

Asian American College Students as Model Minorities: An Examination of Their Overall Competence

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Educational success among Asian Americans has led to their being labeled the "model minority." At the University of California, Berkeley (UCB), Asian American students have higher grade point averages (GPAs) than Hispanic and African American but not White students, supporting the notion that Asian Americans are more successful compared with other racial minorities. However, success in the classroom does not implicate effective functioning in life, and nonacademic criteria ought to be considered in assessing the validity of the model minority image. Given the increasing diversification of the United States, cross-racial engagement may be an additional contributor to overall competence. This was empirically tested in a group of 642 undergraduates at UCB, including 291 Asian, 197 White, 20 African American, 67 Hispanic, and 56 multi-racial students. Overall competence was operationalized by sense of coherence, that is,

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the extent to which the world is experienced as comprehensible, manageable, and meaningful (A. Antonovsky, 1979, 1987). As predicted, Asian Americans had significantly fewer numbers of cross-racial groups represented in their friendship network than did students of all other races. Lower cross-racial engagement and being Asian (as compared with White) were related to a lower sense of coherence, whereas lower GPA was not. Within the Asian American subsample, cross-racial engagement was again significantly associated with greater coherence, whereas GPA again was not. Thus, extending the definition of success to overall competence, these findings raise questions about the applicability of the model minority label to Asian Americans, despite their academic achievement. Future studies need to assess the reasons for their limited cross-racial engagement and lower sense of coherence and to examine means to assist the development of these strengths.

• Asian American • model minority • sense of coherence • cross-race relationship

Asian Americans have been frequently described as the “model minority” because they are believed to have succeeded in the United States, surpassing not only other racial minority groups but even White Americans (Hirschman & Wong, 1986; Kim & Chun, 1994; S. J. Lee, 1996). There is ample evidence that Asian Americans are indeed excelling academically, as is discussed below. However, success in the classroom does not implicate effective functioning in life. Take the stereotype of the Asian American student who excels academically but possesses limited social skills and ability to meet life’s challenges outside the classroom. Despite the Asian American student’s educational achievement, most would hesitate to consider him or her a success. Similarly, in assessing the validity of labeling Asian Americans as model minorities, one must not only consider intellectual ability and academic performance but also other nonacademic criteria.

As is further detailed below, given the context of increasing racial diversification of the United States, a critical component of overall competence may be the ability to interact comfortably and effectively with members of other racial groups. Thus, this study compares Asian American college students with their racially different peers on degree of cross-racial engagement and empirically tests its relationship with sense of coher-

ence, that is, the extent to which the world is comprehensible, manageable, and meaningful (Antonovsky, 1979, 1987) while controlling for academic performance. Specifically, we hypothesized that (a) Asian Americans would show lower cross-racial engagement than students of other racial groups, (b) a lower cross-racial engagement would predict a lower sense of coherence, and (c) within the Asian American subsample, competence would also be predicted by higher cross-racial engagement. As such, this is one of the first investigations to assess empirically the appropriateness of labeling Asian American college students as model minorities beyond the academic realm.

Significance

For decades, the model minority label has been used to praise Asian Americans’ achievement, often in contrast and as a criticism to other racial minorities (Suzuki, 1980). For instance, a 1966 *U.S. News and World Report* article stated that “At a time when it is being proposed that hundreds of billions be spent to uplift Negroes and other minorities, the nation’s 300,000 Chinese Americans are moving ahead on their own—with no help from anyone else” (as cited in Suzuki, 1980, p. 156). Today, Asian

Americans continue to be pitted against other racial minorities and have become the target of envy and resentment by Whites and other minorities alike (S. J. Lee, 1996). Ironically, although some scholars argue that success has made Asian Americans "almost White" and no longer a minority, others note that their skin color keeps them forever unassimilable and makes them persistent targets of racist discrimination (S. J. Lee, 1996; Takaki, 1989). For Asian Americans themselves, the model minority label may engender a sense of pride (Tan, 1994), but the pressure to fulfill the stereotype may result in significant distress and anxiety (P. A. Lee & Ying, in press; S. J. Lee, 1996; Wolf, 1997). Unfortunately, this image has also served to detract attention from their social and psychological needs (S. J. Lee, 1996; Tan, 1994). Along these lines, the comparison of Asian American college students' overall competence with that of their racially different peers provides a more comprehensive assessment of whether Asian Americans are indeed model minorities. Moreover, such a comparison may illuminate heretofore unidentified needs of Asian Americans.

