

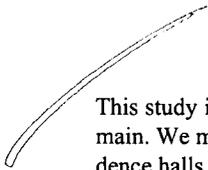
Development of Collective Self-Esteem Among Students: Predicting Adjustment to College

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This study investigates whether collective self-esteem predicts adjustment in a particular domain. We measured collective self-esteem as it relates to students' memberships in their residence halls. Our adjustment measures included social and academic adjustment to college, as well as grade point average. Measures were taken at two different time periods during an academic year. The results showed that academic adjustment at the end of the 1st year in college was predicted by development in collective self-esteem. Moreover, development in collective self-esteem was associated with improvements in adjustment to college from the 1st semester to the second semester. Implications of these findings are discussed in terms of their ramification for students' academic adjustment, as well as for understanding the role of positively valued group memberships in general well-being.

Our group memberships provide us with a sense of belonging, define in part our meaning, and have the propensity to reflect positively on our sense of self (Abrams, 1992; Brewer, 1991; Deaux, 1993; Luhtanen & Crocker, 1992; Tajfel & Turner, 1986). Moreover, several studies show that group memberships have the potential to contribute positively to psychological adjustment and subjective well-being (e.g., Bettencourt & Dorr, 1997; Blaine & Crocker, 1995; Crocker, Luhtanen, Blaine, & Broadnax, 1994; Diener & Diener, 1995; Kernahan, Bettencourt, & Dorr, in press; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). Despite the many benefits of group memberships to the self, social psychological research has only begun to examine the role of ingroup memberships in personal and social adjustment. Yet, Brewer (1991) asserted that "collective identities buffer the individual from many threats to self-worth and it is time their motivational significance is clearly recognized in social psychology's understanding of self" (p. 481).

Drawing in part from social identity theory (Tajfel, 1981), Crocker and her colleagues (1994) were the first to reveal that the extent to which individuals positively evaluate their social groups influences adjustment. That is, collective self-esteem was positively related to psychological well-being, especially for members of ethnic minority groups. Moreover, several other studies have shown that persons with higher collective self-esteem report better psychological adjustment (Blaine & Crocker, 1995) and subjective well-being (Bettencourt & Dorr, 1997). The purpose of the current study was to further examine the benefits of collective self-esteem for adjustment, but to do so in a particular context. In addition, the methodology used in the study allowed us to provide evidence that could potentially support the theoretical proposal that collective self-esteem has a causal influence on adjustment and well-being.

COLLECTIVE SELF-ESTEEM AND ADJUSTMENT



Collective self-esteem is the extent to which individuals evaluate their social groups positively (Luhtanen & Crocker, 1992). The general form of the collective

self-esteem scale instructs participants to think about a variety of ascribed group memberships (i.e., race, nationality, gender) when answering the items. The measure has four subscales:

1. Private collective self-esteem (the extent to which individuals feel positively about their social groups).
2. Public collective self-esteem (the extent to which individuals believe that other people feel positively about their social groups).
3. Membership esteem (the extent to which individuals believe they are good members of their social groups).
4. Importance to identity (the extent to which individuals believe their social groups are an important part of their self-concept; Luhtanen & Crocker, 1992).

Initial research suggested that these components of collective self-esteem were particularly related to psychological and subjective well-being among ethnic minorities (Blaine & Crocker, 1995; Crocker et al., 1994). For example, among their Black participants, Crocker et al. (1994) showed that higher levels of private collective self-esteem were associated with greater life satisfaction, and stronger identification with groups was associated with increased life satisfaction and decreased hopelessness, while at the same time accounting for differences in personal self-esteem. Among Asian American participants, private and membership collective self-esteem were associated with higher life satisfaction and lower hopelessness, when the effects of personal self-esteem were taken into account. However, in the study by Crocker et al., collective self-esteem among White participants was unrelated to White participants' life satisfaction and hopelessness, once personal self-esteem was controlled. In a similar vein, Blaine and Crocker (1995) revealed that collective self-esteem played a mediational role in the relation between religious belief salience and psychological well-being among their Black participants, but not among their White participants.

More recently, Bettencourt and Dorr (1997) have shown that private and public collective self-esteem predict subjective well-being among White respondents, even when personal self-esteem is taken into account. In two studies, predominately White samples responded to a modified version of the collective self-esteem scale that encouraged respondents to think about their acquired as well as ascribed group memberships when answering the collective self-esteem scale. Ascribed group memberships are ones into which we are born, such as race and gender, whereas acquired group memberships are ones that we join, such as social clubs or professional associations. Based on Brewer's (1991) optimal distinctiveness theory, Bettencourt and Dorr (1997) reasoned that, because ascribed group memberships are large and heterogeneous for Whites, more distinctive acquired group memberships might play important roles in subjective well-being.

