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Campus racial climates and educational outcomes

Hurtado, Sylvia, Ph.D.

University of California, Los Angeles, 1990

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UNIVERSITY OF CALIFORNIA

Los Angeles

Campus Racial Climates and Educational Outcomes

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Education

by

Sylvia Hurtado

1990

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ABSTRACT OF THE DISSERTATION

Campus Racial Climates and Educational Outcomes

by

Sylvia Hurtado

Doctor of Philosophy in Education

University of California, Los Angeles, 1990

Professor Alexander W. Astin, Chair

Amid a growing concern over campus race relations, the current study examined the racial climate in 116 colleges and assessed its effects on student outcomes. Longitudinal data from the Cooperative Institutional Research Program were obtained from 328 black, 340 Chicano, and 1,825 white college freshmen surveyed in 1985 and followed up in 1989. Two dimensions of the racial climate, Racial Tension and Institutional Commitment to Diversity, were derived from student perceptions using Confirmatory Factor Analyses and structural equation modeling (EQS). Stepwise multiple regression was used to explore (a) the effects of student and structural characteristics on the racial climate, and (b) racial climate affects on five outcomes: academic and social self-concept, college grades, persistence, and commitment to promote racial understanding. The study used a conceptual framework similar to college influence models proposed by Astin, Pascarella, Smith & Allen, and Tinto. The interpretative framework was based on Giroux's theory of resistance in education.

Although racial climate perceptions are partially dependent on student predispositions (ability, ethnicity, expectation to participate in campus protests,

liberalism), a higher proportion of the variance can be explained by the environment. Colleges that are student-oriented or that value different perspectives have more favorable racial climates. Low racial tension and high institutional commitment to diversity were found at private-nonsectarian and Catholic colleges, and institutions that provide substantial student services financing or scholarship aid. Poor racial climates were more likely at large institutions, public universities, and colleges with high expenditures for instructional services. Mixed racial climate patterns were associated with college selectivity and racial diversification of the student body.

The significant effects of the racial climate on outcomes vary by racial climate measure (student perception, student-reported behavior, minority enrollment), ethnicity, and educational outcome. Positive student outcomes were sometimes associated with adverse racial climates, suggesting that minority students develop strategies of resistance in these environments. Specifically, campus protest and discussing racial issues mediate the effects of racial tension. These activities as well as interracial contact, attending race awareness workshops, and taking ethnic studies courses positively affect interest in promoting racial understanding among all racial groups.

CHAPTER 1

INTRODUCTION

Critical to the search for equality is a willingness to look at perspectives other than our own, "continually unsettling our assumptions" (Minow, 1990). This principle implicitly guided the development of the current study of the impact of campus racial climates on student educational outcomes. In order to see something new in an old issue--and the issue of the racial climate on campus is an old one--I approached the subject with the aim to test some of our common assumptions in higher education. I set out to critically examine the following assumptions:

1. Our institutions of higher education operate in a uniform way in terms of race-related issues.
2. The minority student response to adverse racial climates has been one of accommodation.
3. Racial climates uniformly affect educational outcomes, particularly for minority students.

The first assumption is related to our understanding about the basic nature of our colleges and universities; I discuss in Chapter 2 how contradictions regarding race-related issues may exist within our institutions. These contradictions are then examined in the study through the development of multiple dimensions of the racial climate and are reflected in the results for particular types of institutions described in Chapter 5. The second assumption, addressed theoretically in Chapter 2 and examined empirically in Chapter 6, is concerned with the importance of understanding the student response to the

racial climate. Students may engage in important behaviors that mediate the effect of adverse environments. The third assumption is addressed in Chapter 3, focusing on the review of the literature. It reveals that research today remains inconclusive regarding the effects of the racial climate on student outcomes. Thus, the results of this study shed light on broad issues regarding the role of our institutions in society, while providing an examination of the relationship between student psychological states and behaviors (in the form of outcomes and social interaction on campus) in the context of the campus racial climate.

I have attempted to develop a conceptual definition of the racial climate that is useful for empirical analysis. The racial climate is a socially constructed phenomenon. It is made up of actors' perceptions and actions within an environment that, in turn, are modified by situations and historical contexts. The campus racial climate is also made up of many elements that generally include relations among various campus groups (students, faculty, and administrators), institutional intent or commitment, and structural aspects that reflect institutional policies. These multiple aspects of the racial climate are examined in the review of theories and prior research. For now it is sufficient to say that when I refer to the racial climate, I am referring to multiple aspects of the college environment related to racial/ethnic issues.

Background

Racial climate issues have existed in higher education for about as long as institutions have considered the admission of racially or culturally different students. Vivid historical descriptions of hostilities directed at the entrance of black students to southern universities remind us of periods in American higher education when racial tension was high (Branch, 1988). In the minds in some observers, however, racism and

tense racial climates are confined to a specific era or region of the country. The fact is that memory within the higher education community is selective and short. Scholars have recently begun to uncover archival evidence of discriminatory practices in college admissions, student organizations, and administrative policies that have existed since the post-World War II era at institutions across the country (Cohen, 1990). These practices, no doubt, have caused tensions between institutions and individuals or groups who worked to eliminate them.

The civil rights movement, the elimination of *de jure* segregation in the public sector (*Brown v. the Board of Education*), litigation in areas related to the Civil Rights Law (Title VI), and a surge in minority enrollments up until the mid-1970s raised the level of public consciousness regarding inequalities in the education of minority groups. These events, no doubt, have also reduced overt aspects of discrimination in educational institutions, making such practices illegal and unethical in the public mind. However, scholars concede that institutional compliance with legal injunctions (e.g., *Adams v. Richardson*, *Adams v. Califano*) for increased minority participation in higher education has been problematic over the years (Williams, 1988; Vera, 1989), and subtle forms of racism remain active at both the institutional and individual levels (Reyes & Halcón, 1988; Verdugo, 1986). Unfortunately, institutional inertia persists, while the residue of earlier discriminatory practices lingers.

The racial climate remains one of the many items on higher education's unfinished agenda. Researchers investigating the racial climate in the mid-1970s found that while college campuses exerted considerable energy in initiating programs and services in response to the entrance of minority students, they were not attending to minority-majority relations or the psychological climate (Peterson, Blackburn, Gamson, Arce, Davenport & Mingle, 1978). Researchers today suggest that predominantly white

universities may have introduced programs as “window dressing” without really addressing the more difficult questions of the climate (Hughes, 1987). A recent report from the American Council on Education revealed that only one in four academic administrators felt their campus provided an “excellent” to “very good” climate for black students, and 29 % felt they provided a supportive climate for Hispanics (El-Khawas, 1989). If these climate issues have been left unattended since the influx of minorities in the late 1960s, it is no wonder that campuses found themselves dealing with racial climate issues in the 1980s.

External forces and recent historical events have perhaps made racial climate issues more salient. It is no coincidence that the resurgence of overt hostilities on campuses, occurring as early as 1979 (Smith, 1981), followed events that signalled the questioning of affirmative action (*Bakke*), declining federal commitment to issues that affect minorities, renewed Ku Klux Klan activity, and increasing racial discord in urban communities like Howard Beach and Bensonhurst reported in the media (Jacob, 1988). Events in higher education cannot be viewed entirely apart from the social and political context of the larger society. One can conclude that the events of the past decade helped to create an open atmosphere for overt manifestations of racial intolerance on college campuses.

Aside from the subtle influence of social and political trends, external events can directly influence institutions of higher education. For example, changes in federal aid programs during the Reagan years, and subsequent changes in packaging policies at the institutional level, have disproportionately affected blacks and Chicanos in their decisions to attend or remain in college (Carter-Williams, 1989; Olivas, 1983, 1986; Sudarkasa, 1988). Thus, current campus racial climates reflect a mix of societal and institutional vestiges of what was once a formal institutional ideology (racism), attitudes engendered

during the 1960s to mid-1970s in commitments to equality, and stagnation or reversals of these commitments in the 1980s.

Against this backdrop, gaps in the educational pipeline for the different racial and ethnic groups highlighted at the beginning of the 1980s (Astin, 1982) have widened considerably. Trends in college participation rates indicate that, although test scores have improved and high school graduation rates have increased among black and Hispanic students over the years, these gains have not increased the percentage of minority students entering college since 1976 (Carter & Wilson, 1990). In fact, the statistics reflect a portrait of minority participation in higher education as one of regression since the mid-1970s (Carter & Wilson, 1990).

The college participation rate of low-income black high school graduates, between 18 and 24 years old, dropped from 40 % in 1976 to 30 % in 1988 (Carter & Wilson, 1990). In contrast, the participation rate for low-income white youth has hovered around 37 to 39 % over the same period. Blacks have also experienced losses in the number of degrees conferred nationally: in 1987 they received 5.7 % of the bachelor's degrees, representing a decline from 6.4 % in 1976 (Carter & Wilson, 1990).

Contrary to popular belief, the demographic growth in the Hispanic population has not translated into substantially increased Hispanic enrollments (Olivas, 1986). The participation rates for Hispanics, as a proportion of the 18- to 24-year-old population, have declined from 35.8 % in 1976 to 30.9 % in 1988 (Carter & Wilson, 1990). Traditionally, Hispanics complete high school at substantially lower rates than other groups (Astin, 1982; Carter & Wilson, 1990). It is particularly alarming that the college participation rates for low-income Hispanics has fallen from 50 to 35 % during the years 1976 to 1988 (Carter & Wilson, 1990). Thus, Hispanics continue to be one of the most

underrepresented groups in higher education, particularly at the four-year level (Wilson & Melendez, 1987).

Statement of the Problem

Over the past few years an alarming number of overt racial incidents have occurred, with more than 160 college campuses involved (Steele, 1989). This is only a rough estimate because many incidents go unreported and only one organization, the National Institute Against Prejudice and Violence, makes an attempt to collect information on such incidents. Some of the most highly publicized incidents, ranging from harassment to violent beatings, have occurred at elite institutions such as Columbia, Stanford, University of Michigan, and the University of Massachusetts (Sudarkasa, 1988). Students organized demonstrations to protest such incidents on their own campuses or to express solidarity with students at other campuses (Vellela, 1988). For a time it appeared as if these racial incidents occurred in a chain reaction across campuses, creating student demonstrations and leaving flustered college administrators in their wake. Student demands for institutional action, the confusion, and the unwanted media coverage of these events have led administrators to consider strategies to improve the racial climate on their campuses.

Beyond the desire for institutional stability, other reasons to understand and improve campus racial climates have quickly become apparent. Demographic accounts suggest that, by the year 2000, one-third of our nation's school children will be members of minority groups, and minority workers will represent one-third of the net additions to the U.S. labor force (Commission on Minority Participation in Education and American Life [CMPEAL], 1988). The declining number of majority students among the traditional college-age population, coupled with the youthfulness of the minority

population, portends a change in the "color" of our campuses. In particular, "colleges that draw largely from local communities will experience a rapid ethnic/racial restructuring of their student populations, or face decreasing enrollment" (Estrada, 1988, p. 18). It appears the fate of minority groups may soon be intimately tied to both the economic well-being of the country and the survival of its institutions of higher education (Gándara, 1986). As a result, recent national reports show a new sense of urgency in closing the gaps between minorities and white Americans in educational and economic attainment (CMPEAL, 1988).

What would rapid racial/ethnic restructuring of our institutions entail?

Restructuring will call for an examination of all areas of campus life from ideology expressed in the curriculum, institutional policies and practices, to social relations at the individual level. Some institutions have begun preparations; administrators realize that prior efforts have been inadequate and they are searching for concrete strategies to improve minority access, participation, and degree attainment. The focus is on elements in a college that make it more conducive for education in a multicultural environment.

The American Council on Education recently published a handbook to assist with new campus strategies to improve educational outcomes and reaffirm a commitment to diversity and pluralism. *Minorities on Campus: A Handbook for Enhancing Diversity* (Green, 1989) refers to the importance of the campus climate in improving minority participation and educational outcomes:

Campus climate embraces the culture, habits, decisions, practices and policies that make up campus life. It is the sum total of the daily environment, and central to the "comfort factor" that minority students, faculty, staff, and administrators experience on campus. Students and other members of the campus community

who feel unwelcome or alienated from the mainstream of campus life are unlikely to remain. If they do remain, they are unlikely to be successful (p. 113).

The handbook suggests that the “signs of an inhospitable environment” are often subtle, that these covert forms of racism on campus can adversely affect students, and that minorities have a different view of the college environment than white students.

There is little empirical evidence, however, to support many of these assumptions regarding the racial climate. The extant research regarding the effects of the racial climate on student outcomes is inconclusive, or reflects conflicting results (See Chapter 3). Researchers have also neglected to examine the extent to which students have used particular strategies to deal with adverse environments on an individual and group level (e.g., pressuring the administration for change). Assumptions regarding the effect of the racial climate need to be tested, prior research deserves replication, and more information is generally needed to devise effective strategies for dealing with racial climate issues and the improvement of educational outcomes.

Purpose of the Study

The general goal was to generate empirical evidence concerning the pattern of racial climate effects on: Self-concept (academic and social), undergraduate achievement (grades and persistence), degree aspirations, and change in student racial attitudes (commitment to promote racial understanding). The purpose was to establish new research areas as well as to build on previous research; the study tested hypotheses as well as attempted to generate new hypotheses through new empirical evidence. A second objective was to place these results within a theoretical context that may permit educators to look at the situation in a new way, which may ultimately facilitate the restructuring of

our institutions. A final objective of the study was to provide recommendations that can help both students and institutions to understand and improve racial climates and, consequently, educational outcomes for all students.

The purpose of the study was thus to answer the following general questions:

What is the effect of the campus racial climate on college students? Is there a relationship between educational outcomes and campus racial climates? What college and university policies or structural aspects of institutions are related to the racial climate on a campus? What kinds of mediating factors account for different student responses to the racial climate? How can one explain the general pattern of results within a larger theoretical framework?

Significance of the Study

In view of recent events in higher education, this study is timely. The study covered a time period, 1985-1989, when many racial incidents and related student protests occurred on college campuses. It offered a unique opportunity to examine racial climate issues and related outcomes during this unsettling time at a variety of institutions across the country. Indeed, some of the institutions that received the most media attention are included in the study. If our institutions are at a turning point, a thorough examination of the racial climate can have immediate significance for the process of restructuring.

The data collected for the study include a longitudinal, multi-institutional sample of black, Chicano, and white students. Racial climate studies are usually cross-sectional in design and the few that include longitudinal data have yet to report on changes in student development during college. Multi-institutional studies are also still quite rare.

These two design elements are essential to developing a better understanding of student development and change during the college years (Astin, 1977).

While there have been numerous studies of black students on predominantly white campuses, the experiences of Chicanos on these campuses remain largely unexplored. Evidence in the literature review shows that scholars have made significant strides in studies of black college students. They have moved essentially from issues of access to research on college student experiences (Hall & Allen, 1989), collecting data that reflect a wide range of issues specific to black student experiences on college campuses. In contrast, many of the studies on Chicanos still place strong emphasis on background characteristics and their effect on student outcomes—even in predicting college achievement (Durán, 1983).

This difference in research may be a function of two factors: The lack of extensive data sets on Chicano students and the small number of Chicanos conducting research in higher education (Olivas, 1988; Haro, 1983). The U.S. Department of Education (Institutional Postsecondary Educational Data Systems [IPEDS]) still collects and reports data on Chicanos under the umbrella category of "Hispanics," even though census data and other educational data show dramatic differences among Latino groups (Estrada, 1988; Astin, 1982). Thus, there is no support at the federal level for breaking out the Hispanic category in ways that would enable us to understand the particular problems of Chicanos or other Latino groups. In addition, it is only recently that scholars have looked more closely at college environmental influences on Chicano student experiences (Astin & Burciaga, 1981; Attinasi, 1989; Cuadraz, 1989; Loo & Rolison, 1986; Oliver, Rodriguez, & Mickelson, 1985; Nora, 1987; Rendón & Nora, 1988). Olivas (1983) suggested that a research agenda for Latinos is in order, one which includes an analysis of structural phenomena and an analysis of individuals within institutions. The present

study combines these elements, along with comparative group analyses, to provide important information regarding the unique college experiences of blacks, Chicanos, and white students.

A word about ethnic group labels is in order here. The data was based on student self-reports of racial or ethnic group identification, allowing examination of the specific experiences of these groups. Students could identify themselves in the 1985 Survey specifically as Black/Negro/Afro-American, Mexican-American/Chicano, or White/Caucasian. Chicanos represent students of Mexican descent, yet government data are often reported in the category of Hispanic. When I use the term Hispanic, I am referring only to data or studies that have reported results in that category. While Hispanic research does not reflect the experience of Chicanos alone, unless the data are broken down by region, we can assume that the results are heavily influenced by the Chicano experience since they represent approximately 60 % of the Hispanic population (Astin, 1982). When referring to studies that reflect the experiences of several groups (i.e., not reported in a general Hispanic category), I will use the term Latino as a matter of preference. This preference stems from my own experience with other Latino groups as well as a resolution among the National Chicano Studies Association to avoid the use of the governmental term Hispanic.

Scope of the Study

The study was limited to students who in 1985 were first time, full-time freshmen entering four-year institutions with student bodies that are predominantly white. Although the distinctive experiences of students in community colleges as opposed to the four-year colleges have been documented (Astin, 1977, 1982; Hurtado, Astin, Korn, & Dey, 1989), the idea here was to focus on institutions that become the center of student

life. This allowed an examination of student change and racial climate effects that may be primarily attributed to the college environment.

Survey methods were used to examine the racial climate and its effect on students. Historical accounts or documentation of individual cases of racial hostilities or unrest on campuses were not explored due to the sheer number of institutions (116) in the study. While such immediate contexts are important, a study on students during this era would generally capture some of the effects of these immediate contexts.

Finally, the rationale for focusing on the experiences of blacks, Chicanos, and white students is threefold: (a) Black and white student samples provide comparative data with prior racial climate studies, (b) there is a lack of information on Chicano student experiences during college, and (c) freshman sample sizes for each of these groups provided sufficient selection for a follow-up survey. Other minority groups (Puerto Rican and American Indian) were excluded because of the small initial sample sizes and the need to reduce the complexity of comparison group analyses.

CHAPTER 2

THEORETICAL FRAMEWORKS

Theories serve as useful frameworks that assemble disparate facts into meaningful and coherent relationships. This study draws upon a multidisciplinary base of theories regarding the nature of educational organizations, race relations, social structure and personality, as well as college impact research in higher education. In some cases, similar phenomena have different terms across the disciplines of education, sociology, and psychology. In this chapter, I will attempt to link some of these concepts across disciplines to show how they inform my conceptual approach to the research problem. Perhaps more importantly, this chapter establishes a common language (i. e., definitions of concepts) to facilitate understanding and interpretation of findings.

Conceptual Approach

This study uses a general conceptual approach to the study of the racial climate that, in turn, binds a number of theories. It is a general approach used in the field of social structure and personality (Elder, 1973; House, 1981) and in higher education (Astin, 1977; Weidman, 1989). According to House (1981), three principles should guide an empirical analysis of how and why a social structure affects an individual. These are: (a) the components principle, which involves understanding the nature or multiple aspects of the structure (the college environment and its racial climate); (b) the psychological principle, involving an understanding of the psychology and behavior of the individual in relation to the structure (perceptions of the racial climate and outcomes);

and (c) the proximity principle, which involves understanding the linkages or nature of social interactions (student interaction or involvement) that mediate the two. Theories that highlight the importance of each of these principles in relation to the study are presented here along with the introduction of a general theory on how all these components may work together.

Structural Aspects of the Environment

In a sociological sense, the structural properties of the environment are seen as central to shaping social interaction and the individual's attitude and behavior within it (Kiecolt, 1988). This is analogous to viewing the colleges, or aspects of their environments, as stimuli (Astin, 1968). These structural properties are often assessed through the use of "objective" measures that are also referred to in social psychology as contextual variables (Kiecolt, 1988) or distal characteristics (Jessor, 1979). In higher education research these properties often refer to institutional characteristics such as size, type, control, selectivity, and racial composition of the college (Weidman, 1989).

There are a number of theories that can be applied to understanding structural aspects of the racial climate and the influence of other structural attributes of institutions on educational outcomes. These competing theories have to do with the numerical representation of minorities in college, community, and work environments. For example in her studies of women, Kanter (1977) posits a theory of "tokenism." She suggests that *proportions* of socially and culturally different people in a group are critical in shaping the dynamics of interaction. Tokenism can occur when an environment has a highly skewed distribution of different groups, with one group (usually based on gender or race) greatly outnumbering the others. According to Kanter, the underrepresented

groups “can appropriately be called ‘tokens’ because they are often representatives of their category, as symbols rather than individuals” (p. 965). Tokenism contributes to heightened visibility of the underrepresented group, polarization or exaggeration of group differences, and assimilation or distortion of the images of individuals to fit existing stereotypes. These individuals can face social isolation, stress and, because their roles may be circumscribed, limitations in goal attainment.

Similar work in the area of relative numbers of underrepresented groups is somewhat conflicting, suggesting perhaps that the effect of proportion may be nonlinear. That is, some researchers have suggested that attaining a proportion of 20 to 30 % for underrepresented groups reduces the potential effects of tokenism (Kanter, 1977; Simpson & Yinger, 1985). On the other hand, Blalock (1967) hypothesized that the larger the relative size of the minority group, the more minority individuals will be in direct and potential competition with an individual of the dominant group: “As the minority percentage increases, therefore, we would expect to find increasing discriminatory behavior” (p. 148). Such effects may have important implications for campus racial climates and educational outcomes.

An alternative theory has been suggested by studies in higher education. Studies of campus protests have shown that it is not the percentage of black students but their *absolute numbers* or a “critical mass” that results in campus protest (Astin & Bayer, 1971; Astin, Astin, Bayer, & Bisconti, 1975). That is, racially-related protests in the early seventies were associated with attaining a critical mass of minorities who could collectively present demands for institutional change. There has been little research on the theory of critical mass, however, since the early 1970s.

Still another theory suggests that numbers of minorities are not as important as the *size of the overall community*. In accordance with Blau's (1973) notion of the effect

of size on an organization, Tuch (1987) proposes that community size has a positive effect on racial tolerance within communities and that these effects have actually increased since 1972. In short, urbanites and non-Southerners were more racially tolerant than their non-urban and Southern counterparts. While the effect of size has increased, Tuch (1987) found that the effect of region has diminished over time. This research introduces two additional structural aspects that may affect the racial climate in campus communities, size and location of the college or university.

These different theories suggest that structural characteristics such as institutional size and region, the proportion of minorities, absolute numbers of minorities at each institution, and increases in minority enrollment are important elements to consider in any study of the racial climate. I will use the term diversification or diversity to refer to the structural aspects of the racial climate that are expressed in numerical terms. These diversity measures are useful because they are aspects of the environment that are “policy relevant” (Weidman, 1989). For example, administrators and students often point to diversification (i.e., increasing the number of minority students and increasing the number of minority faculty) as a means of improving the racial climate and consequently, student outcomes. These potential effects can be tested in the current study, together with the competing theories discussed above.

The Perceived Environment

The college environment has been referred to as an “enacted environment” since “participants develop interpretations about the nature of the organization from their social construction of the organization's culture based on historical traditions, current situational contexts, and individual perceptions” (Tierney, 1987, pp. 63-64). Viewed from this

perspective, perceptions of the climate become central to an understanding of the effects of the racial climate on college campuses. As a step in this direction, the current study included measures of the environment based on student perceptions of the racial climate.

Researchers in the fields of education, psychology, and sociology have typically used individuals' perceptions to reflect the environments or conditions to which subjects are exposed. For some of these researchers, the difference between reality and perception is not as important as the impact of such perceptions. For example, Thomas and Thomas (1928) stated, "If men [*sic*] define situations as real, they are real in their consequences" (p. 572). Along these lines, psychologists assert that the impact of a particular sociocultural event on an individual's self-concept is a result of how the experience is interpreted by the individual (Dusek & Flaherty, 1981). Other researchers contend that there is no difference between reality and perception: "Reality is not something objective or external to the participants. Instead participant reality is defined through a process of social interchange in which perceptions are reaffirmed, modified, or replaced according to their apparent congruence with the perceptions of others" (Tierney, 1987, p. 64).

Another view reflects the perceived environment as both an outcome and a cause of other outcomes:

The student's subjective interpretation or impressions of his college environment depend not only on the particular patterns of environmental stimuli to which he is exposed, but also on his values, attitudes, abilities, previous experiences, and other personal characteristics. In one sense, the student's "image" of his college environment at a given point in time is simply his subjective response to a particular set of environmental stimuli; in another sense, it is a potentially important frame of reference for interpreting and responding to new stimuli.

Thus, the student's image of his college is both a response to his environment and a potential determinant of his future responses (Astin, 1968, p. 94).

Both Tierney's and Astin's views, in reference to the perceived environment, are consistent with a social constructionist viewpoint. That is, social structure is "both a product of human interaction and a constraint on interaction" (Pfeffer, 1982, p. 224). Tierney (1987) states that "higher education organizations exist in socially constructed systems" (p. 64). For Astin (1968, 1990a), perceptions represent a confounding of an individual's characteristics, environmental stimuli, and environmental effects. As a consequence, perceptions of the racial climate in this study served as a dependent variable in early phases of analyses and as an independent variable in subsequent analyses.

Diversity measures (enrolment numbers), institutional policy, student perceptions, and student behaviors represented different aspects of the racial climate. Jessor (1979) proposes a theoretical framework that incorporates these elements. His view is that there are a multiplicity of environments in which human interaction takes place. These multiple environments can be ordered along a continuum according to proximity to the individual. Demographic and structural attributes of environments are considered distal characteristics while the perceived environment is considered the most proximal and is of immediate significance to the actor. Astin (1968, 1990a) has proposed a similar continuum in his work.

Studies in higher education have begun to validate the notion that proximal measures are more important than institutional characteristics in relation to student outcomes (Stoecker, Pascarella, & Wolfle, 1988). Research in social psychology also suggests that proximal measures mediate the effect of these distal characteristics (Jessor, 1979; Moos, 1979). In this particular study the distal dimension of the racial climate was

represented by the diversity measures, while the more proximal environment is represented by student perceptions of the racial climate. Factor analyses for the current study (Chapter 4) indicate that the racial climate consists of at least two perceptual dimensions: perceptions of institutional commitment to race-related issues and perceptions of the quality of minority-majority relations on campus.

*Social Interaction - The Link Between
the Environment and Outcomes*

According to theorists in the area of social structure and personality, the “psychological effects of community structure are traced through institutional patterns, ecological contexts, and face-to-face interaction” (Elder, 1973). Thus, the interpersonal environment or pattern of social interaction representing individual experience assumes an important role as a mediator or link to structural conditions. This is the basis for House's (1981) proximity principle. In higher education research, Weidman (1989) describes these “student linkages” to various aspects of the college environment as including: (a) interaction with faculty and peers (Astin, 1988; Pascarella, 1980); (b) amount of time spent studying or student effort (Astin, 1984; Pace, 1984); (c) involvement in campus life (Astin, 1984, 1985); and (d) both social and academic integration (Pascarella, 1985; Pascarella & Chapman, 1983; Stoecker et al., 1988; Tinto, 1975, 1987). These social interaction processes have been found to have significant effects on outcomes. Thus, examining the role of student interaction in the academic and social life of the campus became an important link to understanding the racial climate and its effect on outcomes in this study.

Two related theories have emerged from studies on the role of student interaction with the academic, extra-curricular and organizational aspects of colleges. The first is Astin's (1984, 1985) theory of student involvement, which refers to the amount of

physical and psychological energy a student devotes to the undergraduate experience. According to the theory, gains in college outcomes are a direct function of student involvement. This theory of involvement highlights the direct effect of student interaction processes on changes in student attitudes, behavior, and values.

A second theory that emerges in the literature focuses on the mediating role of social interaction. Tinto (1975, 1987) suggests that an individual's integration into the academic and social life of a college mediates the effects of student background characteristics and influences individual commitments that subsequently lead to decisions to stay in or leave college. Tinto's model of social and academic integration has been the focus of many validation studies on student persistence and other college outcomes (Pascarella & Chapman, 1983; Pascarella & Terenzini, 1980; Stoecker et al., 1988). However, some studies have begun to suggest that Tinto's model is less appropriate for minority students (Fox, 1986; Nora, 1987). This may be related to the distinct experiences of minorities on predominantly white campuses, as racial barriers can restrict social interaction.

One type of social interaction that is key in any study of the racial climate is intergroup contact or the degree to which individuals interact with others from different racial/ethnic backgrounds. Findings regarding what is referred to as the "contact hypothesis" have been mixed; some studies suggest that increased intergroup contact leads to decreases in prejudice, while others suggest that contact can lead to increased hostilities (Allport, 1954; Katz, 1976; Simpson & Yinger, 1985). Allport (1954) suggests that such results depend on the nature of group contact, a complex construct representing: quantitative aspects (frequency, duration), status aspects (equal or unequal), role aspects, social atmosphere surrounding the contact (segregation, voluntary vs. involuntary), personality characteristics, and areas of contact (residential, occupational,

casual, etc.). Blalock (1986) has proposed his own theory of contact in school settings, suggesting that it is shaped by several factors: segregation, cultural and status similarity, equality of status, expected intrinsic or extrinsic rewards and costs, as well as a host of contextual variables (neighborhoods, numbers of minorities, administrative policies). In the current study the nature of interracial contact was presumed to be voluntary, and imply equal status (student to student), focusing on the frequency dimension in a social situation. The degree to which such interracial contact may occur on campus depends on the opportunities created by the racial climate; it can also function independently as a mediating factor between the racial climate and educational outcomes.

Interpretative Framework

Up to this point, I have described a number of theories that undergird the conceptual framework of the study. It is also important to present an interpretative framework that might link these components in a general view of education and campus racial climates. Radical educators created one interpretative framework, resistance theory, that may be useful here. Resistance theory evolved in part, but is distinct, from the neo-Marxist (Bowles & Gintis, 1977) and cultural reproduction views of schooling (Bourdieu, 1979). It differs from these views in that it is less deterministic and pessimistic in its view of the function of schools and their relationships with “culturally different” groups. The central assumption of resistance theory is that although schools function in part to maintain the status quo (inequality), subordinate groups (i.e., class, race, and gender-based groups) do not compliantly submit to the dictates of schools that prepare them for a particular station in life. Rather, schools are viewed as “contested terrains marked not only by structural and ideological contradictions but also by collectively informed student resistance” (Giroux, 1983, p. 260). Furthermore, “schools

often exist in a contradictory relations to the dominant society, alternately supporting and challenging basic assumptions” (p. 260). Thus, this interpretative framework situates schooling within the broader social and political context.

Applied to higher education, this framework provides a plausible explanation for the contradictions that emerge in our institutions. Recent works in organizational theory in higher education have begun to view the college environment as less rational, less uniform in operation than we presume them to be, and contradictory in nature (Cohen & March, 1974; Lincoln, 1989; Tierney, 1987, 1989). Resistance theory offers the following explanation: Our institutions of higher education maintain the social order through the reinforcement of dominant ideologies, but they are also transforming society through pockets of active resistance that represent alternative ideologies.

Higher education prides itself on being a great social critic, yet it is also a producer of intellect and labor that maintains status quo interests. A recent national report on improving minority participation in American life stated that, “the higher education community historically has acted as an important goad to the nation's conscience” (CMPEAL, 1988, p. 22). At the same time, institutions are prone to “academic conservatism” and institutional inertia when it comes to change (Astin, 1985). Recent debates over incorporating alternative perspectives (i.e., ethnic studies, women's studies, and non-Western culture) into the college curriculum serve as prime examples of resistance to change, ideological dominance, and exclusionary practices in higher education.

In studying an issue as sensitive as the racial climate, one would expect to find evidence of these institutional contradictions. Specifically, racism can be regarded as a pervasive ideology that has historical roots in our society. It existed as an economic institution in the form of slavery and the colonization of Latino groups (Chicanos and

Puerto Ricans) (Mirandé, 1985). Progress in the form of racial attitudes on a national level has not eliminated discrepant views among principles on race-related issues and the implementation of such principles (Schuman, Steeh, & Bobo, 1988). Many institutions of higher education have only provided educational opportunities to a diverse student body for less than 30 years; and the system of higher education remains racially stratified (Astin, 1982; Gándara, 1986; Verdugo, 1986). Therefore, it is possible that our educational institutions continue to reflect racist ideology or its residue. Colleges may thus be working to both support and challenge this ideology.

In addition to this perspective on the contradictory nature of educational organizations, there are other concepts within the resistance theory framework that are useful for looking at minorities in higher education. These include the central elements of power, domination, and human agency. The concepts of domination and subordination, or unequal power relations, are prominent in race relations theory; theorists propose these relations as the basis for racial conflict (Yetman, 1985). In resistance theory, these relations are also a source of conflict. Yet, power does not belong exclusively to those who control resources and profess dominant ideologies—domination is never complete. Rather, “power is exercised not only as a mode of domination, but also as an act of resistance” (Giroux, 1983, p. 290). The idea is that “human agents” (i.e., teachers, students, administrators) make history by changing institutions or reaffirming its constraints. Thus, resistance is rooted in “oppositional behaviors” that serve to critique the dominant ideology, and “inherent in the notion of resistance is the hope for radical transformation” of our institutions (p. 290).

Resistance theory suggests that differences in student response to institutions require close examination. “The notion of resistance points to the need to understand more thoroughly the complex ways in which people mediate and respond to the

connection between their own experiences and structures of domination and constraint” (Giroux, 1983, p. 290). For example, certain behaviors (such as dropping out of college or engaging in protests on race-related issues) may actually be oppositional, that is, these behaviors have “little to do with deviance and learned helplessness, but a great deal to do with moral and political indignation” (p. 289).

Campus protest is perhaps the most visible sign of resistance that students develop in response to the racial climate. It is an example of how students use their limited power to reaffirm the importance of their cultures and restore social justice to our institutions. While administrators view such acts as disruptions, still some student affairs administrators are confronted with the moral dilemma of how to handle the situation. Should administrators punish students for caring passionately about social issues? Resistance behaviors, theorists contend, also have transformative possibilities. Campus protest has served as an impetus for change and critical examination of campus racial climates (Farrell & Jones, 1988). It may also mediate the effect of the racial climate on educational outcomes for individual students. This becomes a testable hypothesis in the current study.

Resistance theory provides a framework for understanding the effect of the racial climate on a variety of educational outcomes. I offer the following as an illustration: One college administrator recently suggested that when confronted with a resurgence of discrimination and racism on campus, black students today “have not developed sufficient coping mechanisms, and they will continue to develop low self-esteem, serious interpersonal conflicts, and confused self-identities” (Taylor, 1986, p. 200). While this view has been criticized on many levels (Cheatham, 1986; Cuyjet, 1986; Wright, 1986), it can be critiqued from a resistance theory perspective. Taylor suggests that students accommodate or internalize racist ideology. This response is one of many possible

student responses, and it is a generalization that lacks human agency. That is, the minority group has the capacity to resist individually (e.g., transfer to another college) or collectively (e.g., through campus protest). Taylor's (1986) view of the minority response to the racial climate denies the individual power. It denies the fact that such racial incidents on campus have actually galvanized collective action among students *within* and *across* college campuses (Vellela, 1988; See In Brief, 1989 and articles by Farrell, McCurdy, and Wilkerson cited in Reyes and Halcón, 1988).