Academic Achievement

The academic achievement of Asian Americans has been recorded in both the popular (Brand, 1987; Kasindorf, 1982) and scholarly (Hirschman & Wong, 1986; Ogbu, 1987) literature. Indeed, the 1990 U.S. Census found Asian Americans to be overrepresented among those with college and postgraduate degrees (U.S. Bureau of the Census, 1992). Specifically, 22.7% of Asian/Pacific Islanders, 13.9% of non-Hispanic Whites, 7.5% of African Americans, 6.4% of Hispanics, and 6.1% of Native Americans held a bachelor's degree; and 13% of Asian/Pacific Islanders, 7.7% of non-Hispanic Whites, 3.8% of African Americans, 3.6% of Hispanics, and 3.2% of Native Americans held a postbachelor's degree (O'Hare, 1992).

The high educational achievement of Asian Americans is supported by data obtained from the University of California, Berkeley, where the present investigation was conducted (Office of Student Research, 1999). At the time of this study (spring 1995), the mean grade point average (GPA) for all undergraduates (calculated on a 4-point scale, where 1 = D, 2 = C, 3 = B, and 4 = A) was 3.06 ($SD = 0.56$, $N = 20,177$). An analysis of variance (ANOVA) found GPA to differ by student racial grouping, $F(3, 20173) = 419.93$, $p = .0001$. Scheffé post hoc tests showed that all racial groups varied significantly from one another ($p < .05$): Whites had higher GPAs ($M = 3.18$, $SD = 0.53$, $n = 7,207$) than Asian Americans ($M = 3.05$, $SD = 0.55$, $n = 8,712$) than Hispanics ($M = 2.86$, $SD = 0.54$, $n = 3,017$) than African Americans ($M = 2.71$, $SD = 0.54$, $n = 1,241$). However, G. Thomson (personal communication, July 2, 1999) suggested that Asian Americans may indeed be outperforming White Americans, which is masked by their enrolling disproportionately in natural science courses where, on average, students receive lower grades than in other classes. Consistent with this, the graduation rate of Asian American students surpassed that of Whites and other racial minorities at the University of California, Berkeley, between 1985 and 1992 (Thomson, 1998). These findings support the high achievement of Asian Americans, but it should be considered with the caveat that Asian Americans are not a homogeneous group, and significant variation in educational achievement exists across and within Asian ethnic groups (Oliver, Gey, Stiles, & Brady, 1995).

Sue and Okazaki (1990) cited relative functionalism as a key factor in Asian Americans' academic achievement; that is, they turn to education as the best means for advancement in society upon perceiving barriers in noneducational arenas. Ogbu (1987, 1991) argued that, in contrast to voluntary immigrants such as Asian Americans, involuntary migrant minorities have been treated as permanent members of a lower caste. Thus, they do not believe the American ed-

educational institution serves as a viable means for their upward mobility. Indeed, the genocide of Native Americans (Walker & LaDue, 1986), the enslavement of African Americans (Wallace, 1993), and the conquest of Mexicans and their territory under the banner of Manifest Destiny (Padilla & Salgado de Snyder, 1992) were directed at their biological ancestors and may continue to deeply influence their worldview today.

In contrast, today's Asian Americans may be less affected by the history of anti-Asian racism for reasons discussed below. Asians in the United States have been the target of racist policies, such as the 1882 Chinese Exclusion Act and the 1924 Oriental Exclusion Act, that barred Asians from the entering the United States. Asians already living in the United States were subject to unfair and racist treatment, as exemplified by the 1853 Foreign Miner's Tax and the internment of 120,000 Japanese Americans during World War II, while many of their young men fought on the side of the Allies (Takaki, 1989). Although Asian Americans began coming to the United States in the 1700s, as a result of racist immigration policies, two thirds of the estimated 10.8 million Asian Americans living in the United States today migrated here only after the passage of the Immigration and Naturalization Act of 1965 (Bennett & Martin, 1995; Schevitz, 2000). However, because of the timing (concomitant with the civil rights movement) and recency of their arrival, many Asian Americans may be unaware of this country's anti-Asian history. In addition, many are less likely to be able to trace the impact of these policies on their biological ancestors than other racial minorities, with the notable exception of Japanese Americans, who have been profoundly affected by the internment (Nagata, 1991). Nishi (1989) noted that many Asian Americans may wish to deny the reality of anti-Asian racism, in spite of continuing racist violence and discrimination. However, Asians whose families have been in the United States for more than one generation are more likely to doubt the attainability of full acceptance (S. J. Lee, 1996). This per-

spective is supported by the discrepancy of higher education attainment but lower per capita income of Asian Americans as compared with Whites (\$13,638 vs. \$15,687; U.S. Bureau of the Census, 1992). Asians are also more likely to live below the poverty line (14.6%) than White Americans (9.5%; De Vita, 1996). Scholars have attributed this discrepancy to racial discrimination (Barringer, Takeuchi, & Xenos, 1990).

