS leadership for Whites. In this case, perhaps the influence of student government involvement feeds into the formation of political change goals that, in turn, support TS leadership development.

Comparing Results for Asian Americans and Whites on Traditional-Sociability (TS) Leadership

Eight variables entered the regression equations for both Asian Americans and Whites, with an additional five entering for just one group or the other (see Table 8). These 13 variables were force-entered in six blocks (neither group had any institutional environment variables entering initially, so that block was not included in subsequent regressions). The final model for

Asian Americans includes 8 significant variables accounting for 46.6% of the variance in TS leadership self-ratings, whereas the final model for Whites includes 10 significant predictors accounting for 45.4% of the variance in self-ratings.

Insert Table 8 about here

For both racial groups, the same set of input variables has comparable effects on students' TS leadership self-ratings. Namely, being female negatively predicts TS leadership, while parental income and TS leadership pre-test scores positively predict such leadership. These findings not only highlight the pervasive trend for undergraduate women in general to report lower confidence in their leadership abilities (Astin, 1993c; Kezar & Moriarty, 2000), but they also suggest that coming from higher-income backgrounds generally positions students well to develop their TS leadership skills.

None of the three curricular environment variables force-entered into the regression for Asian Americans appear as significant predictors in the final model for the group. In contrast, working on an independent study project or group project significantly and positively predicts TS leadership for Whites. This implies that the possible impact of curriculum or other academic variables on TS leadership development is less robust for Asian Americans than it is for Whites.

Among the student involvement variables, community service shows twice the positive predictive power for Asian American TS leadership self-ratings than it does for Whites, but is significant only for Asian Americans. The only student involvement variable that significantly predicts higher TS leadership self-ratings for Whites is participation in student government, which does not even enter the initial regression for Asian Americans. Thus, the two groups seem to be differentially affected by distinct types of student involvement when it comes to TS leadership development.

TS leadership self-ratings for both groups are positively influenced by their interactions with faculty and level of diversity awareness. Diversity awareness has double the predictive impact on Asian American TS leadership self-ratings in comparison to Whites, once again highlighting that the level of knowledge and understanding of racial/ethnic diversity plays a stronger part in leadership development for Asian Americans than it does for Whites.

Finally, the same two goal orientations enter as significant positive predictors of TS leadership for Asian Americans and Whites. The effect of personal status goal orientation on TS leadership is identical across racial groups. In contrast, the impact of having a political change goal orientation is approximately one third greater for Whites than it is for Asian Americans.

Conclusions and Implications

Focusing this study on Asian American undergraduates and their leadership development during college extends the limited research that has been done on this student population. To examine the different kinds of academic and social environments, as well as goal orientations, affecting Asian American leadership self-assessments, the study looked at two types of leadership outcomes, with a particular interest in exploring a conceptualization of leadership that involves sociability and competence self-ratings. Several findings emerged that illustrate important factors involved in leadership development for Asian Americans.

First, depending on how leadership is defined, academic environments can have significant positive effects on leadership self-assessments for Asian Americans, or they can have little to no effects. When the outcome is sociability-competence leadership, conducting an independent study project and majoring in business are two curricular environment variables that show uniquely strong effects on Asian American leadership self-ratings. However, none of the curricular environment variables entered as significant predictors for Asian Americans when they were force-entered into the regression to compare this group with Whites on the traditional-

sociability leadership outcome. Expanding the typical notion of leadership to include both sociability and competence dimensions allows for a wider range of college experiences to contribute to students' sense of self-efficacy as leaders. It seems likely that the experience of doing independent work could improve students' intellectual self-confidence or increase their feelings of self-sufficiency that then builds their levels of competence and sociability. Likewise, it might be expected given the social networking involved and competitive nature of business that being a business major would provide students greater chances to improve their sociability and competence. In the case of Asian Americans, a more comprehensive leadership concept may work well to capture the academic growth experiences that shape their leadership development – especially if Asian American students hold certain ethnic/cultural values (e.g., importance of academic achievement, see Kim et al., 1999) that might otherwise not be seen as relevant to the predominant, traditional definition of leadership (Liu & Sedlacek, 1999).