Taken together, the initial research in this domain suggests that collective self-esteem with both ascribed and acquired groups predicts both psychological adjustment and subjective well-being. However, several issues regarding the relation between collective self-esteem and adjustment have yet to be fully resolved. First, most of the prior studies have defined groups in an array of broadly defined acquired and ascribed group memberships. Second, the previous research has included global measures of psychological adjustment and subjective well-being. To our knowledge, no studies have examined whether collective self-esteem influences adjustment within specific contexts such as school or work. Studies of context-related group memberships might provide further evidence that acquired group memberships play an important role in adjustment, even among White participants. Moreover, because people value and devote time to their participation within these contexts, it is important to understand what contributes to positive functioning within these domains. College and work settings often provide multiple opportunities to forge context-related group memberships, and such memberships might be particularly important for adjustment within their respective settings. Information about the importance of such memberships would be useful to practitioners (e.g., school, work, and family counselors) concerned about positive adjustment within these realms of life. With these considerations in mind, we designed the current study to understand whether collective self-esteem within context-related groups is associated with adjustment within that context. Thus, we direct our focus away from broad, global definitions of collective self-esteem and adjustment toward context-specific ones.

In addition, we measured these variables at two points in time, separated by 6 months. Previous studies have exclusively used designs in which subjects respond to all measurements of interest during one time period. As Crocker et al. (1994) have noted, the designs of these studies make conclusions about the causal nature of collective self-esteem difficult to establish. One way to deal with this problem is to manipulate collective self-esteem and examine immediate levels of "state" adjustment. Another method that simplifies inferences about directionality of effects allows the researcher to test whether intertemporal changes in the hypothesized predictor variable are associated with variance in the outcome variable of interest (Markus, 1979). We favored this latter approach because of its capacity to yield findings about actual, longer term changes in adjustment. Therefore, we designed the current study to allow us to examine whether development in collective self-esteem was associated with higher levels of adjustment.

To examine whether adjustment in a particular setting is influenced by change in collective self-esteem, we conducted the study within a setting where developmental changes in group identity were likely to occur. Deaux (1993) has argued that college settings are optimal for studying developmental changes in group identification. Assessing

group identity changes among 1st-year college students also afforded us the opportunity to address a final consideration. Specifically, we were able to include a measure of adjustment that did not involve self-report. This addition seemed important because, to date, the research in this domain has included only self-report measures of adjustment.

APPLICATION OF THE COLLECTIVE SELF-ESTEEM ADJUSTMENT RELATION TO A COLLEGE SETTING

Our method of examining changes in collective self-esteem with a college group membership is consistent with social psychologists' emphasis on the importance of understanding development in group identity (Abrams & Hogg, 1988; Brewer, 1991; Deaux, 1993). Ethier and Deaux (1990, 1994) argued that it is ideal to study changes in identity in tandem with modifications in situational contexts (e.g., home community to college community). A college setting is optimal for examining identity development because it affords a situation in which students experience discernible changes in response to their new environment (Ethier & Deaux).

Researchers (e.g., Astin, 1984) have recognized that students' levels of involvement in the college experience are associated with their academic adjustment. However, studies of students' adjustment have often failed to examine the processes by which involvement affects adjustment. Astin has criticized this research, because it measures only distal achievement and often ignores the social-psychological processes affected by college programs designed to encourage involvement. Similarly, Pascarella and Terenzini (1980) argued that researchers have yet to adequately specify the psychological components that account for differences in academic and social adjustment to college.

As we have noted, one social-psychological process that may be particularly important for academic adjustment is the development of group identifications within the academic setting (Clarke, Miser, & Roberts, 1988). Students vary in the extent to which they become involved in campus groups, but many 1st-year students live in residence halls and come to positively view membership within them (Bliming, 1989; Clarke et al., 1988). Capitalizing on the opportunity to influence students' adjustment to college, many residential services administer social and academic programs designed to encourage integration among students' social and academic lives.

At the University of Missouri, all 1st-year students are required to live in the campus residential facilities, and in the Fall of 1994, the residential coordinators implemented a number of programs designed to facilitate adjustment to college life. We reasoned that, because of their membership defined by these residences, 1st-year students might come to identify with this group membership and that development in collective self-esteem with these group memberships might be associated with positive adjustment in the college setting.