Blacks and Chicanos have a history of resistance to domination and racism (Estrada, Garcia, Macías, & Maldonado, 1985; Branch, 1988). With an established history of minority group struggles to gain access to institutions of higher education, one would conclude that minority students may be resilient. Some researchers suggest minority students develop, throughout their schooling, strategies that allow them to function in an unequal society (Walsh, 1987). The essence of this study was to examine the student response to the racial climate in higher education.

The alternative response to resistance is accommodation and conformity to (or internalization of) a "dominant ideology." A recent survey of black students on white campuses disclosed that while 32% chose to ignore or retreat from racist acts, the majority of students chose not to let racial harassment go uncontested (Allen, et al., 1989). What is the experience of those who retreat? For that small group, are student psychological and behavioral states negatively affected? Further research is necessary to determine the conditions under which internalization of dominant ideologies occurs and how this may affect educational achievement.

What evidence from this study may support a resistance theory perspective? The relationships between structural and perceptual measures of the racial climates, mediating behaviors, and multiple outcomes may give credence to elements of the theory. First, we

may see differences in the way the racial climate affects outcomes. For example, do students increase their interest in promoting racial understanding and social justice as a result of an adverse racial climate, *or* does such a climate weaken a student's ability to accept people from different races? The former outcome suggests that resistance and transformation may be occurring while the latter outcome suggests that racism is being reproduced in our institutions.

Second, participation in campus protest (collective resistance) may mediate the racial climate's effect on certain outcomes such as self-esteem, persistence, and college achievement. If campus protest is a mediating behavior, then it can be said that a form of resistance is occurring that benefits students. Does the racial climate adversely affect academic and social self-confidence? If self-confidence improves since college entry, despite adverse racial climates, then further investigation regarding the source of self-confidence can help us understand empowering behaviors in the face of adversity. These "unintended outcomes" of an environment (Astin & Panos, 1971) reflect a "counter-logic" that was examined post hoc to determine the underlying causes.

If an adverse racial climate has a positive effect on student outcomes, this does not mean that such an environment is best for all. Rather, we need to understand these unintended outcomes and the complex responses that students have developed to function in these adverse environments. If an adverse racial climate affects students negatively, this may serve as evidence that racist ideology is at work. However, we cannot blame the student for not developing an appropriate response to racism. Rather, we should be outraged that such social injustices persist at our most advanced levels of education at great human cost. If we are all responsible for constructing the racial climates on our campuses, then according to resistance theory and a social constructionist view, we also have the ability to transform them.

CHAPTER 3

REVIEW OF THE LITERATURE

There have been numerous studies of the racial climate on specific college campuses. These studies have served as initiatives in critical self-appraisal (Kean College, 1989), mediums for trumpeting programmatic advances to convince the public of institutional commitment (Stanford University, 1989), and vehicles for directing campus energies (McBay, 1986). In addition, there is a growing body of literature that represent the basic research efforts of faculty and administrators. The purposes of many of the campus racial climate studies may depend primarily on whether or not they were spurred by racial incidents or pressures from external or internal constituents. Although these studies served important purposes, I have chosen to review works that represent basic research efforts or scholarly attempts to understand the racial climate and its impact on outcomes. These include research studies conducted at single institution as well as multiple-institution studies.

While the research on minorities in higher education is extensive (Astin, 1982; Durán, 1983; Sedlacek, 1987), the focus on issues related to the racial climate is still somewhat limited. This review is an attempt to link some of the disparate findings to present a portrait of the current status of research in this area. Selected studies were reviewed that examine the relationship between the racial climate and key educational outcomes. In addition, the review focused on studies that used a comparative group framework with special emphasis on those that shed light on the experiences of blacks and Chicanos in higher education. Although minorities are disproportionately

represented at community colleges, I reviewed studies on college environments in which minorities remain generally underrepresented—predominantly white, four-year institutions.

Sources for this review included: General integrative reviews of research on minorities (Crosson, 1988; Durán, 1983; Haro, 1983; Sedlacek, 1987); edited volumes (Olivas, 1986; Williams, 1988); and special editions of journals dedicated to minority issues in education (*Aztlan: International Journal of Chicano Studies Research*, *Harvard Educational Review*, *The Review of Higher Education*, *American Journal of Education*, *Urban Review*). Books were acquired through an ORION bibliographic search. Articles and unpublished papers were also acquired through the latest technology, using compact disc searches of works abstracted in education since 1983. More obscure sources were personal communications with authors and papers presented at specific conferences (e.g., Association for the Study of Higher Education and American Educational Research Association).

Three main issues in the research literature shape the current study. These issues have to do with how researchers have typically conceptualized the racial climate, evidence of racial/ethnic group differences in student perceptions, and empirical evidence that addresses the relationship between the racial climate and student outcomes.

Views of the Racial Climate in Higher Education

There are many views of the racial climate expressed in higher education. Some view it as too complex to comprehend, others consider it a theoretical condition, and still others associate the racial climate with a single issue (e.g., overt hostility). The view most useful to the current study is that the racial climate is made up of many elements. I will devote more time to studies that adopt this view, particularly the Peterson et al.

(1978) study since its level of detail has provided substantial grist for the researcher's mill, influencing subsequent studies of the racial climate.

One view commonly expressed in higher education is that the racial climate is an important but "intangible entity" (Crosson, 1988). This view stresses the complexity of the racial climate, suggesting it is difficult to comprehend and assessment is an elusive task (Green, 1989). This view overlooks the fact that researchers have developed ways to study the climate by "getting inside people's heads" to understand their beliefs through phenomenological and survey research. Moreover, it implies that research on the racial climate has received scant attention among the higher education community, ignoring the fact that empirical research efforts have been conducted for more than a decade now.

Other views of the racial climate have been more useful in discussing the theoretical dimensions of racial climate issues, but they have tended to lack precision. For example, two related concepts that have been introduced in the literature are "institutional racism" (Knowles & Prewitt, 1969; Sedlacek & Brooks, 1976) and "academic colonialism" (Arce, 1978; Olivas, 1986). Simpson and Yinger (1986) suggest that institutional racism is a useful concept since it refers to group-based or structured sources of discrimination. In a recent article aimed at uncovering forms of institutional racism directed at Chicanos in academe, the authors identified examples of two primary forms, overt and covert racism (Reyes & Halcón, 1988). According to the authors, covert racism is the most pervasive institutional form in higher education manifested in the following ways: Tokenism; typecasting, where minorities occupy mainly minority-related positions in academe; unwritten quotas, where academic departments are reluctant to hire more than one minority per department; and the "devaluation of minority research interests" (p. 307). Academic colonialism refers the imposition of dominant ideologies (e.g. intellectual premises, concepts, methods, etc.)

and/or the uncritical acceptance of these ideologies by subordinate minority groups (Arce, 1978). These theoretical views retain an element of complexity by including notions of group relations, psychological dimensions, and ideology. However, these views must be expanded empirically to provide campuses with the tools to examine themselves more critically for restructuring their communities.

In contrast, a unidimensional view of the racial climate belies its complexity. Unidimensional measures have been used in research studies with limited success because they describe only one aspect of the college environment, reducing the racial climate to a single-item on a questionnaire or to a single measure like the number of minorities on campus (Oliver et al., 1985; Deppe, 1989). Thus, the unidimensional approach oversimplifies the racial climate, providing little information about its multiple sources or effects. It would appear that only multidimensional views of the racial climate can adequately address the issue of how students may be affected.

More than 15 years ago, the first, and perhaps most comprehensive study of the racial climate took place on the campuses of 13 four-year institutions. The authors of *Blacks Students on White Campuses* (Peterson et al., 1978) systematically documented the historical and environmental forces that accompanied substantial increases in black student enrollment from 1968 to 1975. Their work represents a two-stage study that incorporated site visits on all campuses and extensive surveys of administrators, faculty, and students at four of the large institutions.

Peterson et al. (1978) used survey data to explore three broad areas of institutional responsiveness to the entrance of black students: Institutional commitment, program responses, and the attitudinal or perceptual climate. The latter area was further divided into indices that reflected respondents' views on: The *philosophical* role of colleges with regard to minorities; the *ideology* of the institution, represented by institutional goal

commitments to minority concerns; the *intent* of the institution, or support for minority programs; perceptions of actual *behavior* on campus, characterized by racial and interracial activity; and a *psychological* measure of the racial climate—measures of the degree of trust and hostility among racial groups. While all of these indices may be said to reflect different dimensions of a campus's racial climate, Peterson et al. chose to reserve the term “institutional racial climate” for black-white relations among the various constituencies on campus. For example, the student racial climate consisted of two separate dimensions: (a) a measure of tension-hostilities, and (b) a measure of “indifference,” or benign coexistence.

Despite their restricted use of the term, Peterson et al.'s approach clearly reflects a multidimensional view of the racial climate. This view makes their study significant, since it enabled them to identify problems that have persisted until today. For example, although all the large institutions had invested a fair amount of time, funds, and commitment to minority programs and services, they found that these institutions differed substantially in ratings of relative priorities placed on the recruitment of black students, provision for nonacademic support, and commitment to affirmative action. They also observed that campuses paid little attention to the interpersonal aspects of race relations. The relations among students on campus were characterized by “voluntary segregation or by indifference thinly covering interracial conflicts and feelings of mistrust” (Peterson et al., 1978, p. 319). Furthermore, no institution scored positively on all the racial climate indices, indicating that no ideal climate existed. They concluded that a failure to deal with any of the issues at the institutional, programmatic, or individual level was “likely to become a source of difficulty at some point in these institutions' relationships with minorities” (p. 316). Although they “prophesied” future racial climate problems related to minorities, they did not foresee the extent to which an institution's

relationship with majority students would become equally problematic in matters such as admissions (e.g., *Bakke*), student organizations (e.g., racism expressed in fraternities), and student publications (e.g., *Dartmouth Review*).

How does the proposed study differ from the comprehensive Peterson et al. study? The first difference is one of perspective. The Peterson et al. investigation centered on the impact of minority students on colleges and universities; they focused on the dynamics of organizational change. Although their work contributes to our understanding of the complexity of the college environment with regard to racial climate issues, these researchers were less concerned with how students responded to the institutions they attended—some of which had racially tense environments. There was no attempt to show how the climates, generated by the actors in each institution, affected attitudes and subsequent student behaviors (i.e., educational outcomes).

A second distinguishing factor is that no specific hypotheses were tested in *Blacks Students on White Campuses* (1978). According to the authors, it is a study that “lies somewhere between description and theory” (p. 9). The current study extended the institutional sample to test hypotheses with a more limited set of racial climate indicators. Admittedly, this approach sacrifices depth for breadth since expanding the number of institutions precludes gathering data at the level of detail in Peterson et al. (e.g. institutional histories). However, it allowed tests of common assumptions and competing theories using a broader institutional base, making results comparable with recent research.

Most of the recent multi-institutional studies reflect scholarly efforts to capture multiple dimensions of the racial climate at the institutional and individual level. Table 3.1 shows the characteristics of recent multi-institutional surveys, including a summary

of the item areas that reflect different dimensions of the racial climate¹. The essential features of each of these surveys are summarized here to permit a more fluid presentation of their findings throughout this document. The surveys cover student perceptions that reflect minority-majority social relations on campus, perceptions of institutional commitment to or support for minority issues, reports of racial hostility or tension on campus, and student self-reports of specific race-related behavior.

In terms of design, the items and respective scales in the ACE study (El-Khawas, 1989) lack the level of clarity, specificity, and sophistication found in the other multi-institutional surveys summarized here. It is also based on the views of one academic administrator per institution. It is the only survey, however, that utilizes a truly random sample of institutions from the universe of 3,200 higher education institutions.

The ACE survey (El-Khawas, 1989) revealed differences in perceptions of the racial climate by type of institution. Doctoral institutions report the most programmatic activity to improve minority participation at all levels of the university. For example, doctoral institutions were most likely to report holding workshops to increase racial/cultural awareness and to offer incentives to increase the hiring of minority faculty. At the same time, some of the most publicized racial incidents have occurred at doctoral-granting institutions. These incidents spurred such activities, or it may be that administrators are less likely to report their true sense of the climate, or it could be that these institutions have more funds to invest in such programs. One can only speculate about this contradiction at this point. In contrast, administrators from baccalaureate institutions (private, four-year) gave their institutions the lowest ratings in both their ability to attract black and Hispanic students and the degree to which they are able to

¹ Individual item scales and wording differed from survey to survey, but they shared conceptual similarities that I summarized for purposes of clarity.

Table 3.1
Summary of Multi-institutional Survey Studies With Racial Climate Measures

	<i>Studies</i>				
	ACE, 1989	Allen et al., 1989	Nettles et al., 1986	Patterson et al., 1984	Peterson et al., 1978
Number of institutions	456	16	30	2	4 of 13 in study
Respondents	Academic Administrators	Undergraduate & Graduate Students	Undergraduates & Faculty	Undergraduates	Administrators, Faculty, & Undergraduates
Survey Year	1989	multi-year, 1981-1985	1982	1983	1974-75
Longitudinal	no	yes, one year	no	no	no
<i>General Item Areas</i>					
Minority relations with:					
Faculty	yes	yes	yes	—	yes
Other race students	yes	yes	yes	yes	yes
Administration	—	yes	yes	—	yes
Institutional support/commitment	yes	yes	yes	yes	yes
Reports of hostile climate/discrimination	yes	yes	yes	yes	yes
Reports of race relations behaviors (i.e. open discussions, dating, etc.)	—	yes	yes	yes	yes
Other areas:					
Hostile town relations	—	—	—	yes	yes
Level of campus activity in special programs	yes	—	—	—	yes

provide a supportive climate. These ratings, coming from one of the top academic administrators at each campus, indicate distinct differences in the racial climates among four-year institutions.

The Nettles, Thoeny, and Gosman (1986) survey has the advantage of parallel student and faculty surveys, yet it lacks a longitudinal design. The most recent survey of the National Study of Black College Students (NSBCS) (Allen, Montoya, de Britto, Presley, Drummond, & Scott, 1989) appears to be the only survey that is longitudinal in design, an important factor in the assessment of student outcomes (Astin, 1977). However, results on the racial climate measures have yet to be reported from the longitudinal version of the NSBCS.

The general technique used in both Nettles et al. (1986) and Allen et al. (1989) has been to combine several of the item areas representing various dimensions of race-related issues into a single factor representing a racial climate construct. This measure is then analyzed in relation to student outcomes. (Results from these studies are described in the next section). This study builds on the approaches of these surveys by using several separate dimensions of the climate in analyses with a larger institutional base than the previous studies. In this way, as in the Peterson et al. (1978) study, contradictory patterns of race-related issues at institutions could be examined. The longitudinal design of the current study also helped determine the impact of the racial climate on educational outcomes. A full discussion of the design is provided in Chapter 4.

The Non-Cognitive Questionnaire (NCQ) and its revised version (NCQ-R) is not listed in Table 1, but merits some attention, since it has been in use since 1979. While the developers of this instrument have published much on its predictive validity with respect to black student persistence at one institution (Tracey & Sedlacek, 1984, 1985, 1987), use of the NCQ at other institutions appears to have been limited (King, Taylor, &

Ottinger, 1989). Only one of their subscales, the Understanding of Racism scale, is of interest here. It consists of four items: Two that assess expected and actual interracial contact, and two self-assessment items reflecting the student's perceived ability to fit in or do well academically at the institution. These latter two items are questionable measures of the racial climate since they appear to mix student assessment of the environment with student self-concept.

There have been mixed reports regarding the Understanding of Racism scale's reliability. In a recent article, the authors report an Alpha reliability measure of .55 for black and .37 for white student samples (Tracey & Sedlacek, 1989). They note that such a subscale may be less valid for whites since interaction with other cultures and relative comfort level are less likely to be salient issues for them on predominantly white campuses. However, researchers at another institution found a reliability of less than .10 for the Understanding of Racism scale in a sample of black students (King et al., 1989). These results do not speak well for the usefulness of NCQ-R subscales across groups or across institutions.

Perhaps in response to this problem, Tracey and Sedlacek (1989) recently conducted tests of the factor structure of the NCQ-R for two samples of black students and a sample of white students to establish the validity of its use across groups. Their confirmatory factor analysis (CFA) results revealed that the factor models fit the data marginally in the first black sample (Tucker Lewis Index (TLI) = .85). Also, seven of the 22 factor loadings (Lambda X matrix) on the various subscales were below .40. The highest loading for the interracial contact items on the Understanding of Racism scale was .36, perhaps confirming that the scale has more to do with self-concept than with interracial contact. There was an even poorer fit for the second black and the white sample (TLI=.72,.73, respectively). Although the authors conclude that this is adequate

support for application of the NCQ-R across groups, it seems that these results call for further analysis and caution in using their racial climate scale across groups. As the next section shows, it is conceivable that mean scores on a racial climate measure may vary according to ethnic/racial group. However, the question arises as to whether these factors represent the same construct across groups. A case must be made for the use of the same factor models across groups before undertaking further multivariate analyses.

Group Differences in Perceptions of the Environment

Although single institution studies have been primarily descriptive in nature, they have brought to light some important differences in racial/ethnic group perceptions. For example, although a higher percentage of blacks than Chicanos said they have personally experienced discrimination at one university, these reports were significantly related to feelings of alienation among Chicano but not black students (Oliver, et al, 1985). Loo and Rolison (1986) also found that the majority of white students (68 %) thought that the university was generally supportive of minority students, while only 28 % of the black and Chicano students expressed the same opinion. In the same study, certain behaviors (e.g., ethnic group clustering) were interpreted by white students as racial segregation while minority students tended to view them as modes of cultural support within a larger unsupportive environment. These findings confirm earlier studies that found student perceptions varied by race in university settings (DiCesare, Sedlacek, & Brooks, 1972).

In a comparative study of two institutions (Patterson, Sedlacek, & Perry, 1984), researchers found blacks were more likely than Hispanics to believe that the interracial climate on campus and in the community was hostile, but Hispanics were also more likely than white students to perceive such hostility. The same study showed that perceptions of the racial climate also differed by institution, although it appears that

dimensions of location (South vs. North, rural vs. urban) and ethnic composition of the campus were confounded with racial differences in perception. Using a comparative group framework across a number of institutions would solve the dilemma of whether racial/ethnic groups share experiences across campuses or whether such experiences are native to particular types of institutions.

The Effects of Racial Climates: Myth or Fact?

Several studies have begun to examine the extent to which students are adversely affected by the racial climate. Researchers believe that the social environment of the large predominantly white universities has been problematic, even for minority students with strong academic preparation (Skinner & Richardson, 1988). A recent qualitative study of black student experiences on 13 campuses found that black students are preoccupied with academic survival and that they feel that social, personal, emotional, and cultural development were deferred in these environments, primarily because of the inability of predominantly white university environments to respond to their social and developmental needs (Hughes, 1987). This may be one of the reasons why black and Chicano undergraduate satisfaction is positively associated with living at home during the college years (Astin, 1982). These conclusions regarding the psychological and social development of students on white campuses were examined in the current study with longitudinal measures of social self-concept (See Chapter 4).

In contrast to the social dimension of student development, empirical evidence regarding the relationship between the racial climate and academic achievement is inconclusive. Black student persistence is said to be related to hostile racial environments and the student's understanding and ability to deal with racism (Sedlacek, 1987; Smith,

1981; Tracey and Sedlacek, 1984, 1985, 1987). Studies have not been conducted that contest these findings. However, a curious pattern of results have emerged regarding the relationship between the racial climate and college grade point average. Multiple regression analyses reported in Nettles et al. (1986) and Nettles (1988) show that black students' perceptions of the campus racial climate (as measured by an eight item Feeling of Discrimination factor) were negatively associated with college grade point averages. In contrast, Oliver et al. (1985) found that reports of discrimination on campus were related only indirectly (through alienation) to college grade point average for Chicano students, but found no such relationship for black students. To add to this conflicting portrait, regression analyses in one of Allen's (1985) cross sectional studies revealed no significant relationship between a general measure of campus race relations and academic achievement, social involvement, and occupational aspirations for black students in white university settings.

These studies on college achievement were all cross-sectional in design, using different student samples and different measures of the racial climate. A longitudinal design, multiple measures of the racial climate, and a multi-institutional sample spanning a variety of institutional types would shed more light on this question. Results from these earlier studies (Nettles et al., 1986) also suggest that further research must be conducted with specific attention to racial/ethnic group differences before educators can make conclusive statements regarding the effect of the racial climate on college achievement.

Pilot Study On the Effect of the Campus Racial Climate

In preparation for the proposed study, a pilot study was conducted using the 1980 Follow-up of 1971 Freshman, a project of the Cooperative Institutional Research

Program (CIRP) and the Higher Education Research Institute at UCLA. The study tested the relationship between the campus racial climate and the academic self-concept of minority graduate students (Hurtado, 1989). A structural equation model was used to examine the adequacy of the following constructs and their relationships: Socio-economic status, gender, the graduate school's racial climate, and academic self-concept in 1971 and in 1980. All variables, with the exception of gender, were latent variables (factors) within a causal model. (See Appendix B for the model and statistical results). Several findings of this pilot study had important implications for the current project.

First, testing the causal model on a sample of white, black and Chicano students indicated that model fit was not as adequate as tests conducted with a minority sample alone. The model was conceptualized on assumptions regarding a minority experience in higher education and, consequently, an acceptable fit was found as indicated by the chi-square statistic (72.5, 67 d.f.), Bentler-Bonnett Normed Fit Index (.96) and the Comparative Fit Index (.99). These initial analyses indicated that constructs used in the study, and/or their specified relationships, may be significantly different for white students.

Second, the campus racial climate had a direct negative effect on the academic self-concept of minority graduate students. That is, adverse racial climates were associated with high academic self-concept. While a direct effect was hypothesized, the direction of this effect was a surprising result. This may be due to any of several plausible explanations: (a) Although students considered the campus environments alienating during the era under study (1971-80), substantial community support for the initial entrance of minorities into graduate programs may have enhanced student self-concept; (b) those students that developed the highest academic self-concepts (and perhaps abilities) were in the most alienating environments (predominantly white, elite

institutions); or, (c) minority graduate students with high academic self-concepts attributed very little legitimacy to environments in which white faculty and students had little or no experience in social interaction with minorities. This unusual finding and possible explanations can be regarded as a “counter-logic” in resistance theory. This finding may indicate a form of resistance on the part of minority graduate students that is empowering, but further analysis is necessary before drawing such conclusions. More specifically, including social interaction variables in the model may provide a better understanding of these results.

Based on these initial results, it appears that the CIRP and Follow-up instruments were useful in examining the effects of the racial climate. The pilot study on minority graduate students offered preliminary evidence suggesting that the campus racial climate can affect educational outcomes, but perhaps in unexpected ways. The current study extended the pilot study by analyzing the fit of the construct models in each racial/ethnic group, describing the racial climate in relation to student background and other college characteristics, and examining the effects of the racial climate on a number of college outcomes at the undergraduate level.

CHAPTER 4

METHOD

The objective of this study was to develop measures of the racial climate and to examine their effects on educational outcomes using a longitudinal, multi-institutional sample of black, Chicano, and white undergraduate students. The investigation was conducted in three parts, the first of which focused on the development of the constructs (i.e., the racial climate and outcome measures) and their validation across groups. The second part of the investigation constituted a partial construct validation by (a) examining measures of the racial climate in relation to student and college characteristics and (b) showing how the measures differed among ethnic groups. The main objective of these two phases of the investigation was to develop a full understanding of the racial climate and its relationships with student and institutional characteristics prior to analyses of student outcomes.

The third phase of the investigation examined the effect of the racial climate measures in multivariate analyses of student outcomes. It provides empirical evidence concerning the effect of the racial climate on five college outcomes: Academic self-concept, social self-concept, undergraduate achievement (college grades and persistence), and student goal commitment to helping to achieve racial understanding. The aim here was to gain a better understanding of these relationships to provide a foundation for the development of models in future research. A final objective of the study was to provide recommendations, based on empirical results, that can help both students and institutions to understand and improve racial climates and, educational outcomes for all students.

This chapter describes several stages of analyses that took place in order to address particular research questions. The study began with the development of racial climate measures for comparison groups in order to understand the following:

What dimensions of the racial climate exist in the minds of students from different racial/ethnic backgrounds? Are there common constructs (factor models) across groups? What is the relationship between the perceived racial climate, student background, and college characteristics (structural attributes such as size, region, type, control, minority enrollment, etc.)?

The study concluded with outcomes analyses that addressed the following questions:

Does the racial climate have a significant direct effect on student educational outcomes (e.g., college grade point average [GPA], academic and social self-concept, etc.)? Do effects vary by race/ethnicity? What is the relationship between college characteristics, the racial climate, and student outcomes? What types of social interaction (student-faculty interaction, interracial contact, involvement in campus protest, etc.) serve as mediators between the climate and outcomes? Finally, what do the general patterns of relationships reveal? Do results support a resistance theory perspective?

Hypotheses

The study was built upon sequential testing of hypotheses based on prior research. It also tested sets of open-ended hypotheses where prior research provided little

or no guidance. These hypotheses are stated in general terms here and are detailed in the subsequent discussion. They are:

1. There is no significant difference among groups (black, Chicano, and white students) in the factor structure of the racial climate measures.
2. There are significant relationships between the structural characteristics of a college and student perceptions of the racial climate.
3. The racial climate has a significant direct effect on the following educational outcomes: Academic self-concept, social self-concept, undergraduate achievement (grades and persistence), and changes in student goal commitment to helping to achieve racial understanding.
4. Specific social interaction measures (e.g., interracial contact, student involvement) mediate the effect of the racial climate, as well as have a positive direct effect on outcomes.
5. Proximal measures (perceptions of the racial climate and social interaction measures) are expected to have stronger positive relationships with student outcomes than the distal measures representing institutional characteristics.
6. Campus protest (as a form of student resistance) is expected to mediate the effects of the racial climate, producing positive outcomes for students.

The first hypothesis was tested prior to assessing the effect of the racial climate measures in outcomes analyses. Too often researchers have assumed that the construction of particular scales, developed through factor analysis, constitute the same constructs across groups (Pascarella, Smart, Ethington, & Nettles, 1987; Tracey & Sedlacek, 1989). This assumption can lead to a misinterpretation of results in comparison group analyses. Observed effects (regression coefficients) of the factor may be different because such a

variable (a) is essentially a different construct, or (b) has measurement error that varies by group. Measurement error has been known to vary according to race, providing biased regression coefficients among comparison groups (Wolfe & Robertshaw, 1983). It is important to establish that constructs can be validly used in different racial/ethnic populations, allowing the researcher to directly compare results across groups.

Testing the second hypothesis permitted further development of the racial climate constructs by exploring their relationship to other college environmental characteristics. These included structural characteristics of the college (size, type, region, etc.) as well as diversity measures that reflected the ethnic mix of the student body. Based on prior research and recent events in higher education, universities were expected to show the biggest contradiction in terms of racial climate. That is, they were expected to have poor (negative) campus race relations but good (positive) institutional commitment (El-Khawas, 1989). At this point, the competing theories (see Chapter 2) representing diversity measures such as absolute numbers (Astin et al., 1975), proportion (Kanter, 1977) and increases of minority enrollment (Blalock, 1967) were tested simultaneously to determine which theory may be applicable to college environments today.

It was useful to conduct these environmental analyses for several reasons. First, they constituted a partial construct validation of the racial climate measures by exploring the relationship between an institution's diversity characteristics (expressed as minority enrollment) and the campus racial climate. Second, the structural characteristics of institutions helped to locate problems in the American higher education system by determining the types of institutions that have poor racial climates. It has also been suggested that certain structural characteristics may serve as proxies for other processes that may be more amenable to change, elements that are formally related to the types of policies set by educational institutions (Hurtado & Dey, 1990). Results from this stage

of the study were useful in examining incidences of multicollinearity among institutional characteristics. In the case where two environmental measures had substantial shared variance, attention was given to those measures most amenable to change by institutional policies. Studies of these environmental characteristics provide information for campus administrators regarding aspects that are within their control, and can be manipulated in order to improve the college environment (Menne, 1967).

Hypothesis number three represented the most important stage of the study. It tested the association between the racial climate and several educational outcomes. Since studies reviewed in the previous chapter suggest that the effects of the racial climate on outcomes are either inconclusive or unexpected (Hurtado, 1989), no direction of effects was hypothesized. The rationale for this approach was that if a significant relationship exists between the racial climate and educational outcomes, it would be quite possible for such an effect to be negative on some types of outcomes and positive with regard to others. This set of analyses provided important evidence regarding the effect of racial climates on several educational outcomes at once, indicating possible contradictions between a campus's racial climate and goals for student development. Results were expected to qualify or support specific studies reviewed in the previous chapter.

Investigating the fourth hypothesis provided an opportunity to understand the student response to the racial climate. College experience variables were expected to play a mediating role in relation to racial climate and student outcomes (Tinto, 1987); that is, the "indirect" effects of the racial climate can be ascertained from these results. These mediating variables were also expected to have direct positive effects on outcomes (Astin, 1984). The fifth hypothesis tested the theory that these proximal measures of student experiences, along with the perceived racial climate, were expected to have stronger

effects than distal institutional characteristics on student outcomes (Astin, 1990a; Dusek & Flaherty, 1981; Jessor 1979; Stoecker et al., 1988).

Testing the sixth and final hypothesis is particularly relevant to student experiences with campus protest from 1985-89, when overt racial incidents and campus demonstrations were prominent. Based on a resistance theory perspective (Giroux, 1983), this hypothesis proposed that campus protest as student resistance was important and beneficial to students both in counteracting racial tension on campus and in improving their educational outcomes. Other aspects of resistance theory were examined through the pattern of relationships that emerged between the racial climate and educational outcomes, particularly in the case where students develop an interest in promoting racial understanding as a result of an adverse climate (resistance).

Data Sources

The current study draws upon several major sources of data. Student enrollment data came from the U.S. Department of Education's Integrated Postsecondary Data Systems (IPEDS, formerly HEGIS), providing information on basic institutional characteristics and ethnic undergraduate enrollments that served as campus diversity measures. Black, Hispanic, and white student enrollment data for 1982, 1986, and 1988 at each institution were obtained from this national source. Financial data on 1985 institutional expenditures reported to the Department of Education were similarly obtained for this analysis. Other institutional characteristics were taken from a study of college catalogs conducted in 1988 on academic programs and policies at 300 institutions (Dey, Hurtado, & Astin, 1989). An additional source of data came from the Educational Testing Service. The Scholastic Aptitude Test (SAT) scores were obtained for a

subsample of students (58 %) for use with analyses of academic achievement outcomes. All institutional and test score data were merged with student survey data.

The primary sources of student data came from responses to a four-year longitudinal survey, the 1989 Follow-up (FUS) of the 1985 Freshman Survey, a project of the Cooperative Institutional Research Program (CIRP) and the Higher Education Research Institute at UCLA. The CIRP is the longest running (24 years) national survey of American college students. The 1989 FUS was designed to address student experiences inside and outside the classroom, perceptions of the college environment, college activities, and a wide array of educational outcomes. Student responses on the FUS are linked with the Freshman Survey to conduct longitudinal analyses of college student development. (Copies of the survey instruments used in 1985 and in 1989 are in Appendix A).

The 1985 Freshman Survey was administered during freshman orientation and the FUS was sent to the student's home address in the summer and fall of 1989, four years after college entry. The FUS was administered according to two different sampling techniques for a variety of studies currently underway at the Higher Education Research Institute (HERI). The first student sample was drawn from full-time freshman responding to the 1985 Survey using a stratified, random procedure to ensure representation of the different types of institutions in higher education. (Stratification involved 23 cells reflecting selectivity, control, race, sex, and the type of institution). Based on patterns of response observed in earlier FUS studies, a sample size of 20,317 was selected to yield a minimal number (175) of respondents in each stratification cell. The response rate to the FUS for this group was 23 %.

A second sample involved the collection of data from full cohorts of students attending 53 institutions with distinct types of general education curricula. The purpose

of this sampling design was to maximize variability in four-year institutions according to student academic experiences (curriculum) and minority enrollment. This sample included 34,323 students, 31% of which responded to the survey. All students received two waves of questionnaires; those from the second sampling procedure received one additional mailing. The majority of data for this study came from the larger cohorts of students attending institutions in this second sample.

Student Sample and Non-Respondents

Students were selected from respondents representing three ethnic groups (black, Chicano, and white students) that participated in the Follow-up Survey. Additional sampling criteria included representation according to institutional type, control, and selectivity. The sample included 328 black and 340 Chicano students attending approximately 116 four-year colleges and universities. A sample of 1,825 white students were selected from among 11,326 white respondents attending the same institutions with minority respondents. Each institution was considered as a separate stratum with stratified random sampling conducted on a 3: 1 white/minority ratio. The purpose of this procedure was to yield a sample of white students that was distributed across institutions in a manner similar to the distribution of minority students.

Table 4.1 provides a description of the sample selected for study. On the average, Chicano students were most likely to be first generation college students and come from families with incomes lower than black and white students. Moreover, the distribution of Chicano students across institutional types revealed that more than half (54 %) attended public institutions, particularly public universities. Approximately 25 % attended Roman Catholic institutions. These sample statistics show that Chicanos were attending large, low cost, or somewhat less selective institutions.

Table 4.1

Student Characteristics: Black, Chicano and White Student Samples

<i>Demographic Characteristics</i>	Black (n=328)	Chicano (n=341)	White (n=1,825)
	<u>Mean* (Std. Dev.)</u>	<u>Mean* (Std. Dev.)</u>	<u>Mean* (Std. Dev.)</u>
Age Of Student	3.04 (.50) <i>18 yrs.</i>	3.19 (.53) <i>18 yrs. 2 mos.</i>	3.12 (.47) <i>18 yrs. 1.6 mos.</i>
Mother's Education	5.05 (2.00) <i>Some college</i>	3.50 (2.11) <i>High school to other than coll.</i>	5.37 (1.79) <i>Some college</i>
Father's Education	4.84 (2.21) <i>Other than coll. to Some college</i>	3.88 (2.39) <i>Other than college</i>	6.10 (1.91) <i>College degree</i>
Estimated Parental Income	6.72 (3.40) <i>\$28,600</i>	6.57 (3.24) <i>\$27,850</i>	9.21 (3.12) <i>\$42,100</i>
Ave. High School GPA	5.59 (1.62) <i>B to B+</i>	5.95 (1.41) <i>B+</i>	6.36 (1.40) <i>B+ to A-</i>
Percentage of Females	.61	.64	.58
<i>Institutional Characteristics</i>	<u>Mean (Std. Dev.)</u>	<u>Mean (Std. Dev.)</u>	<u>Mean (Std. Dev.)</u>
Institutional Selectivity (Ave. SAT Verbal + Math)	1080.55 (157.16)	984.21 (136.43)	1053.76 (142.57)
Percentage attending:			
Public University	.26	.51	.42
Private University	.19	.08	.15
Public Four-year College	.09	.03	.06
Nonsectarian Four-year College	.30	.10	.22
Catholic Four-year College	.05	.25	.08
Protestant Four-year College	.12	.02	.07

* Variables were measured on an interval scale, approximations of categories are shown in italics.