Interestingly, for Asian Americans and Whites alike, it is clear that the role of positive faculty interactions in enhancing leadership development is key. These interactions positively influence both types of leadership self-ratings, with slightly larger effects evident for Asian Americans compared to Whites. Receiving faculty guidance, support, and advice on academic or personal matters apparently fosters an environment in which Asian Americans and Whites can cultivate their intellectual and social leadership skills. Future studies should test if this effect holds for other racial groups as well.

This study also found support for the expectation based on prior research that diversity experiences are positively related to student development outcomes such as leadership (e.g., Antonio, 2001), and have even greater impact on Asian Americans and other students of color (Tan, 1996). With respect to both types of leadership outcomes, the findings here demonstrate that the level of diversity awareness (i.e., knowledge and understanding of racial/cultural

diversity) among Asian Americans is a positive predictor variable for leadership development. When the outcome is traditional-sociability leadership, diversity awareness positively predicts leadership self-ratings for Asian Americans as well as Whites, but the effect on Asian Americans is twice as large. In contrast, when the outcome is sociability-competence leadership, diversity awareness does not enter the model for Whites, although if it had, its effect would be six times as large for Asian Americans. Frequency of diverse peer interactions did not enter either regression model for Asian Americans or Whites, indicating that possibly other elements of peer interactions, such as quality of interactions, might need to be measured in further analyses to tap into any additional effects such interactions may have on leadership development.

The assumption that goal orientations would account for variations in leadership self-ratings above and beyond other environmental variables stemmed from the likelihood that such goals are the intermediate outcomes between students' self-selected environments and leadership outcomes. Indeed, certain goal orientations were found to play contributing roles in Asian American leadership development, as also with Whites. Having professional expertise goals is associated with higher sociability-competence leadership self-ratings across racial groups. For both leadership types, having political change goals and personal status goals positively predicts leadership self-ratings, though for Asian Americans the effects tend to be weaker than they are for Whites. Nonetheless, these goal orientations suggest that Asian Americans are equally concerned as their White peers about developing respect within a profession, addressing political and community issues, and achieving financial success and high status. These concerns, in turn, relate to their leadership growth during college.

A final point stemming from this study is that leadership can be described in multiple ways, and can include individual traits, behaviors, level of influence, interaction patterns, role relations, and other features (Yukl, 2006). Connecting theories of social cognition, trait-based

leadership, and college impact to create a theoretical framework for defining leadership in terms of sociability and competence is one approach to examining Asian American student leadership development. While providing several answers to the research questions posed, this study opens the door to other important questions. For example, beyond the two types of leadership addressed here, what other ways might leadership be defined for Asian Americans, and how can leadership definitions be validated? Certainly, cultural factors, among others, can affect the way Asian American students display leadership as well as how they are perceived as leaders (Liang et al., 2002). Furthermore, how can we maximize leadership growth among Asian American undergraduates? Beyond studying leadership skills, future research on Asian American student leaders might consider examining the individual and environmental influences on actual leadership performance.

As more research on this topic is produced, campuses will want to keep pace and should continue generating curricular and co-curricular efforts to cultivate Asian American leadership. Several college and universities have already demonstrated success in creating model programs aiming to enhance Asian American undergraduates' level of understanding of sociopolitical issues and to foster their leadership potential (Liang et al., 2002). By addressing their student development needs and redefining leadership, scholars, practitioners, and policy makers collectively can help empower Asian American students and encourage them to become more involved on campuses and beyond. This trend is essential to improve opportunities for Asian American youth to emerge as clearly visible leaders.