PRESENT STUDY

In this study, we examine relations among students' collective self-esteem development with their residence hall membership and their academic and social adjustment to college as well as their grade point average. All participants were 1st-year college students and, as we noted previously, measurements were taken at two points in time. Phase 1 measurements were taken within the first 45 days of the academic year and Phase 2 measurements were taken within the final 45 days of the same academic year. We used a modified version of the general collective self-esteem scale that asked students to think of their particular residence hall membership when responding to the items. In addition, we used the scales of academic adjustment and social adjustment of the Student Adjustment to College Questionnaire (Baker & Siryk, 1984). We focus here on these two scales because these were consistent with our purposes of assessing academic and social adjustment in the 1st year of college. The academic adjustment scale measures (a) attitudes towards academic work, (b) how well students apply themselves to their academic work, (c) the effectiveness of students' academic efforts, and (d) the acceptability of what the academic environment offers. The social adjustment scale measures (a) the success of college social activities and functioning, (b) the extent of success in interpersonal relationships, (c) adjustment to social relocation, and (d) acceptability of the social environment. The academic adjustment scale is known to be moderately correlated with grade point average, and the social adjustment scale is known to be related to active involvement on campus (Baker & Siryk, 1984). It should be noted that the average total scores for the scales of the Student Adjustment to College Questionnaire tend to show a downward trend over time, especially in the 1st year (Baker & Schultz, 1992). This is not to say that all students become less adjusted over time, but that a nontrivial number of students experience disillusionment during the academic year. Finally, grade point average was assessed as another indicator of adjustment to college.

Principally to control for their possible intercorrelations with collective self-esteem, we also measured students' personal self-esteem, perceptions of interpersonal relationship quality, and extracurricular involvement. Students' interpersonal relationships at college and the extent of their extracurricular activity have been shown to be related to college adjustment (e.g., Baker & Siryk, 1984, Pascarella & Terenzini, 1980). Moreover, in the statistical analyses, we controlled for students' initial levels of academic achievement using an index of high school achievement, which included high school percentile rank and American College Testing (ACT) score.

We hypothesized that temporal change in students' collective self-esteem with their residence groups would predict academic and social adjustment at the end of the 1st year of college. We also hypothesized that increases in collective

self-esteem would be associated with improvements in adjustment to college.

METHOD

Participants

Participants were 1st-year college students who participated in both Phase 1 and Phase 2 of the study. At the beginning of the Fall semester, 213 students initially agreed and participated in Phase 1. Thirty-one of these participants moved after Phase 1 but before Phase 2. Because they were no longer members of their original residential hall, these participants were ineligible to continue in Phase 2. Of those eligible, 21 were dropped from the study after repeated unsuccessful attempts to contact them, and 19 were not included because they declined to participate in Phase 2. Therefore, 142 students constitute our sample of Phase 1 and 2 participants. Including only those who were eligible in Phase 2, the participation rate in Phase 2 was 78% of that in Phase 1.¹ These participants were entering, 1st-year, 1st-semester students with a mean age of 18. Seventy-seven percent were White, 19% Black, 2% Hispanic, 2% Asian/Asian American, and 1% Other (95 women, 47 men). Students reported their father's education as the following: 18% had no college education, 10% had some college or junior college education, 41% had a bachelor's degree, and 15% had a graduate degree. For mother's education, students reported the following: 27% had no college education, 19% had some college or junior college education, 34% had a bachelor's degree, and 13% had a graduate degree. Students reported the following socioeconomic level: 2% reported lower class, 4% lower-middle class, 50% middle class, 11% upper-middle class, and 1% upper class, and the remaining did not report their family's socioeconomic level.

Procedure

Students were told that each of the phases of the experiment would take approximately 1 hr. Sessions were held in a common room within the residence halls. After arriving at the session, participants were first asked to complete a consent form and then the questionnaire packets were distributed. To keep the responses anonymous while allowing us to link participants' responses in Phase 1 to their responses in Phase 2, the packets were labeled with a predetermined code number. After receiving the packets, participants were directed to read all instructions carefully and answer as thoughtfully and candidly

¹We tested whether there were differences in ACT, percentile rank, and academic adjustment at the beginning of the 1st semester between those who participated and those who declined. We found no differences for ACT, $t(181) = 1.19, p > .05$; percentile rank, $t(181) = 0.38, p > .05$; or academic adjustment, $t(181) = 0.13, p > .05$.

as possible. Following completion of Phases 1 and 2, a letter explaining the purpose of the study was sent to the participants. Participants were paid either \$7.00 or given course credit for participating in each phase of the study. In an attempt to reduce participant loss, two times during the academic year, four students were randomly selected to receive \$50.00.