In addition to social and historical factors, the academic achievement of Asian American youths has been attributed to cultural traits of effort and diligence (Freeman & Morss, 1993; Kim & Chun, 1994), culturally based parental value and expectation (Fuligni, 1997; Kim & Chun, 1994; Mordkowitz & Ginsburg, 1987; Sue & Okazaki, 1990), peer support (Freeman & Morss, 1993; Fuligni, 1997), and the wish to pay back parents (especially immigrant parents) for sacrifices made to provide opportunities to their children to succeed (Mordkowitz & Ginsburg, 1987; Ying, Coombs, & Lee, 1999).

Despite the extensive literature on educational achievement in Asian Americans, we are not aware of any studies that have empirically examined whether higher academic performance is associated with greater general competence in living. The image of Asian Americans as model minorities may be viewed as implying such successful functioning, although this association remains untested. This study broadens the definition of success to overall competence to evaluate the applicability of the model minority label to Asian Americans.

Cross-Racial Engagement

The importance of person-environment fit for the healthy development and functioning of individuals has been eloquently presented by Bronfenbrenner (1979). Among college students, Tan (1994) found that African Americans who reported a better fit with their college environment outper-

formed those who did not. Although this relationship was not found among Asian Americans, Tan did find that Asian Americans who experienced the social norms on campus to be consistent with their own received a much higher GPA ($M = 3.55$) than those who did not ($M = 2.20$).

In the present investigation, the person–environment fit is examined in terms of cross-racial engagement. As the American population continues to diversify in the 21st century, one important predictor of successful functioning may be the ability to interact effectively and associate comfortably with people from other racial groups. At the University of California, Berkeley, significant diversity in the undergraduate student population exists: 39.4% Asian, 32.4% White, 13.8% Hispanic, 5.5% African, and 8.9% other (Office of Student Research, 1999). Similarly, in its surrounding environment, the San Francisco Bay Area, the population continued to diversify between 1990 and 1997. During this time, the White population declined from 61% to 54%; the African American and Native American populations remained constant at 9% and 1%, respectively; the Hispanic population increased from 15% to 19%; and the Asian American population also increased from 9% to 12% (McLeod, 1998). Statewide, the non-White population has already exceeded 50% in 1999 (Schevitz, 2000). Similarly, the national population is also continuing to diversify. In 1999, it consisted of 71% Whites, 13% African Americans, 11% Hispanics, 4% Asian and Pacific Islanders, and 1% Native Americans (Schevitz, 2000). By 2020, it will comprise 64% Whites, 16% Hispanics, 13% African Americans, 6% Asian and Pacific Islanders, and 1% Native Americans (De Vita, 1996). With this dramatic change in the demographic makeup of the United States, it is increasingly clear that Americans are interracially dependent (West, 1993). In this context, the formation of cross-race friendships not only suggests an appreciation for diversity (Pettigrew, 1997) but may also contribute to the students' overall competence in the campus community, the San Francisco

Bay Area, and American society at large. In addition, it also increases the probability of successful collaboration with future cross-race colleagues, surely an increasingly important predictor of professional success.

Most research on cross-racial friendships has focused on White and Black associations (for a review, see Foster, Martinez, & Kulberg, 1996). Very few studies have examined cross-racial friendships in Asian American college students. One exception is a recent investigation of 353 Chinese American college students' close social network that found that about three quarters (74.8%) of the sample had no intimate cross-racial relationships (Ying, Lee, Tsai, Lee, & Tsang, in press). Unfortunately, this study did not include other Asians or non-Asians. The present investigation addresses this gap.

We hypothesized that Asian Americans would be less likely to engage in cross-racial relationships than students of other racial backgrounds. Despite cross-ethnic differences, Asian cultures have been found to share many similarities (Ho, 1993). In particular, Asian cultures are collectivistic with a rigid ingroup–outgroup distinction, whereas, in contrast, White American cultures are more individualistic with a more fluid ingroup–outgroup distinction (Markus & Kitayama, 1991; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). For Asians, the ingroup is narrowly defined as family members, but it may be broadened to include individuals with whom one shares important similarities (Hsu, 1985). In a multiracial society such as the United States, racial similarity is an important criterion for defining ingroup and outgroup membership. As most Asian Americans are no more than one generation away from migration, they are likely to retain a strong ingroup–outgroup distinction and prefer other Asians as friends.

Sense of Coherence

In the present study, overall competence was operationalized by sense of coherence.

Antonovsky (1987) proposed this construct as a mediator of positive health, defining it as

a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli, and (3) these demands are challenges worthy of investment and engagement. (p. 19)

Antonovsky (1987) referred to these specific components as comprehensibility, manageability, and meaningfulness. Sense of coherence, then, reflects a subjective sense of efficacy and competence (Antonovsky, 1987). Empirical research has shown sense of coherence to be correlated with better physical and psychological well-being and adjustment in general and clinical populations (Antonovsky, 1979, 1987; Carstens & Spangenberg, 1997; Flannery & Flannery, 1990). Studies examining student samples found that undergraduate students with a higher sense of coherence were less anxious (Hart, Hittner, & Paras, 1991). Graduate business school students were less alienated and were more likely to evaluate their program positively if they had a higher sense of coherence (Ryland, Tegarden, & King, 1994).