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Appendix

Independent Variable Definitions and Coding Schemes

<i>Student Background Characteristics</i>	
Student's sex (female)	1 = "male," 2 = "female"
Student born in / age came to U.S.	4-point scale: 1 = "came after age 12" 2 = "came between ages 6-12" 3 = "came before age 6" 4 = "born in U.S."
Father's education	8-point scale: 1 = "grammar school or less" to 8 = "graduate degree"
Mother's education	8-point scale: 1 = "grammar school or less" to 8 = "graduate degree"
Parental income	14-point scale: 1 = "less than \$6,000" to 14 = "\$200,000 or more"
Average high school grade	8-point scale: 1 = "D" to 8 = "A or A+"
<i>Sociability-Competence Leadership Pre-Test</i>	
1994 Soc-comp leadership self-ratings: Social self-confidence Public speaking ability Leadership ability Academic ability Drive to achieve Competitiveness Intellectual self-confidence	5-point scale: 1 = "lowest 10%" to 5 = "highest 10%" 7 items summed for a Sociability- Competence Leadership Scale pre-test score ($\alpha_A = .81$, $\alpha_W = .78$)
<i>Traditional-Sociability Leadership Pre-Test</i>	
1994 Trad-soc leadership self-ratings: Social self-confidence Public speaking ability Leadership ability	5-point scale: 1 = "lowest 10%" to 5 = "highest 10%" 3 items summed for a Traditional- Sociability Leadership Scale pre-test score ($\alpha_A = .76$, $\alpha_W = .71$)
<i>Institutional Environment</i>	
Public University Private university Private four-year college (Public four-year college)	1 All dichotomous: 1 = "no," 2 = "yes"
<i>Curricular Environments</i>	
College major: Professional Business	All dichotomous: 1 = "no," 2 = "yes"

Education	
Engineering	
Arts and Humanities	
Biological Sciences	
Physical Sciences	
Social Sciences	
(Other major)	
Enrolled in ethnic studies course	1 = "no," 2 = "yes"
Enrolled in honors/advanced courses	1 = "no," 2 = "yes"
Worked on independent study project	1 = "no," 2 = "yes"
Worked on group project in class	1 = "no," 2 = "yes"
Average college grade	6-point scale: 1 = "C- or less" to 6 = "A"

Student Involvement Environments

Diversity activism:	
Participated in racial/ethnic student org	1 = "no," 2 = "yes"
Attended racial/cultural awareness workshop	1 = "no," 2 = "yes"
Community service:	All dichotomous: 1 = "no," 2 = "yes"
Tutoring/teaching	9 items summed for a community service score ($\alpha = 0.59$)
Educational counseling/mentoring	
Personal counseling/mentoring	
Providing childcare	
Providing homeless/shelter support	
Public safety (e.g., crime prevention)	
Community cleanup/rebuilding	
Conservation activities (e.g., recycling)	
Other community service	
Political engagement:	All dichotomous: 1 = "no," 2 = "yes"
Participated in student government: involved in student government, elected to student office	2 items summed for a student government participation score ($\alpha = 0.66$)
Discussed politics	1 = "no," 2 = "yes"

Interaction Environments

Positive faculty interactions:	3-point scale: 1 = "not at all," 2 = "occasionally," 3 = "frequently"
Professor provided respect	7 items summed for a positive faculty interaction score ($\alpha = 0.85$)
Professor provided intellectual challenge	
Professor provided opp to discuss homework	
Professor took personal interest in my progress	
Professor provided feedback about abilities	
Professor provided emotional support	
Professor provided advice on education program	