Measures

Questionnaire packets included measures of collective self-esteem, personal self-esteem, student adaptation to college (i.e., social adjustment and academic adjustment), student interpersonal relationships, extracurricular activities, and demographic information.² High school percentile rank and ACT scores for each participant were obtained from university admissions records. For the sample, the average high school percentile rank was 86.02 ($SD = 14.59$) and the average ACT composite score was 26.43 ($SD = 4.06$). These scores were standardized and summed as an index of high school achievement. Additionally, grade point average was obtained from university records at the end of the 1st and 2nd semesters.

A modified version of the general Collective Self-Esteem Scale (Luhtanen & Crocker, 1992) was used. This version instructed participants to think of their membership in their residence hall. To achieve this, the name of the respective residence hall was specifically indicated on the measure. Examples of the 16 items in this collective self-esteem assessment included: "I feel good about this group" and "This group is an important reflection of who I am." Participants indicated the extent to which they agreed with each item on 7-point scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Luhtanen and Crocker report good internal consistency ($\alpha = .85$) and a 6-week test-retest correlation ($r = .68$) for the general collective self-esteem scale.

Personal self-esteem was assessed using Rosenberg's (1965) scale. Participants indicated the extent to which they agreed with each of 10 statements (e.g., "I take a positive attitude toward myself") on 4-point scales, ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). The scale has reasonable internal consistency, $\alpha = .77$ to $.88$ (reported in Blaskovich & Tomaka, 1991).

Academic adjustment and social adjustment were measured using scales from the Student Adaptation to College Questionnaire (Baker & Siryk, 1984). The academic adjustment scale measures attitudes towards academic work (e.g., "I know why I'm in college and what I want out of it," and "I have been keeping up to date on my academic work"). The social adjustment scale measures the success of college social activities (e.g., "I have several close social ties at college," and "I am

²Several other assessments were given, but are not reported in this article. They were: faculty involvement, need for cognition, a lie scale, consideration for future consequences, value and importance of group memberships, the "twenty statements" questionnaire.

satisfied with the extent to which I am participating in social activities at college"). Participants indicated their agreement with items on a 9-point scale, anchored at one end with *applies very closely to me* and the other with *doesn't apply to me at all*. Baker and Siryk report adequate reliability for the academic (α range = .82-.87) and social adjustment sub-scales (α range = .83-.89), and an intercorrelation among the scales of .42.

Measures at second semester only. We also asked students to indicate the degree to which they had close relationships with other students, and whether their interactions with other students had a positive influence on their personal growth, values and attitudes, intellectual growth and interest in ideas, and on their college career (Pascarella & Terenzini, 1980). Participants were asked to respond using a 7-point scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Finally, we asked participants to indicate the number of extracurricular activities (not paid work) that they were involved in for an average of 2 hr or more per week. Participants were asked to indicate the number of activities by circling a number from 0 to 9, with 9 indicating *9 or more activities*.

RESULTS

In what follows, we report the means and standard deviations for our primary measures, the results of correlational analyses among the measures, and the results of two series of multiple regression analyses.³ We conducted two sets of regression analyses because we were interested in whether development in collective self-esteem over time would predict change in college adjustment over time as well as adjustment at the end of the 1st year of college.⁴

The means and standard deviations for our primary measures taken during Phase 1 and Phase 2 are reported in Table 1. For each participant, the collective self-esteem and the personal self-esteem scores were coded so that higher numbers were indicative of higher levels of self-esteem. In addition, although the collective self-esteem measure has four subscales, we report the results for the overall scale, because the subscale scores were positively correlated (correlations ranged between .31 and .65, all $ps < .001$) and the reliability of the overall scale was high (Phase 1: $\alpha = .88$; Phase 2: $\alpha = .89$). Also, the findings for regression analyses conducted on each subscale separately were consistent with those we report for the entire scale. For personal self-esteem, the reli-

ability of the scale was high for both phases of the data collection ($\alpha = .89$ and $\alpha = .90$, respectively). The quality of students' college relationships and the amount of time spent in extracurricular activities were only measured at Phase 2; the reliability for students' college relationships was .82 (extracurricular activities was a single item). As shown in Table 2, collective self-esteem and personal self-esteem were somewhat correlated for Phases 1 and 2. In addition, at Phase 2, collective and personal self-esteem were moderately correlated with the quality of students' interpersonal relationships as well as the number of extracurricular activities, and these latter two variables were also intercorrelated.