Few studies have assessed racial variation in sense of coherence. In a community sample, older Japanese American women were found to have a lower sense of coherence than older White American women, possibly because of their minority status (Milanesi et al., 1994). In contrast, Bowman (1996) found that Native American college students had a comparable level of sense of coherence as White American students of a similar socioeconomic background. Thus, it is not clear if majority-minority status difference is necessarily associated with variation in sense of coherence.

We hypothesized that both across racial groups and within Asian Americans, those with more cross-racial engagement would

experience a greater sense of coherence. Ying et al. (in press) found that Chinese American college students with the greatest racial and ethnic diversity in their intimate social network (including Chinese, Asians, and non-Asians) enjoyed a significantly higher sense of coherence than those with less racially and ethnically mixed networks, supporting the association of racial diversity in social network and a stronger sense of coherence. We are not aware of any studies that have empirically examined the relationship of GPA and sense of coherence. The determination of whether such a relationship exists informs whether the educational success of Asian Americans is indeed associated with superior competence and functioning in life.

Method

Sample

The study sample consisted of 642 undergraduate college students attending the University of California, Berkeley, and enrolled in psychology courses in the spring of 1995. Of the sample, 45.3% were Asian (specifically, 27.3% Chinese, 6.2% Korean, 3.1% Filipino, 3.0% South Asian, 2.2% Japanese, 2.0% Vietnamese, and 1.5% other Asian), 30.7% were White, 3.1% were African, 10.4% were Hispanic, 8.7% were multiracial, and the remaining 1.8% were other Americans, including Middle Eastern and Native Americans. Because of their small numbers, the last group was deleted from further analyses. The racial composition of the sample roughly matched that of the entire undergraduate student population at the time of the study (39.4% Asian, 32.4% White, 13.8% Hispanic, 5.5% African, and 8.9% other; Office of Student Research, 1999), with Asian Americans overrepresented in our sample.

As Table 1 shows, 60.7% of the sample were female and 39.3% were male. About two thirds of the sample were born in the United States. The racial groups varied sig-

TABLE 1 Descriptives on Study Variables by Racial Group

Variable	Total (N = 642)	Asian (n = 291)	White (n = 197)	African (n = 20)	Hispanic (n = 67)	Multiracial (n = 56)	Significant difference
Gender							
% Male	39.3	43.3	40.6	30.0	32.8	25.0	
% Female	60.7	56.7	59.4	70.0	67.2	75.0	
Place of birth							
% U.S.	64.9	43.0	87.8	94.7	68.7	83.9	Asian < Others***
% Non-U.S.	35.1	57.0	12.2	5.3	31.3	16.1	Hispanic < White***
Age							
M	20.79	20.21	21.39	23.05	21.13	20.45	Asian < White, African*
SD	3.40	1.75	4.61	6.16	4.02	1.65	
SES ^a							
M	28.31	27.88	23.64	34.15	41.90	28.64	Hispanic > White, Asian, Multiracial*
SD	15.81	14.81	13.57	15.82	19.97	12.93	
Grade point average							
M	3.15	3.11	3.31	2.91	3.01	3.03	Whites > Others*
SD	0.50	0.49	0.50	0.45	0.44	0.49	
Cross-racial groups in friendship network							
M	0.88	0.53	0.89	1.21	1.22	2.11	Multiracial > Others; Asian < Others*
SD	1.01	0.73	1.01	1.13	1.08	1.04	
Sense of coherence							
M	129.35	125.43	133.47	129.40	131.31	132.80	White > Asian*
SD	21.74	20.28	22.34	19.80	23.07	23.05	

^aA higher score indicates a lower socioeconomic status (SES).

* $p < .05$. *** $p < .001$.

nificantly by birth place, $\chi^2(4, N = 629) = 123.15, p = .0001$. A total of 10 pairwise comparisons were conducted by racial group, and the more conservative critical value of .005 (.05 divided by 10) was used. Asians were less likely to be U.S.-born than students of other racial groups: versus Whites, $\chi^2(1, N = 487) = 98.79, p = .00001$; versus African Americans, $\chi^2(1, N = 311) = 19.24, p = .00001$; versus Hispanics, $\chi^2(1, N = 358) = 14.42, p = .0002$; and versus multiracial students, $\chi^2(1, N = 347) = 31.54, p = .00001$. Also, Hispanics were less likely to be U.S.-born than Whites, $\chi^2(1, N = 263) = 12.84, p = .0003$. An ANOVA showed that the racial groups differed by age, $F(4, 626) = 6.37, p = .001$. With Scheffé post hoc tests, Asians were found to be significantly younger (mean age = 20.21 years, $SD = 1.75$) than White and African American students (mean age = 21.39 years, $SD = 4.61$ and mean age = 23.05 years, $SD = 6.16$, respectively, $p < .05$).