<p>Diverse peer interactions: Interacted with someone of different race/ ethnicity Dined with someone of different race/ethnicity Studied with someone of different race/ethnicity</p>	<p>3-point scale: 1 = “not at all,” 2 = “occasionally,” 3 = “frequently” 3 items summed for a diverse peer interaction score ($\alpha = 0.82$)</p>
<p>Diversity awareness: Acceptance of different races/cultures Knowledge of different races/cultures</p>	<p>5-point scale indicating degree of change from freshman year to senior year: 1 = “much weaker,” to 5 = “much stronger” 2 items summed for a diversity awareness score ($\alpha = 0.71$)</p>
<hr/>	
<i>Intermediate Outcomes: Goal Orientations</i>	
<p>Social change goal orientation: Help others in difficulty Participate in community action program Promote racial understanding Influence social values</p>	<p>4-point scale indicating degree of importance: 1 = “not important,” to 4 = “essential” 4 items summed for a social change goal orientation score ($\alpha = 0.75$)</p>
<p>Political change goal orientation: Keep up to date with politics Influence the political structure Become a community leader</p>	<p>4-point scale indicating degree of importance: 1 = “not important,” to 4 = “essential” 3 items summed for a political change goal orientation score ($\alpha = 0.73$)</p>
<p>Personal status goal orientation: Be successful in own business Be very well off financially Have administrative responsibility over others</p>	<p>4-point scale indicating degree of importance: 1 = “not important,” to 4 = “essential” 3 items summed for a personal status goal orientation score ($\alpha = 0.64$)</p>
<p>Professional expertise goal orientation: Become an authority in my field Obtain recognition from colleagues</p>	<p>4-point scale indicating degree of importance: 1 = “not important,” to 4 = “essential” 2 items summed for a professional expertise goal orientation score ($\alpha =$ 0.74)</p>
<hr/>	

Table 1

Dependent Variables

	Factor Loading
<i>Self-Rated Sociability-Competence Leadership</i>	
<i>($\alpha_{AsianAm} = .81, \alpha_{White} = .78$)</i>	
<i>Sociability Items</i>	
Social self-confidence	0.83
Public speaking ability	0.76
Leadership ability	0.74
<i>Competence Items</i>	
Academic ability	0.77
Drive to achieve	0.73
Competitiveness	0.68
Intellectual self-confidence	0.55
<i>Self-Rated Traditional-Sociability Leadership</i>	
<i>($\alpha_{AsianAm} = .76, \alpha_{White} = .71$)</i>	
Social self-confidence	0.83
Public speaking ability	0.76
Leadership ability	0.74

Note: All items on a 5-point scale: 1 = lowest 10%, 2 = below average, 3 = average, 4 = above average, 5 = highest 10%.

Table 2

Changes in Leadership Self-Ratings by Race

	1994		1998		% Point Change	
	Asian Americans (%)	Whites (%)	Asian Americans (%)	Whites (%)	Asian Americans	Whites
<i>Sociability-Competence Leadership Self-Ratings</i>						
Highest 10% / Above Average (Score of 28-35)	30.9	31.0	39.0	39.5	8.1	8.5
Average (Score of 21-27)	60.4	58.8	54.1	54.1	-6.3	-4.7
Below Average / Lowest 10% (Score of 7-20)	8.7	10.2	6.9	6.4	-1.8	-3.8
Mean Score	25.52 ^a	25.46 ^b	26.29 ^a	26.45 ^b		
S.D.	3.76	3.86	4.14	3.98		
<i>Traditional-Sociability Leadership Self-Ratings</i>						
Highest 10% / Above Average (Score of 12-15)	23.7	27.0	36.8	38.9	13.1	11.9
Average (Score of 9-11)	52.4	50.5	48.3	49.0	-4.1	-1.5
Below Average / Lowest 10% (Score of 3-8)	23.8	22.5	15.0	12.1	-8.8	-10.4
Mean Score	9.93 ^{a**}	10.17 ^{b**}	10.70 ^{a*}	10.90 ^{b*}		
S.D.	2.08	2.18	2.24	2.18		

Note: Independent samples *t*-tests indicate significant mean differences between racial groups in 1994 and in 1998.

** $p < .01$, * $p < .05$.

^a Paired samples *t*-tests show significant overall mean differences for Asian Americans in 1994 and 1998, $p < .001$.