In contrast, more than half of the black students attended private institutions. They were most likely to be in private-nonsectarian four-year colleges (30 %). This is particularly interesting since predominantly black institutions were excluded from this study. Black students were more likely than Chicanos to be attending smaller and more selective, predominantly white institutions. Although black students were also more likely to have mothers who had attended college, both minority groups came from households with substantially lower parental incomes than their white classmates.

The white student sample represents a compromise between the black and Chicano student samples in terms of where they went to college, since they were randomly selected within each institution that had minority respondents. Still, the differences between white and minority students attending the same institutions suggest that white students are more likely to have college-educated parents and higher incomes. On the average, they also earned somewhat higher grades in high school than minority students. An additional feature of the sample for this study was that more women than men were represented in the sample of each of the racial/ethnic groups. This latter result may be primarily attributed to the slightly higher response rates of women.

It is well known that response rates to surveys vary according to student characteristics (i.e., race, ability, etc.) and the Follow-up Survey is no exception. The advantage of using this longitudinal survey is that the 1985 Freshman Survey (baseline year) provides extensive information on non-respondents. Since a primary interest of this study is to compare ethnic groups, survey data were analyzed for non-response bias according to ethnic group. The means of key variables were tested (using t-tests) to determine significant differences. The characteristics of respondents and non-respondents are reported in Appendix C. Significant differences were found among the three groups on demographic, ability, and pretest measures, these differences were taken

into account in the interpretation of results. It is interesting to note, however, that the Chicano sample most resembles its non-respondent counterpart.

Research Design

The major research design used here is similar to those used in previous studies of the influence of college on students (Astin, 1975, 1977, 1982; Lacy, 1978; Pascarella, 1980; Smith & Allen, 1984; Tinto, 1975). The basic purpose of this panel design is to assess the impact of college environmental variables on student outcomes. Since the distribution of students across different college environments is never random, one of the basic features of this design is to control for student characteristics at the point of initial exposure to the environment. In the case of this particular study, this means that entering student characteristics (inputs) were controlled using the 1985 student data prior to any attempt at examining the effects of environmental factors (i.e., racial climate) on outcome measures taken four years later. Measures of educational outcomes, student background characteristics, and college environments are described below.

Outcome Measures

Multiple outcome measures were selected because research has shown that any college environmental variable of interest can affect a variety of student outcomes (Astin & Panos, 1971). I chose to focus on the performance of the racial climate in relation to five educational outcomes. Three of these outcomes were selected because of their relevance to minority achievement in higher education and because they would represent an attempt to replicate findings in the research literature (i.e., student persistence, college GPA, and social self-concept). The other two outcomes were selected because they have never been empirically tested in campus racial climate studies (academic self-concept and student goal commitment to helping to promote racial understanding). Therefore, the

results of this study build on prior research on minorities and develop new paths for investigation. Survey items representing each educational outcome are detailed in Table 4.2.

The first set of items reflects dimensions of a student's self-concept (academic and social). These measures were drawn from an item set in which students were asked to rate themselves on traits in comparison to the average person their age. Students had five response alternatives on each self-rating, ranging from *highest 10%* (scored 5) to *lowest 10%* (scored 1). An identical set of items was included in the 1985 Freshman Survey, thereby allowing for control of "pretest" measures.

Academic achievement during college was measured by student self-reports of undergraduate grade point average (GPA). Studies have indicated that student self-reports of college grades are fairly accurate (Baird, 1976), and "self-reported grades predict future grades as well as or better than college entrance tests of academic ability" (Pace, 1985, pp. 12-13). Students were asked to indicate on the survey a value that best describes their undergraduate grade point average. This measure is on a six-point scale ranging from A (3.75-4.0) to C- or less (below 1.75). High school grades reported in the Freshman questionnaire constitute the equivalent of a pretest on this particular outcome.

An inhospitable racial climate could cause a student to transfer to another college, take time off, or stop attending college altogether. Therefore, the measure of student persistence included a combination of two measures: Students who remained continuously enrolled in their first institution for four years and students who earned a bachelor's degree were both considered "persisters." Both measures were dichotomous variables that were combined into a single classificatory variable. Some groups of students, depending on major (e.g., engineering) and ethnic group (Chicanos), are considered to be persisting in college, but are taking longer than four years to earn a

Table 4.2
Outcome Measures and Pretests

Outcome Measure (1989 Follow-up Survey)	Pretests (1985 Freshman Survey)
<i>Self-Concept</i>	
Academic Self-Concept ^a	Academic Self-Concept
Self-ratings:	Identical Self-ratings
academic ability	
drive to achieve*	
math ability*	
writing ability*	
intellectual self-confidence*	
Social Self-Concept ^a	Social Self-Concept
Self-ratings:	Identical Self-ratings
social self-confidence	
popularity	
leadership ability	
<i>College Achievement</i>	<i>High School Achievement:</i>
Undergraduate Grade Point Average	High School GPA
<i>Student Persistence</i>	<i>Pretest</i>
Earned a bachelor's degree or above	Students best guess as to
Student did not withdraw, transfer	the chances they will:
or take a leave of absence	Drop out temporarily
	Earn a BA
<i>Racial Awareness/Tolerance</i>	
Important Goals:	Identical measure
Helping to promote racial understanding ^b	
Self-Reported Growth:	

^aCoded as a five point scale: 5 = "Highest 10%" to 1 = "Lowest 10%".

^bCoded as a four point scale: 4 = "Essential" to 1 = "Not Important".

*Variables were used for exploratory factor analyses but were not used in subsequent regression equations.

degree. The persistence measure used for this study takes such differences in student experiences into account by allowing a more liberal measure on time to degree, but it also has more stringent criteria in that it classified students who have left their institution for any reason as nonpersisters.

Finally, in the area of racial/cultural awareness or tolerance, one item was selected as a dependent variable. The item, pretested in 1985, asked students to indicate the importance of the following goal: "Helping to promote racial understanding." Students rated the item from *not important* (scored 1) to *essential* (scored 4). This outcome was intended to directly address the question of whether colleges were increasing student awareness and appreciation among different racial groups.

Student Background Characteristics

Pretest measures of each of the outcome measures represent the most important student background characteristics to control when evaluating change in student development (Astin, 1977). Pretests available on the 1985 Freshman Survey are shown in Table 4.2. Simulated pretest measures were also available for the persistence measure. Students were asked to make their best guess in 1985 regarding the chances that they would obtain a bachelor's degree or drop out of their freshmen college temporarily. These items were on a four-point scale from *very good chance* to *no chance*.

The importance of student background characteristics to educational outcomes has long been established by researchers (Astin, 1977; Feldman & Newcomb, 1969), particularly with regard to the socioeconomic status of ethnic groups (Astin, 1982; Featherman & Hauser, 1978; Ortiz, 1986). Background "control" variables included socioeconomic status, gender, and measures of student ability. Socioeconomic status was measured by parental income, and mother's and father's education. Student ability

measures included high school GPA and, for a limited sample of students, performance on the SAT.

A number of attitude and value measures were included in the analyses to control for any predispositions in student perceptions of the racial climate. These items included student agreement with the following statements (four-point scale): "Busing is O.K. if it helps to achieve racial balance in the schools", and "Realistically, an individual person can do little to bring about changes in our society." Students were asked to indicate the personal importance of each of the following items: Influencing the political structure; Influencing social values; and Participating in a community action program. These items were rated on a four-point scale ranging from *not important* to *essential*. Students were also asked to characterize their political views along a five-point continuum from *far right* (scored 1) to *far left* (scored 5). In addition to political views, students were asked in 1985 to estimate the chances that they would become involved in campus protest at their freshman college. This item was scored on a four-point scale from *very little chance* (1) to *very good chance* (4). These variables helped detect predispositions in student perceptions prior to any significant influence of a particular college environment.

To test independent effects of religiously-affiliated institutions, a student's religious affiliation was included in the analysis. Students were asked to identify their own religious preference among 17 types of religions. Categories were collapsed to develop dichotomous variables for Catholic, Jewish, Protestant, other religion, and no religion.

Table 4.3
Racial Climate Measures (1989 Follow-up Survey)

Student Perceptions of the Campus Racial Climate

Statements about the Freshmen College^{a*}

- Most faculty here are sensitive to the issues of minorities
- Many courses include minority group perspectives
- There is a lot of campus racial conflict here (recoded positively)
- Students of different racial/ethnic origins communicate well with one another
- There is little trust between minority student groups and administrators (recoded positively)

Priorities of the Freshman College^{b*}

- To increase the representation of minorities in the faculty and administration
- To develop among students and faculty an appreciation for a multicultural society
- To recruit more minority students
- To create a diverse multicultural environment on campus

Student Racial Contact Behaviors

College activities^c

- Enrolled in an ethnic studies course
- Attended a racial/cultural awareness workshop

College activities^d

- Discussed racial/ethnic issues
- Socialized with someone of another racial/ethnic group
- Participation in campus protests/demonstrations

Structural Aspects—Diversity Measures (HEGIS/IPEDS data)

- Absolute numbers of Blacks and Hispanics in each institution in 1986
 - Change in Black and Hispanic enrollments (absolute numbers), 1982-1988
 - Change in White enrollment (absolute numbers), 1982-1988
 - Proportion of Black and Hispanic on campus in 1986
-

^aCoded as a four point scale: 4 = "Agree strongly" to 1 = "Disagree strongly".

^bCoded as a four point scale: 4 = "Highest priority" to 1 = "Low Priority".

^cCoded as a dichotomous variable: 2 = "Yes", 1 = "No".

^dCoded as a three point scale: 3 = "Frequently" to 1 = "Not at all".

*Items used in factor analyses and subsequent regression equations.

Measures of the College Environment

Racial Climate Measures

Survey items that measured the campus racial climate are detailed in Table 4.3. The majority of these items reflect the perceived environment, the environment that is presumably most likely to affect the student in a psychological and behavioral sense. The first group of items are campus descriptions that address basic issues regarding campus relations between minority students and administrators, faculty, and other students. The second group of items represents student perceptions of institutional priorities that are related to minority issues. These two sets were used to develop racial climate constructs.

Student reports of their own race-related behaviors were also included in analyses, hypothesizing that such behaviors tend to mediate the effect of the racial climate. These included measures that reflect interracial contact, exposure to minority perspectives through an ethnic studies course, and involvement in racial/cultural awareness activities (i.e., workshops and discussion of race-related issues).

The final group of measures represented the diversity measures, or numerical aspects of the racial climate, that may also affect student outcomes. Different measures of minority student enrollment served as proxies for the competing theories offered by Astin et al. (1975), Blalock (1967), and Kanter (1977) that were discussed in Chapter 2. These measures included the absolute numbers of blacks and Chicanos on each campus in 1986, the proportion of blacks and Chicanos enrolled in 1986, and changes in white and minority enrollments from 1982 to 1988. These measures were tested simultaneously in relation to the racial climate and student outcomes to determine which theory best described the effects of enrollment diversification on campus.

Other Measures of the College Environment

Most college impact studies include several college characteristics that serve as independent variables in an analysis. These distal characteristics (shown in Table 4.4) generally served as controls, but they also helped identify sectors of the higher education system that have the most adverse racial climates. Those variables selected for this study included institutional size, location, type and control, religious affiliation, gender (coed or single-sex), and the selectivity of the institution. Many of these distal or structural characteristics of institutions have traditionally been included in studies on student outcomes (Astin, 1977; Weidman, 1989). These institutional characteristics confirmed and provided more detailed information on racial climate differences found at different types institutions described in the ACE study (El-Khawas, 1989).

Another group of variables were included in the outcomes analyses involving student descriptions of their institutions. These variables provided additional information about the campus, from a student's point of view, augmenting findings that emerged from effects of the distal characteristics on the racial climate. These included students' perceptions of competition among students, the impersonality of the environment, and the behaviors of faculty at their institution.

To identify institutional policies that might be changed to improve racial climates, several measures representing institutional policies were also obtained independent of student observation. Variables from the 1985 Department of Education financial data and individual college catalogs included: Financial expenditures per capita on student services, instructional services, non-repayable aid awards in the form of fellowships and grants; and whether or not an institution offered an ethnic studies major. Student service expenditures represented funds for admissions and all activities that are designed to

contribute to the emotional, physical, intellectual, cultural, and social development of students outside of the formal instructional program. Instructional expenditures included funds for colleges, schools, and departments that cover general academic instruction and special instructional activities (i.e., adult, vocational, remedial) conducted by the teaching faculty. Scholarships and fellowship aid included only monies that were given in the form of outright grants and stipends to students enrolled in formal coursework. College Work Study, Pell grants, and tuition fee remissions were not included in this category. Research on college catalogs for a general education project provided information on whether individual institutions offered an ethnic studies major (Dey, Hurtado, & Astin, 1989). Although additional institutions offered ethnic studies programs, these were not considered to have acquired the level of status or emphasis represented by institutions that offered ethnic studies for a college degree.

Since many different forms of student involvement during the undergraduate years are known to enhance educational outcomes (Astin, 1984), a number of college experience measures were included. These college experience measures, which were also hypothesized to mediate the relationship between the racial climate and educational outcomes, included college residence, measures of student-faculty interaction, and student involvement in campus academic (study hours and remedial coursework) and social (student clubs and fraternities/sororities) activities. One additional measure was included that has been shown to have a negative effect on student outcomes, the amount of time a student spends working for pay while attending college (Astin, 1977).

Table 4.4
Other Environmental Measures

Structural Characteristics of Institutions (IPEDS Data)

College type and control
 Private nonsectarian four-year college
 Private University
 Public four-year college
 Public University
 Religious Affiliation - Protestant, Catholic, Nonsectarian
 Size of Institution (undergraduate and graduate FTE)
 Selectivity of Institution
 College location — South, East, West, Midwest
 Size of city location
 Distance from student's home

Offerings/Expenditures (IPEDS Data; HERI Catalog Survey; Freshman Survey)

College offers ethnic studies major
 Expenditures per student
 Student services
 Fellowships and non-repayable aid
 Instructional expenditures
 Availability of freshman campus housing

College Student Experiences/ Social Interaction (mediating variables) (1989 Followup Survey)

College residence:
 Number of years in a college dormitory or other campus student housing
 Hours per week spent in the last year of college^a
 Working for pay
 Talking with faculty outside of class
 Participation in student groups/clubs
 Studying/Homework
 College activities in the last year^b
 Been a guest in a professor's home
 Student involvement since entering college^c
 Joined or been a member of a fraternity or sorority
 Taken remedial or developmental courses
 Assisted faculty in teaching a course
 Description of the college environment^d
 There is keen competition among most of the students for high grades
 Faculty are rewarded for being good teachers
 Most students are treated like "numbers in a book"
 There is little or no contact between students and faculty
 Faculty here feel that most students are well-prepared academically

^aCoded as an eight point scale: 1 = "None" to 8 = "Over 20".

^bCoded as a three point scale: 1 = "Not at all" to 3 = "Frequently".

^cCoded as a dichotomous variable: 2 = "Yes", 1 = "No".

^dCoded as a three point scale: 1 = "Not at all" to 3 = "Frequently".

Analyses

Analyses proceeded in several stages. The first step was to identify dimensions of the racial climate by factor analyzing (exploratory factor analyses) the items shown in Table 4.3, and then to assess the adequacy of the resulting factor models. The number of dimensions and factorial composition (items) were tested in one of the student samples using confirmatory factor analysis (CFA). This technique helped to demonstrate the extent to which survey items (measured variables) reflect the racial climate factors (latent variables) in a statistically reliable manner. Next, further confirmatory analyses tested the validity of the factor models in the two other student populations. The most efficient method for conducting confirmatory factor analyses is through the use of covariance structural analyses. Bentler (1989) has developed the computer software (EQS) that can be used to test whether the constructs are similar across a number of populations. Lagrange Multiplier Tests were used to determine the need for modifications in the model and chi-square tests were used to determine if the factor models adequately describe the data in each group. The interpretation here is that the chi-square statistic should be nonsignificant if the hypothesized factor models fit the data for each student group.

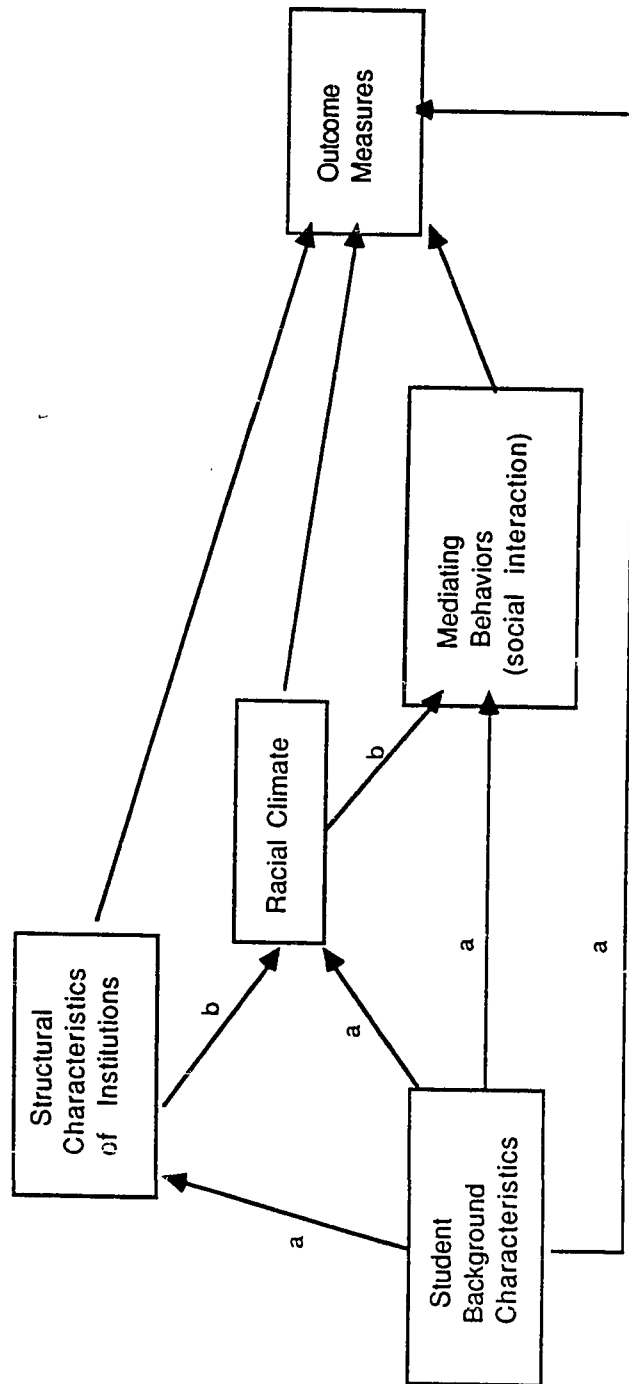
In phase II, multiple regression analyses were conducted with two dimensions of the racial climate serving as dependent variables. These factors were regressed on college characteristics and student background characteristics for the total student sample and each racial/ethnic group (eight regression equations). The effects of these variables helped to identify patterns of relationships between the racial climate measures and other college environmental characteristics in the study, controlling for student background characteristics. It was at this point that theories regarding the numerical diversity measures were also tested. These measures were entered in the same block in the

regression in order to determine the measure that is most related to students' perceptions of the racial climate. This stage of analyses provided information regarding the student as "perceiver" and the nature of the relationships among the racial climate and other college characteristics.

Phase III of the study was conducted using stepwise multiple regression techniques to examine the relationships between the racial climate, outcomes, and the role of mediating variables (college student experiences) in an exploratory fashion. The conceptual framework for this stage of analyses is presented in Figure 1. Each of the five outcome measures were regressed on student background characteristics, racial climate indices, and other college environmental measures. Beta coefficients for the racial climate measures were observed after controlling for student background, and again after controlling for college environments to determine if the racial climate measures made a unique contribution over and above the effects of other environmental variables. This process was replicated with the total sample and each of the ethnic groups, constituting 32 regressions. Twelve of the regressions were conducted with a smaller sample of students (58 %) with SAT scores to verify that academic ability was adequately controlled in analyses of academic achievement outcomes. Multiple regression results were compared across groups to identify variables that were shared or unique to a specific ethnic group.

Figure 1.

Conceptual Framework for Analyses - Stage III



^a These relationships were controlled statistically to examine the relationships among the other variables.

^b These relationships (betas) were examined to identify indirect effects.

Controlling for all other input and environmental variables before assessing the impact of the racial climate constitutes a very conservative test of the importance of the climate. Since certain college experience variables may mediate racial climate effects, the entry of certain measures (e.g, interracial contact, student-faculty interaction, campus protest) into the regression could substantially reduce the coefficients for the racial climate measures. In such an instance we would have evidence of a possible "indirect" effect of the racial climate on outcomes (i.e., an effect that is mediated by these specific college experiences). Attention was given to these unusual or complex relationships by monitoring the performance of betas at each step in the equation. This monitoring was possible through the use of special computer software, *BetaView*, developed at the Higher Education Research Institute (Dey, 1990).

Analysis of Constructs and Development of Factor Scales

Researchers are confronted with the dilemma of searching for universal characteristics while acknowledging the need to learn more about "culturally-specific traits." Some scholars strive to identify patterns shared across groups, while others focus on understanding patterns particular to certain populations. The latter approach is often the first step in developing new theories that describe the experience of special populations, while the former tests established theories. Both approaches are critical to the development of social science theory.

I have attempted to resolve this dilemma by using the comparison groups to learn what is common across groups, while devoting attention to the culturally-specific traits or variables important to specific groups. I expected to find significant group differences at every stage in the study, thus making comparisons problematic. The first phase of the study showed some differences in student views of the climate. In order to resolve

construct differences I used the following strategy: Survey items found, in exploratory factor analyses, to be unique to one particular group were deleted from the common factor models. The adequacy of these models were then tested using structural equation modeling, confirming the existence of racial climate constructs in each group. I then proceeded with a separate examination of those ethnic-specific items to understand how such measures performed in the subsequent stages of regression analyses. This strategy retained the comparison groups without ignoring the important information obtained from group differences. Reported below are results from analyses that led to the development of constructs for the study.

Exploratory Factor Analyses

Exploratory factor analyses, using maximum likelihood estimation and oblique rotation, were conducted with the items shown in Table 4.3 to determine the dimensions of racial climate as interpreted by black, Chicano and white students. The results provided in Table 4.5 indicate that student perceptions reflect at least two dimensions of racial climate, one involving Institutional Commitment to race-related issues (Factor I) and the other reflecting Racial Tension on Campus (Factor II). These analyses indicate that the pattern involving the first four items of Factor I is fairly consistent across groups. However, there is disagreement among the groups with regard to two items: "Many courses include minority group perspectives" and "Most faculty here are sensitive to the issues of minorities." Compared to the first four items, the minority perspective item had relatively low loadings on Factor I with Chicano (.429) and white student samples (.460), and the faculty sensitivity item had the lowest loading on Factor I for both groups.

Table 4.5

Exploratory Factor Analyses: Factor Loadings of Racial Climate Measures for Black, Chicano and White Students

Items	Factor I			Factor II		
	<u>Institutional Commitment to Diversity</u>			<u>Race Relations on Campus</u>		
	Black	Chicano	White	Black	Chicano	White
To create a diverse multicultural environment on campus	.840	.878	.819	-.014	.057	.035
To recruit more minority students	.820	.677	.602	-.042	.038	.143
To develop among students and faculty an appreciation for a multicultural society	.775	.812	.768	-.054	.006	-.029
To increase the representation of minorities in the faculty and administration	.769	.745	.656	.036	.066	.061
There is little trust between minority student groups and campus administrators	.001	-.001	-.014	.746	.726	.581
There is a lot of campus racial conflict here	.157	.143	.129	.644	.679	.697
Students of different racial/ethnic origins communicate well with one another	.070	.193	.106	-.493	-.442	-.571
Many courses include minority group perspectives	.124	.429	.460	-.571	-.230	-.064
Most faculty are sensitive to the issues of minorities	.171	.368	.418	-.519	-.349	-.201
Correlations between Factors I and II	-.417	-.336	-.137			

In fact, the faculty sensitivity item had marginal loadings on *both* factors for Chicano students, suggesting this item merited examination apart from these two factors.

In contrast, the curriculum item (-.571) and the faculty sensitivity item (-.519) loaded on Factor II in analyses of the black student sample. Black students apparently tend to view these items as less reflective of institutional commitment than of the actual quality of minority-majority relations on campus. Black students are apparently more likely than whites or Chicanos to feel that less racial tension on campus is associated with faculty sensitivity to minority issues and a curriculum that includes minority group perspectives. These results suggest that a confirmatory analysis was indeed necessary before developing the racial climate scales for use in subsequent analyses.

Confirmatory Factor Analyses

Confirmatory factor analyses were conducted, using maximum likelihood estimation, without the two items which differed according to group. The objective here was to obtain some statistical gauge that would determine (a) whether a correlated two-factor model of the racial climate is in fact reflected in each student sample, (a) if the deletion of the two race-specific items results in a poor factor model, particularly for black students, and (c) if accounting for measurement error changes the model significantly.

The items of controversy were deleted and a model was tested, allowing the estimation of parameters for specific items linked only to either the Institutional Commitment or Racial Tension on Campus factor. That is, variables hypothesized to load on Factor I had factor loadings that were constrained to zero on Factor II. This

Table 4.6
*Model Statistics: Confirmatory Factor Model of
 Racial Climate for Black, Chicano and White Samples*

	Black	Chicano	White Sample 1	White Sample 2
Sample size	327	338	1,824	340
<i>Initial hypothesized model</i> (Items constrained to load on one of two factors)				
Chi-square with 12 degrees of freedom	18.48	35.54	125.03	41.51
Probability value	.10	<.001	<.001	<.001
Fit Indices				
Bentler-Bonnet Normed Fit Index	.98	.96	.96	.94
Bentler-Bonnet Nonnormed Fit Index	.99	.95	.94	.92
Comparative Fit Index	.99	.97	.97	.96
Correlation between Factor I and II	-.39	-.28	-.07	-.07
<i>Final model</i> (Racial conflict item allowed to load on both factors)				
Chi-square with 11 degrees of freedom	10.58	16.85	68.92	18.21
Probability value	.48	.11	<.001	.08
Fit Indices				
Bentler-Bonnet Normed Fit Index	.99	.98	.98	.97
Bentler-Bonnet Nonnormed Fit Index	1.00	.99	.97	.98
Comparative Fit Index	1.00	.99	.98	.99
Correlation between Factor I and II	-.47	-.43	-.20	-.24

model is one which is essentially employed when constructing scales for regression analysis. The model fit for each group is shown on Table 4.6. Since the chi-square statistic and fit indices are extremely sensitive in large samples (Bollen, 1989), a smaller sample of white students (n=340) was also randomly drawn to assist in assessing model fit.

As indicated by the chi-square, probability values, and fit indices, this initial model fits the data on black students well, but is somewhat marginal in the case of the Chicano and white samples. Some values in the residual matrices of the reproduced models indicated that particular variables were not well explained by the model. The Lagrange Multiplier Test (LM) was used to investigate other possible relationships among the variables. The LM test procedure is designed to test hypotheses on restrictions in a model (Bentler, 1989). In this case, the test indicated that covariances or paths that were set to zero were better treated as free parameters. Both the residual matrices and LM test suggested that the model fit could be improved by (a) estimating a relationship between the racial conflict item and Factor I, and (b) introducing a relationship among the error variances (correlated error) between two items: Institutional priorities to recruit more minority students and to increase the representation of the minorities on the faculty and administration. Both these suggested changes fit within the conceptual framework of the study and make theoretical sense. These modifications were added to the model, Table 4.6 shows the results of these analyses.

The fit of the model was improved substantially for all groups. The chi-squares were reduced to more than half of their value in the initial model for Chicano and white students, and the probability value indicates a good fit for all student samples. The factor loadings for this final model are shown on Table 4.7. Factor loadings for the racial conflict item are higher for Racial Tension on Campus (Factor II) than the Institutional

Commitment factor (Factor I), indicating that it is reasonable to construct the Racial Tension scale using this item for multiple regression analyses with measured variables. Further research using structural equation modeling with latent constructs, however, should include parameter estimates of the racial conflict item for both constructs. (The internal consistencies of all scales used in subsequent analyses are shown in Table 4.9).

The model statistics and factor loadings indicate that the model is actually best descriptive of the black student data, but is also accurately reflected in the data of the other student groups. In most cases the factor loadings are slightly lower for white students, suggesting perhaps that racial climate issues are more salient for blacks and Chicanos than they are for white students. It is also interesting to note that the correlation between the factors, Institutional Commitment and Racial Tension on Campus, are lowest among white students (-.20) and fairly similar for blacks and Chicanos (-.47 and -.43, respectively). Apparently, there is a stronger interconnection between the quality of race relations and institutional commitment in the minds of minority students. In contrast, white students perceive a greater distinction between these two constructs.

The weaker connection between the two racial climate constructs for whites parallels similar gaps found in national attitude surveys and previous research on college campuses. Schuman, Steeh, & Bobo (1988) found that white attitudes are most favorable when asked questions on general principles of race relations but less favorable on items that reflect actual implementation of these principles on a more personal level. At the institutional level Peterson et al. (1978) found that during the period of minority influx into higher education, campus energy and money was indicative of general institutional commitment to affirmative action goals, but little attention was devoted to campus race relations. Similarly, the results here show that white students are less likely to see a relationship between institutional commitment to diversity issues and

Table 4.7

Confirmatory Factor Analyses (Standardized Solution): Factor Loadings of Racial Climate Measures for Black, Chicano and White Students

Items	Factor I Institutional Commitment to Diversity			Factor II Race Relations on Campus		
	Black	Chicano	White	Black	Chicano	White
To create a diverse multicultural environment on campus	.885	.883	.876	.0	.0	.0
To recruit more minority students	.785	.620	.530	.0	.0	.0
To develop among students and faculty an appreciation for a multicultural society	.841	.835	.768	.0	.0	.0
To increase the representation of minorities in the faculty and administration	.674	.664	.581	.0	.0	.0
There is little trust between minority student groups and campus administrators	.0	.0	.0	.730	.652	.565
There is a lot of campus racial conflict here	.208*	.316	.201	.734	.822	.744
Students of different racial/ethnic origins communicate well with one another	.0	.0	.0	-.527	-.558	-.576
Correlations between Factors I and II	-.465	-.433	-.201			

* This loading is significant at $p < .01$, all other factor loadings are significant at $p < .001$.

interpersonal relations on campus. This finding provides helpful insights regarding key differences in student views that may impact improvement of the racial climate in college environments. For example, is it possible that white students are less likely to see institutional commitment as a solution to campus race relations? This is difficult to deduce from a single correlation. However, it does appear to indicate that institutional interventions and commitment to diversity are critical, as many believe, to improving minority student perceptions of campus racial tensions. Minority student interpersonal relations with faculty, students, and administrators may be much more affected by the overall commitment of the institution or the environment of support.

The Development of Self-Concept Measures

Previous research studies have used the student self-rating items from the Freshman CIRP and FUS surveys to develop academic and social self-concept factors to study changes in self-concept during the college years (Astin, 1977; Pascarella, Smart, Ethington, & Nettles, 1987; Smart & Pascarella, 1986). These studies have used principal components analyses, a technique which has been shown to significantly and systematically inflate factor loadings (Snook & Gorsuch, 1989). Maximum likelihood estimation was conducted to obtain more valid estimates. The results from these analyses are shown in Table 4.8.

Although prior studies have identified two underlying factors, analyses with the 1989 self-rating items produced results that were quite different from previous work. Three factors emerged for white students with one item, self-confidence (intellectual), loading with other social self-concept items rather than with academic self-concept items as previous studies have shown. Principal axis factoring (orthogonal and oblique) was also conducted in an attempt to replicate the results of previous studies, yet neither of

Table 4.8

Exploratory Factor Analyses: Factor Loadings of Self-Concept Measures for Black, Chicano and White Students

Self-rating Items	Factor I				Factor II			
	Social Self-Confidence		Academic Self-Confidence		Social Self-Confidence		Academic Self-Confidence	
	Black	Chicano	White*	White*	Black	Chicano	Black	White*
Self-confidence (social)	.821	1.039	.834		-.095	-.174	-.110	
Popularity	.670	.570	.748		-.142	.107	-.087	
Leadership ability	.542	.474	.613		.170	.229	.090	
Drive to achieve	.353	.244	.348		.343	.430	.238	
Academic ability	-.017	-.108	-.099		.807	.880	.892	
Mathematical ability	-.087	-.026	-.068		.492	.432	.481	
Self-confidence (intellectual)	.554	.455	.378		.294	.455	.453	
Writing ability	.137	.116	.066		.388	.442	.406	
Correlation between Factors I and II	.328	.537	.313					

* This analysis represents a forced two factor solution for this group.

these techniques yielded a successful replication. A second maximum likelihood estimation procedure was conducted again with the white sample, this time forcing a two-factor solution. The intellectual self-confidence item loaded with the academic factor in this instance. The results from this second analysis for white students are shown on Table 4.8 along with two-factor solutions obtained for black and Chicano student samples.

Several important points are worth noting since these analyses suggest the use of dependent variables that represent a departure from prior research. First, a coherent academic self-concept factor could not be found in the data for use within or across groups. Table 4.8 shows, for example, that the writing ability item merits examination apart from other items and constructs. The intellectual self-confidence item also shared substantial variance with both Factor I and Factor II. As a matter of fact, the intellectual self-confidence item had the lowest loading with Astin's (1977) intellectual self-esteem factor and had substantial shared variance with other self-concept factors in the Smart & Pascarella (1986) study. It may well be that a clear three-item academic self-concept factor may not exist in the data, indicating that academic self-concept is best examined using single-item variables until construct differences can be resolved in future research.

In contrast, the factor loadings of three other items (social self-confidence, popularity, and leadership self-ratings) suggest that a social self-confidence factor would constitute a useful construct. These same three self-ratings were part of a social self-esteem factor (Astin, 1977) and social self-concept factor (Smart & Pascarella, 1986) in previous studies. Two other items were also included in the factor in previous studies, but were not available in the 1989 survey.

Factor scales

The results from these exploratory and confirmatory factor analyses were used in constructing variables for use in subsequent analyses. Since all items composing each construct were on the same scale, new variables were created by adding together responses on each item to construct a factor scale. Items that were in reverse order were recoded to match the direction of the other items composing the scale. All the scales have fairly high reliabilities (Table 4.9.) that are very similar across groups. These statistics provide some assurance that the constructs developed for the study will be reliable for interpretation across groups.