The sample's socioeconomic status (SES) was calculated using Hollingshead's (1957) method, that is, derived from the father's education and occupation (where the possible range of scores is from 11 to 77, with 11 being the highest socioeconomic level). An ANOVA showed that the racial groups varied on SES, $F(4, 625) = 19.47, p = .0001$. With Scheffé post hoc tests, Hispanics were found to have significantly ($p < .05$) lower SES ($M = 41.90, SD = 19.97$) than Whites ($M = 23.64, SD = 13.57$), Asians ($M = 27.88, SD = 14.81$), and multiracial students ($M = 28.64, SD = 12.93$), as a higher score indicates a lower SES.

The sample's mean GPA was 3.15 ($SD = 0.50$) as measured on a 4-point scale, where 1 = D, 2 = C, 3 = B, and 4 = A. The racial groups varied significantly from one another, $F(4, 613) = 9.28, p = .0001$. Scheffé post hoc tests revealed that White students had a better GPA than all other students ($p < .05$). Asian Americans did not vary from other racial minorities. These numbers are inconsistent with those for the whole undergraduate population reported in the introduction. Using one-sample t tests, our sam-

ple's mean GPA was significantly higher than the campus mean GPA across all racial groups: for Asians, the sample versus campus means were 3.11 versus 3.05, $t(285) = 1.91, p = .06$; for Whites, the sample versus campus means were 3.31 versus 3.18, $t(194) = 3.76, p = .001$; for African Americans, the sample versus campus means were 2.91 versus 2.71, $t(19) = 2.00, p = .06$; and for Hispanics, the sample versus campus means were 3.01 versus 2.86, $t(64) = 2.75, p = .001$. Because the campus does not maintain a multiracial category, we could not compare our multiracial subsample's GPA with that of all multiracial undergraduates at Berkeley. Notably, the Asian Americans in the sample differed the least from their campuswide counterpart (by only .06 points), whereas the other groups in the sample surpassed their campuswide counterpart by .13 (in the case of Whites), .15 points (in the case of Hispanics), or .20 (in the case of African Americans). This, coupled with the much larger size of the campuswide student population, may explain why, in our sample, the Asian Americans did not surpass other racial groups on GPA, whereas campuswide they did. The descriptives for degree of cross-racial engagement and sense of coherence are reported in the Results section.

Procedure and Measures

All of the participants were recruited through the Psychology Subject Pool and received course credit for their participation. The sample completed a brief demographic background questionnaire that assessed their age, gender, place of birth, father's education and occupation, GPA, and number of cross-racial groups represented in their friendship network. In addition, the Sense of Coherence Questionnaire (Antonovsky, 1987) was administered. The instrument consisted of 29 items that examined the extent to which the respondents felt their life was comprehensible, manageable, and meaningful. Some sample items were, for example, Item 1, "When you talk to people, do you have the feeling they don't

understand you?" (reverse coded, measures comprehensibility); Item 6, "Has it happened that people you counted on disappointed you?" (reverse coded, measures manageability); and Item 4, "Do you have the feeling you don't really care about what is going on around you?" (reverse coded, meaningfulness). Participants responded to the items on a 7-point scale, expressing differential levels of endorsement. Items 1, 4, 5, 6, 7, 11, 13, 14, 16, 20, 23, 25, and 27 were reverse coded. The total sense of coherence score was created by summing the item scores, with a possible range from 29 to 203. In over 20 studies, the instrument's Cronbach alpha of internal consistency has ranged from .82 to .95 (Antonovsky, 1993). The criterion validity of the Sense of Coherence Questionnaire has also been established in numerous investigations by the presence of significant correlation with health and well-being (Antonovsky, 1993). This instrument has been used successfully in numerous studies with ethnic minority Americans (Bowman, 1996; Milanesi et al., 1994; Ying & Akutsu, 1997; Ying, Akutsu, Zhang, & Huang, 1997). Its criterion validity in Asian Americans was demonstrated by its significant negative association with depression, anxiety, psychosocial dysfunction, and demoralization but positive association with happiness (Ying & Akutsu, 1997; Ying et al., 1997). In the present study, the instruments' alpha internal reliability was .90.