The means for the measures of social and academic adjustment to college are reported in Table 1; Baker and Siryk (1984) report internal consistencies ranging from .82 to .89 for these scales. As shown in Table 2, during Phase 1 and Phase 2, social adjustment was relatively highly correlated with academic adjustment. However, the relations of these variables with grade point average were less consistent within and across Phases 1 and 2. In Phase 1, grade point average was negatively correlated with social adjustment and was somewhat positively correlated with academic adjustment, but in Phase 2, grade point average was uncorrelated with social adjustment but moderately positively correlated with academic adjustment.

Table 2 also shows the correlations between the predictor variables and the outcome variables. These results showed that, at Phase 1 and Phase 2, collective self-esteem and personal self-esteem were positively correlated with social and academic adjustment to college. However, the results revealed negative correlations among grade point average and collective self-esteem and personal self-esteem at Phase 1, but low positive correlations between grade point average and self-esteem and personal self-esteem at Phase 2. The measure of the quality of student relationships was correlated with social adjustment but not academic adjustment or grade point average, and the number of extracurricular activities was positively correlated with all three measures.

Regression Analyses

In the first series of regression analyses, we treated adjustment to college at the end of the academic year (Phase 2) as the criterion variable, and in the second series, we treated change in adjustment over time (from Phase 1 to Phase 2) as the criterion. To calculate change in adjustment, we subtracted the Phase 1 values from the Phase 2 values for social adjustment, academic adjustment, and grade point average. In addition, we created similar change scores for collective self-esteem and personal self-esteem, both of which were measured during Phases 1 and 2.

Although some researchers have recommended using residualized scores to study change (e.g., Pendleton, Warren, & Chang, 1979; Woody & Costanzo, 1990), others have suggested that using these types of scores provides no advantage over using change scores and that change scores are more in-

³A small number of values were missing in the data set (1%). Because the percentage of missing data was small, we replaced the missing values with the mean for its respective measure (see Bollen, 1989, for discussion).

⁴Because a substantial number of participants did not report socioeconomic status, separate analyses for mothers' and fathers' education levels were performed with these background characteristics entered into the regression analyses. Results were substantially the same, though not reported because the overall N for each analysis was approximately one third of the total N .

TABLE 1
Means and Standard Deviations for Predictor and Outcome Variables at Phase 1 and Phase 2 as Well as Intercorrelations Among Time Periods

Variable	Phase 1		Phase 2		Phase 1 With Phase 2 <i>r</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Predictor					
Collective self-esteem	4.90	1.00	4.33	0.94	.53*
Personal self-esteem	3.30	0.55	3.32	0.52	.61*
Students' relationships	—	—	5.51	1.13	—
Extracurricular activities	—	—	2.13	1.75	—
Outcome					
Social adjustment	129.05	26.64	132.87	25.54	.56*
Academic adjustment	154.49	22.60	148.51	27.98	.58*
Grade point average	3.17	0.69	3.04	0.76	.71*

Note. The quality of students' relationships in college as well as the amount of extracurricular activities were assessed at only Phase 2. The participants' scores for collective self-esteem, personal self-esteem, and quality of students' college relationships were the average for each scale. The participants' social and academic adjustment scores were totals for each scale; higher scores on these measures indicate greater adjustment (copyright law prohibits calculation of means for these scales). Grade point average is on a 4-point scale.

* $p < .001$, two-tailed.

TABLE 2
Correlations Among Variables Separately Reported for Phase 1 and Phase 2

Variable	Phase 1					
	CSE	PSE	Social	Academic	GPA	
Collective self-esteem	—					
Personal self-esteem	.20**	—				
Social adjustment	.39****	.27***	—			
Academic adjustment	.09	.28***	.52****	—		
Grade point average	-.29****	-.15*	-.17**	.14*	—	
High school achievement	-.02	.00	.19**	.18**		.55****

Variable	Phase 2					
	CSE	PSE	SR	EA	Social	Academic
Collective self-esteem	—					
Personal self-esteem	.10	—				
Student relationships	.19**	.16**	—			
Extracurricular activities	.12	.17**	.13	—		
Social adjustment	.32****	.42****	.51***	.28***	—	
Academic adjustment	.18**	.48****	.09	.27***	.44****	—
Grade point average	.05	.09	-.02	.21**	.07	.41****

Note. Positive correlations for all variables mean that higher scores on a given variable are associated with higher scores on the second variable. CSE = collective self-esteem; PSE = personal self-esteem; Social = social adjustment to college; Academic = academic adjustment to college; GPA = grade point average; SR = student relationships; EA = extracurricular activities.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$, two-tailed.

terpretable (e.g., Dalecki & Willits, 1991; Gottman & Krokoff, 1990; Llabre, Spitzer, Saab, Ironson, & Schneiderman, 1991). As have other researchers (e.g., Gillespie & Streeter, 1994; Llabre et al.), we conducted a separate series of analyses using residualized scores and found that the pattern of results for the residualized scores were entirely redundant with those using raw change scores.