Table 4.9
Factor Scales
Estimates of Internal Consistencies (Alpha) by Student Sample

Factor Scale	Number of items	Black	Chicano	White
Institutional Commitment to Diversity	4	.88	.86	.80
Racial Tension on Campus	3	.66	.66	.64
1985 Social Self-Confidence	3	.76	.75	.73
1989 Social Self-Confidence	3	.71	.76	.75

CHAPTER 5

THE RACIAL CLIMATE: 1985 FRESHMEN CHARACTERISTICS AND COLLEGE ENVIRONMENTS

This phase of the analyses examined the relationships among the student's background, attitudes and values in 1985, distal measures of the college environment, and two racial climate measures: Racial Tension on Campus and Institutional Commitment to Diversity Issues. The student data were taken from the 1985 freshmen survey, administered during freshmen orientation, and student responses to racial climate measures on the 1989 Follow-up Survey (FUS). The racial climate measures served as dependent variables in this phase of the study, which was conducted in two stages. The first stage explored the extent to which perceptions of the racial climate were a function of the cultural and psychological baggage that students bring with them to college, including demographic attributes and tendencies that might suggest a precollege bias in their views regarding the climate. A student with such precollege biases may have perceptions reinforced in college, or a particular environment may actually cause students without these tendencies to develop distinctly negative or positive views of the racial climate on campus. In any case, examining freshman characteristics helped to identify student characteristics that should serve as controls in subsequent outcomes analyses, allowing one to more definitively attribute causation to a particular environmental variable. Thus, these first stage analyses provide important information on the "perceiver" prior to any significant influence of college.

The second stage examined the possible influences of environmental factors on the racial climate. Distal measures of the college environment, obtained primarily from data sources independent of student observation (i.e., U.S. Department of Education and college catalogs), were used in these analyses to examine the nature of the racial climate in different college environments. These distal measures represent structural characteristics or conditions of the college environment that existed prior to and during a student's assessment of the racial climate. The purpose of including only distal measures after controls for student characteristics was to (a) utilize measures that would serve to locate problems in the higher education system, discovering how the racial climate differs between types of institutions; (b) identify policy-relevant measures that have a direct relationship to the racial climate; and (c) understand the relationships among these "between" institution measures and the racial climate prior to examining more proximal environmental measures that are likely to affect variation in student response within institutions. The results based on these institutional characteristics represent the first overview of racial climate issues across a variety of campus settings.

Racial Tension on Campus

The quality of race relations on college campuses has received a good deal of media attention in recent years. However, the common characteristics of institutions with "inhospitable" environments have not been identified or discussed at any great length. Accounts of racial harassment incidents suggest that many of the institutions with poor climates are public and private universities (Farrell & Jones, 1988), but aside from these incidents, there has been little speculation about other structural indicators of a tense racial climate. This section provides results from an analysis of the relationships among student and institutional variables and the quality of race relations on campus. The

dependent measure, Racial Tension on Campus, is based on student responses regarding the existence of racial conflict, poor communication among various student groups, and low trust between minorities and campus administrators.

Table 5.1 shows results from a regression analysis using the entire student sample. Betas are reported at step one and from step 10 until the final step to show how the effects of these variables change once all student characteristics are controlled. All institutional characteristics have an equal chance of entering the equation, based on their significant relationships with the dependent variable, immediately after the block containing significant student characteristics (step 10). Showing the performance of environmental variables prior to and subsequent to entering the equation also allows one to examine multicollinearity, suppressor effects, and other complex relationships among institutional characteristics. This approach has been recommended in exploratory analyses using stepwise multiple regression (Astin, 1990).

Student Characteristics

Since minority students have often been the targets of harassment on campuses, it is not surprising to find that being a member of a minority group is associated with perceptions of a tense racial climate. Black students are more likely than white students to perceive campus racial tensions, as indicated by the strong effect size (step 10, .22), regardless of the type of college they attend. The effect of being a Chicano student on the dependent variable was suppressed by parental income, as Chicanos tended to come from lower income levels than the other student groups in the sample. After controlling for parental income, results show that Chicanos are also more likely than white students to perceive a tense racial climate. Minorities may be more likely to perceive tensions because it is difficult to buffer or isolate themselves from racial tension on predominantly

Table 5.1

Regression of Campus Racial Tension on Student and Institutional Characteristics (N = 2483)

Variable	Step	Mult. R	Simp. r	Standardized regression coefficients (Betas) At Each Step																								
				1	10 ^a	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
Student Characteristics																												
Black student	1	.197	.20	20	22	24	20	19	19	19	19	19	19	19	19	19	19	19	18	19								
U.S. GPA	2	.216	.05	09	04	04	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01
Parental income	3	.224	.02	06	05	04	-01	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-01	-01	-01	-01	-01	-01	-01	-01	-01
No religious affiliation	4	.231	.05	05	03	02	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
Jewish	5	.234	.02	04	02	01	00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	-00	
Chicano student	6	.237	-.02	01	05	03	04	05	05	05	05	05	06	06	06	06	06	06	06	06	06	06	06	06	06	06	06	
Expect to protest in 1985	7	.283	.17	17	14	16	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Academic ability	8	.292	.10	12	08	06	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	
Liberal political view 1985	9	.295	.11	09	05	05	05	05	05	05	05	05	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04	
Social self-confidence	10	.298	.07	06	04	04	03	02	03	03	03	02	02	03	03	03	03	03	03	02	02	02	02	02	02	02	02	
Institutional Characteristics																												
<i>Type:</i>																												
Institution size	11	.366	.20	22	22	22	26	22	23	21	19	20	16	10	07	07	02	04	-01									
Selectivity (SAT V + M)	12	.410	.22	20	15	22	22	18	18	19	22	23	-26	19	21	20	18	21	21									
Catholic 4 yr college	13	.420	-.26	-24	-22	-17	-11	-11	-11	-13	-13	-13	-13	-12	-11	-11	-13	-12	-12									
Coeducational institution	14	.423	.02	01	-03	-04	-04	-04	-04	-06	-06	-06	-08	-07	-08	-08	-08	-08	-08									
Nonsectarian 4yr college	15	.425	-.01	-02	-05	05	-01	-04	-05	-05	-08	-08	-09	-10	-06	-07	-08	-08	-08									
Private university	16	.426	.07	06	02	06	-01	-01	-01	-05	-05	-06	-09	-10	-07	-07	-07	-08	-08									
<i>Location:</i>																												
Midwest	17	.429	.01	-00	01	03	06	05	05	05	05	05	05	06	07	07	06	06	07									
Offerings/Expenditures:																												
Student services exp.	18	.435	-.07	-07	-09	-00	-05	-05	-07	-06	-09	-09	-09	-11	-09	-09	-11	-11	-11									
Instructional expenditures	19	.442	.28	28	26	21	12	10	09	09	09	10	13	13	16	16	16	16	15									
Aid expenditures	20	.447	-.03	-05	-10	04	-09	-08	-11	-10	-09	-10	-08	-11	-11	-11	-12	-13	-13									
Plan to live on campus	21	.449	.04	03	-01	06	02	02	02	02	02	03	03	04	04	04	04	04	04									
Enrollment Characteristics:																												
Growth in White FTE	22	.453	-.16	-15	-13	-07	-03	-06	-05	-06	-06	-05	-07	-07	-08	-08	-08	-05	-03									
Black percentage in 1986	23	.455	.05	03	03	04	06	06	05	05	06	06	07	06	06	07	05	05	05									
Growth in Black FTE	24	.457	.18	20	18	05	02	04	04	07	06	06	09	08	10	09	06	07	07									
Variables not in equation																												
Public University	.16	.18	.19	.02	.09	.06	.06	.06	.05	.02	.04	.02	.04	.02	.00	-.04	-.04	.05	.06	.09								
Ethnic Studies Majors	.13	.14	.14	.01	-.00	.00	.00	.01	.00	.01	.00	.01	-.01	-.02	-.01	-.01	.01	.01	.01									
Hispanic percentage in 1986	-.15	-.12	-.11	-.12	-.06	.01	.00	.00	.01	.03	.05	.04	.06	.06	.06	.05	.04	.06	.05	.04								
Black FTE in 1986	.22	.22	.21	.11	1.0	1.0	1.0	1.0	1.0	1.0	.09	.09	.08	.08	.08	.08	.08	.08	.08									
Hispanic FTE in 1986	.13	.17	.17	.11	-.04	-.01	-.01	-.01	-.01	-.00	-.02	.06	-.01	.00	.01	.05	.07	.02	.02									
Growth in Hispanic FTE	.16	.19	.18	-.04	-.01	.02	.01	.04	.03	.04	.09	.03	.06	.06	.06	.05	.02	.03	-.06									

NOTE: Decimals omitted from Beta coefficients.

a Reported Betas on variables prior to and subsequent to entrance into the equation at each step after 10, the step in which all student characteristics are controlled

white campuses. Minorities have to interact with white faculty and students daily, while white students are more likely to have a choice as to the extent and nature of their interracial contact. Additional results on the characteristics of these particular student populations are presented in the discussion on comparison groups.

Students who entered college expecting to participate in campus demonstrations and freshmen who characterized themselves as having a liberal political view in 1985 are more likely to perceive a tense racial climate. Both these groups tend to view the racial climate critically and perhaps are more politically attuned to climate issues than students who label themselves as conservatives or are less motivated toward social activism. It may also be that these students have some prior knowledge about the racial climate on campus from pre-matriculation visits, discussions with students, or media reports. In any case, these variables appear to be important student characteristics to control in subsequent analyses, since these may predispose students to view the college environment in particular ways.

Institutional Characteristics

With the exception of the minority group membership, political views, and expectations to become involved in protest during college, virtually all other student characteristics become nonsignificant after controlling for institution type. Institutional characteristics account for approximately 12 % of the variance in the Racial Tension measure, while student characteristics account for 9 %. This suggests that perceptions of the degree of racial tension on campus have more to do with where students go to school than with their demographic or psychological make-up. For example, measures of student academic ability (self-rating and high school GPA) and parental income are significantly related to perceptions of racial tension at step 10, but controlling for

institutional selectivity reduces these effects to nonsignificance. This indicates that the effects of ability and income are really attributable to college selectivity, an institutional characteristic that turns out to be the strongest positive indicator of Racial Tension in the final equation.

Selective institutions may have tense racial climates because their environments tend to represent an extreme in American wealth, ability, and privilege. They tend to attract high income students from predominantly white, conservative circles of society. They also attract bright students and highly successful professors, many of whom are of a progressive or liberal bent. Tradition and privilege are staunchly promoted at selective institutions and, at the same time, they are birthplaces for progressive thought. This swirl of competing ideologies and tension manifests itself in a variety of contradictions. For example, although selective institutions spend time vigorously recruiting minorities, their admissions policies prevent them from admitting large numbers of minorities. There are other contradictions in these environments that will be further explored in this study. For now, it is sufficient to say that students perceive poor campus race relations at colleges that are largely identified with an admissions policy that has historically favored privileged groups. Recent accounts have documented some of the overt manifestations of racism at these elite institutions (Sudarkasa, 1988).

In contrast, students attending a Catholic four-year college are least likely to report campus racial tensions. Although two of the Catholic institutions in the sample have a high proportion of Chicano students (approaching 50 %), it is noteworthy that controlling for ethnic origin and religion does not substantially reduce this environmental effect (step 10, .26). Private-nonsectarian colleges also seem to have relatively low racial tension (step 10, -.05 and final step, -.08). The performance of the beta weights throughout the regression suggest that given the types of students these colleges have (high ability), their

size (small), and other aspects of the environment, these institutions have less racial tension than the Protestant or public institutions. Both Catholic and private-nonsectarian colleges are perhaps more attentive to student needs and the general psychological climate on campus. Further research on these colleges may help determine how they maintain greater racial harmony relative to other types of institutions.

The betas for the institutional types manifest a complex set of relationships that include multicollinearity and suppressor effects with other institutional measures. Multicollinearity among institutional characteristics is inevitable, given that certain characteristics (e.g. size, financial expenditures, enrollment characteristics, etc.) are often strongly associated with particular college types. The effects of some of the gross measures of institutional type can perhaps never be separated from a configuration of conditions that characterize their environments. Thus, reviewing only the final step in the regression equation can be misleading, whereas the performance of betas at earlier stages of the regression provides a better understanding of why particular environments may produce more or less racial tension. Some variables have significant relationships with the dependent variable but do not enter the equation because of shared variance with another institutional measure. In these cases, multicollinearity becomes a source of interest. For this reason, the betas of some important variables that do not enter the equation are shown in Table 5.1. Such is the case with the dichotomous variable for public university.

Public universities demonstrate a positive relationship with Racial Tension after controlling for student characteristics (step 10, .19), but since there are few public universities that are small, institutional size serves as a possible explanatory variable. This means that public universities may not have significantly more racial tension in comparison to other institutional types; rather, there is an inherent condition of a public

university environment (large size) that contributes positively to racial tension. Nevertheless, even after controlling for size and all other institutional characteristics, the positive effect of public universities on Racial Tension remains significant by the final step of the equation (.09). This effect is even stronger among white and Chicano students, as demonstrated in the discussion of the subgroup analyses that follows Table 5.2.

Attending a private university also demonstrates a complex relationship with the dependent variable, since this institution type apparently has both positive and negative conditions that contribute to the racial climate. Although this variable has a simple correlation of .07 with racial tension, this effect drops in significance when student characteristics are controlled, suggesting that this college environment has no unique effect over and above the characteristics of its student body. On the other hand, given the relative size of private universities, these institutions tend to have more racial tension than other types of private institutions. Indeed, changes in the beta coefficients suggest that students at private universities perceive more racial tension than at private-nonsectarian colleges but less racial tension when compared to the public institutions. Other elements, such as campus spending practices (i.e., student services), reflect conditions of the private university environment that make it less racially tense. The changing beta weights also suggest that students attending private universities where student services are financially-well supported are less likely to report poor racial climates. The dichotomous variable for private university maintains a beta of -.08 in the final step of the equation.

Institutional size is a strong indicator of Racial Tension on Campus (step 10, .22). Such an effect may be due to the largely bureaucratic and impersonal environment coupled with a broad mix of student types and belief systems represented at such institutions. This is indicated by the fact that the effect of size is diminished substantially

when controlling for campus expenditures and white enrollment changes (1982-88). Large institutions spend more on administrative structures associated with instruction and less on student services and fellowship aid per student, factors that make large institutions impersonal and less attentive to a student's developmental needs.

One might assume that there is a positive correlation between institutional size (based on graduate and undergraduate FTE) and the growth in white undergraduate enrollment at predominantly white institutions. However, the correlation is $-.33$ and further investigation revealed that the correlations between size and growth in black (.76) and Hispanic (.87) enrollments are extremely high. These results suggest the white enrollment variable is a continuum—moving from increasing white enrollment to a racially diverse enrollment—that supports an alternative conclusion: Large institutions had the most change in diversification of undergraduate enrollments in the last six years, and these changes are associated with the perception of racial tension on campus. This perception of a tense racial climate may be directly related to a more diverse student clientele, since a variety of perspectives and cultural modes find expression and conflict in these large environments.

These results also indicate that more white students may be attending small institutions while more minorities are attending larger, and presumably less expensive, institutions. Trends in black freshmen over the last 20 years show that blacks have increasingly chosen colleges because they are low cost, and that they are now less likely to be attending their first choice institution (Astin, 1990b). This could be taken to mean that diversification of student enrollments is occurring primarily in certain types of institutions. Although the racial stratification of the system of higher education has been noted by various researchers (Astin, 1982; Brown, Rosen, Hill & Olivas, 1980; Verdugo, 1986), these changes may suggest we could be moving toward an increasingly

racially-segregated higher education system. Since this sample of students is limited to institutions where minority respondents have returned follow-up surveys, this cannot be confirmed in the present study. Future research on enrollment changes across all institutions will provide a more definitive answer.

Once institutional type characteristics were controlled, growth in black enrollment had the strongest and most consistent effect on the dependent variable of all ethnic enrollment measures (step 10, .18 and final step, .07). The percentage of black students in 1986 and the absolute numbers of black students (not in the equation) are also associated with campus racial tension. The latter variable maintains a strong positive effect until growth in white enrollment is controlled (step 10, .21).

Since Latino students are concentrated in a relatively limited variety of institutional types, i.e., large public institutions and Catholic colleges (Hurtado, 1990; Brown et al., 1980), it is not surprising to find that institutional types account for the effects of all measures of Hispanic enrollment. All the enrollment measures for Latino students had significant betas at step 10 that were reduced to nonsignificance once college type measures entered the regression equation. It is interesting to note, however, that the percentage of Hispanics is the only enrollment characteristic that had a negative relationship with racial tension at step 10 (-.11). This effect is maintained until a control for attending a Catholic college is introduced, indicating that several of these institutions in the sample have both a high percentage of Hispanics and a relatively positive racial climate.

These initial results provide partial support for Blalock's theory (1967) of racial tension in communities. He suggests that discriminatory behaviors increase as minority numbers increase, since more minority individuals are in direct and potential competition with individuals of the dominant group. Such is certainly the pattern observed with

changes in enrollments: Tension is greatest where there has been declining white and increasing minority enrollment. While the relationship between increases in a minority presence and racial tension is supported, there is insufficient information to specify the cause of such a pattern. Moreover, it appears that some colleges with high proportions of minorities (e.g., Catholic colleges) have favorable racial climates. Without further measures of student behaviors, one can only speculate at this point.

Campus spending practices were investigated to begin to explore some institutional characteristics that may be policy-relevant. These results provide some reason for optimism about the possibilities for improvement of the racial climate. Specifically, it appears that the more an institution spends on financial aid per student in the form of fellowship and scholarship awards, the less likely they are to have racial tension on their campuses. This finding is especially significant because it holds true regardless of institutional type. Student services expenditures also maintain a unique negative effect on racial tension (final step, -.11) when other institutional characteristics are controlled. The effects of these campus expenditure measures suggest that more institutional support provided in the form of college services to students, from the stage of admission through college completion, may actually serve to reduce racial tensions.

The amount of monies expended on instructional activities has a strong *positive* effect on Racial Tension after controlling for student characteristics (.26) and at the final step of the equation (.15). This variable includes expenditures of the colleges, schools, and departments that include both general academic instruction, adult, and remedial education. Higher instructional expenditures per student may not necessarily mean that an institution gives a priority to teaching; rather, it may reflect the opposite scenario. Presuming that faculty salaries constitute the bulk of instructional expenditures, the more that the faculty are paid, the more likely they are to be involved in research. This often

results in a lower teaching load which must be compensated for by hiring additional part-time staff (lecturers and graduate teaching assistants) to teach courses, further inflating the per student instructional costs. Such an environment would be less student-oriented, more impersonal, more research-focused, and perhaps more racially tense. These assumptions are supported, in part, by the fact that this variable may be serving as a proxy for institutional affluence. (Controlling for selectivity and institution type reduce the effect of instructional expenditures slightly). Thus, instructional expenditures may represent campus priorities that are quite different from student-centered priorities.

It appears that where a student attends college is perhaps not as significant, in terms of racial climate, as the type of college he or she chooses. Most of the location characteristics of the institution yielded very little information in this analysis. Still, once size and selectivity were controlled, attending college in the Midwest tends to be a positive indicator of tense campus race relations (final step, .07).

Given the relative paucity of information about racial tension on college campuses, this analysis represents a substantial addition to our understanding of the correlates of campus racial tension. Freshman and institutional characteristics accounted for 21 % of the variance (Multiple R = .457) in the dependent measure. These results provide a starting point on which to build further research on the determinants of racial tension.

Results by Comparison Group

Table 5.2 highlights the results from regressions conducted on separate student populations—white, black and Chicano students. All variables that are significant in any regression after controlling for student characteristics are reported here to show effects across groups. These include variables that maintain their effect until the final step

(designated with a superscript *a*), variables that are reduced to nonsignificance by the final step, and variables that did not enter the equation due to multicollinearity (designated with a superscript *b*). Finally, the table includes variables that became significant due to suppressor effects, entering the equation after the block of student characteristics.

Many of the results reported here confirm results found in the total group regressions. However, the assumption here is that these groups constitute distinct populations. In such cases where a broad categorical variable is included in a regression (race), separate regressions are recommended to assure that such results hold true across groups (Pedhazur, 1973). The multiple correlations (*R*) for the equations across the three equations indicate that student and institutional characteristics explain between 13 % (blacks) and 23 % (Chicanos) of the variance in the racial tension measure. The differences in statistical explanation reveal that, for even the two groups with a similar sample size, the populations have distinct characteristics.

What are the freshman characteristics of students who reported racial tension on their campuses? White students tend to be of high ability, socially self-confident, and to come from affluent families. Chicanos who tend to perceive a tense environment also have a high degree of academic self-confidence. White students who identify themselves as either Catholic or Protestant are least likely to report racial tension. None of these student characteristics, however, maintains a unique effect over and above the type of institution attended.

Comparison group results confirm that it is important to control for those students who are motivated, at the level of action and ideology, to view the racial climate negatively at college entry. White and Chicano students who enter college expecting to become involved in protest are most likely to report that their campuses have poor race relations. For black freshmen, a liberal political view apparently serves as a proxy for

Table 5.2
*Regression of Campus Racial Tension on Student
 and Institutional Characteristics by Ethnic Group*

	Simple Correlations and Standardized Coefficients for								
	Whites (n=1,820)			Blacks (n=324)			Chicanos (n=339)		
	r	Beta	Final B	r	Beta	Final B	r	Beta	Final B
<i>Student Characteristics</i>									
Academic Ability (self-rating)	.14	.07*	.00	.04	.04	.00	.13	.12*	-.06
High School GPA	.11	.06*	.00	.06	.04	.00	.04	.04	-.04
Mother's education	.10	.04	.02	.01	-.01	-.05	-.03	-.07	-.12*
Income	.08	.05*	.00	.03	.02	-.03	.05	-.03	.04
Catholic	-.08	-.06*	.01	-.03	-.03	-.03	-.03	-.01	-.02
Protestant	-.01	-.03	.00	-.08	-.06	-.04	-.04	-.05	-.07
Social self-confidence 1985	.08	.05*	.03	.00	.00	.01	.07	.01	-.01
Expect to protest	.17	.15**	.12*	.14	.07	.05	.22	.21**	.14*
Political view 1985 (liberal)	.06	.02	.00	.25	.25**	.23*	.12	.08	.06
<i>Institutional Characteristics</i>									
Type:									
Size	.21	.20**	-.13*	.15	.14**	.00	.36	.35**	.26*
Selectivity	.21	.14**	.22*	.13	.10*	.14*	.30	.26**	.16*
Catholic four-year	-.24	-.20**	-.07*	-.11	-.10*b	-.06	-.40	-.38**	-.15*
Coeducational	-.00	-.01	-.09*	.05	.03	-.02	.13	.11*b	.01
Protestant four-year	-.06	-.05*b	.04	-.04	-.03	.05	-.07	-.10	-.07
Nonsectarian	-.02	-.05*b	-.02	-.03	-.11*b	.01	-.04	-.08	-.09
Public four-year	-.05	-.01	.05*	-.12	-.11	-.05	.02	.04	.06
Public university	.16	.17**	.22*	.10	.09	.03	.35	.34**	.25*
Location:									
South	-.10	-.07**b	-.04	-.04	-.02	.02	-.02	-.02	-.02
Midwest	.01	.04	.13*	-.08	-.05	-.03	-.01	-.01	-.01
Distance from home	.06	.02	.08*	-.03	-.05	-.03	-.01	-.05	-.03
Offerings/Expenditures:									
Offers ethnic studies majors	.14	.13**b	.01	.10	.08	-.01	.24	.22**b	-.07
Instructional expenditures	.30	.26**	.14*	.15	.11*	.12*	.40	.38**	.11*
Student services expenditures	-.06	-.10**	-.11*	-.15	-.15**	-.17*	-.06	-.06	-.01
Aid expenditures	-.02	-.09**	-.12*	-.08	-.09	-.08	-.16	-.20**b	-.09
Enrollment Characteristics:									
Black FTE in 1986	.22	.21**	-.15*	.14	.14**b	.07	.34	.31**b	.05
Black percent in 1986	.07	.07**	.09*	-.05	-.04	-.02	-.13	-.11*b	-.02
Hispanic FTE in 1986	.16	.15**b	.00	.09	.07	-.05	.30	.30**	.22*
Hispanic percent in 1986	-.08	-.07**b	.01	-.02	-.03	-.02	-.32	-.28**	.04*
Growth white FTE (1982-88)	-.17	-.14**	.03	-.17	-.17**	-.15*	-.12	-.10	-.02
Growth black FTE (1982-88)	.20	.18**	.12*	.08	.05	-.06	.31	.30**	.15*
Growth Hispanic FTE (1982-88)	.16	.16**	-.09*	.09	.07	-.05	.31	.30**	.15*
Multiple R	.44			.36			.48		

NOTE: Betas are reported at the step where all student characteristics have been controlled and at final step.
 * Significant at final step; b did not enter equation due to shared variance with another institutional variable. * $p < .05$, ** $p < .01$.

expecting to protest in college. Black freshmen who expected to protest in 1985 also described themselves as liberal and reported racial tension on campus in 1989. In comparison to the other groups, however, liberalism is an important predisposition of black students (.23) that will be necessary to control in subsequent analyses.

Across all groups, both institutional size and selectivity are indicators of a tense racial environment. Students of all racial/ethnic groups attending selective institutions agree that these institutions have racially tense environments. Chicanos at large institutions perceive poor race relations on campus, as evidenced by the consistently positive association of institutional size with racial tension (.26). White students at large institutions also report racial tension, not only because of the institution's size but perhaps also because these institutions tend to have increased minority enrollments in the last six years. (Minority enrollment growth measures reverse the direction of effects for institutional size at the final step). This high degree of multicollinearity also appears to indicate that black students report tense race relations at large campuses that have increased minority enrollments in the last six years and did not allocate substantial financial support for student services in 1985. The black student regression equation shows that the effects of both institutional size and minority enrollment growth are diminished by expenditures for student services and white enrollment growth, which are negatively related to racial tension. In fact, both black and white students tend to report better race relations at institutions where student services were well-supported financially (-.17, -.11, respectively). These results have important policy implications for college administrators at large institutions. Attending to the specific needs of an increasingly diverse clientele may ameliorate the racial tension that may accompany rapid growth in minority enrollment. In particular, a policy measure such as spending for student services reflects an institutional priority within their control that may improve the climate

for students. What cannot be ascertained at this point is the precise mechanism whereby spending for student services reduces racial tension. Clearly, this is a potentially rich area for further research.

The data on aid expenditures further support the notion that racial tension may be associated with institutional priorities that neglect student-oriented priorities. Chicano and white students perceive better race relations at institutions that provide more fellowship and scholarship awards per student. This relationship is particularly true among white students, regardless of the type of institution attended (-.12). Race relations may be more harmonious primarily because institutions provide the general type of student support that addresses student needs. Financial concerns, inadequate counseling, and lack of college-sponsored activities to foster student interaction, are potential sources of stress for students. Perhaps at a more basic level, if a student feels valued by the institution, he/she is more likely to trust college administrators and perceive that all student groups are equitably treated at the institution.

These results can also be interpreted from a conflict perspective. If one adopts Blalock's (1967) theory of competition among the races, results from these resource variables would suggest that making sure each group perceives they have a "piece of the pie" prevents them from viewing each other as competitors for limited institutional resources. This is primarily an economic perspective within race relations theory that suggest that resentment among groups emerges out of a struggle for resources. While a plausible explanation, this view reduces the matter of racial issues to greed. Other issues such as respect and understanding of different cultural perspectives and misconceptions about group practices and intents also play a part in the racial tension on campus. Regardless of the interpretation, these results show that some variations in financial support may be related to racial tension on campus. Further research needs to be

conducted on the programs that constitute the types of services and aid students receive at campuses with good racial climates.

In contrast, large instructional expenditures appear to reflect different institutional priorities. This variable is associated with racial tension in the black and Chicano samples, and it has a strong independent effect on racial tension in the white student sample (.14). These findings suggest that institutions with a high bureaucratic mesh of colleges and departments, high faculty salaries, and perhaps a research emphasis are less conducive environments for racial harmony.

Catholic institutions have less tense racial environments according to both Chicano and white students (-.15, -.07, respectively). Black and white students attending private-nonsectarian institutions and black students at Catholic institutions also report less racial tension, although these effects are diminished by controlling for size and selectivity. Such institutions may be more attuned to the development of students on their campus. In contrast, public universities appear to be troublesome environments for Chicano and white students, as this institution type demonstrates a substantial and unique effect over and above other college characteristics (.25, .22, respectively). Public universities represent large environments, with competing priorities, that are less attentive to the psychological climate for undergraduates on campus. However, these low cost institutions are also attracting larger numbers of minorities, in part, because of changing demographics and external political pressures. Results here suggest possibilities for further research focused primarily on the racial climate of public universities.

White students perceived greater racial tensions if they went to college away from home or attended a large midwestern institution. The further away from home a white freshman attended college in 1985, the more likely he/she was to report racial tension (.08). A college's distance from home is negatively correlated with size ($r = -.21$)

making the distance variable a significant indicator of racial tension when size was controlled. White students reported racial tension in the Midwest (.13), while their counterparts in the South report less racial tension (-.07). Once controlling for selectivity, however, attending school in the South has no significant relationship with racial tension. These effects suggest that white students who went away to smaller, less selective colleges in these regions perhaps had more of an opportunity to get to know students of other races.

The general pattern for measures of diversity in student enrollments reveals that the absolute numbers of blacks and Hispanics and their enrollment changes in the last six years are associated with tense racial climates, with only a few variations among groups. For example, Chicano students tend to report better race relations only at institutions with a high percentage of black and Hispanic students in 1986 (-.11, -.28). These are primarily Catholic colleges, since controlling for this institution type reduces these coefficients to nonsignificance. White students attending institutions with a high percentage of Hispanics also to report low racial tension, but again, this relationship can be primarily attributed to attendance at a Catholic college. Other than these exceptions, white students tend to perceive racial tension on campuses where student enrollment has undergone substantial diversification; this is demonstrated by the percentage (.09), absolute numbers (.21), and growth measures of black student enrollment (.12). For Black students, only the absolute numbers (FTE) of black undergraduates in 1986, and declines in white enrollment are related to Racial Tension. These findings on the numerical aspects of diversity support Astin's (1971) hypothesis that the absolute numbers of black students on campus, or a critical mass, were found to be most closely associated with campus unrest. Racial tension appears to be associated more with the

absolute numbers of minorities, or a critical mass, than with the percentage of minorities in the student body.

What patterns do these enrollment variables generally suggest? First, contrary to popular belief, having large numbers of blacks and Hispanics and increases in minority enrollments does not necessarily translate into less racial tension on campus. Second, a curvilinear relationship between minority enrollment and racial tension may be possible. For example, it may be that Hispanic enrollment numbers are no longer related to racial tension beyond a threshold level. There is some evidence that in particular institutional contexts (Catholic colleges), high percentages of minorities begin to be associated with less racial tension in a student body. Furthermore, rapid diversification of enrollments in the last six years appears to be a strong indicator of racial tension.

These points should not be taken to suggest that increasing minority enrollment is *the* cause of racial tension. Campus racial tension is not created solely in the mix of students, nor does it exist only in the minds of particular types of students. It is created in the mix of people, policies, and belief systems that prevail on campuses. These analyses have shown that there are a web of issues that must be addressed that include institutional policies, financial decisions, and campus priorities. Institutions that attend to these issues with a concern for different cultural groups may reduce racial tension and successfully restructure their campuses for learning in a multicultural environment.

Institutional Commitment to Diversity

A natural extension of research on campus race relations is to examine an institution's commitment to diversity. Institutions have a variety of priorities that they address on a daily basis. These priorities have been transformed into policies and actions that communicate values to students and faculty. In some cases, however, the link between institutional policy and action is weak. For example, as a result of pressure from various groups such as the NAACP and MALDEF and from federal regulations (Title VI), affirmative action policies have been institutionalized in colleges for the past two decades. Although these policies are designed to prevent overt forms of discrimination, many campuses have been slow in producing real change in the ethnic make-up of their faculty and student body. Despite legal constraints on institutions, affirmative action has been challenged in the last decade and the hiring of minority personnel at colleges and universities appears to continue on a "replacement only" basis (Reyes and Halcón, 1988). This institutional inertia conveys the idea that campus commitment to a diverse multicultural environment is neither a high priority nor of educational value to students.

Exploring the student's perception of institutional commitment to diversity may shed light on the complex matter of the racial climate on college campuses. Students were asked to respond to questions regarding the extent to which they felt their college placed a high priority on increasing minorities in the faculty and administration, developing an appreciation of a multicultural society, recruiting more minority students, and creating a diverse multicultural environment on campus. Table 5.3 shows results from a regression of the Institutional Commitment factor on entering student and institutional characteristics. This discussion will focus on variables that were significant after completion of calculations for regression blocks containing student characteristics (step 5) and on the subsequent performance of these variables. SPSSX prevents

variables from entering the regression equation that become significant late in the calculation process (after their original block is controlled). To override this software problem, one final forward command was executed to examine additional variables that have significant relationships with the dependent variable after *both* student and institutional characteristics were controlled. (This technique was also used in regressions for Racial Tension, but provided significant results only in the regression for Institutional Commitment).

Student Characteristics

Students expressing a strong interest in the goal of promoting racial understanding in 1985 report, four years later, that their campuses had an institutional commitment to diversity (step 5, .10). Jewish students (.05), students who were older (.06), and students who rated themselves highly on social self-confidence as college freshmen (.05) are also likely to report that their institution is committed to diversity. In contrast, Black students are least likely to report their institution is committed to diversity (-.09; final step -.11). Most of these student characteristics maintain a significant effect on the dependent variable, regardless of institution type.