Results

Bivariate Analyses of Cross-Racial Engagement and Sense of Coherence by Racial Group

Racial group differences on cross-racial engagement and sense of coherence were tested using the bivariate ANOVA. Table 1 shows that the mean number of cross-racial groups represented in the friendship network was 0.88 ($SD = 1.01$). The racial groups were found to vary significantly, $F(4, 620) = 38.30, p = .0001$; Asians had 0.53 ($SD = 0.73$), Whites had 0.89 ($SD = 1.01$), African Ameri-

cans had 1.21 ($SD = 1.13$), Hispanics had 1.22 ($SD = 1.08$), and multiracial students had 2.11 ($SD = 1.04$) cross-racial groups represented in their friendship network. Scheffé post hoc tests ($p < .05$) showed Asians had significantly fewer, whereas multiracial students had significantly more, cross-racial engagement than all other racial groups. With regard to sense of coherence, the overall mean was 129.35 ($SD = 21.74$). The racial groups varied significantly on sense of coherence, $F(4, 622) = 4.70, p = .001$. With Scheffé post hoc tests, Asian students ($M = 125.43, SD = 20.28$) were found to score significantly lower than White students ($M = 133.47, SD = 22.34, p < .05$).

Multivariate Analysis Testing the Study Hypotheses

The first hypothesis that Asian Americans would demonstrate lower cross-racial engagement was tested using a multiple regression. Table 2 shows the model was significant (adjusted $R^2 = .19$), $F(8, 619) = 19.64, p = .0001$. The more conservative two-tailed test was used. Controlling for the demographic variables gender, birthplace, age, and SES, Asian Americans had significantly fewer numbers of cross-racial groups in their friendship network than students from all other racial groups (compared with Whites: standardized $\beta = -.17, p = .0003$; compared with African Americans: standardized $\beta = -.37, p = .001$; compared with Hispanics: standardized $\beta = -.36, p = .0001$; and compared with multiracial students: standardized $\beta = -.78, p = .0001$). Whites reported fewer cross-racial groups than Hispanics (standardized $\beta = -.18, p = .008$). Finally, in addition to Asian Americans, all other groups had fewer cross-racial groups in their network than the multiracial students (in the case of Whites, standardized $\beta = -.57, p = .0001$; in the case of African Americans, standardized $\beta = -.14, p = .0009$; and in the case of Hispanics, standardized $\beta = -.26, p = .0001$). None of the demographic control variables were significant.

The second hypothesis that a lower cross-

TABLE 2 Standard Beta Weights in Regressions Predicting Cross-Racial Groups in Friendship Network and Sense of Coherence

	<i>Cross-racial groups in friendship network</i>	<i>Sense of coherence</i>
Male vs. female	0.4	-.01
U.S.-born vs. non-U.S.-born	.01	.04
Age	.01	.17****
Socioeconomic status	-.04	-.02
Asian vs. White	-.17***	-.13**
Asian vs. African	-.37***	-.05
Asian vs. Hispanic	-.36****	-.10
Asian vs. multiracial	-.78****	-.09
White vs. African	-.19	.07
White vs. Hispanic	-.18**	.03
White vs. multiracial	-.57****	.03
African vs. Hispanic	.01	-.02
African vs. multiracial	-.14***	-.01
Hispanic vs. multiracial	-.26****	.01
Cross-racial groups in friendship network		.09*
Grade point average		-.01
Adjusted R^2	.19	.06
F^a	19.64****	4.55****

^aFor cross-racial groups in friendship network, $dfs = 8, 613$. For sense of coherence, $dfs = 10, 595$.

* $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$. (All tests are two-tailed.)

racial engagement would be associated with a lower sense of coherence was tested using a multiple regression. As Table 2 shows, this model was significant (adjusted $R^2 = .06$), $F(10, 595) = 4.55$, $p = .0001$. With the more conservative two-tailed test and controlling for gender, birthplace, age, and SES, degree of cross-racial engagement was positively predictive of sense of coherence (standardized $\beta = .09$, $p = .05$). In addition, Asian Americans reported a significantly lower sense of coherence than Whites (standardized $\beta = -.13$, $p = .01$). GPA was not a significant predictor of coherence. Among the control variables, age emerged as a positive predictor of sense of coherence (standardized $\beta = .17$, $p = .0001$).

The third hypothesis that within Asian Americans, lower cross-cultural engagement would be associated with lowered sense of coherence was also assessed using a multiple regression. As Table 3 shows, this model was marginally significant (adjusted $R^2 = .02$), $F(6, 275) = 1.94$, $p = .07$. With two-tailed tests, greater cross-racial engagement was

positively associated with sense of coherence (standardized $\beta = .16$, $p = .01$). The control variables of gender, birthplace, age, and SES did not make significant contributions to explaining the variance in coherence. Serving as a comparison, a similar regression tested the contribution of cross-racial engagement to the sense of competence in White students. As Table 3 shows, the model was significant (adjusted $R^2 = .06$), $F(6, 183) = 2.98$, $p = .008$. However, cross-racial engagement was not associated with sense of coherence, although age was (standardized $\beta = .28$, $p = .0003$). Other race-specific models were not conducted because of small sample size.