Phase 2 academic adjustment. The zero-order correlations between change in the predictors and adjustment at Phase 2 are printed above the upper diagonal of Table 3. These results show that increase in collective self-esteem was associated with higher academic adjustment and grade point average at Phase 2 but was unreliably correlated with social adjustment. In addition, increase in personal self-esteem was

TABLE 3
Correlations Among Change Scores in Predictor Variables and Change Scores in Academic Outcomes as Well as Academic Outcomes at Phase 2

Variable	CSE	PSE	Social	Academic	GPA
Collective self-esteem	—	—	.09	.16**	.32***
Personal self-esteem	.17**	—	.26***	.24***	.22***
Social adjustment	.25***	.21**	—	—	—
Academic adjustment	.16**	.10	.40****	—	—
Grade point average	.14*	-.02	-.07	.24***	—

Note. Correlations below the diagonal are between change in the predictor and the outcome variables. Correlations above the diagonal are between change in the predictors and academic outcomes at Phase 2. CSE = collective self-esteem; PSE = personal self-esteem; Social = social adjustment to college; Academic = academic adjustment to college; GPA = grade point average.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$, two-tailed.

TABLE 4
Regression of Outcomes Measured at Phase 2 on Change in Collective Self-Esteem, Change in Personal Self-Esteem, Students' College Relationships, and Extracurricular Activities

Variable	Time 2 Outcomes		
	Social Adjustment	Academic Adjustment	Grade Point Average
Predictor			
Collective self-esteem change	.16*	.18*	.21**
Personal self-esteem change	.31***	.42***	.14
Students' college relationships	.40***	-.02	-.06
Extracurricular activities	.14*	.17*	.13
Control			
High school achievement	.15*	.13	.48***
Phase 1 collective self-esteem	.23**	.06	-.11
Phase 1 personal self-esteem	.30**	.46***	.02

Note. Standardized betas are reported. Social adjustment: overall $R^2 = .47$, $F(7, 134) = 17.11$, $p < .001$. Academic adjustment: overall $R^2 = .31$, $F(7, 134) = 8.56$, $p < .001$. Grade point average: overall $R^2 = .40$, $F(7, 134) = 12.91$, $p < .001$. Phase 1 scores of collective self-esteem and personal self-esteem were entered into the regression analyses to control for initial main effects of these variables.

* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed.

correlated with higher levels of social adjustment, academic adjustment, and grade point average at Phase 2.

To further examine these relationships, we conducted one regression analysis for each indicator of adjustment at the end of the academic year (i.e., social adjustment, academic adjustment, and grade point average at Phase 2). For each of these regression analyses, we simultaneously entered change in collective self-esteem, change in personal self-esteem, student college relationships, extracurricular activity, and high school achievement as predictors of adjustment.⁵ The standardized beta weights from these three analyses are reported in Table 4.

The results of the regression analyses were consistent with our hypothesis that development in collective self-esteem

would be associated with better adjustment to college. The results at Phase 2 revealed that change in collective self-esteem predicted social adjustment, $t(134) = 2.14$, $p < .05$, and academic adjustment, $t(134) = 2.10$, $p < .05$, suggesting that development of positive collective self-esteem was related to more positive adjustment to college. In a similar vein, change in collective self-esteem predicted grade point average at Phase 2, $t(134) = 2.54$, $p < .05$.

Although of lesser interest for the purposes of the current study, the results also showed that increase in personal self-esteem was associated with social, $t(134) = 4.03$, $p < .01$, and academic adjustment, $t(134) = 4.86$, $p < .01$, but not with grade point average, $t(134) = 1.77$, $p > .05$, at Phase 2. In addition, the quality of students' interpersonal relationships, the number of extracurricular activities, and the index of high school achievement were positively associated with social adjustment, $t(134) = 6.19$, $p < .01$; $t(134) = 2.14$, $p < .05$; $t(134) = 2.40$, $p < .05$; respectively. Finally, the amount of extracurricular activity was associated with academic adjustment, $t(134) = 2.24$, $p < .05$, and the index of high school achievement was associated with grade point average, $t(134) = 7.15$, $p < .01$.