^b Paired samples *t*-tests show significant overall mean differences for Whites in 1994 and 1998, $p < .001$.

Table 3

Predictors of Sociability-Competence Leadership Self-Ratings for Asian Americans (n = 831)

Step	Variable Entering	Simple <i>r</i>	Beta After Inputs ^a	Final Beta
<i>Student Background Characteristics</i>				
1	Student's sex: female	-.19	-.19 ***	-.10 ***
2	High school GPA	.15	.17 ***	-.01
3	Father's education	.15	.14 ***	.06 *
<i>Sociability-Competence Leadership Pre-Test</i>				
4	1994 leadership self-ratings	.62	.60 ***	.50 ***
<i>Institutional Environment</i>				
5	Private 4-year college	.05	.08 **	.01
<i>Curricular Environments</i>				
6	College GPA	.30	.23 ***	.18 ***
7	Worked on independent study project	.16	.13 ***	.08 **
8	Business major	.06	.09 **	.09 **
<i>Student Involvement Environments</i>				
9	Discussed politics	.18	.09 **	.01
<i>Interaction Environments</i>				
10	Positive faculty interactions	.32	.23 ***	.15 ***
11	Diversity awareness	.13	.12 ***	.06 *
<i>Intermediate Outcomes</i>				
12	Personal status goal orientation	.21	.16 ***	.09 **
13	Political change goal orientation	.30	.20 ***	.11 ***
14	Professional expertise goal orientation	.30	.21 ***	.07 **

Note: All simple correlations in boldface are significant, $p < .01$. Variables listed are those that entered the regression equation at $p < .01$.

^a Except for coefficients corresponding to student background characteristics and the pre-test, the values in this column represent the standardized coefficient the variable would have received if it had entered at the step immediately after inputs are controlled.

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

Table 4

Predictors of Sociability-Competence Leadership Self-Ratings for Whites (n = 1736)

Step	Variable Entering	Simple <i>r</i>	Beta After Inputs ^a	Final Beta
<i>Student Background Characteristics</i>				
1	High school GPA	.19	.19 ***	-.06 **
2	Student's sex: female	-.18	-.21 ***	-.09 ***
3	Parental income	.12	.13 ***	.06 **
4	Student born in/age came to U.S.	-.05	-.05 *	-.02
<i>Sociability-Competence Leadership Pre-Test</i>				
5	1994 leadership self-ratings	.64	.65 ***	.52 ***
<i>Curricular Environments</i>				
6	College GPA	.24	.19 ***	.18 ***
7	Worked on independent study project	.15	.07 ***	.04 *
8	Worked on group project in class	.09	.07 ***	.03 *
<i>Student Involvement Environments</i>				
9	Participated in student government	.15	.06 ***	.02
10	Discussed politics	.19	.06 **	.01
<i>Interaction Environments</i>				
11	Positive faculty interactions	.27	.15 ***	.12 ***
<i>Intermediate Outcomes</i>				
12	Personal status goal orientation	.25	.19 ***	.13 ***
13	Professional expertise goal orientation	.31	.20 ***	.10 ***
14	Political change goal orientation	.34	.18 ***	.09 ***

Note: All simple correlations in boldface are significant, $p < .01$. Variables listed are those that entered the regression equation at $p < .01$.

^a Except for coefficients corresponding to student background characteristics and the pre-test, the values in this column represent the standardized coefficient the variable would have received if it had entered at the step immediately after inputs are controlled.