The effect of several other student characteristics became significant after controlling for institutional type, revealing additional precollege biases. As one would expect, those students who entered college expecting to participate in campus demonstrations were likely to be most critical of institutional commitment (at final step, -.07). In contrast, entering students who expected to become involved in community action programs reported a high commitment to diversity on their campuses (final step, .06). These attitudes predispose students to view the commitment of an institution in a negative or positive way and are controlled in subsequent regressions on student

Table 5.3

Regression of Institutional Commitment on Student and Institutional Characteristics (N = 2,483)

Variable	Mult. Simp.			Standardized Coefficients (Betas) At Each Step																							
	Step	R	r	1	5 ^a	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
Student Characteristics																											
Black student	1	.065	-.06	-.06	-.09	-.10	-.10	-.10	-.10	-.10	-.10	-.11	-.10	-.10	-.10	-.11	-.11	-.10	-.10	-.11	-.11	-.11	-.11	-.11	-.11	-.11	
Age	2	.084	.06	.05	.06	.06	.06	.06	.06	.06	.06	.06	.05	.05	.05	.05	.05	.05	.05	.05	.05	.04	.04	.05	.05		
Jewish	3	.099	.05	.05	.04	.05	.05	.05	.05	.05	.04	.04	.05	.05	.05	.05	.05	.05	.05	.05	.04	.04	.04	.05	.05		
Racial Understanding	4	.139	.07	.10	.10	.08	.08	.09	.08	.08	.08	.09	.08	.08	.08	.10	.10	.07	.07	.07	.07	.07	.07	.07	.07		
Social self-confidence	5	.148	.06	.06	.05	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.05	.05	.05	.05	.05	.05	.05	.05		
Institutional Characteristics																											
Type:																											
Nonsectarian	6	.241	.19	.20	.19	.19	.17	.19	.18	.17	.17	.15	.18	.19	.18	.19	.17	.18	.18	.18	.18	.18	.15	.19	.19		
Coeducational	7	.256	-.12	-.12	-.13	-.09	-.09	-.09	-.10	-.10	-.10	-.10	-.08	-.08	-.07	-.07	-.08	-.08	-.08	-.08	-.08	-.09	-.09	-.09	-.09		
Public University	8	.261	-.04	-.05	-.04	.05	.06	.06	.06	.04	.01	.00	.01	.03	.10	.10	.12	.12	.13	.13	.13	.10	.15	.21	.21		
Location:																											
City size	9	.267	-.08	-.08	-.08	-.05	-.06	-.06	-.06	-.06	-.06	-.11	-.13	-.13	-.11	-.11	-.11	-.12	-.12	-.12	-.11	-.12	-.12	-.12	-.12		
Midwest	10	.271	-.07	-.06	-.06	-.05	-.05	-.04	-.05	-.05	-.05	-.06	-.04	-.03	-.03	-.03	-.01	-.01	-.01	-.01	-.01	-.01	-.00	-.00	-.00		
Offerings/Expenditures:																											
Offers ethnic majors	11	.275	.05	.04	.05	.07	.07	.06	.06	.06	.06	.05	.05	.06	.08	.08	.07	.08	.08	.08	.08	.07	.08	.09	.09		
Enrollment:																											
Growth White FTE	12	.296	-.08	-.08	-.09	-.08	-.08	-.08	-.12	-.12	-.12	-.12	-.12	-.10	-.16	-.16	-.15	-.15	-.15	-.15	-.15	-.11	-.05	-.06	-.06		
Hispanic pct. 1986	13	.313	.06	.06	.06	.11	.10	.10	.12	.11	.12	.11	.11	.11	.10	.09	.12	.12	.12	.12	.12	.12	.12	.12	.12		
Black percent 1986	14	.317	.07	.07	.07	.08	.07	.08	.09	.09	.09	.06	.06	.06	.10	.10	.11	.11	.11	.11	.11	.11	.06	.05	.05		
Black FTE 1986	15	.320	-.02	-.02	-.02	.06	.06	.05	.10	.11	.10	-.05	.00	-.13	-.13	-.14	-.13	-.14	-.14	-.14	-.14	-.12	-.07	.09	.09		
Entering Equation After Final Block																											
Expect to protest	16	.326	-.01	-.01	-.04	-.07	-.06	-.06	-.06	-.06	-.06	-.07	-.06	-.06	-.06	-.06	-.07	-.08	-.07	-.07	-.07	-.07	-.07	-.07	-.07		
Selectivity	17	.330	.07	.08	.07	.00	.01	.02	.02	.02	.01	-.01	.05	.06	.06	.07	.07	.07	.08	.09	.11	.11	.12	.08	.08		
Part. in Community	18	.335	.08	.09	.04	.05	.05	.05	.05	.05	.05	.06	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06		
No religion	19	.338	-.04	-.04	-.03	-.05	-.05	-.05	-.05	-.05	-.05	-.06	.05	-.05	-.06	.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05		
Mother's education	20	.340	-.01	-.01	-.02	-.05	-.05	-.05	-.05	-.05	-.05	-.06	-.04	-.04	-.04	-.03	-.05	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04		
High School GPA	21	.342	-.01	-.02	-.01	-.02	-.01	-.01	-.01	-.01	-.01	-.02	-.02	-.02	-.02	-.01	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04		
Growth Black FTE	22	.344	.05	.05	.06	.09	.10	.09	.14	.13	.13	.06	.04	.06	.05	.05	.05	.06	.06	.06	.06	.06	.16	.19	.19		
Institutional size	23	.352	-.06	-.07	-.06	.03	.04	-.02	.03	.04	.01	-.17	-.15	-.14	-.11	-.12	-.12	-.11	-.12	-.12	-.10	-.30	-.30	-.37	-.37		
Private University	24	.354	-.08	-.08	-.09	-.05	-.04	-.02	-.01	-.01	-.01	-.01	.03	.03	.04	.04	.00	.01	.00	.00	.01	.01	.07	.07	.07		

Note: Decimals omitted from Beta coefficients.

^a Betas prior to and subsequent to entering the equation are reported here after Step 5, when all student characteristics are controlled.

outcomes. The marginal effects of student ability, religious affiliation, and mother's education shown in Table 5.3 are discussed as group differences in the comparison group regressions shown in Table 5.4.

Institutional Characteristics

Despite the number of entering student characteristics that remained significant in the final equation, the cumulative effects of environmental variables on Institutional Commitment to Diversity were greater than was with the case of Racial Tension: less than 3 % of the variance in Institutional Commitment is attributable to entering student characteristics, in contrast to about 8 % attributable to environmental variables. This suggests that changes in an institution's commitment to diversity are more likely to be due to specific environmental elements, some of which can be changed by institutional policies and are directly related to student views of the environment. However, the relations among the institutional variables are even more complex in this regression than in the regression of Racial Tension. A high degree of multicollinearity is observed here, particularly among the diversity measures. In many cases the effects are best reviewed at step 5, when all student characteristics are controlled. Fewer variables maintain consistent effects throughout the equation than was the case with the Racial Tension regression. Those institutional variables that maintain unique effects on Institutional Commitment to Diversity are particularly noteworthy.

With this in mind, it should be noted that students at private-nonsectarian colleges see diversity as a high priority on their campuses. This is the only type of institution that corroborates student reports of better race relations discussed in the previous section. Attending a private-nonsectarian institution maintains a strong positive effect on Institutional Commitment (.19), diminishing the effect of many other institutional

characteristics (i.e., selectivity, size, and location). Before controlling for this dummy variable, selective institutions show a high campus priority on diversity (step 5, .07), while large institutions tend to show low institutional commitment to diversity (step 5, -.06). Both public and private universities have significant negative effects on institutional commitment at the stage where all student characteristics are controlled (step 5, -.04 and -.09, respectively). However, controlling for the effects of private-nonsectarian institutions, black enrollment, and size reverses this effect for both types of institutions. This suggests that if all institutions were of similar size with similar black enrollments, universities would show a higher commitment to diversity—a near impossibility given current institutional conditions. In contrast, a consistent effect is shown by students at coeducational institutions. They are less likely to view diversity as a top campus priority (step 5, -.13).

The location of the college reveals some interesting results. Students attending college in larger cities judged their campuses as having a low commitment to diversity (final step, -.12). Despite the concentration of minority populations in large cities, the student bodies of urban institutions often do not reflect the ethnic make-up of urban populations. This contrast between the campus population and neighboring communities may lead students to recognize a gap between institutional rhetoric and commitment to action on diversity issues. Only one other location variable yielded significant results: Students attending college in the Midwest are least likely to perceive diversity as a high campus priority. The effect of this location variable is diminished, however, by controlling for the percentage of black and Hispanic students and for institutional selectivity.

Students tend to report that commitment to diversity is a high priority on campuses where ethnic studies is offered as a major for a college degree (final step, .09).

Institutionalizing alternative perspectives in the curriculum, and the creation of faculty positions that come with such an action, signals to students that the institution is committed to developing a multicultural environment. For many years minority perspectives were excluded from the curriculum. Campuses with ethnic studies majors communicate the idea that such knowledge deserves a rightful academic home. It suggests that such knowledge is of educational (and perhaps economic) value and is central to developing an appreciation of other cultures in our society.

The enrollment characteristics developed for this study constitute a partial validation of student views on campus commitment to diversity. If an institution is committed to diversity, it seems that such a commitment should be manifested in the make-up of its student body. Students judged that institutions placed a high priority on diversity on campuses with declining white enrollments, a high percentage of black or Hispanic students in 1986, and growth in black enrollment over the last six years. These variables maintained strong and fairly consistent effects throughout the regression equation. This shows that according to at least one objective measure of the college environment (enrollment statistics reported to the Department of Education), student perceptions of institutional commitment are consistent with objective reality.

Comparison Group Results

Table 5.4 shows comparison group results. Although the regression model accounts for a similar amount of variance in the Institutional Commitment to Diversity factor for all groups (approximately 13 %), there are interesting group differences. Factors that influence student judgement on institutional commitment to diversity are more race specific than factors that influence student perceptions of racial tension. Black students who were academically successful in 1985 (high school GPA) tended to be

Table 5.4
Regression of Institutional Commitment on Student and Institutional Characteristics by Ethnic Group

	Simple Correlations and Standardized Coefficients for								
	Whites (n=1820)			Blacks (n=324)			Chicanos (n=339)		
	r	Beta	Final β	r	Beta	Final β	r	Beta	Final β
<i>Student Characteristics</i>									
High School GPA	-.01	-.02	-.02	-.15	-.13*	-.13 ^a	-.02	.09	.08
Age	-.01	.03	.03	.15	.12 ^{ab}	.09	.08	.06	.03
Jewish	.06	.05*	.05 ^a	-.04	-.03	-.05	.01	.02	-.03
Promote racial understanding	.11	.11**	.10 ^a	.03	.06	.02	.02	.03	.04
Social self-confidence 1985	.07	.06**	.06 ^a	.06	.05	.04	.02	.04	.04
Mother's education	.01	-.01	-.06 ^a	-.01	.00	.01	-.08	-.05	-.04
No religion:	-.02	-.02	-.06 ^a	-.07	-.09	-.10	-.07	-.05	-.09
Expect to protest	-.02	-.03	-.06 ^a	-.05	-.03	-.03	-.07	-.10	-.10
Participate in community action program	.08	.03	.05 ^a	.04	.04	.06	.14	.13**	.13 ^a
Academic ability (self-rating)	.03	.02	.00	-.06	.03	.04	-.12	-.11*	-.10 ^a
<i>Institutional Characteristics</i>									
Type:									
Nonsectarian four-year	.23	.22**	.16 ^a	.19	.20**	.24 ^a	.04	.05	.06
Coeducational	-.15	-.16**	-.11 ^a	-.08	-.09	-.01	-.03	.00	.03
Public university	-.05	-.04	.23 ^a	-.05	-.06	.06	-.06	-.04	.02
Selectivity	.13	.11**	.11 ^a	-.08	.01	.00	.00	.05	.05
Institutional size	-.07	-.06**	-.30 ^a	-.09	-.09	.06	-.07	-.03	-.02
Private university	-.07	-.08**	.07 ^a	-.20	-.16**b	-.04	.01	.02	.01
Public four year	-.07	-.06**	.00	.11	.08	.16 ^a	-.07	-.06	-.09
Protestant four-year	-.06	-.06**b	-.03	-.08	-.09	-.01	-.09	-.09	-.09
Location:									
City size	-.09	-.09**	-.09 ^a	-.14	-.11*	-.13 ^a	.01	.01	-.30 ^a
East	.10	.08**b	.00	-.04	-.01	-.02	.03	-.03	-.02
Midwest	-.07	-.06**b	.00	-.04	-.07	-.02	-.09	-.09	-.13 ^a
South	-.02	-.02	-.01	.09	.07	.09	-.12	-.12*	-.16 ^a
Distance from home	.07	.06**b	.02	.07	.09	.03	.08	.09	.06
Offerings/Expenditures									
Offers ethnic studies major	.06	.06**	.08 ^a	.04	.03	.05	-.01	.02	.06
Freshman residence on campus	.11	.09**	.06 ^a	-.01	.00	-.03	.04	.05	.05
Student services expenditures	.12	.11**b	.00	.06	.08	-.01	.04	.04	.04
Aid expenditures	.13	.12**b	.01	.04	.08	.04	.10	.09	.04
Instructional expenditures	.09	.08**b	.01	-.09	-.03	-.01	-.04	.00	.01
Enrollment characteristics:									
Growth in white FTE ('82-88)	-.10	-.10*	-.10 ^a	.03	.03	.01	-.11	-.12*	-.19 ^a
Hispanic percent 1986	.00	.01	.07 ^a	.10	.11*	.21 ^a	.17	.14**b	.02
Growth in black FTE ('82-88)	.05	.06**	.15 ^a	.05	-.05	.04	.02	.05	-.03
Black percent 1986	.05	.05*	.07 ^a	.09	.04	.06	.20	.19**	.25 ^a
Hispanic FTE 1986	-.05	-.05**b	-.09	-.04	-.05	-.04	.03	.01	.02
Multiple R	.37			.37			.36		

NOTE: Betas are reported at the step where all student characteristics have been controlled.

^a Significant at final step; ^b significant but did not enter equation due to shared variance.

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

especially critical of their institution's commitment to creating a multicultural environment in 1989 (-.13). Chicanos who rated themselves highly on academic ability (-.11) in 1985 tend to report lower institutional commitment, regardless of institution type. In contrast, neither measure was related to perceptions of institutional commitment among white students. Perhaps it is because minorities entering college with high ability are more critical and aware of the contradictions in an institution that they see their campuses as less committed to diversity. Administrators at institutions may promise to hire more minority faculty, but explain there are no available candidates. Promises to increase recruitment efforts for minority students are also met with institutional decisions to adopt tougher admissions standards. The next phase of analyses will provide more information about the experiences of these students in relation to college outcomes.

Older black students and Chicanos who expected to become involved in community action programs during college judged their institutions favorably with regard to commitment to diversity (.12 and .13, respectively). White students who expected in 1985 to become involved in community action (.05), those who were interested in the goal of promoting racial understanding (.10), and those who rated themselves highly in social self-confidence as freshmen (.06) also believe the institution has a commitment to diversity. The majority of these student characteristics maintain a significant and unique effect on the dependent variable. Institutions should consider some of the freshman interests (e.g., participation in community action programs) common across racial groups as potential areas for activities that can strengthen both institutional commitment to diversity and improve student perceptions of the environment.

Both black and white students attending private-nonsectarian colleges report their institutions have an institutional commitment to diversity (.24 and .16, respectively). Results from the previous racial climate measure indicated that students also perceived

these environments to have better race relations. Institutional size is negatively associated with perceived institutional commitment among white students. Results from black and white students are similar in terms of other institutional types (negative relationships), with one exception: Black students at public four-year institutions tend to see their institutions as having made commitment to diversity a high priority (final step, .16), while white students at these institutions perceive them to be less committed to this goal (-.06). It is not clear why these groups should differ in their views, especially since public four-year colleges have tended to attract large numbers of black students. These differences clearly require further investigation.

Institutional selectivity is positively related to institutional commitment to diversity among white students, but not among minority students. What can account for this difference in student views? From the standpoint of some white students, they may feel that more than enough has been done for diversity at these institutions. On the other hand, minorities may feel that their perspectives continue to be systematically excluded from the curriculum, among the faculty, the student body, or other aspects of the institution. If racial tension among groups are high at selective institutions, as all students have reported, this tension may stem in part from these differences in student perception. These views among racial groups at the institution represent another potential area for research emerging from results on institutional type characteristics.

Across all groups, the separate analyses confirmed that institutions located in larger cities were perceived to place a low priority on diversity. A contributing factor to this perception among students is believed to be the relative differences in the ethnic make-up of two populations, "town" and "gown". Chicanos at institutions in the Midwest (-.13) and in the South (-.16) felt that their institutions placed the development of a multicultural environment as a low priority. Given that institutions in the Midwest

were also considered to have tense race relations, it may be that both Chicano and white students feel that such tension may have an institutional basis. Students feel that these institutions have little interest in creating a multicultural environment. However, a conflicting pattern of relations emerges for students in the South. White students in the South felt that their institutions lacked racial tension, while results here show that Chicanos attending institutions in the South feel that these institutions place a low priority on diversity. The lack of racial tension could be due to the continued segregation of higher education institutions in the South. While racial tension does not appear to be any greater than other campus locations, the small numbers of Chicanos attending institutions in this region perceive that these institutions have yet to make a substantial commitment to diversify the faculty and student body.

White students attending institutions that offer ethnic studies majors (.08) and freshmen residence on campus (.06) perceive these institutions as more committed to diversity. Institutions with higher campus expenditures per FTE in student services (.11), non-repayable student aid (.12), and instruction (.08) are also perceived by whites to have a high commitment to diversity. The effects of these campus expenditures largely disappear when the effects of private-nonsectarian institutions are controlled, indicating that these are positive characteristics typical to this type of institution.

Since the Institutional Commitment to Diversity factor is composed of several items, one of which serves as a measure of the extent to which institutions place a priority on minority recruitment, the diversity measures appear to validate this factor. The percentage of Hispanic students is positively associated with institutional commitment to diversity among all racial groups. Declining white enrollments and the percentage of black students are positively associated with institutional commitment in analyses of white and Chicano data. White students attending institutions with rapidly increasing

black enrollment from 1982-88 also tend to perceive diversity is a high institutional priority. However, the absolute number of Hispanics in 1986 is negatively associated with perceived institutional commitment to diversity among whites. These results differ somewhat from the results for Racial Tension. Institutional commitment to diversity appears to be more related to the proportion of Hispanics in an institution, positive growth in black enrollment, and declines in white enrollment rather than the absolute numbers of minorities according to separate group analyses shown in Table 5.4.

Summary of Effects Across Racial Climate Measures

Examining the correlates of two measures of the racial climate, Racial Tension on Campus and Institutional Commitment to Diversity, has helped define a portrait of the racial climate on college campuses. Student characteristics revealed aspects of the perceiver, while the structural characteristics of institutions identified contexts in which racial harmony or conflict takes place. A review of the results in relation to both climate measures is presented here.

Academic Achievement, Self-concept, and Socioeconomic status

High school GPA and academic self-concept are significantly related to both measures of the racial climate. Black students entering college with high GPAs and Chicanos with high academic self concept are less likely to perceive institutional commitment; white and Chicano students with high academic self concepts are more likely to perceive racial tension. Students with these characteristics may perceive their campuses to have tense racial climates because they attend institutions that are characterized by affluence and selective admissions policies. It may well be that high ability minority students and white students from highly educated families (indicated by mother's education) have high standards for creating a multicultural environment that

make them more likely to be critical of the environment. Thus, high ability students are perhaps more cynical and less inclined to accept institutional rhetoric on diversity.

Religion

Students with no religious affiliation were less inclined to think that their institutions were committed to diversity. Only Jewish students rated their institutions positively on institutional commitment, whereas white students and Catholic students were less likely to perceive racial tension. The effects of religious affiliation (or non-affiliation) suggest that religious beliefs may influence perceptions of the racial climate. Moreover, it appears that colleges with a religious affiliation (Catholic institutions) may actually have more positive racial climates, perhaps because religion provides a set of common values that are shared across groups.

Attitudes and Values

Freshmen attitudes were significantly related to institutional commitment and racial tension. These attitudes suggest that some student characteristics help form perceptions of the racial climate, perhaps pre-disposing students to view the climate in a negative or positive light. If a black student reported a liberal political view in 1985, he/she was likely to perceive racial tension on campus. Chicano and white students who reported, as entering freshmen, that they expected to become involved in campus protest were also likely to perceive racial tension. These same students also report less institutional commitment to diversity four years later, indicating they are generally more critical of the racial climate. In contrast, Chicano and white students who value participation in community action programs and white students interested in promoting racial understanding rated their institution high on commitment to diversity. The extent to which these attitudes are actually the cause of the racial climate on campus is still a matter

of speculation at this stage of research, especially since there is a strong selection effect operating in matters of college choice. It is not known if students prone to protest choose adverse environments, nor do we know if students committed to community and interracial goals are choosing colleges where they can pursue these interests.

Characteristics of a Positive Racial Climate

Several patterns of environmental variables were observed across both racial climate measures. As distinct conceptual measures, they can operate in a mutually reinforcing or contradictory fashion. Chapter 4 revealed that student perceptions of Racial Tension and Institutional Commitment to Diversity were negatively correlated, from -.20 (whites) to -.47 (blacks) depending on the racial group. Minorities' views of these two racial climate dimensions were more highly correlated than were white students' views. Therefore, it is more likely that these groups would view the measures as mutually reinforcing. Minority students may be more likely to interpret racial tension as stemming from a lack of institutional commitment, or it may be that minorities are more likely to view the climate in holistic terms. Regardless of the reason for this difference, a positive racial climate pattern would be an environment in which students perceived low racial tension and high institutional commitment.

Private-nonsectarian colleges represented the only institutional type that consistently showed both strong institutional commitment and low racial tension. Both black and white students attending these institutions reported such a pattern. Campus spending practices that favored student support in the form of student services and non-repayable student aid represent campus priorities and policies that were also related to both white and minority students' perceptions of a consistently positive racial climate. Less racial tension was also reported at Catholic institutions by all groups. Institutional

priorities for commitment to diversity are apparently reflected in practice and in the nature of social relations at campuses with these characteristics. Research conducted in the early 1970s, when minority enrollments were reaching a peak, suggested that racial policies changed more quickly at smaller institutions (Astin & Bayer, 1971). Research on the racial climate here shows evidence that institutional characteristics that also reflect a distinct student-orientation play an important role in bringing about a positive racial climate.

Conflict-Prone and Contradictory Environments

A second pattern was observed across the climate measures, reflecting high racial tension and low institutional commitment. Institutional size was associated with this consistently negative racial climate pattern in all racial groups. Several explanations have been suggested for these findings: The impersonality and the propensity of larger environments to have a greater representation of different types of students, belief systems, and competing institutional priorities. Thus, there are a variety of conditions in these large environments that make it particularly prone to student perceptions of low commitment and high racial tension.

Situations in which the racial climate measures operated in a contradictory fashion are of considerable interest. This pattern is one in which both high racial tension and high institutional commitment is detected by students. Changes in minority enrollments patterns over the last six years were perhaps the only measures that were associated with white *and* minority students perceptions of a paradoxical pattern of high commitment and high racial tension. This may be one of the stumbling blocks that institutions encounter when efforts are limited to improving the racial climate through increases minority enrollments. Without other institutional changes or attention to the psychological climate

on campus, these enrollment changes may result in racial tensions on campus. Since this finding has implications for the diversification of college campuses, this will be further discussed along with the theories regarding the impact of minority enrollment at the end of this chapter.

In general, white students were more likely than minorities to perceive a contradictory pattern of high institutional commitment and high racial tension in their college environments. This is consistent with the finding that the relationship (negative correlation) between the two racial climate measures is weaker among white students. For example, institutional selectivity was the strongest correlate of racial tension among all groups but only white students at these institutions tend to perceive a strong commitment to diversity. White students also tended to perceive high racial tension and high institutional commitment at institutions with the following characteristics: Colleges that were some distance from home; institutions that offered ethnic studies majors; institutions that had high instructional expenditures, a high percentage of black students, or had recently increased black enrollment. Given the relative increases in income disparities among groups and segregation in the schools, a white student's first exposure to different racial/ethnic cultures away from home can mean exposure to values and perspectives that challenge his/her own. These measures may represent exposure to people and perspectives with a completely different view of the world. They may contribute to white students' perception that their institution is considerably committed to diversity, relative to their experiences in environments prior to college, while also perceiving elements of racial tension on campus.

The combination of high commitment and high racial tension represents one of a variety of social situations that pose problems for campuses interested in improving the racial climate. As Peterson et al. found in the mid 1970s, even though many programs

were instituted to accommodate the changes in black enrollment, relations among groups or the psychological climate on campuses were characterized by hostility. These programs may constitute institutional commitment in the minds of white students, but they may have little bearing on their relations with minorities. Indeed, such programs or special attention from the institution for minorities, may generate resentment among some white students. This represents another possible situation: There may be high racial tension because white students feel too much has been done in the way of institutional commitment, and/or minority students feel that not enough has been done. The former situation reflects the backlash on affirmative action and cries of reverse discrimination that emerged during the beginning of the decade; the latter reflects the phenomenon of "rising expectations." Finally, it may also be that high commitment has been instituted precisely to counteract high racial tension, and that the two are recognized by white students as operating simultaneously. Minorities, on the other hand, may be inclined to believe that racial tensions reflect an inadequate level of institutional commitment to diversity. Since this paradoxical pattern may due to a number of alternative explanations, further research using a variety of methodologies may help clarify the processes actually involved in such contradictory patterns.

Location

Including the location of a college in these analyses was a way of extending some of the work conducted on the relationship between region, urbanization, and racial tolerance. Tuch (1987) confirmed prior research that found that urbanites and non-Southerners were more racially tolerant than their nonurban and Southern counterparts. While these findings may be true with regard to communities, the results were quite different for college campuses. Urbanites may have been more racially tolerant in Tuch's

study because cities have high proportions of minority groups today. The fact that these large minority populations are often not proportionally represented in the campus populations at four-year institutions was posited as a possible explanation for the finding that four-year institutions located in large cities are perceived as having a relatively weak campus commitment to diversity. Another result from these analyses further qualifies the Tuch study: White students attending institutions in the South reported less racial tension, but Chicanos reported less interest on the part of these institutions to make commitment to diversity a high priority. A plausible explanation for this combination of results is that the higher education institutions in this region are still racially segregated, with fewer minorities at the predominantly white institutions. Indeed, some of the Texas institutions involved in the *Adams* case have not met their target goals for diversifying their student bodies or faculty (Vera, 1989). Both the MALDEF and the NAACP are taking up these cases with renewed vigor.

Enrollment Characteristics and Theory

The results from tests of the various theories concerning the numerical representation of minorities are more complex than originally considered, but also more interesting. The data support each theory in one way or another, depending on the environmental measure, the direction of effects, and on the dependent variable. For example, the critical mass theory is supported primarily in situations related to racial tension and black students. Astin and Bayer (1971) found that the absolute numbers of black students, rather than the percentage, was related to campus protest and conflict. The current study shows that the absolute numbers of blacks in 1986 are a far more important factor in racial tension than black percentages across all groups. Hispanic FTE was also positively related to racial tension in the white student sample. These findings suggest

that it takes only a critical mass of minority students to raise a critique of institutional racial policies, as campus protest research shows. These actions may have contributed to perceptions of racial tension on campus.

Kanter's (1977) theory of proportions is partially supported by the results on institutional commitment rather than with results on racial tension. Kanter hypothesized that the proportions of socially and culturally different people are central to shaping the dynamics of interaction. The percentage of black students was negatively related to racial tension among the black and Chicano student groups, but the effects disappeared when type characteristics were controlled. Data on all three groups confirmed that the percentage of Hispanics students was negatively related to racial tension, but this effect also disappears with controls for college type. More support for Kantor's theory (1977) comes from the findings on institutional commitment. The percentages of black and Hispanic students were positively associated with institutional commitment to diversity across all groups, regardless of institution type. It follows that perceptions of institutional commitment are favorable in environments where the proportions of minorities are substantial. These perceptions may also be indicative of less tokenism in environments with a high proportion of minorities; minority students and faculty are less likely to be circumscribed to limited roles in such campus settings.

Rapid changes in undergraduate enrollments that result in declines in white enrollment and increases in minority enrollment had strong and consistent effects on racial tension. These results support Blalock's (1967) theory of discrimination and increasing minority numbers. At the same time, however, these same changes—declines in white enrollment and increases in black enrollment—are associated with high institutional commitment in the minds of white and Chicano students. This constitutes a paradox for institutions interested in improving racial climates. Do institutions run the

risk of greater racial tension by attempting to improve institutional commitment to diversity through increasing minority enrollments? These effects are disturbing since it indicates, as shown in earlier studies (Peterson et al., 1975), that predominantly white institutions may be relatively unprepared for some of the problems that may accompany changes in the composition of their student bodies—particularly in the wake of impending demographic changes.

While the causal relations here are still a matter of speculation, it is important to understand how these changes in minority enrollments contribute to racial tension on predominantly white campuses. Several scenarios are possible: Increases in minority enrollments bring students on campus that may call into question certain institutional policies and social practices. Since minorities first began entering higher education in significant numbers, they have been involved in struggles to make their institutions more responsive to their communities. Most types of institutions in American society have a history of exclusionary and racist (and sexist) policies, with educational institutions among them. External events over the last years have also contributed to the reversals in commitments to equal opportunity for low income and minority individuals (Chapter 1). Since our institutions of higher education are not immune to these societal changes, vestiges of racism may be called to life in institutions where there have been rapid increases in minority enrollments. In addition, other explanations have been offered by some theorists. Race relations theorists (Blalock, 1967) propose that the different racial groups are in competition for economic resources, while other theorists propose that it is really a competition among ideologies or world views, one more dominant than the other (Giroux, 1983). In both cases, these theories suggest that increases in minorities may provoke white fears that they are “losing ground” and, consequently, lead to racial tension.

Whether the effects of these enrollment changes represent competing ideologies, competition among the races for institutional resources, or a struggle against the vestiges of racism is still a matter of speculation. What is important is that these enrollment changes do not function alone. Results from other measures of the college environment suggest that it is a configuration of institutional conditions and contexts that can work with these enrollment changes to produce poor or harmonious racial climates. Several environmental characteristics have been identified that may make a difference in improving the climate (e.g., student-oriented priorities). The next chapter identifies additional factors that may be important to both the racial climate and student outcomes.

CHAPTER 6

EFFECTS OF THE RACIAL CLIMATE ON STUDENT OUTCOMES

Years of research on minority education have shown that students enter college differing considerably in their student backgrounds (inputs) and leave college perhaps equally variable in their educational outcomes (Astin, 1982; Durán, 1983; Sedlacek, 1987). Many believe that these inequalities in outcomes may be attributed, in part, to the adverse racial climates encountered by minority students in college. Such a conclusion is difficult to substantiate, however, given unequal student backgrounds and differential effects of various institutional types. Analyses described in this chapter address the central question regarding the relationship of racial climates to educational outcomes. Although similar institutional characteristics are related to Racial Tension and Institutional Commitment to Diversity across racial/ethnic groups (Chapter 5), these racial climate measures were expected to have distinct effects on educational outcomes for each group.

Results presented in this phase of analyses combine student background, racial climate, college type characteristics, and student experiences with educational outcomes in a single analytical model (see Chapter 4). In order to link what was learned in previous analyses, student perceptions of the climate that served as dependent variables in Chapter 5 (Racial Tension and Institutional Commitment to Diversity) were used as independent variables in these student outcomes analyses. Additional racial climate measures that served as independent variables included two additional perception measures ("Most faculty are sensitive the issues of minorities" and "Many courses include minority group perspectives"), student reports of race-relation behaviors, as well

as the diversity measures (enrollments). Thus, the racial climate was conceptualized as an environment made up of many elements that generally include: Relations among various campus groups (students, faculty, administrators) measured by student perceptions and student behaviors; student perceptions of institutional intent or commitment to diversity, and structural aspects that reflect institutional policies (offering ethnic studies courses or majors, diversity measures).

The results from these regressions addressed the final three hypotheses proposed in Chapter 4 regarding (a) the effects of the climate on outcomes, (b) the relative importance of distal and proximal environments as mediating variables, and (c) the effects of campus protest as a highly visible form of student resistance. Stepwise multiple regression was used to examine these hypotheses in an exploratory fashion on three academic and two affective outcome measures. These outcomes included: Academic self-concept (self-rating on academic ability), college grade point average (GPA), persistence, social self-concept, and commitment to helping promote racial understanding. Because multicollinearity among environmental measures occurs, beta coefficients for the racial climate measures were observed first after controlling for student background and again after controlling for other college environmental characteristics. These analyses were carried out with the total sample and replicated for each of the three ethnic groups. Significant betas of independent variables are generally reported in the text at the point just after all entering student characteristics are controlled, unless otherwise noted. Since results are reported across several regressions, institutional characteristics that reduce the effect of racial climate variables are referred to in the text with these data reported in the full regression tables in Appendix C.

Since prior student ability plays such a strong role in college academic achievement, regression analyses of academic outcomes were conducted in two ways,

once using all students and a second time with smaller samples using the SAT as an additional control variable. (The SAT was not available for all students). Coefficients with this control are not reported in the tables of separate group analyses because the SAT substantially reduced student sample sizes in regressions, and the majority of effects show a similar pattern of relationships with and without the SAT. Student samples were reduced by nearly one third for blacks and by more than one half for Chicano students in analyses with controls for the SAT. These differential patterns of missing SAT scores suggest that there are systematic differences in students' backgrounds and the types of colleges they attend. That is, students at less selective colleges (mostly Chicanos and their white classmates) tend to be differentially excluded from analyses with the SAT. Thus, reference is given to SAT analyses in this chapter to confirm results when there was doubt that high school GPA had adequately controlled for the effects of student ability prior to college entry. Regression results for the racial climate variables, using SAT as a control, are available in Table C.2 in Appendix C.

It should be noted at the outset that other variables related to student ability performed just about as well as standardized test scores in determining student academic outcomes. For example, in the overall group analysis of persistence, both parental income and high school grade point average had substantial shared variance with combined verbal and math SAT scores. As a consequence, SAT scores did not enter the regression equation. This indicates that parental income and high school GPA are equal or better predictors of timely degree attainment and persistence in college. Other educational researchers have reached similar conclusions about standardized test scores in studies on student retention (Astin, 1977) and college grades (Pace, 1985).

Overall, the SAT analyses confirmed the relationships between the racial climate measures and academic outcomes observed in the analyses without SAT scores.

Differences in the two sets of analyses were noted only in a few cases. Any differences that substantially altered interpretations of results are reported in the discussions that follow. While high school GPA remained the most important predictor of academic achievement, including SAT as a control altered the effects of some institutional type variables (i.e., selectivity) in the college GPA and academic self-concept analyses. These effects can be reviewed in the regression tables in Appendix C.

Table 6.1 shows the amount of variance explained in outcomes analyses for each of the student samples. The results from 23 regressions of five academic and social outcomes are shown according to the amount of variance explained by student background or input characteristics (I) and environmental characteristics (E). Several general points can be made about the current analyses of student outcomes that may impact racial climate results. First, the general pattern of results show that entering student characteristics account for a large proportion of the variance in academic and social measures that had pre- and post tests (i.e., academic self-concept, social self-concept, college grades, and Helping to Promote Racial Understanding). Pretests account for a substantial portion of the input contribution to the variance. These findings are consistent with research conducted at HERI on the absolute and relative change reported by students from the freshman to the second and fourth year in college on a wide range of outcomes (Astin, 1977; Hurtado, Astin, Korn, & Dey, 1989).

In contrast, environmental characteristics show more of a unique contribution to the variance in regressions of college student persistence. Environmental characteristics account for at least twice as much of the variance in the persistence measure as do student background characteristics for black and white students. These analyses imply that it is not so much the type of student who enters college but the college experience itself that can make a difference in student persistence. Analyses of the student goal,

Helping to Promote Racial Understanding, also show that the college experience may have much to do with change in student values of racial tolerance, particularly for Chicano and white students. These results will be further investigated at the end of this Chapter.