⁵In all regression analyses, the Phase 1 score of each respective change score in the regression model was also entered into the analysis. The Phase 1 score associated with the change in adjustment criterion was entered to control for initial levels of adjustment, and Phase 1 scores of collective self-esteem and personal self-esteem were entered to control for any initial main effects of these variables (see Games, 1990, for discussion).

Change in academic adjustment. The second series of regression analyses allowed us to examine whether development in collective self-esteem accounted for improvement in adjustment from the 1st to the 2nd semester of college. The zero order correlations between change in collective self-esteem and change in academic outcomes are presented below the diagonal in Table 3. These results showed that change in collective self-esteem was positively associated with change in social and academic adjustment but only marginally correlated with change in grade point average. In addition, change in personal self-esteem was correlated with change in social adjustment.

Similar to the previously reported regression analyses, we conducted one regression analysis for each of the three indicators of change in adjustment to college. For each regression analysis we simultaneously entered change in collective self-esteem and change in personal self-esteem as predictors of change in adjustment along with the index of high school achievement as a control variable (*viz.*, variables measured at Phase 2 only were not entered).

The results of these regression analyses were highly consistent with those reported for adjustment to college at Phase 2 (end of the academic year). Table 5 reports the standardized beta weights from these analyses. The results revealed that development in collective self-esteem was associated with improvements in social adjustment, $t(135) = 2.74, p < .01$, as well as improvements in academic adjustment, $t(135) = 2.16, p < .05$. Moreover, increase in collective self-esteem was associated with improvements in grade point average, $t(135) = 2.58, p < .001$. Finally, the results also revealed that increase in personal self-esteem as well as prior high school achievement were fairly reliably predictive of social adjustment and personal self-esteem, $t(135) = 4.05, p < .01$; high school achievement, $t(135) = 2.49, p < .05$; academic adjustment and personal self-esteem, $t(135) = 3.22, p < .01$; high school achievement, $t(135) = 1.34, p > .10$; grade point average and personal self-esteem, $t(135) = 0.73, p > .40$; and high school achievement, $t(135) = 2.87, p < .01$.⁶

⁶We also examined whether gender moderated the association between collective self-esteem and our measures of adjustment. The findings of these analyses revealed no interactions between gender and collective self-esteem on adjustment (and gender did not have a main effect on adjustment). Another series of analyses were conducted to examine whether academic aptitude, as measured by the high school achievement index, moderated the relation between collective self-esteem and adjustment. In general, the results revealed few interactions, and these were inconsistent among one another. Only two interactions were significant: one revealed that the relation between change in collective self-esteem and grade point average at the end of the academic year was stronger among those with high aptitude than among those with relatively low aptitude, $t(131) = 2.03, p < .05$. A second interaction revealed that the relation between change in collective self-esteem and change in social adjustment was higher among those with low aptitude compared to those with high aptitude, $t(131) = -2.07, p < .05$.

DISCUSSION

Our findings provide compelling evidence that social identifications with a context-related group have the capacity to enhance positive adjustment in that context. The primary goal of the current study was to examine whether adjustment within a particular context would be associated with development of social identity. Consistent with our hypotheses, the findings suggest that development in collective self-esteem with campus groups may contribute to better adjustment to college. The results of two series of regression analyses revealed that increase in collective self-esteem with residence-hall group membership was associated with adjustment at the end of the 1st academic year as well as with improvements in adjustment from the 1st semester to the 2nd semester.

The results also showed that change in personal self-esteem as well as the quality of students' college relationships and the quantity of extracurricular activities affected adjustment in the college setting. Indeed, the associations between adjustment and these personal and interpersonal variables were often relatively stronger than those between adjustment and collective self-esteem. Nevertheless, development in collective self-esteem reliably predicted variance in social and academic adjustment to college as well as in grade point average, even when levels of change in personal self-esteem, students' relationships, extracurricular activity, and initial high school achievement were controlled.

The findings of this study suggest that practitioners seeking to improve students' adjustment to college should recognize the capacity of group memberships to enhance adjustment. Our results showed that residential group membership could have positive influences on adjustment. This finding, in part, may have been due to programs instituted within the residential hall to encourage academic and social involvement on campus. We suspect that group memberships that are consistent with students' social and academic developmental needs and that provide positively valued social identities will be those that have the greatest potential to affect student adjustment to college. Although residence hall memberships clearly had meaning for our students, it is likely that as students become acculturated into the university, other group memberships may play more important roles in adjustment to college. For example academic major, academic clubs, and college social clubs may eventually provide more distinctive and valued memberships, which ultimately have influence after the 1st year of college. In addition, not all group memberships will positively influence adjustment to college. Groups that are context related but not positively valued (e.g., some college majors) or those that are positively valued but unrelated to the context (e.g., some family groups) may not play primary roles in affecting adjustment to college. Also, it is probable that some groups that are embedded in the academic context and positively valued by its members but whose norms or values are at odds with academic achievement may hinder adjustment to college.