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

Table 5

Comparison of Predictors of Sociability-Competence Leadership Self-Ratings for Asian Americans and Whites

Variable Entering	Asian Americans (n = 835)			Whites (n = 1749)		
	Simple r	Final b	Final Beta	Simple r	Final b	Final Beta
<i>Block 1: Student Background Characteristics</i>						
Student's sex: female	-.19	-.76 ***	-.09 ***	-.18	-.73 ***	-.09 ***
High school GPA	.15	-.04	-.01	.19	-.19 **	-.06 **
Father's education	.15	.07	.04	.09	(.02)	(.01)
Parental income	.12	(.09 **)	(.08 **)	.12	.07 **	.05 **
Student born in/age came to U.S.	-.01	(-.10)	(-.03)	-.05	-.24	-.02
		$R^2 = .092$			$R^2 = .097$	
<i>Block 2: Sociability-Competence Pre-Test</i>						
1994 leadership self-ratings	.62	.55 ***	.49 ***	.64	.53 ***	.51 ***
		$R^2 = .396$			$R^2 = .422$	
<i>Block 3: Institutional Environment</i>						
Private 4-year college	.05	.08	.01	-.03	(-.20)	(-.02)
		$R^2 = .402$			$R^2 = .422$	
<i>Block 4: Curricular Environments</i>						
College GPA	.30	.81 ***	.19 ***	.24	.83 ***	.19 ***
Worked on independent study project	.16	.38 **	.07 **	.15	.19 **	.04 **
Business major	.06	1.09 ***	.09 ***	.01	(.18)	(.02)
Worked on group project in class	.01	(-.25)	(-.03)	.09	.23	.03
		$R^2 = .468$			$R^2 = .461$	
<i>Block 5: Student Involvement Environments</i>						
Discussed politics	.19	.04	.01	.19	.05	.01
Participated in student government	.15	(.20)	(.03)	.15	.15	.02
		$R^2 = .474$			$R^2 = .467$	
<i>Block 6: Interaction Environments</i>						
Positive faculty interactions	.32	.18 ***	.14 ***	.27	.16 ***	.12 ***
Diversity awareness	.13	.18 *	.06 *	.09	(.03)	(.01)
		$R^2 = .505$			$R^2 = .482$	
<i>Block 7: Intermediate Outcomes</i>						
Personal status goal orientation	.21	.16 **	.09 **	.25	.25 ***	.13 ***
Political change goal orientation	.30	.19 **	.10 **	.35	.18 ***	.10 ***
Professional expertise goal orientation	.30	.20 **	.08 **	.31	.25 ***	.10 ***
		$R^2 = .536$			$R^2 = .529$	

Note: All simple correlations in boldface are significant, $p < .01$. Coefficients in parentheses correspond to variables that did not enter the regression equation for that group; in these cases, the *bs* and betas represent the coefficients the variable would have received at the final step.

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

Table 6

Predictors of Traditional-Sociability Leadership Self-Ratings for Asian Americans (n = 834)

Step	Variable Entering	Simple <i>r</i>	Beta After Inputs ^a	Final Beta
<i>Student Background Characteristics</i>				
1	Parental income	.17	.17 ***	.09 ***
2	Student's sex: female	-.15	-.14 ***	-.08 **
<i>Traditional-Sociability Leadership Pre-Test</i>				
3	1994 leadership self-ratings	.62	.61 ***	.52 ***
<i>Curricular Environments</i>				
4	Enrolled in honors/advanced courses	.13	.08 **	.05 *
<i>Student Involvement Environments</i>				
5	Discussed politics	.17	.08 **	.01
6	Community service	.16	.08 **	.06 *
<i>Interaction Environments</i>				
7	Positive faculty interactions	.29	.17 ***	.14 ***
8	Diversity awareness	.16	.14 ***	.08 **
<i>Intermediate Outcomes</i>				
9	Personal status goal orientation	.21	.14 ***	.11 ***
10	Political change goal orientation	.31	.18 ***	.10 **

Note: All simple correlations in boldface are significant, $p < .001$. Variables listed are those that entered the regression equation at $p < .01$.

^a Except for coefficients corresponding to student background characteristics and the pre-test, the values in this column represent the standardized coefficient the variable would have received if it had entered at the step immediately after inputs are controlled.