Table 6.1
Proportions of Variance in Five Student Outcomes Explained by Input and Environmental Variables

Student Outcomes (Dependent Variables)	Student Samples									
	Black		Chicano		White		All		All (with SAT)*	
	I	E	I	E	I	E	I	E	I	E
Academic self-concept	.25	.02	.25	.14	.31	.04	.34	.03	.39	.01
College grade point average	.18	.03	.15	.11	.24	.08	.29	.06	.33	.07
Persistence/Attained B.A.	.06	.14	.07	.05	.04	.08	.06	.13	.05	.07
Social self-concept	.40	.05	.32	.12	.36	.05	.37	.04		
Goal: Helping to promote racial understanding	.14	.11	.17	.28	.20	.20	.26	.18		

* Only 1,363 students had SAT scores, approximately 58 % of the sample used in other regression analyses.

I= Input or student background characteristics

E= College environmental characteristics

Group differences in these overall regression statistics suggested that separate group analyses should be a central focus of this chapter. Even though the sample sizes were nearly the same for the two minority groups, outcomes for Chicanos were consistently more determined by environmental characteristics (with the exception of persistence) than outcomes for the other student groups. When compared to results for the other groups, a better level of explained variance (20 %) was clearly achieved in the persistence analysis for black students. These initial differences among ethnic groups represent distinct research issues that merit close investigation.

The higher education literature contains a great deal written on the determinants of outcomes for students and has provided many clues regarding important student and

institutional characteristics related to cognitive and affective areas of student development (Astin 1977; Feldman & Newcomb, 1969; Pascarella, 1985). However, with the exception of the few studies reviewed in Chapter 2, relatively little is known about campus racial climates and their relationships to college student success. Therefore, less attention in this chapter will be devoted to personal and environmental variables typically described in the college impact literature in order to focus on the racial climate effects across groups. The sheer volume of analyses requires summary presentations for racial climate measures in the tables that accompany the text in this Chapter. Those interested in more details about student background characteristics and other environmental characteristics that are significantly related to each of the outcomes in this study may review full regression tables in Appendix C.

Since measures of the climate were taken at the same point in time as outcome measures, the causal conclusions involving the racial climate measures should be regarded with some caution. Those variables that were known to exist prior to a student's exposure to the environment include the 1985 pretest measures, background characteristics, and all institutional characteristics (including diversity measures). The conclusions regarding the possible effects of these variables can be drawn with somewhat greater confidence. These precollege independent variables were entered first in separate blocks in the regression equation. The temporal priority of the remaining variables, however, is less clear. Student perceptions, race-relation behaviors, and other college experiences were entered (respectively) in the equation to determine which variables in each category were significantly related to each outcome. I shall offer tentative speculation into possible causal relationships, involving these latter variables, that can be tested in future research.

Academic Achievement and the Racial Climate

Student Perceptions

While the effect sizes of student perceptions of the racial climate are generally small, it is unlikely that they can be attributable to chance. Given the number of replications of the regression models (9) and the number of racial climate perceptions (4), one would expect to find only about two relationships to reach significance ($p = <.05$) by chance. Table 6.2 shows that eight of the 36 relationships are actually significant after inputs were controlled, and five of these relationships remain significant at the final step of the equations.

The specific results involving student perceptions of the racial climate, however, suggest complexities that may appear initially counterintuitive, until one considers them within the framework of prior research and theories proposed for this study. Perhaps the most salient finding is that student perceptions of racial tension on campus are positively associated with high academic self-concept among black students (.10), and positively associated with persistence among Chicano students (.14) (see Table 6.2). The evidence suggests that neither white nor minority students are negatively affected by racial tension; indeed, racial tension is positively associated with certain academic outcomes among blacks and Chicanos. These data do not appear to confirm some of the popular assumptions regarding the negative effects of racial tension on educational outcomes.

Several explanations that might account for these results have been suggested by previous studies. First, desegregation studies in the mid 1970s revealed that students in a peaceably integrated school demonstrated lower self-esteem than did students in a *de facto* segregated school or a school where hostility accompanied integration (Meketon cited in Katz, 1976). Meketon proposed that support in the black community for students

in the more racially tense environment enhanced (or maintained) student self-esteem. It is quite possible that college students receive similar support from family, peers, ethnic student organizations, and sympathetic counselors in some of the more tense environments. Although tentative support for such an interpretation is suggested by results on student involvement, the existence of a supportive network in adverse climates is a tenable explanation that would need to be empirically examined in future research studies.

Other studies present alternative explanations for the effects of racial tension observed here. One study concluded that successful Latino students develop “strategies” throughout their schooling that allow them to function in what they perceive as adverse environments (Walsh, 1987). Since in higher education we are essentially looking at students who have “made it” in the educational system, there may be some truth in the fact that students who develop such “survival” skills at an early stage can be successful academically. Similarly, studies of minority student retention have shown that an understanding of racism is significantly related to persistence up to the eighth semester or late in a student’s college career (Sedlacek 1987; Tracey & Sedlacek, 1985).¹ This evidence suggests that the minority student response to the racial climate, at least for some students, is not one of resignation but of resistance.

A more recent research example, the study on minority graduate students conducted as a pilot project for this study, revealed a similar effect of tense campus race relations using a similar construct (See Appendix B). Tense race relations among faculty, students, and administrators in the student’s graduate school appeared to have a

¹ It may well be that student perceptions of the racial climate were found to have a positive effect on outcomes in these studies, but the authors neglect to report the direction of effects in most cases. Their interpretation of results, however, suggest that an understanding of racism reflects a hostile climate and positive outcome pattern.

Table 6.2

Racial Climate Effects on Student Academic Achievement, Pearson Correlation and Standardized Regression Coefficients by Outcome and Race

Climate Measures	Academic self-concept						College GPA						Persistence/Degree Attainment					
	Black			Chicano			Black			Chicano			Black			Chicano		
	r	β	r	r	β	r	r	β	r	r	β	r	r	β	r	r	β	r
<i>Student Perceptions</i>																		
Racial Tension	.15	.10*	.06	.01	.09	.00	.06	.03	.07	.07	.05	-.03	.08	.05	.13	.14#a	.00	-.02
Institutional Commitment	-.06	-.04	-.01	.05	.03	.02	-.11	-.06	-.11	-.10 ^a	.05	.04	-.04	-.01	-.05	-.04	.04	.03
Minority perspectives in courses	-.15	-.13#a	.01	.00	.03	.04	.02	.02	-.05	-.06	-.02	-.02 ^a	-.07	-.04	.01	.00	-.01	-.00
Faculty sensitivity to min. issues	-.03	-.01	.04	.05	.05	.06#	.04	-.05	.01	.02	.06	.07#a	.08	.12*	.03	.01	.04	.04
<i>Student Behaviors</i>																		
Participated in campus protests	.14	.13#a	.18	.12#	.08	.02	.12	.06	.06	.06	.07	.02	.23	.19#	.07	.05	.08	.05*
Discussed racial/ethnic issues	.17	.09	.09	.08	.13	.07#	.14	.08	.11	.08	.12	.07#	.15	.12*	.09	.08	.06	.05*
Socialized with other races	.06	-.01	.07	.06	.10	.06#	.03	.00	.09	.05	.08	.04	.18	.17#	.05	.03	.10	.07#
Attended awareness workshop	.03	-.01	.09	.07	.06	.02	.05	-.01	.16	.14#	.09	.04	.11	.08	.14	.13#	.07	.09#
Took an ethnic studies course	.04	.04	-.03	.01	.00	.01	.06	.05	.11	.10*	.03	.01	.06	.05	.01	.01	.10	.07#a
<i>Diversity Measures (Distal)</i>																		
White enrollment growth	.02	.07	-.10	-.06	-.12	-.03	.01	.03	-.05	-.03	-.08	.00	.02	.07	-.01	.00	-.06	-.03 ^a
Black percentage in 1986	.01	-.01	-.02	.05	.05	.04	.03	.03	-.06	-.05	.03	.02	-.08	-.09	-.03	.00	-.05	-.05 ^a
Hispanic percentage in 1986	.08	.03	-.23	-.04	-.00	-.01	.03	-.01	-.17	-.13*	.07	.05 ^a	.01	-.01	-.11	-.07	-.07	-.07#a
Black FTE in 1986	-.06	-.08	.09	-.00	.01	-.04	-.06	-.03	-.00	-.02	-.04	-.07#	-.11	-.09	.04	.03	-.07	-.08#
Hispanic FTE in 1986	.01	-.05	.00	-.05	-.02	-.09#	.01	.00	-.03	-.04	-.01	.06#	-.11	-.11	.03	.03	-.09	-.12#
Black enrollment growth	-.07	-.07	.08	.01	.03	-.06#	.02	.03	.03	.01	.03	-.04	-.17	-.16#	.05	.04	-.04	-.06#
Hispanic enrollment growth	-.02	-.07	.04	-.02	.00	-.07#	-.00	-.01	-.00	-.01	.01	-.06#	-.11	-.11	.04	.04	-.07	-.10#
Sample Size	297		319		1,722		305		318		1,726		305		320		1,734	

Notes: Other variables related to academic achievement are not shown in this table. See Appendix C for summary of effects. r = simple correlation; β = standardized regression coefficient after controlling for student characteristics. ^aVariable remained significant at final step; * $p < .05$, # $p < .01$.

positive effect on academic self-concept for minority graduate students (Hurtado, 1989). At the time of the study, several alternative explanations for this finding were offered which can be empirically examined here. It was suggested that the minorities who developed the highest academic self-concept (and perhaps abilities) were located in the most alienating environments—predominantly white, elite institutions. Since high ability students were shown to be more critical of the racial climate than students of lesser ability (Chapter 5), we might expect a positive relationship between ability and racial tension. The data reveal some element of truth to this explanation.

Controlling for student ability and institutional characteristics generally appears to weaken the positive effect of racial tension on academic outcomes, however, these other variables cannot be entirely supported as rival explanations. Controls for prior academic self-concept reduce the effect of racial tension on 1989 academic self-concept, and the length of time a student lived on campus accounts for the remainder of the effect among blacks. (The beta becomes nonsignificant, see Table C.4). This result suggests that it is not racial tension per se, but rather living on campus that may positively affect academic self-concept. Such a conclusion is consistent with Astin (1977), who found that the student residential experience was positively associated with most educational outcomes.

In contrast, neither prior student ability nor living on campus could account for the positive effects of racial tension on persistence among Chicano students. Moreover, analyses conducted with controls for the SAT show that the effects of racial tension remain significant, both for academic self-concept among black students and for persistence among Chicano students. Since student ability and environmental effects are closely linked in the measure of institutional selectivity, this variable was entered (forced) as a control in the persistence equation to further test the results for Chicanos. Institutional selectivity reduced the effect of the racial tension coefficient on persistence

from .14 to .09. This examination of the minority student data suggests that students who enter college with higher abilities, live on campus, and attend selective institutions, have higher academic self-concepts and persist in college. However, since these campus environments were also judged to have tense race relations, these results suggest that student perceptions of racial tension do not appear to interfere with the academic self-concept or persistence among white or minority students.

Additional results show a general pattern suggesting that favorable academic outcomes (high academic self-concepts, high college grades, and persistence) are associated with perceptions of a poor racial climate. For example, perceptions of institutional commitment to diversity are negatively associated with college grades among Chicano students. Once the number of hours spent studying per week is controlled, the negative effect of institutional commitment to diversity on college grades becomes even stronger, increasing from -.10 to -.14 at the final step. Similarly, black students' academic self-concept (-.13) and the college GPAs of white students (final step, -.06) are negatively associated with the perception that many courses at their college include minority perspectives. (The effect of the latter variable on college grades for white students was initially suppressed by perceptions regarding faculty sensitivity to minority issues). While these findings could be taken to mean that certain positive outcomes are enhanced by an adverse racial climate, the ambiguity regarding causation mentioned at the beginning of this chapter may suggest that the direction of causation has been reversed. Thus, these results might be an indication that students are more critical of the institution because many predominantly white institutions have been slow to change. These institutions still have very few minority faculty, and they have yet to create sufficient faculty interest in integrating minority and women's perspectives into the curriculum. It may be that students who are more secure academically (by their own

standards and standards of the institution) are more attuned to these issues, and perhaps they are also more critical of their institution than students who are doubtful about their own academic ability and future at an institution.

One of the basic premises that was set forth at the beginning of this study was that there is a residue of racism that remains in our institutions of higher education (Chapter 2). Racist ideology has resurfaced in the last decade, not only in educational institutions but also in urban communities. The racial climate constitutes an environmental context and a process whereby this ideology is mediated. It is a context that reflects how racial issues are resolved on a campus—through social relations among various groups, institutional intent, and among competing ideologies or perspectives. Data here suggest that students serve as critical observers of this mediation of racial issues reflected in social relations, curriculum, and institutional practices. The degree to which they are able to remain critical may, in part, contribute to their academic success. That is, adverse racial climates may stimulate students to unite and become involved in activities to change the institution, as evidenced by recent student protests on college campuses (Vellela, 1988). As one student said in a campus racial climate report, “As a Black student, you had to *unite*, be willing to help and be helped” (McBay, 1986).

College administrators may often face the dilemma of having to deal with certain unintended side effects of their racial climate policies. That is, the slow movement toward improving the environment for multicultural learning at predominantly white institutions has elicited a variety of student responses to the racial climate. A degree of racial tension may serve to promote better educational outcomes among those who choose to engage in some type of resistance behavior. These might include participation in ethnic group activities, student protest, and initiation of alternative student clubs or newspapers to represent their perspectives. These may be the activities that, initiated in

response to the racial climate, facilitate student success. (If the racial climate is favorable, it is unlikely that these students will find cause to develop alternative activities to represent their perspectives). Although these student responses may counteract the effects of a poor racial climate, these results should not be taken mean that responsibility for change and adaptation rests solely with the student. Nor should these results be taken as a recommendation to abandon institutional commitments to diversity, or to increase racial tension. Both of these actions would run counter to current practice and the values of many of the participants in higher education. Instead, it is important for college administrators to recognize the many avenues that students use toward successful academic outcomes. These mechanisms of student response are discussed further in the results for student race-related behaviors.

Not all measures of student perceptions of the racial climate have uniform effects on educational outcomes for students. In particular, results on one measure in academic outcomes analyses differs from the general pattern described thus far. Students who perceive that most faculty at their institution are sensitive to the issues of minorities show better academic outcomes. This is shown in the case of college GPA (.07) and academic self-concept (.06) for white students, and persistence among black students (.12). The latter effects were weakened by student reports of having been a guest in a professor's home (white students) and attending a nonsectarian institution (black students). These results suggest that faculty who are more sensitive to the issues of minorities may also tend to be more student-oriented and that, consequently, these attitudes translate into better academic outcomes for students. Indeed, the higher education literature indicates that faculty-student interaction is key to better educational outcomes (Astin, 1977; Astin, 1988; Pascarella, 1980). This exception to the pattern observed with other perception measures may be indicative of the centrality of faculty to student academic achievement.

The evidence on student perceptions of faculty sensitivity reaffirms the importance of campus activities to improve faculty attitudes regarding minority issues, recruit minority faculty, and most importantly, improve overall student-faculty contact on campus.

Student Race-related Behaviors

Although the causal relations are tentative, if we assume that student perceptions of poor racial climates actually leads to improved retention and academic self-concept, we still do not know *why* or *how* this occurs. Are students more complacent in a favorable racial climate? Does a poor racial climate spur some interactions on campus that relate to better student outcomes? Examining the social interaction or race-related behaviors may provide some clues in answering such questions, since these proximal measures were expected to mediate the effects of the student perceptions of the racial climate on student outcomes.

The one activity that is positively associated with academic self-concept among minorities is student participation in campus protest and demonstrations. For white students, prior academic ability accounts for most of this variable's positive relationship with academic achievement (college GPA). However, for black and Chicano students, participating in campus protests remains positively associated ($p < .01$) with academic self-concept regardless of controls for ability (.13, and .12, respectively). Participation in campus protest maintained unique effects with academic self-concept regardless of the type of institution attended for blacks (.13) in the large sample, but not in analyses in which SAT was controlled. For Chicanos, however, controlling for the SAT did not diminish the positive effects of participating in campus protest (.28) (Table C.2). Moreover, participating in campus protest turns out to be the strongest racial climate correlate of persistence among black students (.26), even after controlling for the SAT.

Blacks and Chicanos have a history of resistance to domination and racism in their communities (Estrada et al., 1985; Branch, 1988). The importance of what Martin Luther King called "direct action" as a mode of acquiring fundamental privileges, and achieving recognition for these groups, was demonstrated most clearly during the civil rights movement (Branch, 1988). Results here show that involvement in campus protest carries with it a better sense of self among minority students and bears a positive relationship with persistence in college for black students. It may well be that participation in protest today serves as an effective defense against potentially inhospitable racial climates. Protest is a form of collective resistance (Giroux, 1983) that appears to be empowering for students—the institution becomes theirs and they reaffirm their importance in relationship to the institution. This may also be a clue as to how an adverse racial climate may unintentionally produce positive effects. That is, a possible causal order may be: Conflict (racial tension) spurs activism or resistance, which creates student involvement and mutual support from peers that, in turn, leads to better academic outcomes. This preliminary causal model can be tested in future research.

Students who frequently discussed racial/ethnic issues also tended to have better academic outcomes. The coefficients after controlling for student input characteristics are significant on all three outcomes for white students. Even though the coefficients reach statistical significance only in the case of persistence for black students, the absolute size of the two nonsignificant coefficients for blacks is actually larger than the parallel coefficients for white students. The coefficients for Chicanos, just failing to reach significance, were also greater in absolute size than the white students' coefficients. This suggests that perhaps with larger samples, the coefficients for discussion of racial/ethnic issues might well be significant for all groups on all academic outcome measures. Both participation in campus protest and discussion of racial issues suggest two activities that

students engage in as a response to an adverse climate. They are involved in a dialogue with other students, faculty, and the administration, and learn to work out solutions among themselves. Frequent discussion of racial issues appears to be more prevalent in the private nonsectarian and residential colleges, as evidenced by a reduction in the size of the betas when these institutional characteristics are controlled. (See full regression tables in Appendix C).

Data suggest that residential environments are related to interracial interactions that lead to better outcomes. The frequency with which black students socialize with someone of a different racial/ethnic group is positively associated with their persistence in college (.17). Controlling for living on campus weakens this effect, suggesting that black student persistence is facilitated by students' becoming socially and racially integrated in a residential campus environment. While this supports both Tinto's theory (1975) of social integration and Astin's (1984) theory of student involvement, this finding adds the important dimension of interracial contact (Allport, 1954) that has been omitted from most studies of student departure. In addition, white students who frequently socialized with someone from another racial/ethnic group tend to be more academically self-confident (.06) and tend to persist in college (.07). The latter effect was also diminished when living on campus was controlled. These results suggest that interracial contact, facilitated by the residential experience, has positive academic results for students.

Attending a racial awareness workshop is positively associated with Chicano students' grade point averages (.14) and persistence in college (.13). Although this activity is not significantly diminished by controls for ability, it is more likely to occur in selective institutions and residential colleges (indicated by beta changes). One of the ambiguities about the causal order of these variables is that we do not know if the

academically successful students actually initiated this activity, whether the workshops promote perceptions of racial tension, or if racially tense environments cause college administrators to initiate race awareness workshops. For example, the coefficient for attending a racial awareness workshop in relation to Chicano student persistence is diminished by controlling for racial tension and living on campus. This means that Chicanos are more likely to attend a racial awareness workshop if they live on campus and perceive racial tension in the environment. However, there are multiple possibilities for causal ordering of these variables: Did Chicano students on campus initiate these workshops in response to racial tension? Is persistence in college enhanced by racial tension, attending a workshop, or both? Did attending a race awareness workshop make Chicanos perceive there was more racial tension? The only way to resolve these questions within a particular institutional context is to have behaviors measured in at least three time points so that student perceptions of racial tension could be determined immediately prior to their participation in a workshop, and workshop participation could be assessed before any students drop out of college. Without these additional measures, generally speaking, the sequence that is most likely to occur is that awareness workshops are initiated in response to some racial tension on campus, and student persistence is both a product and a necessary precondition of attending such a workshop.

In any case, attending a racial awareness workshop is associated with positive outcomes for other students. White students who have attended a racial awareness workshop are also more likely to persist in college (.09) than students who did not attend. Once enrolling in an ethnic studies course was controlled, this effect became nonsignificant. This suggests that white students who attend racial awareness workshops are also likely to have taken courses in ethnic studies. Both activities are indicators of being open to learning about racial/ethnic issues. Other results from the

data show that taking an ethnic studies course is positively associated with persistence for white students (.07). As stated earlier, it may be that persistence in college is a necessary precondition for participation in all these student race relation behaviors. That is, the longer students stay in college, the more likely they are to participate in these interracial activities. If this is the case, these findings support the notion that the college environment is an important arena in which students learn to understand and deal with people from other cultures and perspectives.

Diversity Measures

Since it may be that diversity measures are serving as proxies for institutional types at the stage where all student characteristics are controlled, betas were reviewed at the end of the block after institutional characteristics were controlled. Diversity measures maintained significant relationships with academic outcomes in two general cases. In analyses with SAT controls, black enrollment growth is positively associated with college GPA for black students (.13). Thus, in colleges that required the SAT and had increasing black enrollments, black students received higher grades. Although the causal connections here are unclear, it could be that increasing black enrollments is a general measure of institutional programmatic support and commitment that have resulted in better overall achievement among black students. These minority enrollment changes in relationship to academic achievement require further investigation.

In the case of the white student sample, a curious pattern emerged: The percentage of Hispanics in the student body is positively associated with college grades for white students (.05), but is negatively associated with persistence (-.05). This means that white students were earning better grades at institutions with a high percentage of Hispanics, yet they were also more likely to leave such institutions. It may be that white

students initially attend institutions that have large Hispanic enrollments as a stepping stone, improving their grades before transferring to another institution. The percentage of black students is negatively associated with white student persistence ($-.07$), regardless of institution type. Other minority enrollment measures are also negatively associated with persistence among white students, but since size and selectivity can account for the effects of these measures, it suggests that large and less selective institutions (where many minorities are located) may have poor overall retention rates. Still, it is not clear why white students leave institutions with high percentages of black and Hispanic students. Could this indicate a "white flight" or a migration pattern? This potential student migration and demographic pattern provides a substantial area for continuing research on minority enrollments and student outcomes.

Regression results for the other diversity measures (Hispanic FTE, percentages, and black and Hispanic enrollment growth) suggest that other environmental variables primarily account for their negative effects on academic outcomes for minority students. These results suggest that large minority enrollments are in institutions that are less selective, public universities, and institutions where students are less likely to live on campus. Each of these institutional characteristics has been identified as being associated with poor academic outcomes in the research literature (Astin, 1977). This result also refers to the possible ethnic stratification of the system of higher education (Astin, 1982; Verdugo, 1986), where minorities are concentrated at the institutions with the least resources and where they are least likely to emerge with positive student outcomes. Thus, it is not so much a function of the diversity of the student body, than of general institutional conditions that account for these negative outcomes.

Affective Outcomes

Student Perceptions

Table 6.3 shows the effects of the racial climate on two affective outcomes, social self-concept and student interest in helping to promote racial understanding. An interesting pattern emerged from analyses of affective outcomes that was unexpected, but can be logically explained. Two negatively correlated dimensions of the perceived racial climate, Racial Tension and Institutional Commitment to Diversity, can work to produce the positive effects on the same outcome. Across all groups, racial tension is positively associated with increases in the student's interest in helping to promote racial understanding. It may be that such tension or conflict may encourage students to reflect on racial issues, or motivate them to develop their views on racial issues. This is supported by the fact that, in all student samples, the effect of racial tension is weakened by controlling for discussion of racial/ethnic issues. Racial tension may be working indirectly, provoking discussion on racial/ethnic issues and related activities that heighten a student's sense of the need for racial understanding. At the same time, institutional commitment to diversity is associated with increases in student goal commitment to helping to promote racial understanding for Chicano (.14) and white students (.07). Thus, what initially appears to be a paradoxical finding, two negatively related measures of the climate producing positive results on the same outcome, can be explained by the effects of some of the mediating behavior variables. These inroads in increasing commitment to promote racial understanding in individuals may eventually result in collective efforts to socially construct better racial climates.

Commitments on the part of the institution are also associated with student development of social self-concept during the college years. Although these coefficients

Table 6.3

Racial Climate Effects on Student Affective Outcomes, Pearson Correlations and Standardized Regression Coefficients by Outcome and Race

Climate Measures	Social self-concept				Racial Understanding			
	Black	Chicano	White		Black	Chicano	White	
	<i>r</i>	<i>β</i>	<i>r</i>	<i>β</i>	<i>r</i>	<i>β</i>	<i>r</i>	<i>β</i>
<i>Student Perceptions</i>								
Racial Tension	-.03	-.04	-.02	-.06	.00	-.04 ^a	.13	.11 [#]
Institutional Commitment	.09	.07	.10	.12 [#]	.12	.08 ^a	-.00	-.01
Faculty sensitivity to min. issues	.01	.06	.03	.06	.06	.06 [#]	-.05	-.01
Minority perspectives in courses	-.06	-.01	.03	.03	.06	.03	-.15	-.10
<i>Student Behaviors</i>								
Took an ethnic studies course	.13	.09	.03	.02	.03	.02	.17	.12 [#]
Attended awareness workshop	.19	.12 [#]	.11	.08	.10	.07 [#]	.29	.22 ^a
Discussed racial/ethnic issues	.20	.11 [*]	.07	.06	.06	.02	.37	.31 ^a
Participated in campus protests	.12	.09	.09	.09	.06	.01	.25	.19 [#]
Socialized with other races	.17	.07	.19	.16 ^a	.12	.08 ^a	.11	.09
<i>Diversity Measures (Distal)</i>								
White enrollment growth	.00	.01	-.07	-.01	-.03	-.02	.04	.05
Black percentage in 1986	.06	.03	-.07	.03	-.00	-.00	-.05	-.04
Hispanic percentage in 1986	-.02	-.06	-.11	.00	-.00	-.00	-.03	-.02
Black FTE in 1986	-.11	-.07	.05	-.04	-.00	-.03	-.11	-.08
Hispanic FTE in 1986	-.14	-.11 [*]	-.02	-.05	-.02	-.03	-.05	-.02
Black enrollment growth	-.10	-.06	.02	-.03	-.01	-.01	.02	-.02
Hispanic enrollment growth	-.13	-.10 [*]	.00	-.04	.00	-.03	-.07	.04
Sample Size	300	319	1,725	304	320	1,731		

Notes: Other variables related to affective outcomes are not shown in this table. See Appendix C for summary of effects. *r* = simple correlation; *β* = standardized regression coefficient after controlling for student characteristics. ^aVariable remained significant at final step; * *p* < .05, # *p* < .01.

reach significance for only Chicano (.12) and white students (.08), institutional commitment to diversity is positively associated with social self-concept for all three racial groups. In related results, white students who perceive that most faculty at their institution are sensitive to the issues of minorities increase their social self-concept and their interest in helping to promote racial understanding (.07). Since the two perceptions are highly related, controlling for Institutional Commitment to Diversity weakens the effect of student perceptions of faculty. This could indicate that institutions that have a clear commitment to diversity and faculty who communicate these values to students are creating a more culturally-sensitive student body at predominantly white institutions. (See Tables C.12, C.15, for changes in coefficients).

Student Race-related Behaviors

All student behaviors are positively associated with affective outcomes, showing especially strong effects on commitment to helping to promote racial understanding. The results demonstrate that these student behaviors were more important to affective outcomes than student perceptions of the climate. Students who reported frequently socializing with someone from another race/ethnic group are more committed to the goal of helping to promote racial understanding (Chicano, .25; white, .22) and have higher self-concepts (Chicano, .16; white, .08) four years after college entry. Although this pattern appears to be true for black students, much of the effect is attributed to these students' levels of social self-concept and commitment to promoting racial understanding as entering freshman. It should be noted that while social self-concept served as the dependent variable in these analyses, and its connection with interracial contact has been demonstrated, it is difficult to say whether a lower social self-concept is a product of avoiding opportunities to socialize with someone from another racial group.

It may also be that the social insecurities of students decrease their chances of interracial contact. Both these relationships are possibilities in the strange mix of sources and effects of racial climates on campus. Results based on these and other race-related behavior measures suggest that having a positive social self-concept is not only a product of a positive racial climate, but perhaps a factor that affects a student's inclination to interact with other races. This would be congruent with Allen's (1988) hypothesis that states that a sense of interpersonal accomplishment is important to student involvement.

Among black students, the activity of discussing racial/ethnic issues is positively associated with social self-concept (.11) and helping to promote racial understanding (.31). Although the effect on racial understanding remains strong throughout the regression, the effect on self-concept is weakened by controlling for attendance at a racial awareness workshop and participation in student clubs and organizations. It may be that black students' social self-concept is enhanced by activities that may be important to a collective ethnic identity. Ethnic student organizations have long been a source of group support and collective action since minorities first began entering higher education in significant numbers. While there is no independent measure of participation in an ethnic student organization in this study, this cluster of variables (discussion of racial issues, participation in student organizations) may be serving as a proxy for this form of involvement. Further research on student participation on ethnic student organizations would be necessary to verify this interpretation.

Discussion of racial issues has a strong positive relationship with student commitment to promoting racial understanding among all groups. Controlling for discussion of racial/ethnic issues weakens the effects of most other behavioral variables including: enrolled in a ethnic studies course, participated in campus protest, attended a racial awareness workshop, and student perception of faculty sensitivity to the issues of

minorities. In all likelihood, discussion is a key element in each of these activities that heightens awareness and enhances understanding among groups, not unlike the consciousness-raising activities that have helped change people's beliefs about the role of women in society.

Perhaps more importantly, the fact that controlling for discussion of racial/ethnic issues weakens the positive effect of racial tension on promoting racial understanding confirms the notion that racial tension may provoke some intermediate activity that can lead to positive outcomes. Campus discussion on racial issues, which is associated with all the student race-related behaviors, may be the mediating force that strengthens student commitment to promoting racial understanding. Conflict is turned into dialogue, self-examination, and heightened awareness regarding racial issues. Discussions of racial issues may be a primary mode by which students increase their understanding of other racial/ethnic groups. This is further evidenced by the fact that attending a racial awareness workshop is associated with increases in student goal commitment to promote racial understanding (black .22, white .25). In addition, attending a racial awareness workshop had its own effect independent of discussion of racial issues on increases in black and white students' social self-concept (.12, .07, respectively). Given the large size of the white student sample, the positive effects on commitment to promoting racial understanding attributed to all the student race-related behaviors are quite remarkable. This suggests that each of these activities is important in improving white students' commitment to promoting racial understanding.

Finally, an important finding regarding ethnic studies courses should be mentioned here. Generally, the idea has been that students who enroll in ethnic studies courses are already interested in such issues. In scientific terms, a "selection effect" argument was often used to counter student and faculty arguments that such courses

could improve racial awareness and cultural understanding. Since student predisposition was taken into account by controlling for the 1985 pretest and other input variables, results here seem to counter the selection effect argument. Enrolling in an ethnic studies course maintains a significant positive effect on student commitment to promoting racial understanding. Indeed, among both Chicano (.31) and white students (.22), the effect remains significant even after controlling for student background characteristics *and* the type of institution attended. Given the large number of control variables (24) and the large number of campuses (116), these results provide substantial support for the value of ethnic studies courses in the curriculum. (See also Table 6.4 for regression results for the total group).

Diversity Measures

The minority enrollment variables show no significant unique effects on affective outcomes after controlling for student and institutional characteristics. The negative effects of Hispanic enrollments on social self-concept for black students are accounted for by institutional size. That is, black students in large institutions report lower social self-concept, not so much because of the ethnic enrollment, but because of the large institutional environment where such enrollments are most likely. Controls for living on campus, frequent discussion on racial issues, and attending a private nonsectarian institution diminished the negative effect of black student enrollments on affective outcomes in a similar manner for black and white students.

Proximal versus Distal Measures of the Environment: Helping to Promote Racial Understanding

To illustrate the relationships and effects of proximal as opposed to distal measures of the environment, Table 6.4 shows the total group regression for the

Table 6.4

Determinants of Student Commitment to Helping to Promote Racial Understanding

Variable ²	Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Promote understanding	1	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44	.44
Black student	2	.47	.30	.18	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20
Female student	3	.48	.12	.09	.09	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
Chicano student	4	.49	.08	.05	.10	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11
Mother's education	5	.49	.02	.02	.03	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Participate in protests	6	.50	.22	.09	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08
Political view (1985)	7	.50	.19	.10	.07	.07	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
Social self-confidence	8	.51	.07	.05	.05	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Degree aspiration (1985)	9	.51	.09	.06	.04	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
Selectivity (SAT V + M)	10	.52	.14	.10	.09	.09	.07	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
Nonsectarian college	11	.52	.13	.09	.07	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Public college	12	.52	.07	.07	.05	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Institutional size	13	.52	.12	.06	.06	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Eastern college	14	.52	.07	.03	.01	.04	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Ethnic studies majors	15	.52	.01	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
Growth Black FTE	16	.52	.05	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Racial tension	17	.53	.21	.15	.10	.08	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
Inst. comnt to diversity	18	.54	.11	.09	.10	.10	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09
Discussed racial issues	19	.62	.49	.41	.38	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
Participated in protests	20	.64	.34	.27	.24	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23
Interacted w/other races	21	.65	.31	.24	.21	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20
Took ethnic studies crs.	22	.65	.35	.27	.22	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21	.21
Attend racial workshop	23	.66	.40	.30	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Member of frat/sorority	24	.66	.11	.08	.08	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
Hours talked w/faculty	25	.66	.18	.15	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13	.13

NOTE: Decimals omitted from Beta coefficients.

^a Reported Betas on variables prior to and subsequent to entrance into the equation at each step after 9, the step in which all student characteristics are controlled.

outcome, commitment to promoting racial understanding. Distal characteristics of institutions and the different types of social interaction on campus are featured here, since it is by understanding the effects of these measures that institutions will be in a better position to increase racial understanding at the level of the individual student, and thereby improve their campus racial climate.

In the case of this particular outcome, the proximal measures have the strongest effects. Distal measures of the environment—institutional selectivity, private-nonsectarian control, public four-year college, institutional size, location in the east, and offering an ethnic studies major—account for less than 2 % of the variance in the dependent variable. In contrast, proximal measures of the environment account for 18 % of the variance, leaving student background characteristics (particularly the pretest) to account for 26 %. These results are especially significant, since distal characteristics were given priority over proximal measures in the regression blocks (after student background). Many of the proximal social interaction variables also maintain significant betas at the final step. For example, discussion of racial/ethnic issues maintains the strongest weight in the equation (.25), rivaling the pretest for its effects on the dependent variable (.23). This constitutes powerful evidence that frequent discussion of racial/ethnic issues within the college environment can help to promote racial understanding and tolerance.

All measures of student race-related behavior are positively associated with helping to promote racial understanding. Many of these variables were identified as having positive direct effects on other academic and affective student outcomes reviewed earlier. In order of importance, these variables include: Frequently discussed racial/ethnic issues (.38), attended a race awareness workshop (.25), participated in campus protests or demonstrations (.24), took an ethnic studies course (.22), and frequently socialized

with someone of another race/ethnic group (.21). Two of these measures, participation in racial awareness workshops and ethnic studies courses, reflect activities that can be initiated by campus administrators as a steps toward promoting racial awareness and understanding.