Discussion

To recap, our major findings were as follows: Asian Americans showed the least cross-racial engagement compared with other racial groups, and whereas cross-racial

TABLE 3 Standard Beta Weights in Regressions Predicting Sense of Coherence in Asian and White Americans

	Asian Americans	White Americans
Male vs. female	.04	-.08
U.S.-born vs. non-U.S.-born	.07	-.03
Age	-.05	.28***
Socioeconomic status	.04	-.06
Cross-racial groups in friendship network	.16**	.01
Grade point average	.09	-.12
Adjusted R^2	.02	.06
$F^{(3)}$	1.94	2.98**

^aFor Asian Americans, $dfs = 6, 275$. For White Americans, $dfs = 6, 183$.

** $p < .01$. *** $p < .001$. (All tests are two-tailed.)

engagement and being Asian (as compared with White) significantly predicted sense of coherence, GPA did not emerge as a significant predictor. In addition, separate models for Asian American and White students showed that cross-racial engagement significantly promoted sense of coherence in Asian Americans but not in Whites. Thus, in spite of Asian Americans' academic achievement, these findings do not support their model minority image, if the definition of success is extended beyond the academic realm. The results are further discussed below.

Cross-Racial Engagement

The cross-racial engagement model was highly significant, with the predictors accounting for 19% of the variance. As predicted, Asian Americans had the least racial diversity in their friendship network compared with students from other racial backgrounds. Notably, these differences were quite large (i.e., significant at least at the .001 level in the regression model). As suggested before, their choice of other Asians as friends was likely to be due to their continued espousal of the ingroup-outgroup distinction and viewing fellow Asian Americans as most like them. Although birthplace (being American-born or overseas-born) did not predict racial diversity in friendship net-

work composition, with increasing generations in the United States, this may change (as Ying et al., in press, found in their study of Chinese American students). However, the limited cross-racial engagement of Asians in the sample is of concern, given the large proportion of non-U.S.-born students in this population. Also, the college years provide an important opportunity for broadening one's horizons. If Asian Americans are minimally engaged in exploring cross-racial friendships during this time, they may be even less likely to do so in the future. Efforts are needed to encourage such cross-race associations.

In addition, White students were found to have fewer cross-racial groups represented in their friendship network compared with Hispanics. This is consistent with the existing literature showing Whites have fewer cross-racial associations than minority Americans (Foster et al., 1996). This may be partially due to the size of their population, which decreases the need for cross-racial affiliation. In addition, as the majority group, Whites enjoy more power than racial minorities in our society, and other Whites may be viewed as preferable friends. Multiracial students had more cross-racial groups in their friendship network than all other students. By definition, multiracial students' relationships are more likely to be cross-racial, as it would be more difficult to find other

multiracial friends with identical racial makeup as themselves. In addition, as their parents chose partners from a cross-racial group, they themselves may also value cross-racial engagement.

Sense of Coherence

As hypothesized, sense of coherence was significantly predicted by degree of cross-racial engagement in the whole sample. Other significant predictors were age and being Asian (vs. White). Also as predicted, cross-racial engagement significantly predicted coherence in Asian Americans. However, among Whites, this relationship was not found. Instead, their coherence was predicted by age. GPA was not a significant predictor in any model. Thus, although in general racial diversity in one's network predicted an overall sense of competence, this was more true for Asians, a racial minority group, than for Whites, the majority group. Despite the previously noted increase in diversification both on the Berkeley campus and its surrounding community, White Americans continue to hold a position of power in the United States. As such, learning about other racial groups is less salient to their sense of competence than it is for a racial minority group such as Asian Americans. For minorities, affiliating and learning about other groups, perhaps especially the majority White group, increases their ability to function in this society.

The overall model showed that when cross-racial engagement was controlled for, Asian Americans still reported a significantly lower sense of coherence than White students. They did not vary significantly from other racial minorities on sense of coherence, but as Table 1 shows, they scored lower than African Americans (by 3.97 points), Hispanics (by 5.88 points), and multiracial students (by 7.37 points). Thus, despite their educational success, our findings do not support the view that Asian Americans are the model minority, if competence is more broadly defined. In fact, the results

suggest a trend of Asian Americans being less competent than other racial minorities.