TABLE 5
Regression of Change Score in Academic Outcomes on Change Scores for Collective Self-Esteem and Personal Self-Esteem

Variable	Change in Academic Outcomes		
	Social Adjustment	Academic Adjustment	Grade Point Average
Predictor			
Collective self-esteem change	.22**	.20*	.24**
Personal self-esteem change	.32**	.32**	.07
Control			
High school achievement	.17*	.11	.28**
Phase 1 collective self-esteem	.14	.05	.00
Phase 1 personal self-esteem	.22*	.32***	.04
Phase 1 academic outcomes ^a	-.60***	-.44***	-.49***

Note. Standardized betas are reported. Social adjustment: overall $R^2 = .41$, $F(7, 134) = 15.37$, $p < .001$. Academic adjustment: overall $R^2 = .19$, $F(7, 134) = 5.39$, $p < .001$. Grade point average: overall $R^2 = .17$, $F(7, 134) = 4.75$, $p < .001$. Phase 1 scores of collective self-esteem and personal self-esteem were entered into the regression analyses to control for initial main effects of these variables.

^aPhase 1 academic outcomes are the respective measure for each dependent measure change score. For example, for the regression analysis predicting change in social adjustment, the Phase 1 academic outcomes are the scores on social adjustment to college at Phase 1.

* $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed.

For example, membership in some social fraternities may not foster academic adjustment. In a similar vein, if membership in a group conflicts with a person's values or goals, it is unlikely to benefit adjustment to college. This notwithstanding, the findings of the current study suggest that particular college-related group memberships are likely to play an important role in students' adjustment to college.

These findings are consistent with a growing body of evidence highlighting the importance of group memberships for personal functioning (Bettencourt & Dorr, 1997; Blaine & Crocker, 1995; Crocker et al., 1994; Diener & Diener, 1995; Triandis et al., 1988). Moreover, by revealing that temporal change in collective self-esteem is associated with adjustment, the results provide evidence for the theoretical perspective (Crocker et al.) that positive evaluations of and identifications with group memberships have causal effects on cognitive and emotional well-being. Because Ethier and Deaux (1990, 1994) argued that college is a setting in which identities are likely to change and develop, we focused on collective self-esteem among college students. The importance of the development of collective self-esteem on adjustment might be especially relevant when persons experience notable changes in their lives, such as when one begins a new career, moves to a new community, and so on. Thus, the findings suggest that collective self-esteem may play a role in adjustment to other contexts. For example, work-related group memberships may play a role in worker satisfaction and productivity. Further research should seek to understand adjustment in such settings where social identity development, as well as indexes that do not involve self-report, may be studied (i.e., measures of productivity).

The present research is the first to show that change in collective self-esteem with context specific group membership is related to adjustment in a respective context. In addition, as has other research (e.g., Bettencourt & Dorr, 1997), the cur-

rent study documents that collective self-esteem and personal self-esteem have distinct associations with adjustment. Although social identifications have the capacity to reflect positively on one's personal identity, their associations with adjustment are not one and the same (Tajfel & Turner, 1986). This perspective concurs with other theoretical and empirical work (e.g., Hogg & Abrams 1990; Trafimow, Triandis, & Goto, 1991; Turner, 1982) that suggests that the self-concept can be divided into two relatively separate subsystems (social identity and personal identity) and that social identities and personal identities are cognitively represented somewhat differently (Bettencourt & Hume, 1999). The findings of the current study are also consistent with other theoretical perspectives suggesting that relatedness (Deci & Ryan, 1991) and social support (Diener & Fujita, 1995) are important for well-being. Clearly, interpersonal relationships are important for adjustment. However, our study suggested that interpersonal relationships and collective self-esteem had independent influences on adjustment. Our view is that group memberships are very particular types of relationships that provide an individual with a sense of meaning and purpose that extends beyond the self (Turner, Oakes, Haslam, & McGarty, 1994), which in turn, positively influences adjustment and well-being. In the future, researchers should seek to integrate the perspectives that focus on group relations with those that focus on interpersonal relations.

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