It is noteworthy that the effect of racial tension on helping to promote racial understanding is weakened substantially by controlling for discussing racial issues and participating in campus protests. This result suggests that racial tension may primarily work *indirectly* to produce increases in student commitment to promoting racial understanding. In other words, racial tension may give rise to both campus protests and to discussions of racial issues. These activities, in turn, serve to strengthen student interest in promoting racial understanding. Discussion of racial issues and participation in campus protest are two strategies that students have used to deal with racial tension, collective activities that allow them to solidify their views and work together to help change their environments. Although racial tension may be a catalyst, these other intervening activities are of key importance. In fact, the coefficients for the these intervening variables are much stronger than those for racial tension, indicating that there may be many ways (other than through racial tension) that such activities are initiated in the college environment.

The importance of several additional involvement variables should be mentioned here, since they are related to changes in commitment to racial understanding. Being a member of a fraternity or sorority is negatively associated with student interest in promoting racial understanding (-.08). These results are not surprising, given the number of racial incidents and antics associated with these selective membership clubs reported in recent campus and national newspapers. In many ways it appears that these organizations have become problematic for campuses with regard to racism, sexism, and

a host of other issues. Fraternities may actually serve to maintain traditional views that once dominated higher education, vestiges of ideologies that run counter to the plurality of perspectives now represented on college campuses. In contrast, each of the following activities is positively associated with student interest in helping to promote racial understanding: Time spent talking with faculty outside of class (.15), having been a guest in a professor's home (.11), and time spent in other student clubs and organizations (.10). The latter two variables did not enter the equation because of substantial shared variance with students who reported being involved in campus protest. Overall these results suggest that particular types of student involvements are likely to increase student interest in promoting racial understanding, while at least one other activity (membership in fraternities) has been identified as associated with decreases in the importance that students attribute to this value.

Results from this analysis provide additional information regarding the effects of other (distal) institutional characteristics. Recall from Chapter 5 that selective institutions maintained a seemingly contradictory environment: high racial tension coupled with high institutional commitment. Table 6.4 shows that both these climate perceptions are positively associated with commitment to promoting racial understanding. Similarly, attending a selective institution is associated (.09) with positive changes in this outcome. However, the coefficient for institutional selectivity becomes nonsignificant when controlling for discussion of racial/ethnic issues. Thus, it appears that the seemingly contradictory environment at many selective institutions serves to heighten student awareness about racial issues by creating an environment which encourages discussion of racial/ethnic issues.

Private nonsectarian institutions were identified in the previous chapter as having positive racial climates. This analysis provides additional evidence that students at these

types of institutions also increase their interest in helping to promote racial understanding (.07). In contrast, institutional size (-.06) and public four-year institutions (-.05) are both negatively associated with student change in this area. Perceiving that students are treated like “numbers in a book” is also negatively associated with interest in promoting racial understanding. Thus, it appears that large or impersonal college environments not only have less favorable racial climates (Chapter 5), but they also tend to have negative effects on student interest in promoting racial understanding.

Summary and Implications

The original intention of this phase of the study was to resolve some of the controversies in the research literature; instead, it appears the results here raise new questions regarding the effects of the racial climate. Results show that the effect of campus racial climates depend on the type of outcome, the climate measure, and the ethnic group. Moreover, some of the effects of the racial climate alter popular assumptions held in higher education. Thus, the unintended outcomes of the racial climate suggest complexities that call for new models.

Perhaps the most salient finding that may impact future research in this area is that perceived racial tension on the campus is positively associated with persistence among Chicanos, a positive academic self-concept among black students, and a commitment to promoting racial understanding for all students. In addition, other results support a negative racial climate and positive outcome pattern for students. For example, a negative relationship was found between perceptions of Institutional Commitment to Diversity and college grade point averages among Chicanos. Similarly, black students who *disagreed* with the statement that many courses included minority group perspectives at their institution had high academic self-concepts. This pattern of results

does not support popular assumptions regarding the student response to poor racial climates. However, what appears at first glance to be a paradoxical pattern can be explained either by other elements in the environment or by understanding some of the complex ways that students respond to their environments (collective resistance).

The results suggest that academically successful students may be more critical of the racial climate. If one presumes that perception *is* reality to the student (Tierney, 1987), these results alone cannot account for how positive student outcomes emerge under real or imagined adverse conditions. Related research suggests that an understanding of racism (Sedlacek, 1987), peer and community support networks (Meketon, cited in Katz, 1976), and adaptive strategies or "survival skills" that minority students develop throughout their schooling can allow them to succeed in adverse environments (Walsh, 1987). Moreover, in the majority of cases, the positive effects of racial climate perceptions can be accounted for by mediating variables such as discussing racial/ethnic issues, living on campus, and campus protest in the current study. Thus, this earlier research combined with the current data suggest a research focus on the subtle and not so subtle (student protest) responses to the racial climate.

Campus protest is perhaps the most highly visible adaptive strategy that students have developed in response to the racial climate. Both minority and white students are motivated to resist inequities in the environment. Protest is a form of student resistance that is positively associated with increased commitment to helping to promote racial understanding for all students. This form of collective resistance is also associated with increases in academic self-concept among minorities, and it is an important correlate of black student persistence. Students, as critical observers, use protest as a collective attempt to empower themselves and bring to light injustices at the institution that require attention (e.g., racial harassment, mishandled tenure cases, discriminatory admissions

practices, etc.). Although racial tension may spark campus protest, student involvement in protest serves as an impetus for change and critical examination of campus racial climates (Farrell & Jones, 1988).

Student reports of race-related behaviors were all positively associated with student outcomes. Regression results using the dependent variable of Helping to Promote Racial Understanding also show that these proximal involvement measures were much more important than distal measures, or perceptions, in affecting changes in student values on racial issues. The most important activity that serves to increase student goal commitment to promote racial understanding is frequent discussion of racial issues. As a matter of fact, it appears to be a key mediating element in the majority of the race relations behaviors reported here. Finally, taking an ethnic studies course and attending a racial awareness workshop is positively associated with increases in student interest in helping to promote racial understanding.

Racial Climate Research

Results from this study augment current research findings on the effects of the racial climate. For example, Hughes (1987) reported that both black men and women felt that they must defer their social, emotional, and personal development until they have left predominantly white institutions. While black colleges were not included in this study for comparison, the data do not support the notion that social self-concept in black students is affected one way or the other by perceptions of the racial climate. On the other hand, Chicano students' 1989 social self-concept reveal positive relationships with only one perception measure, Institutional Commitment to Diversity. This result supports Hughes (1987) results observed in qualitative studies, but only in part. Although social self-concept development is not "deferred", this affective outcome is

enhanced by institutional commitments to improve the racial climate at least in the case of Chicano students.

Allen (1988) suggests that a sense of interpersonal accomplishment is necessary for student involvement. Although this represents a reversal of causal effects studied here, the pattern of results suggests that a more positive social self-concept may be a product *and* an important antecedent for interracial social interaction and, hence, a better racial climate. This possibility is supported by the findings involving white students, where social self-concept is negatively associated with racial tension but positively associated with interracial activities (i.e., attending a racial awareness workshop and socializing with someone of another race). Thus, the extent to which colleges attend to the affective dimension of student development may actually translate into improved racial climates.

The racial tension measure, which is similar to measures used in previous research, shows no significant relationship with college grades for black students. Allen (1985) and Oliver et al. (1985) also found no significant relationship between their measure of campus race relations and college grades. Other racial climate measures in the form of institutional commitment to diversity, minority enrollments, and student race-related behaviors in the current study show no significant relationship with college grades among black students. In contrast, Nettles (1988) found that his Feeling of Discrimination factor was negatively associated with college grade point average for black students in white institutions. The squared multiple correlation (R^2) for black students in the SAT analysis is .27 in the current study, while Nettles' R^2 (also using SAT) was .32 for black students in predominantly white institutions. The major difference between the two studies is that the current one uses two time points (longitudinal control) for changes in grades from high school to the fourth year of

college, while Nettles' crossectional design includes several classes of black students. Grades for college freshman and sophomores differ dramatically from those of upper division students (Astin, Green, Korn, Schalit, Dey & Hurtado, 1988; Hurtado et al., 1989). Perhaps lower student attrition, due to a crossectional design, and variation in college grades obtained by using more than one grade level may have provided enough variability in the Nettles study to find effects attributed to the racial climate measure (Feelings of Discrimination). In addition, the differences in results may be attributed to a measure of the racial climate factor, Feelings of Discrimination, that is based both on student perceptions of the environment and on the student's own personal feeling of being discriminated against.

This comparison of results provides insights into the different approaches researchers have taken to examine elements of the racial climate in relation to academic achievement. First, this suggests that slight differences in the racial climate measures may result in quite different results in attempts to establish the relationship of the climate to academic achievement. Second, significant attention to sample and study design is necessary to allow future replications of results. In addition, differences in ethnic groups may provide additional information that will help us arrive at more conclusive facts regarding the effects of the racial climate. Although significant relationships between racial climate measures and college grades could not be found among black students, significant relationships (after controlling for inputs) were observed for Chicanos students in at least four different measures of the climate. Further examination of results reported here may provide some insights into racial climate effects on different groups.

Finally, in the area of black student retention, Sedlacek's (1987) work has suggested that an understanding of racism is vital to black students' success, particularly for those who persisted until the eighth semester in college. These data appear to

confirm his findings. Persistence among Chicanos is positively associated with perceptions of racial tension. In addition, black students who perceived that faculty were sensitive to minority issues, participated in campus protest, frequently discussed racial/ethnic issues, and who frequently socialized with someone of another race were most likely to persist in college. These independent variables suggest that a minority student's ability to be critical and aware of the racial climate, as a process that mediates racist ideology in their environments, impacts educational outcomes.

Practical Implications

College administrators face the dilemma of dealing with unintended effects of the racial climate. The gradual movement toward improving the environment for multicultural learning at predominantly white institutions has elicited a variety of student responses. However, these results should not be taken as a recommendation to abandon efforts to improve institutional commitment to diversity, nor that racial tension should be increased, for several reasons. First, the results here speak to the importance of student behaviors and involvements. For most outcomes, the important aspects of the racial climate were those that were proximal to the student, involvement in race-related behaviors. These student behaviors usually have equal or stronger effects on student outcomes than did student perception of the climate. This means that the student response (participation in campus protest, discussion of racial issues, participation in alternative organizations) can make a big difference in climates that students judge to be poor. Thus, it is of primary importance for college administrators to recognize the many avenues that students use toward successful educational outcomes and support them. Following this logic, it is important to note that if the racial climate is perceived to be

favorable, it is less likely that students will find the need to develop resistance behaviors or to develop alternative activities to represent their perspectives.

Second, if the goal is to improve outcomes via improvements in the racial climate, some fairly obvious recommendations emerge from the data. Institutions can have a direct impact by encouraging open campus discussion of racial/ethnic issues among students, offering race awareness workshops, and encouraging (or requiring) ethnic studies courses. These are all activities that can be initiated on campuses to heighten student awareness and promote better educational outcomes (racial understanding, social and academic self-concept, persistence, etc.).

What data, if any, support the popular notions that improving the racial climate is essential for better student outcomes? Several findings across analyses support the importance of continuing to recruit minority faculty, recruiting minority students, and improving overall race relations on campus. Campus case studies of the racial climate have reported that positive and supportive faculty attitudes are critical to the academic success of students (McBay, 1986). Results here indicate that perceptions of faculty sensitivity to the issues of minorities are positively associated with persistence among black students and with two positive outcomes for white students, academic self-concept and college GPA. Faculty sensitivity is believed to be associated with an overall student-orientation among faculty, supporting previous research that indicates that the student-faculty relationship is key to improving student outcomes (Astin, 1977; Pascarella, 1980).

Positive outcomes are also associated with socializing with someone from another racial group. These outcomes included: Persistence for black and white students; social self-concept for Chicano and white students, and student commitment to helping to promote racial understanding among Chicano and white students. This

supports the common belief that harmonious racial relations on campus are related to better educational outcomes for students. In a third example, institutional commitment to diversity is associated with positive social self-concept among all groups and the value of promoting racial understanding among Chicano and white students. These results suggest some concrete areas that college personnel may consider in their development of programs and policy.

CHAPTER 7

CONCLUSION

This study has been an exploration into the multiple sources and multiple effects of the racial climate on college campuses. The first section of this chapter reviews the study's conceptualization and design, initial hypotheses, and general results. Since many issues were covered in this broad study, a synthesis of the major findings reported in Chapter 5 and Chapter 6 are summarized in detail under two broad themes. The final section deals with practical and theoretical issues and provides recommendations for future research.

Review of Approach

This study of campus racial climates and student outcomes covers 1985 to 1989, a period of time in which racial incidents, protests, and campus discussions on racial issues were prevalent on the national scene. The principal goals of the study were to obtain a gauge of the racial climate and its correlates on college campuses, and to assess the effects of the racial climate on student academic and affective outcomes. The primary sources of data were student responses to a longitudinal survey of 328 black, 340 Chicano, and 1,825 white students attending 116 four-year colleges and universities. Since the idea was to examine multiple dimensions of the racial climate in relationship to students in a wide range of environmental conditions, several major sources of national data were merged with student data. These included: Institutional enrollment data from 1982-88, institutional financial data, and curriculum data from college catalogs. Analyses proceeded in three phases, the results of which have been described in the three preceding

chapters. Chapter 4 describes the use of factor analysis and structural equal modeling in developing two racial climate constructs based on student perceptions. Chapter 5 explores student background characteristics and the structural characteristics of institutions that affect students' perceptions of the racial climate, with stepwise multiple regression as the primary technique in the analyses. Chapter 6 presents the results, derived from the same technique, of the racial climate effects on five outcomes within a conceptual framework developed from a general model of college influence studies (Astin, 1977; Pascarella, 1980; Smith & Allen, 1984; Tinto, 1975). The interpretative framework for the study originates from Giroux's (1983) theory of resistance in education.

General Summary

Results are discussed below under separate headings representing each major hypothesis:

Consistency of Racial Climate Factors Across Ethnic Groups

Initial exploratory factor analyses of racial climate items revealed differences in the factors among the comparison groups. In order to produce comparable factors for the regression, two items that were found to be unique to one group (black students) were removed from the factor model. These items were used as separate measures in subsequent outcomes investigations. Confirmatory Factor Analyses (using structural equation modeling) conducted with the remaining items demonstrated that a correlated, two-factor model of the racial climate was represented in the data for each group. Factors representing student perceptions of Racial Tension and Institutional Commitment to Diversity emerged as constructs from this first phase of analyses.

Relationships Between the Structural Characteristics of the College, Entering Student Characteristics and Student Perceptions of the Racial Climate

Phase II of the study addressed the extent to which student characteristics and the structural (distal) characteristics of a college were related to constructs of the racial climate. Racial Tension and Institutional Commitment to Diversity were each regressed on student and college characteristics. Results for both measures demonstrated that structural characteristics explained a higher proportion of the variance than did student characteristics, indicating that the “perceived” climate was primarily a function of institutional characteristics measured independently of the student’s own personal characteristics. Thus, it appears that perceptions of the climate represent, to a large extent, a “shared reality” based on environmental characteristics. (Highlights of the most salient structural characteristics and their effects on student perceptions of the racial climate are discussed in the concluding portion of this chapter).

The Effects of the Racial Climate on Student Outcomes

Five outcomes served as dependent variables in these analyses: Academic self-concept, social self-concept, college GPA, persistence to the baccalaureate degree and student commitment to promoting racial understanding. In phase III, each dependent variable was regressed on the racial climate measures, entering student characteristics, institutional characteristics, and student involvement measures in a single analytical model. The racial climate was operationalized as consisting of: Relations among various campus groups (students, faculty, administrators) measured by student perceptions and student behaviors; student perceptions of institutional intent or commitment to diversity, and structural aspects that reflect institutional policies (offering ethnic studies courses or majors, diversity measures). Racial climate measures proved to have significant direct

effects on student outcomes. However, these effects were not uniform. The effects depended on the type of racial climate measure used (student perception, student-reported behaviors, or diversity measure), the racial/ethnic group, and the educational outcome. Student perceptions of the climate had significant effects, but these proved to be just as important (and in some cases weaker) in comparison to the effects of student race-related behaviors. (Details of these findings are highlighted in the conclusion of this chapter).

The Mediating Effects of Social Interaction

The mediating effects of the various student involvement or race relation behaviors were examined by noting changes in beta coefficients for all racial climate measures throughout the regression equations in Phase III. In more than one instance, the measures of student social interaction and involvement appeared to serve as important mediating variables. For example, the positive effect of racial tension on student interest in helping to promote racial understanding appears to be mediated by frequent discussion of racial/ethnic issues and by participation in campus protest. While these activities may be triggered by racial tension, these variables also maintain unique independent effects on student outcomes. These and other mediating variables may serve as key components for future research using a causal model framework.

The Relative Importance of Proximal Measures and Distal Measures

One dependent variable, student interest in Helping to Promote Racial Understanding, was selected to illustrate the relative effects of proximal and distal measures. When this dependent variable was regressed on all independent variables, distal measures accounted for less than 2 % of the total variance while proximal measures of the environment accounted for 16 %. These results are especially significant, since distal characteristics were given priority in the regression blocks (entered just after student

background characteristics). The student perception measures, however, were not as powerful predictors of student values in promoting racial understanding as were measures of student race-related behaviors, indicating that actual behavior is more important than perception. Many of the proximal race relation behaviors (particularly the activity of having discussed racial/ethnic issues) maintained the strongest coefficients at the final step of the equation. In addition, participation in student clubs and organizations tend to increase, while participation in fraternities tend to decrease student commitment to promoting racial understanding. These proximal environments appear to be key to promoting change in student values.

*Participation in Campus Protest (as a form of student resistance)
and Its Effects on Student Outcomes*

Participation in campus protest appears to mediate the effect of Racial Tension on student interest in helping to promote racial understanding. Campus protest also has a direct positive effect on academic self-concept for black and Chicano students. This activity was also the best racial climate correlate of persistence among black students. (The effect of protest was weakened only by controlling for participation in student clubs and organizations). These results indicate that participation in campus protest is associated with generally positive outcomes for minority students. The effects of campus protest were weaker but still generally positive for white students as well. These results show the positive effects of student resistance behaviors in relation to educational outcomes.

Detailed Summary and Conclusion

Several of the major findings are summarized under two broad themes, Students as Critical Observers, and Environments: Valuing Students and Perspectives. It is

believed that many of these empirical results can be of use to both students and institutions in helping them to understand and improve racial climates and educational outcomes for all students.

Students as Critical Observers

Since survey data come from student responses, the story of the condition of the racial climate is told from their perspective. Analyses of these "perceivers" revealed that certain types of students were more likely than others to report poor racial climates. Specifically, students who were prone toward social activism at the time of college entry are most likely to perceive that their institution had an unfavorable racial climate. These included white and Chicano students who entered college expecting to become involved in campus protest. Similarly, black students who characterized themselves as having a liberal political view in 1985 tend to report more racial tension on campus in 1989. Freshman minority students entering college in 1985 with high ability (measured by grades or academic self-concept) also report that their institution was relatively uncommitted to diversity in 1989.

Perhaps more importantly, even after controlling for all these student predispositions, the data suggest that the most academically successful students were likely to view their institutions as racially tense. Perceived racial tension is positively related to persistence among Chicano students and to academic self-concept among black students. In addition, institutional commitment to diversity is negatively related to college GPA among Chicanos; and student agreement with the statement that many courses at their institution included minority group perspectives is negatively related to academic self-concept among blacks. Although freshman student ability (measured by SAT and institutional selectivity) is linked to both positive academic outcomes and tense racial

environments, multivariate analyses show that differences in student ability cannot entirely explain these results.

These results suggest that academically successful students may be more critical of the racial climate than other students. However, if one presumes that perception *is* reality to the student (Tierney, 1987), these results do not account for how positive student outcomes emerge under real or imagined adverse conditions. Moreover, this pattern of effects does not support the assumption that an inhospitable racial climate necessarily leads to poor outcomes among minority students; the student response to the climate is apparently more complex. Related research suggests that students develop adaptive strategies that allow them to succeed in adverse environments. (Sedlacek, 1987; Meketon, cited in Kaiz, 1976, Walsh, 1987). Psychologists call these activities coping strategies, while some sociologists call these "resistance" strategies because they are developed in opposition to a dominant or "dominating" cultural mode or ideology (Giroux 1983). These strategies may explain why some students do not internalize messages that demean their culture. Giroux (1983) suggests that the resistance behavior stands in opposition to and represents a critique of the dominant ideology. Strategies that are of particular interest are those that are group-based, represent collective action, and suggest the possibility for transforming the institution.

Along these lines, student protest stands as perhaps the most salient critique of the institution and its policies. Participating in campus protest turns out to be the most important activity associated with persistence among black students, and it is positively associated with high academic self-concept among both minority groups. The transformative possibilities of campus protest are demonstrated by the fact that it is also positively associated with increases in student interest in promoting racial understanding. Thus, by first calling attention to problems in the college environment through campus

protest, these students increase the personal importance they attribute to the goal of helping to promote racial understanding. (Although the direction of causality is not clearly established here, even if one assumes that students had increased their interest in promoting racial understanding *before* protesting, one can also reason that their belief in such a goal may increase because of their actions. This is a possible example of a nonrecursive relationship that will be discussed in the section on future research).

The other activity that perhaps has the most potential for strengthening student commitment to promoting racial understanding, at least at the individual level, is frequent discussion of racial/ethnic issues. This measure has a powerful positive effect on this outcome for all the student groups, on persistence among black students, and on all academic measures for white students. Frequent and open discussions of racial issues that occur formally and informally through various activities (race awareness workshops and course work) are important in heightening student awareness of issues and dealing with subtle racial problems in a constructive manner.

Students stand as critical observers of the environment, identifying issues that require attention in the college community and detecting the contradictions in institutions. Students may operate from at least three different perspectives: they see the contradictions involving institutional support of general principles of equality and inertia when it comes to affirmative action (rhetoric and action), they may have first hand experience with cultural disparities among groups, or they may observe and be party to competing ideologies (conservative and progressive) in the environment. It may be that maintaining this critical stance on the institution (e.g., regarding commitments to diversity) is precisely what has allowed these students to be successful. This response to the climate represents an aspect of a phenomenon, student involvement, that is known to produce successful educational outcomes (Astin, 1984). Thus, the results here augment the

general principle of student involvement by revealing that a specific type of involvement, occurring in *opposition* to institutional policies or ideologies (represented by other groups on campus, i.e., fraternities), is also positively associated with student outcomes.

Environments: Valuing Students and Perspectives

This study's focus on college environments contributes to our understanding about critical environmental components of the racial climate. Results on the effects of structural characteristics of institutions augment previous research (El-Khawas, 1989) and help identify types of institutions in the higher education system that merit further investigation. For example, the ACE study (El-Khawas, 1989) found that doctoral institutions report the most programmatic activity to improve minority participation at all levels of the university. Although this may be the case, results here show that particular types of universities (public universities and selective institutions) are perceived to have the most racially tense environments in comparison to other types of institutions. Other results suggest areas of institutional priority and policy that merit evaluation or *re*-evaluation for improvement of the racial climate. Institutional characteristics were examined in relation to two dimensions of the racial climate, racial tension and institutional commitment to diversity. Outcomes analyses provided additional information that validated the effect of these characteristics on student outcomes. Results appear to indicate that institutions that value students, or have distinct student-oriented priorities, and value different perspectives may have better racial climates. These results are shown both in the institutional commitment to diversity that is communicated to students and in the actual quality of race relations on campus.

Specifically, both Catholic and private nonsectarian colleges appear to be most attentive to students and to the general psychological climate on campus. Black and white

students attending private nonsectarian colleges perceive that these institutions have a consistently positive pattern of race relations, low racial tension and high institutional commitment to diversity. Outcomes analyses also revealed that students at these institutions tended to increase their commitment to the goal of helping to promote racial understanding. Thus, the positive racial climate of these institutions is reflected in positive outcomes for students. While these institutions appeared to produce generally favorable effects on black students' academic and social development, another institutional type was identified as a particularly hospitable environment for Chicano students. Students at Catholic four-year colleges were least likely to report campus racial tension. Although further research is necessary to determine how these institutions maintain relatively favorable racial climates, two hypotheses are offered here. First, since many Chicanos have been raised in the Roman Catholic tradition, they are likely to find many of their cultural values reflected in the traditions of Catholic colleges. Thus, many of the cultural perspectives of Chicano students may be congruent with the values of these institutions. Second, both types of colleges are small and have a commitment to student development.

Institutions with substantial expenditures on student services and financial aid (primarily scholarships and non-repayable grants) also have a consistently positive racial climate. Spending on student services and generous scholarship aid both reflect institutional priorities that are student-oriented. These are priorities that communicate to students that they are valued by the institution. In contrast, since expenditures on instructional services are dominated by faculty salaries and the administrative bureaucracy of schools and departments, substantial expenditures in this area apparently reflect a different institutional priority than one would expect (research as opposed to teaching). Data show that the larger the instructional expenditures, the less likely the institution is

perceived to have a favorable racial climate. Since these policy-related variables seem to be significantly associated with perceptions of the racial climate, it would be important to investigate in future studies the kind of funding configurations and programmatic activities that are supported by monies at campuses with student-oriented priorities.

A positive racial climate pattern also emerged for the outcome of social self-concept. Measures of 1989 social self-concept were negatively associated with perceptions of racial tension in white students, but positively associated with perceptions of institutional commitment for Chicano and white students. Moreover, student reports of participation in interracial activities (e.g., socializing with someone from another race) suggest that a positive social self-concept may facilitate the development of a favorable racial climate. If a positive social self-concept is both a product and an important precursor of a favorable racial climate, it stands to reason that college efforts to attend to the affective dimension of student development may actually translate into improved racial climates.

Results concerning student race relations further support the idea that colleges can improve the racial climate, at least at the individual level, by providing opportunities for involving students in valuing the perspectives of others. Chicano and white students who reported frequently socializing with someone of another racial/ethnic group show stronger than expected social self-concepts and larger increases in their commitment to promote racial understanding. Interracial contact is also positively associated with persistence in the black student sample. (This interracial contact is also associated with living on campus and being involved in campus activities for black students). In all student groups, attending a race awareness workshop is positively related to student interest in helping to promote racial understanding. Finally, Chicano and white students who took an ethnic studies course increased their interest in helping to promote racial

understanding. This finding is important since few researchers are able to test the effect of taking an ethnic studies course, while also controlling for the numerous confounding student and institutional characteristics observed in this study. Colleges desiring to increase this value in student development may want to consider encouraging (or requiring) ethnic studies courses. This may be an important step to take since academically successful students are critical of the general curriculum; most courses still do not include minority group perspectives.

Perhaps the strongest evidence supporting the general notion of valuing students, and valuing the different perspectives they may bring to a campus, comes from those institutions that had consistently negative or contradictory environments. Institutional selectivity is the strongest positive indicator of racial tension. Since selective institutions represent an extreme in American wealth, ability, and privilege, tensions are manifested in a variety of contradictions. These campuses harbor a swirl of competing ideologies that include tradition and innovation, progressive and conservative philosophies, and differences between action and rhetoric. Their very own elitist policies prevent the admission of large numbers of minorities, yet they purport to vigorously recruit these students. These contradictions are perhaps reflected in the contradictory pattern of student perceptions of the racial climate. All three student groups reported high racial tension at these institutions, but only white students reported high institutional commitment to diversity. Despite this difference, outcomes analyses revealed that attending a selective institution tends to increase student commitment to promoting racial understanding. These different group perspectives and contradictions in the environment may serve to heighten student awareness about racial issues.

Institutional size is negatively associated with institutional commitment and positively related to racial tension. This may be because of the impersonality and

propensity of larger environments to have a greater representation of competing institutional priorities, different belief systems or ideologies, and different types of students. This interpretation is supported by the fact that white students tend to associate racial tension with large campuses that have undergone substantial diversification in undergraduate enrollment. Black students report tense racial climates at large campuses that have increased minority enrollments in the last six years. Large campuses also indicate lower expenditures for student services in 1985. These findings suggest that racial tension may arise from a mix of institutional conditions, including less attention to student development and an increasingly diverse student clientele. In addition, earlier studies on campus protest on racial issues found that large institutions were slower to change racial policies than small campuses (Astin, 1971). These results suggest some of the conditions in which campus racial tensions may be formed.

The diversity or ethnic mix of the study body was found to be significantly related to both dimensions of the racial climate. The general pattern for measures of diversity in student enrollments reveals that both the absolute numbers of blacks and Hispanics and growth in their numbers during the last six years are associated with tense racial climates, with only a few variations among groups. The only enrollment characteristic that is associated with *lower* racial tension is the percentage of Hispanic students, and these effects are accounted for by the Catholic college environment. On the other hand, the percentage of minority students (black and Hispanic) and increases in minority enrollment over the last six years are positively associated with institutional commitment to diversity. To add to these results, outcomes analyses show that white students are less likely to persist at institutions that have a high percentage of black or Hispanic students.

This pattern of results constitutes a paradox for institutions interested in improving the racial climate, and it is disturbing in a number of ways. First, it indicates

that some institutions that have recently increased their minority enrollments as part of an institutional commitment to diversity have also experienced racial tension on campus. This is not a new problem since, some 15 years ago, the Peterson et al. (1975) study of institutional adjustments to increasing black student enrollments found hostilities among racial groups on campus. At that time, the authors suggested that campus' inattention to any of the multiple dimensions of the racial climate, particularly the psychological dimension, may lead to problems with minority students. What the study did not foresee, however, were the problems that would be initiated by white students on campus. Several actions of harassment have shown a particular mean-spiritedness on the part of a few white students; and for the most part, minority students have chosen not to let such affronts go uncontested. Vestiges of racism may become active in environments where white students feel they are "losing ground" or feel that affirmative action should be discontinued. These may be the attitudes underlying cries of reverse discrimination that have been heard since the beginning of the 1980s, even though the numbers of minorities entering institutions remained relatively small (e.g., *Bakke*). This pattern of events is congruent with the critical mass theory, where the absolute number of minorities were related to campus conflict (Astin & Bayer, 1971). In this case, however, it may be that it only takes a few white students to cause conflict and/or only a few minority students to raise a critique of institutional practices regarding the racial climate on campus.

Second, this relationship between minority enrollments and racial tension may cause concern among some institutions—perhaps enough concern to cause campuses to abandon their commitment to diversity in order to reduce racial tension. Unfortunately, this response would only serve to exacerbate problems. Diversification of student enrollments may be occur at only certain types of colleges, since minorities attend larger,

less selective, and presumably less expensive institutions. The higher education system is already racially stratified, as noted by various researchers (Astin, 1982; Verdugo, 1986). Particular types of institutions may continue what Estrada (1988) calls "ethnic restructuring" of their student bodies only because economic solvency or state policy demand it. These actions may be taken without restructuring the curriculum, institutional policies and priorities, or other aspects of the environment. Such steps would serve only to perpetuate inequalities among racial groups, continue to marginalize minorities on campus, and consequently, prevent the improvement of both the racial climate and educational outcomes.

Clearly, the results of this study show that these minority enrollment changes, while potential contributors, are not the sole cause of campus racial tension. There are a mix of internal conditions and external influences on institutions that have accompanied these enrollment changes, not the least of which have been a resurgence of racism in urban communities, competition among different ideologies, and the economic events of our time. The general pattern of results from the study suggests that internal conditions that reflect a student-oriented environment and the support of activities that highlight the value of different perspectives (e.g., in the curriculum, interracial activities) may help to promote both a more favorable racial climate and better student outcomes. These changes in minority enrollment and the monitoring of institutional response and conditions provide a substantial area for continuing research on the development of multicultural learning environments.

Implications for Theory, Research, and Practice

The breadth of this study provides many new areas for research and theory development. Each stage of research also offers practical recommendations for the improvement of campus racial climates and student outcomes.

Theory

By adding the dimension of race relations to studies of college influence, the current work augments Astin's (1984) basic principle of student involvement and raises some questions regarding Tinto's (1975) model of student departure. As stated earlier, certain types of student involvement that are oppositional in nature (student protest) can lead to positive student outcomes. Results from this study support the idea that student involvement in activities that are not part of the mainstream of college life can be just as beneficial, in terms of educational outcomes, as more traditional forms of student involvement. Participating in campus protest, as compared to socializing with someone of another race, has a greater impact on student commitment to promoting racial understanding among all three racial/ethnic groups. At the same time, participation in campus protest can interact with race: involvement in student protest has a positive impact on academic self-concept among blacks and Chicanos, and college grades and persistence among black students. Participation in campus protest, however, has no effect on these outcomes among white students. This suggests that participation in oppositional activities, compared to other activities such as socializing with someone of another race, are often more important to educational outcomes for minority students than for white students.

While elements of this study appear to confirm aspects of Tinto's model (1975; 1987), results also support the development of new models to understand minority

student experiences in higher education. Specifically, Tinto's (1975) theory of student departure may be less applicable to the minority student experience because it relies on the constructs of institutional commitment and social integration. Protesting against college policies would appear to represent the antithesis of both constructs. The Tinto model implies a process that posits conformity to institutional values and focuses on student involvement in mainstream college activities as the central modes by which students are retained in college. However, the model does not account for the fact that some successful students choose to attempt to change the institution instead of reaffirming its constraints. Apparently, these students are able to convert their feelings of marginality into a motivating force for involvement in oppositional activities. This allows them to maintain a critical stance on the institution, develop mechanisms for dealing with the environment, and come together to try to change their environments. Such resistance activities have been proposed as important to group identity development (Giroux, 1983) as well as to individual success. Yet, protest activities are usually discouraged by college administrators or other students because they call into question the condition of the institution. Thus, while protesting is an important form of student involvement, it is clearly not the conforming process implied by Tinto's constructs of social integration and student institutional commitment. Further research on these issues that speak to the minority experience in higher education is necessary to develop new models that explore the complex ways in which students respond to their environments.

Giroux's (1983) work, as an alternative to other interpretative frameworks, was a springboard for understanding the experience of minorities in the educational process. The cultural reproduction framework (Bourdieu, 1979) proposes that it is only those students who possess the cultural keys that can succeed in a dominant culture, a culture which is confirmed by institutions while other cultures are "disconfirmed." This

determinism of the cultural reproduction model does not account for *why* some students succeed despite cultural differences, *how* and *why* they maintain a critical stance on their environment, and *how* they reject messages that demean their culture. In a similar vein, some educators may be taken aback because results from this study go against their typical conceptions (or misconceptions) of minorities. (Recall from Chapter 2 Taylor's notion that black students have not developed sufficient coping mechanisms to deal with the resurgence of racist acts on college campuses). These conceptions are equivalent to the cultural deficit perspective prevalent in educational research. Deficit models suggest that there is some fundamental characteristic in the background of the student that is the cause of their lack of success. While the data here show that prior student characteristics play a role, environmental conditions significantly influence all student outcomes and in some instances, are more important than the characteristics that students bring with them to college. If educators continue to operate from a cultural deficit perspective, it will be difficult to improve the educational status of culturally different groups. Giroux's work (1983) was used in this study as a departure from these perspectives.