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

Table 7

Predictors of Traditional-Sociability Leadership Self-Ratings for Whites (n = 1746)

Step	Variable Entering	Simple <i>r</i>	Beta After Inputs ^a	Final Beta
<i>Student Background Characteristics</i>				
1	Student's sex: female	-.15	-.15 ***	-.09 ***
2	Parental income	.12	.12 ***	.05 **
<i>Traditional-Sociability Leadership Pre-Test</i>				
3	1994 leadership self-ratings	.62	.61 ***	.51 ***
<i>Curricular Environments</i>				
4	Worked on group project in class	.11	.08 ***	.05 **
5	Worked on independent study project	.13	.07 ***	.04 *
<i>Student Involvement Environments</i>				
6	Participated in student government	.16	.08 ***	.04 *
7	Community service	.17	.08 ***	.04
<i>Interaction Environments</i>				
8	Positive faculty interactions	.22	.12 ***	.09 ***
9	Diversity awareness	.13	.08 ***	.04 *
<i>Intermediate Outcomes</i>				
10	Political change goal orientation	.35	.18 ***	.12 ***
11	Personal status goal orientation	.24	.12 ***	.11 ***

Note: All simple correlations in boldface are significant, $p < .001$. Variables listed are those that entered the regression equation at $p < .01$.

^a Except for coefficients corresponding to student background characteristics and the pre-test, the values in this column represent the standardized coefficient the variable would have received if it had entered at the step immediately after inputs are controlled.

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

Table 8

Comparison of Predictors of Traditional-Sociability Leadership Self-Ratings for Asian Americans and Whites

Variable Entering	Asian Americans (n = 865)			Whites (n = 1779)		
	Simple <i>r</i>	Final <i>b</i>	Final Beta	Simple <i>r</i>	Final <i>b</i>	Final Beta
<i>Block 1: Student Background Characteristics</i>						
Student's sex: female	-.15	-.39 **	-.09 **	-.15	-.44 ***	-.10 ***
Parental income	.17	.06 ***	.09 ***	.13	.04 **	.05 **
		$R^2 = .046$			$R^2 = .038$	
<i>Block 2: Traditional-Sociability Pre-Test</i>						
1994 leadership self-ratings	.61	.56 ***	.52 ***	.62	.52 ***	.52 ***
		$R^2 = .393$			$R^2 = .398$	
<i>Block 3: Curricular Environments</i>						
Worked on independent study project	.09	(.08)	(.03)	.13	.10 *	.04 *
Worked on group project in class	.06	(-.05)	(-.01)	.11	.18 *	.05 *
Enrolled in honors/advanced courses	.13	.24	.05	.11	(-.01)	(.00)
		$R^2 = .403$			$R^2 = .407$	
<i>Block 4: Student Involvement Environments</i>						
Community service	.16	.08 *	.06 *	.16	.04	.03
Participated in student government	.16	(.05)	(.01)	.16	.13 *	.04 *
Discussed politics	.16	.01	.00	.17	(-.02)	(.00)
		$R^2 = .414$			$R^2 = .416$	
<i>Block 5: Interaction Environments</i>						
Positive faculty interactions	.29	.10 ***	.14 ***	.21	.07 ***	.09 ***
Diversity awareness	.16	.14 **	.08 **	.13	.07 *	.04 *
		$R^2 = .446$			$R^2 = .427$	
<i>Block 6: Intermediate Outcomes</i>						
Political change goal orientation	.30	.09 **	.08 **	.35	.13 ***	.12 ***
Personal status goal orientation	.21	.11 ***	.11 ***	.24	.11 ***	.11 ***
		$R^2 = .466$			$R^2 = .454$	

Note: All simple correlations in boldface are significant, $p < .05$. Coefficients in parentheses correspond to variables that did not enter the regression equation for that group; in these cases, the *bs* and betas represent the coefficients the variable would have received at the final step.

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