The lower sense of coherence in Asian Americans is unlikely to be due to minority status, as other racial minorities did not vary significantly from White students. An alternative explanation may involve their strong ingroup orientation, as noted earlier. One of the consequences of such an orientation is a limited interest and curiosity in the world beyond one's ingroup (Hsu, 1985). As such, they may find the racially and culturally heterogeneous world less comprehensible, manageable, and meaningful. Whites, however, may enjoy a stronger sense of coherence because American society is still by and large dominated by and caters to its White members. The finding that older students in general, and among Whites in particular, had a higher sense of coherence reflected progressive mastery of the world with maturation and is consistent with the existing literature (Carstens & Spangenberg, 1997; Ryland et al., 1994).

The finding that GPA was not a significant predictor of sense of coherence indicates that excelling in the classroom does not implicate greater competence in real-life situations. This, considered with the findings that Asian Americans had a lower sense of coherence than Whites but were not different than other racial groups, and that cross-racial engagement (on which Asians scored lower than all other groups) predicted sense of coherence, leads to the conclusion that Asian Americans are not surpassing other racial minority groups or Whites in overall competence, and they cannot be considered "model minorities" when success is more broadly defined.

Study Limitations and Directions for Future Research

Several study limitations are worthy of note. First, the GPAs reported in this study were based on subjective report and not obtained from transcripts. As such, it is possible that the reported GPA varied from the actual GPA. It is notable that although the sample's

GPA surpassed that of the campus data across all racial groups, the overestimate was smallest for Asian Americans (by .06 points) than the other groups (.13 for Whites, .15 for Hispanics, and .20 for African Americans). This may be due to Asian Americans' endorsement of the value of self-effacement (Akimoto & Sanbonmatsu, 1999; Bond, Leung, & Wan, 1982), although they, too, seemed to have overestimated their GPA, just less so than the others. An alternative explanation for the sample-campus discrepancy in GPA may be that it accurately reflects the more stringent grading in majors underrepresented in the Psychology Subject Pool, such as the natural sciences. Future studies ought to use objective measures of GPA. However, the sample-campus discrepancy in GPA does not challenge the higher academic achievement of Asian Americans (as evidenced by the campuswide data as well as the census figures), nor does it invalidate the finding that GPA was not predictive of sense of coherence, as race had been controlled for in testing that association.

The possible overrepresentation of social science majors in our sample may also limit the generalizability of the findings to other college students. Asian Americans have been documented to prefer the natural science, engineering, computer science, and business fields (Kao, 1995; Leong, 1985). Because the social sciences are concerned with people and their social environment, the degree of cross-racial engagement and sense of coherence in our sample may be an overestimate of what is found in the general Asian American (and other) student populations. Also, given the large number of Asian American students at the University of California, Berkeley (39.4%), it is possible that Asian American students on this campus and in the San Francisco Bay Area feel less need to form cross-racial affiliations than if they were in a context with fewer Asian Americans. Future research on cross-racial engagement ought to target campuses with a smaller Asian American student population.

We assessed the quantity but not quality

of cross-racial engagement. Future research should examine the relative contribution of both quantity and quality of cross-racial diversity in social network to overall competence. Also, only a small portion of the variance in sense of coherence was accounted for in our various models (6% for the whole sample, 2% for Asian Americans, and 6% for White Americans). More research is needed to identify additional contributors to sense of coherence. In addition, future studies should use both subjective self-report measures (such as the Sense of Coherence Scale) as well as objective, behavioral measures of competence to further test the model minority image of Asian Americans.

The study demonstrated racial differences on cross-racial engagement and sense of coherence. Race is best thought of as a proxy of different life experiences. Although we offered possible explanations for the variations found, future studies need to empirically assess their validity. These may provide directions for interventions to improve Asian Americans' cross-racial engagement and overall competence. For instance, if the sharp delineation of Asian versus non-Asian ingroup-outgroup distinction is empirically demonstrated to contribute both to diminished cross-racial engagement and sense of coherence, Asian Americans need to be encouraged to reconsider their perspective of the world. As permanent settlers in the United States, their challenge lies in both retaining a sense of continuity with their culture of origin and embracing the new country with its diverse members. In addition to cross-race differences, within-race and cross-ethnic differences also need to be assessed. Given the study's focus on racial differences, we did not attempt to recruit comparable numbers of Asian Americans of varying ethnicities for the study. Future research should do so.

Conclusion

This investigation examined the appropriateness of labeling Asian Americans as

model minorities by extending the definition of success beyond the academic realm. Using sense of coherence to measure overall competence, we found that Asian Americans scored lower than Whites and did not differ significantly from other racial minorities. In addition, they reported the fewest number of cross-racial groups in their friendship network, which was also predictive of a lower sense of coherence. Notably, GPA was not predictive of sense of coherence. Taken together, these findings do not support the model minority stereotype of Asian Americans if success is defined as overall competence. Despite their academic achievement, Asian American college students cannot be said to enjoy superior competence in overall functioning than their peers of other racial backgrounds.

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