The use of resistance theory here suggests that the minority student experience and campus disruptions need to be looked at in new ways. Minority students who have overcome adversities to reach higher education did not do so through learned helplessness. Campus protests can affect student outcomes in a positive way, and they can also serve to jolt institutions into considering issues of social justice. Further development of resistance theory may help us understand just how protesting and other forms of oppositional behaviors can actually enhance the student development process.

With regards to other areas of theory, several perspectives regarding the effects of a numerical representation of minorities on campus were explored (Astin & Bayer, 1971; Blalock, 1967; Kanter, 1977). The theory that the absolute numbers of minority of

students were associated with racial tension on campus (Astin & Bayer, 1971) are supported by the current study. However, the positive findings with regard to Hispanics in Catholic colleges raises the intriguing possibility that there may be enrollment numbers beyond which racial tension diminishes. Blalock (1967) has proposed that there is a curvilinear relationship between increasing minority numbers and discrimination. This possibility merits in depth investigation in future research, particularly as it relates to the development of a general model of the racial climate on college campuses.

Future Research: Causal Models

One of the aims of the study was to gain a better understanding of relationships among environmental variables and student development to provide a foundation for the development of more definitive models for use in future research. Since there was some ambiguity in the temporal order of the outcomes and the racial climate measures observed in 1989, it is impossible to say with total assurance which variable affected the other. Given that 1985 pretests were available for all dependent variables, we can be sure that these changes actually occurred during the college years, and that other student characteristics and institutional characteristics preceded these changes in time. Thus, the foundation has been laid in the way of identifying various components to be tested in the form of a causal model.

In some ways the entire study was conducted in a causal framework, with Chapter 5 representing the first part of the model, identifying student and distal characteristics that influence student perceptions of the climate. Using several variables as an example, one can propose the following: Increases in minority enrollment, representing exogenous variables, have direct effects on student perceptions of the climate (e.g., racial tension). Results from Chapter 6 provide additional steps to the model: The

effects of student perceptions of racial tension on outcomes are mediated, in part, by student race-related behaviors such as student protest and discussion of racial issues.

However, in many cases, results from Chapter 6 indicated that several variations in the final part of the model were plausible. It appeared as if certain outcomes, such as positive social self-concept, were important precursors of student race-related behavior. These student race-related behaviors, in turn, have further effects on social self-concept. Such a pattern of relationships suggests a social constructionist viewpoint, where such race-related behaviors as part of the racial climate, create outcomes that may further constrain future behavior and outcomes. These social constructionist interpretations can be tested using nonrecursive models in future research (Pfeffer, 1982).

Competing models can also be tested. For example, since student protest appears to mediate the effect of racial tension on student commitment to promote racial understanding, it can be said that racial tension provokes student protest that, in turn, heightens student awareness on racial issues. At the same time, it is quite possible that participation in student protest increases student perceptions of racial tension, also leading to greater commitment to promoting racial understanding. Thus, there are numerous competing models that can be posited as equally valid models within particular institutional contexts.

Practical Implications

The slow movement toward improving the environment for multicultural learning at predominantly white institutions has elicited a variety of student responses. College administrators now face the dilemma of dealing with the positive and negative effects of their action or inaction. Throughout this study I have alluded to some concrete recommendations for practice that may result in more favorable racial climates and

improvements in student outcomes. Although there are some institutional characteristics that cannot be changed, the focus here is on those characteristics that can be instituted on just about any campus.

The extent to which institutions can convey the notion that they value students and value different student perspectives may have some impact on both the racial climate and student outcomes in general. This is a general philosophy that can cut across all institutional actions, priorities, and social relations. For example, financial aid and support for student services are both aspects of fiscal policy that appear to have positive effects on the racial climate. (The exact programmatic configurations of these expenditures is a subject of future research). In addition, the most potent aspects of the racial climate that can affect student outcomes are those that are proximal to the student. Specifically, campuses may improve racial understanding and facilitate positive student outcomes by encouraging open campus discussion of racial/ethnic issues among students, offering race awareness workshops, and encouraging (or requiring) ethnic studies courses. These activities can be initiated on campuses to heighten student awareness and promote better educational outcomes (racial understanding, social and academic self-concept, persistence, etc.). Finally, activities to improve both faculty sensitivity to minority issues and overall student-faculty contact are also a promising means to both improve the racial climate and promote positive educational outcomes.

It is also important for college administrators and faculty to recognize the value of and support the many avenues that students can use toward successful educational outcomes. These may include activities that are not within the mainstream of college activity (such as work on alternative newspapers, minority student organizations) that both engage the student in campus issues and enhance ethnic pride. Although campus protest is a sore point for many administrators, there are important messages that are

conveyed through such student activity. Students often bring up issues that are of moral concern, issues the institution should be addressing, and they highlight inequities that may help reorient institutional priorities. Moreover, campus protest may be a signal that students do not feel valued and are trying to reassert their recognition as a vital part of the institution. Thus, while campus protests may be temporarily disruptive, this type of student activity can have positive effects on outcomes for both the student *and* the institution.

Limitations of the Study

Two limitations of the study that may alter interpretations are that a) longitudinal data had only two time points and, b) there is the possibility of non-response bias. The approach here to the racial climate was to review environmental effects in an exploratory fashion. Since many of the causal links were somewhat ambiguous, all of these interpretations and conclusions should be tempered with a recognition that the key independent variables—measures of perceptions of the racial climate and race-related behaviors—were measured concurrently with all the dependent variables. Under these circumstances, as shown in the discussion of causal models, some of the causal connections may actually operate in a reverse manner. For example, it stands to reason that students who increase their interest in promoting racial understanding would be more likely to take an ethnic studies course, discuss racial issues, participate in a race awareness workshop, participate in campus protests, and socialize with other races than students whose interest in this goal declined shortly after entering college. Such reversals of causation are especially likely when it comes to the dependent variable of persistence, since staying in college increases one's opportunities to participate in such race-related activities. Clearly, such ambiguities can be resolved only in future research that is able to

use at least three time points, where the presence or absence of behaviors can be established at the second time point and final performance on the dependent variable measured at the third time point. Still, this study has laid substantial groundwork for identifying the key components needed to develop and test more definitive causal models when such data become available in the future.

Although the study covers student experiences at 116 institutions, it was limited to institutions where there were minority respondents. All mailed surveys face the problem of non-response, with minority students among those who are least likely to return mailed surveys. Therefore, there is the possibility that negative perceptions of the climate may have caused some students either to drop out of college or refuse to answer the survey. That is, it could be argued that the most dissatisfied students have been underrepresented in the data. However, the results suggest that minority students who were the most negative about the racial climate were actually more likely to be retained. One way to check these results in future research is to use respondents' perceptions of racial tension on each campus to examine possible climate influences on the non-respondent group. Since information on college outcomes is not available for such students, one can obtain retention data from college registrars for a subsample of non-respondents and combine this dependent variable with controls for their student background characteristics and most institutional characteristics. These analyses would help determine if, for example, racial tension maintains a positive effect on persistence and academic achievement among non-respondents. A second way to test these effects would be to try various weighting techniques to see if results differ significantly. These extensive analyses should have priority in future research projects.

A final limitation of the study is that, despite the large and diverse sample of institutions represented, there was lack of specific information on some aspects of

institutional context. Specifically, campus histories regarding race-related issues, and student participation in specific programs or ethnic student organizations provide important information about the immediate context of the campus racial climates. Thus, in many cases, the actual mechanisms whereby environmental or structural characteristics affect campus racial climates were left open for interpretation. Results here suggest specific areas for future areas of in depth research including: fiscal policies that represent programs that promote favorable racial climates, historical changes at the institution that accompany enrollment diversification, the role and nature of student activities that are outside the mainstream of college activities, and other proximal environments (peer and faculty environments) that affect the campus racial climate and educational outcomes.

APPENDIX A: SURVEY INSTRUMENTS

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



UCLA

SANTA BARBARA • SANTA CRUZ

HIGHER EDUCATION RESEARCH INSTITUTE

GRADUATE SCHOOL OF EDUCATION
405 HILGARD AVENUE
LOS ANGELES, CALIFORNIA 90024-1521
(213) 825-1825

FOLLOW-UP SURVEY OF COLLEGE FRESHMEN

June, 1989

You may recall that when you first entered college you participated in a national research project by completing a questionnaire at the beginning of your freshman year. We are now conducting a new survey to follow-up students who responded to this freshman survey in 1985 and 1987. We want to know about your experiences over the past few years, especially your experiences in college. The results of this survey will help to improve higher education programs at campuses across the country.

We ask that you help us by completing the enclosed questionnaire and returning it in the enclosed postage reply envelope. *Please complete the questionnaire even if you withdrew from college or changed schools.* We are very interested in learning about your experiences in college, no matter how long you attended. The information you provide is confidential and will be used only in group comparisons for research purposes.

Some of the colleges that participated in the original freshman surveys have asked us to include additional questions designed specifically for their students. If your college is among this group, you will find an additional page with supplemental questions enclosed in this envelope. Please mark your answers to these supplemental questions at the end of the survey form, as directed. Again, please be assured that your responses are confidential and will be used only for research.

We will be pleased to send you a summary of the findings when they become available. Just mark the appropriate box on the questionnaire.

Your participation is very important to the success of this project. We thank you in advance for your assistance and cooperation.

Sincerely,

Alexander W. Astin
Professor and Director

DIRECTIONS:

Your responses will be read by an optical mark reader. Your observance of these few directions will be most appreciated.

- Use only a black lead pencil (No. 2 is ideal).
- Make heavy black marks that fill the oval.
- Erase cleanly any answer you wish to change.
- Make no stray markings of any kind.

EXAMPLE: Will marks made with a ball-point or felt-tip pen be properly read?

☐ Yes ☒ No



1. If you could make your college choice over again, would you still choose to enroll at the college you entered as a freshman?

- ☐ Definitely yes ☐ Probably not ☐ Don't know
☐ Probably I would ☐ Definitely not

2. Since entering college have you:

	YES	NO
Enrolled in honors or advanced courses	<input checked="" type="radio"/>	<input type="radio"/>
Enrolled in an interdisciplinary course	<input checked="" type="radio"/>	<input type="radio"/>
Joined or been a member of a fraternity or sorority	<input checked="" type="radio"/>	<input type="radio"/>
Gotten married	<input checked="" type="radio"/>	<input type="radio"/>
Had a part-time job on campus	<input checked="" type="radio"/>	<input type="radio"/>
Had a part-time job off campus	<input checked="" type="radio"/>	<input type="radio"/>
Worked full-time while attending school	<input checked="" type="radio"/>	<input type="radio"/>
Participated in a study abroad program	<input checked="" type="radio"/>	<input type="radio"/>
Participated in a college internship program	<input checked="" type="radio"/>	<input type="radio"/>
Participated in campus protests, demonstrations	<input checked="" type="radio"/>	<input type="radio"/>
Been elected to a student office	<input checked="" type="radio"/>	<input type="radio"/>
Voted in the 1983 election	<input checked="" type="radio"/>	<input type="radio"/>
Graduated with honors	<input checked="" type="radio"/>	<input type="radio"/>
Taken reading study skills classes	<input checked="" type="radio"/>	<input type="radio"/>
Participated in intercollegiate athletics	<input checked="" type="radio"/>	<input type="radio"/>
Worked on a professor's research project	<input checked="" type="radio"/>	<input type="radio"/>
Played intercollegiate football or basketball	<input checked="" type="radio"/>	<input type="radio"/>
Taken remedial or developmental courses	<input checked="" type="radio"/>	<input type="radio"/>
Purchased a personal computer	<input checked="" type="radio"/>	<input type="radio"/>
Enrolled in an ethnic studies course	<input checked="" type="radio"/>	<input type="radio"/>
Enrolled in a women's studies course	<input checked="" type="radio"/>	<input type="radio"/>
Assisted faculty in teaching a course	<input checked="" type="radio"/>	<input type="radio"/>
Attended a racial, cultural awareness workshop	<input checked="" type="radio"/>	<input type="radio"/>

3. Which option listed below best describes your enrollment status each year since you entered college?

(Mark one in each column)

	YEAR			
	1	2	3	4
Attended my first college full-time	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended my first college part-time	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended a different college full-time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Attended a different college part-time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Not enrolled	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Your sex: Male ☐ Female ☐

5. Which option listed below best describes where you lived during each year you attended college?

(Mark one in each column)

	YEAR			
	1	2	3	4
With parents or relatives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other private home, apartment, room	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
College dormitory	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Fraternity or sorority house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other campus student housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Since entering college as a freshman, have you taken a leave of absence, withdrawn from school, or transferred to another college? (If more than one applies, mark only the most recent)

- ☐ No — Please go to question 8.
☐ Took a leave of absence
☐ Withdrew from school
☐ Transferred before completing my program

Please answer Question 7

7. How important were each of the reasons listed below in your decision to take a leave of absence, withdraw from school, or transfer?

(Mark one answer for each reason)

	Very Important	Somewhat Important	Not Important
Wanted to reconsider my goals and interests	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changed my career plans	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Wanted practical experience	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Didn't feel like I "fit in" at my first college	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Was bored with my coursework	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Wanted to go to a school with a better academic reputation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Wanted a better social life	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Wanted to be closer to home	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Had a good job offer	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Wasn't doing as well academically as I had expected	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Family responsibilities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Tired of being a student	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Had money problems and could no longer afford to attend college	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Wanted to go to a school that offered a wider selection of courses or more major field choices	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

8. What do you plan to be doing in the fall of 1989? (Mark all that apply)

- ☐ Attending undergraduate college full-time
☐ Attending undergraduate college part-time
☐ Attending graduate or professional school
☐ Attending a vocational training program
☐ Working full-time
☐ Working part-time
☐ Serving in the Armed Forces
☐ Traveling, hosteling, or backpacking
☐ Doing volunteer work
☐ Staying at home to be with (or start) my family

9. Mark the one circle that best describes your undergraduate grade average.

- ☐ A (3.75-4.0) ☐ B- (2.25-2.74)
☐ A- (3.25-3.74) ☐ C (1.75-2.24)
☐ B (2.75-3.24) ☐ C- or less (below 1.75)

10. Please rate your satisfaction with the college you entered as a freshman on each of the aspects of campus life listed below.

(Mark one for each item)

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Can't Rate	No Response
Science and mathematics courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humanities courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social science courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Courses in your major field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General education requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevance of coursework to everyday life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall quality of instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laboratory facilities and equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Library facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities to take interdisciplinary courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities to discuss coursework and assignments outside of class with professors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities to participate in extracurricular activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Campus social life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulations governing campus life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutorial help or other academic assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic advising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Career counseling and advising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal counseling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial aid services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amount of contact with faculty and administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall relationships with faculty and administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On-campus opportunities to attend films, concerts, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job placement services for students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Campus health services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall college experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Compared with when you entered college as a freshman, how would you now describe your:

(Mark one for each item)

	Much Stronger	Stronger	No Change	Weaker	Much Weaker
General knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analytical and problem-solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of a particular field or discipline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to think critically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foreign language skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job-related skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religious beliefs and convictions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interest in pursuing a graduate/professional degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparation for graduate or professional school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to work independently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonal skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural awareness and appreciation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acceptance of persons from different races/cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidence in your academic abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public speaking ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to work cooperatively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Indicate the importance to you personally of each of the following:

(Mark one for each item)

	Very Essential	Essential	Very Important	Important	Somewhat Important	Not Important
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming an authority in my field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining recognition from my colleagues for contributions to my special field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Influencing the political structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Influencing social values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Raising a family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having administrative responsibility for the work of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being very well off financially	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping others who are in difficulty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making a theoretical contribution to science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing original works (poems, novels, short stories, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creating artistic work (painting, sculpture, decorating, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being successful in a business of my own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming involved in programs to clean up the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing a meaningful philosophy of life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in a community action program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping to promote racial understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming an expert on finance and commerce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How many undergraduate courses have you taken that emphasized:

(Mark one for each item)

	None	1-2 Courses	3-5 Courses	6-8 Courses	9 or More Courses
Writing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math/Understanding numerical data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science/Scientific Inquiry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
History/Historical Analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foreign language skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Indicate how well each of the following describes the college you entered as a freshman.

(Mark one for each item)

	Very Descriptive	Descriptive	Somewhat Descriptive	Not Descriptive
It is easy to see faculty outside of office hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a great deal of conformity among the students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most of the students are very bright	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The administration is open about its policies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is keen competition among most of the students for high grades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course work is definitely more theoretical than practical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty are rewarded for their advising skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students have little contact with each other outside of class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The faculty are typically at odds with the campus administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intercollegiate sports are overemphasized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The classes are usually informal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty here respect each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most students are treated like numbers in a book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social activities are overemphasized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is little or no contact between students and faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The student body is apathetic and has little school spirit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students here do not usually socialize with one another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty are rewarded for being good teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Please indicate your agreement with each of the following statements.

(Mark one for each item)

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
The Federal government is not doing enough to promote disarmament	4	3	2	1
The Federal government is not doing enough to control environmental pollution	4	3	2	1
The Federal government should raise taxes to help reduce the deficit	4	3	2	1
The death penalty should be abolished	4	3	2	1
A national health care plan is needed to cover everybody's medical costs	4	3	2	1
Abortion should be legalized	4	3	2	1
Trading in colleges has become too easy	4	3	2	1
The activities of married women are best confined to the home and family	4	3	2	1
Women should receive the same salary and opportunities for advancement as men in comparable positions	4	3	2	1
Wealthy people should pay a larger share of taxes than they do now	4	3	2	1
Marijuana should be legalized	4	3	2	1
Racism is O.K. if it helps to achieve racial balance in the schools	4	3	2	1
College officials have the right to regulate student behavior off campus	4	3	2	1
College officials have the right to ban persons with extreme views from speaking on campus	4	3	2	1
Realistically, an individual person can do little to bring about changes in our society	4	3	2	1
The chief benefit of a college education is that it increases one's earning power	4	3	2	1
Racial discrimination is no longer a major problem in America	4	3	2	1
Colleges should be actively involved in solving social problems	4	3	2	1
The best way to control the spread of AIDS is through widespread mandatory testing	4	3	2	1
Just because a man feels a woman has "led him on" does not entitle him to have sex with her	4	3	2	1

16. Below are some statements about the college you entered as a freshman. Indicate the extent to which you agree or disagree.

(Mark one for each item)

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
Faculty here are interested in students' personal problems	4	3	2	1
Most faculty here are sensitive to the issues of minorities	4	3	2	1
The curriculum here has suffered from faculty over-specialization	4	3	2	1
Many students feel like they do not "fit in" on this campus	4	3	2	1
Faculty are committed to the welfare of this institution	4	3	2	1
Many courses include minority group perspectives	4	3	2	1
Administrators consider student concerns when making policy	4	3	2	1
Faculty here are strongly interested in the academic problems of undergraduates	4	3	2	1
There is a lot of campus racial conflict here	4	3	2	1
Students here resent taking required courses outside their major	4	3	2	1
Students of different racial/ethnic origins communicate well with one another	4	3	2	1
Campus administrators care little about what happens to students	4	3	2	1
There is little trust between minority student groups and campus administrators	4	3	2	1
Faculty here are positive about the general education program	4	3	2	1
Many courses include feminist perspectives	4	3	2	1
There are many opportunities for faculty and students to socialize with one another	4	3	2	1
Administrators consider faculty concerns when making policy	4	3	2	1
Faculty feel that most students here are well prepared academically	4	3	2	1

17. During your last year in college, how much time did you spend during a typical week doing the following activities?

(Mark one for each item)

	None	Less than 1 hour	1-2	3-5	6-10	11-15	16-20	Over 20
Classes/labs	1	2	3	4	5	6	7	8
Studying/homework	1	2	3	4	5	6	7	8
Socializing with friends	1	2	3	4	5	6	7	8
Talking with faculty outside of class	1	2	3	4	5	6	7	8
Exercising/sports	1	2	3	4	5	6	7	8
Reading for pleasure	1	2	3	4	5	6	7	8
Using a personal computer	1	2	3	4	5	6	7	8
Partying	1	2	3	4	5	6	7	8
Working (for pay)	1	2	3	4	5	6	7	8
Volunteer work	1	2	3	4	5	6	7	8
Student clubs/groups	1	2	3	4	5	6	7	8
Watching TV	1	2	3	4	5	6	7	8
Commuting to campus	1	2	3	4	5	6	7	8
Religious services/meetings	1	2	3	4	5	6	7	8
Hobbies	1	2	3	4	5	6	7	8

18. For the activities listed below, please indicate how often—Frequently, Occasionally, or Not at all—you engaged in each during the past year.

(Mark one for each item)

	Frequently	Occasionally	Not at all
Worked on an independent research project	4	3	2
Discussed course content with students outside of class	4	3	2
Worked on group projects for a class	4	3	2
Been a guest in a professor's home	4	3	2
Took a multiple-choice exam	4	3	2
Tutored another student	4	3	2
Smoked cigarettes	4	3	2
Felt depressed	4	3	2
Felt overwhelmed by all I had to do	4	3	2
Stayed up all night	4	3	2
Gave a presentation in class	4	3	2
Participated in intramural sports	4	3	2
Discussed racial/ethnic issues	4	3	2
Attended a racial or ethnic event	4	3	2
Missed classes because of illness	4	3	2
Felt like leaving college	4	3	2
Failed to complete a homework assignment on time	4	3	2
Drank beer	4	3	2
Drank wine or liquor	4	3	2
Received career/vocational counseling	4	3	2
Received personal/psychological counseling	4	3	2
Participated in campus protests/demonstrations	4	3	2
Took an essay exam	4	3	2
Received tutoring in courses	4	3	2
Read the student newspaper	4	3	2
Socialized with someone of another racial/ethnic group	4	3	2
Discussed political/social issues	4	3	2
Had a class paper critiqued by an instructor	4	3	2

19. Please indicate (A) the highest degree you have earned as of June 1989 and (B) the highest degree you plan to complete.

(Mark one in each column)

	Highest Degree Earned	Highest Degree Planned
None	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
Vocational certificate	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
Associate's degree (A.A. or equivalent)	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
Bachelor's degree (B.A., B.S., etc.)	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
Master's degree (M.A., M.S., etc.)	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
Ph.D. or Ed.D.	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
M.D., D.O., D.D.S., or D.V.M.	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
LL.B. or J.D. (Law)	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
B.D. or M.Div. (Divinity)	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B
Other	<input type="radio"/> A <input type="radio"/> B	<input type="radio"/> A <input type="radio"/> B

20. How would you characterize your political views? (Mark one)

- Far left ☐
 Liberal ☐
 Middle-of-the-road ☐
 Conservative ☐
 Far right ☐

21. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

(Mark one for each item)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artistic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive to achieve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mathematical ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Popularity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (intellectual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (social)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Your current religious preference: (Mark one)

Baptist <input type="radio"/>	Methodist <input type="radio"/>
Buddhist <input type="radio"/>	Presbyterian <input type="radio"/>
Congregational (UCC) <input type="radio"/>	Quaker <input type="radio"/>
Eastern Orthodox <input type="radio"/>	Roman Catholic <input type="radio"/>
Episcopal <input type="radio"/>	Seventh Day Adventist <input type="radio"/>
Islamic <input type="radio"/>	Other Protestant <input type="radio"/>
Jewish <input type="radio"/>	Other Religion <input type="radio"/>
Latter Day Saints (Mormon) <input type="radio"/>	None <input type="radio"/>
Lutheran <input type="radio"/>	

23. Are you a born-again Christian? ☐ Yes ☐ No

24. Are you: (Mark one)

- Not presently married ☐
 Married, living with spouse ☐
 Married, not living with spouse ☐

25. Please mark your probable career/occupation below: (Mark one)

- Accountant or actuary ☐
 Actor or entertainer ☐
 Architect or urban planner ☐
 Artist ☐
 Business (clerical) ☐
 Business executive (management, administrator) ☐
 Business owner or proprietor ☐
 Business salesperson or buyer ☐
 Clergy (minister, priest) ☐
 Clergy (other religious) ☐
 Clinical psychologist ☐
 College teacher ☐
 Computer programmer or analyst ☐
 Conservationist or forester ☐
 Dentist (including orthodontist) ☐
 Dietitian or home economist ☐
 Engineer ☐
 Farmer or rancher ☐
 Foreign service worker (including diplomat) ☐
 Homemaker (full-time) ☐
 Interior decorator (including designer) ☐
 Interpreter (translator) ☐
 Lab technician or hygienist ☐
 Law enforcement officer ☐
 Lawyer (attorney) or judge ☐
 Military service (career) ☐
 Musician (performer, composer) ☐
 Nurse ☐
 Optometrist ☐
 Pharmacist ☐
 Physician ☐
 School counselor ☐
 School principal or superintendent ☐
 Scientific researcher ☐
 Social welfare or recreation worker ☐
 Statistician ☐
 Therapist (physical, occupational, speech) ☐
 Teacher or administrator (elementary) ☐
 Teacher or administrator (secondary) ☐
 Veterinarian ☐
 Writer or journalist ☐
 Skilled trades ☐
 Other ☐
 Undecided ☐

26. How important are each of the following reasons for your career choice or career preference?

(Mark one for each item)

	Essential	Very Important	Somewhat Important	Not Important
Job opportunities are generally available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy working with the kind of people involved in this field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The work would be interesting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This is a well-paying career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This choice satisfies my parents' hopes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The work would be challenging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel this enables me to make a contribution to society	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are opportunities for rapid career advancement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are opportunities for freedom of action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. Indicate how important you believe each priority listed below is at the college or university you entered as a freshman.

(Mark one for each item)

	Highest Priority	High Priority	Medium Priority	Low Priority
To promote the intellectual development of students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help students examine and understand their personal values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To increase the representation of minorities in the faculty and administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To develop a sense of community among students and faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To develop leadership ability among students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To conduct basic and applied research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To raise money for the institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To develop leadership ability among faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To increase the representation of women in the faculty and administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To facilitate student involvement in community service activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help students learn how to bring about change in American society	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help solve major social and environmental problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To maintain a campus climate where differences of opinion can be aired openly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To increase or maintain institutional prestige	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To develop among students and faculty an appreciation for a multi-cultural society	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To hire faculty "stars"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To economize and cut costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To recruit more minority students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To enhance the institution's national image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To create a positive undergraduate experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To create a diverse multi-cultural environment on campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. Below is a list of different major fields.
(Mark only one in each column)
- ☐ Undergraduate major (final or most recent)
- ☐ Graduate major (omit if you do not plan to go to graduate school)

ARTS AND HUMANITIES	PHYSICAL SCIENCE
Art, fine and applied <input type="checkbox"/> <input type="checkbox"/>	Astronomy <input type="checkbox"/> <input type="checkbox"/>
English (language and literature) <input type="checkbox"/> <input type="checkbox"/>	Atmospheric Science (incl. Meteorology) <input type="checkbox"/> <input type="checkbox"/>
History <input type="checkbox"/> <input type="checkbox"/>	Chemistry <input type="checkbox"/> <input type="checkbox"/>
Journalism <input type="checkbox"/> <input type="checkbox"/>	Earth Science <input type="checkbox"/> <input type="checkbox"/>
Language and Literature (except English) <input type="checkbox"/> <input type="checkbox"/>	Marine Science (incl. Oceanography) <input type="checkbox"/> <input type="checkbox"/>
Music <input type="checkbox"/> <input type="checkbox"/>	Mathematics <input type="checkbox"/> <input type="checkbox"/>
Philosophy <input type="checkbox"/> <input type="checkbox"/>	Physics <input type="checkbox"/> <input type="checkbox"/>
Speech <input type="checkbox"/> <input type="checkbox"/>	Statistics <input type="checkbox"/> <input type="checkbox"/>
Theater or Drama <input type="checkbox"/> <input type="checkbox"/>	Other Physical Science <input type="checkbox"/> <input type="checkbox"/>
Theology or Religion <input type="checkbox"/> <input type="checkbox"/>	PROFESSIONAL
Other Arts and Humanities <input type="checkbox"/> <input type="checkbox"/>	Architecture or Urban Planning <input type="checkbox"/> <input type="checkbox"/>
BIOLOGICAL SCIENCE	Home Economics <input type="checkbox"/> <input type="checkbox"/>
Biology (general) <input type="checkbox"/> <input type="checkbox"/>	Health Technology (medical, dental, laboratory) <input type="checkbox"/> <input type="checkbox"/>
Biochemistry or Biophysics <input type="checkbox"/> <input type="checkbox"/>	Law <input type="checkbox"/> <input type="checkbox"/>
Botany <input type="checkbox"/> <input type="checkbox"/>	Library/Archival Science <input type="checkbox"/> <input type="checkbox"/>
Marine (Life) Science <input type="checkbox"/> <input type="checkbox"/>	Nursing <input type="checkbox"/> <input type="checkbox"/>
Microbiology or Bacteriology <input type="checkbox"/> <input type="checkbox"/>	Pharmacy <input type="checkbox"/> <input type="checkbox"/>
Zoology <input type="checkbox"/> <input type="checkbox"/>	Podiatric, Premedicine, Preveterinary <input type="checkbox"/> <input type="checkbox"/>
Other Biological Science <input type="checkbox"/> <input type="checkbox"/>	Therapy (occupational, physical, speech) <input type="checkbox"/> <input type="checkbox"/>
BUSINESS	Other Professional <input type="checkbox"/> <input type="checkbox"/>
Accounting <input type="checkbox"/> <input type="checkbox"/>	SOCIAL SCIENCE
Business Administration (general) <input type="checkbox"/> <input type="checkbox"/>	Anthropology <input type="checkbox"/> <input type="checkbox"/>
Finance <input type="checkbox"/> <input type="checkbox"/>	Economics <input type="checkbox"/> <input type="checkbox"/>
Marketing <input type="checkbox"/> <input type="checkbox"/>	Ethnic Studies <input type="checkbox"/> <input type="checkbox"/>
Management <input type="checkbox"/> <input type="checkbox"/>	Geography <input type="checkbox"/> <input type="checkbox"/>
Secretarial Studies <input type="checkbox"/> <input type="checkbox"/>	Political Science (gov't, international relations) <input type="checkbox"/> <input type="checkbox"/>
Other Business <input type="checkbox"/> <input type="checkbox"/>	Psychology <input type="checkbox"/> <input type="checkbox"/>
EDUCATION	Social Work <input type="checkbox"/> <input type="checkbox"/>
Business Education <input type="checkbox"/> <input type="checkbox"/>	Sociology <input type="checkbox"/> <input type="checkbox"/>
Elementary Education <input type="checkbox"/> <input type="checkbox"/>	Women's Studies <input type="checkbox"/> <input type="checkbox"/>
Music or Art Education <input type="checkbox"/> <input type="checkbox"/>	Other Social Science <input type="checkbox"/> <input type="checkbox"/>
Physical Education or Recreation <input type="checkbox"/> <input type="checkbox"/>	TECHNICAL
Secondary Education <input type="checkbox"/> <input type="checkbox"/>	Building Trades <input type="checkbox"/> <input type="checkbox"/>
Special Education <input type="checkbox"/> <input type="checkbox"/>	Data Processing or Computer Programming <input type="checkbox"/> <input type="checkbox"/>
Other Education <input type="checkbox"/> <input type="checkbox"/>	Drafting or Design <input type="checkbox"/> <input type="checkbox"/>
ENGINEERING	Electronics <input type="checkbox"/> <input type="checkbox"/>
Aeronautical or Astronautical Engineering <input type="checkbox"/> <input type="checkbox"/>	Mechanics <input type="checkbox"/> <input type="checkbox"/>
Civil Engineering <input type="checkbox"/> <input type="checkbox"/>	Other Technical <input type="checkbox"/> <input type="checkbox"/>
Chemical Engineering <input type="checkbox"/> <input type="checkbox"/>	OTHER FIELDS
Electrical or Electronic Engineering <input type="checkbox"/> <input type="checkbox"/>	Agriculture <input type="checkbox"/> <input type="checkbox"/>
Industrial Engineering <input type="checkbox"/> <input type="checkbox"/>	Communications (radio, TV, etc.) <input type="checkbox"/> <input type="checkbox"/>
Mechanical Engineering <input type="checkbox"/> <input type="checkbox"/>	Computer Science <input type="checkbox"/> <input type="checkbox"/>
Other Engineering <input type="checkbox"/> <input type="checkbox"/>	Forestry <input type="checkbox"/> <input type="checkbox"/>
	Law Enforcement <input type="checkbox"/> <input type="checkbox"/>
	Military Science <input type="checkbox"/> <input type="checkbox"/>
	Other Field <input type="checkbox"/> <input type="checkbox"/>
	Undecided <input type="checkbox"/> <input type="checkbox"/>

29. If you have attended more than one undergraduate college, please write in the name and location of the current (or most recent) college attended. (Please print)

Institution _____ State _____

30. If you have been admitted to a graduate or professional school, please write in the name of the institution and its location. (Please print)

Institution _____ State _____

31. Please provide the following information about your scores on the tests listed below:

GRE: Verbal GRE: Quantitative

LSAT MCAT

32. Would you like to receive a copy of the results of this survey?
- ☐ Yes ☐ No

33. The Higher Education Research Institute at UCLA actively encourages the colleges that participate in this survey to conduct local studies of their students. If your college asks for a tape copy of the data and signs an agreement to use it only for research purposes, do we have your permission to include your ID number in such a tape?
- ☐ Yes ☐ No

34. Please provide your Social Security Number:

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- ADDITIONAL QUESTIONS: If you received an additional page of questions, please mark your answers below:

35. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	42. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	49. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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55. Please update the name and address information printed on the front page of this questionnaire:

First Name: MI:

Last Name:

Street Address:

City:

State: ZIP Code:

Area Code: Phone:

Birthdate: Month: Day: Year:

THANK YOU!

Please return your completed questionnaire in the postage-paid envelope to:

Higher Education Research Institute
2905 W. Service Rd.
Eagan, MN 55121

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274035

PLEASE PRINT: YOUR NAME _____
 First Middle or Maiden Last
 HOME STREET ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 Area Code Home Phone No. _____

When were you born?
 Month Day Year
 (01-12) (01-31) _____

1985 STUDENT INFORMATION FORM

DIRECTIONS
 Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.
 • Use only black lead pencil (No. 2 is ideal).
 • Make heavy black marks that fill the circle.
 • Erase cleanly any answer you wish to change.
 • Make no stray markings of any kind.
EXAMPLE:
 Will marks made with ballpoint or felt-tip marker be properly read? Yes ☐ No ☒

Dear Student:
 The information in this form is being collected as part of a continuing study of higher education conducted jointly by the American Council on Education and the University of California at Los Angeles. Your voluntary participation in this research is being solicited in order to achieve a better understanding of how students are affected by their college experiences. Detailed information on the goals and design of this research program are furnished in research reports available from the Higher Education Research Institute at UCLA. Identifying information has been requested in order to make subsequent mail follow-up studies possible. Your response will be held in the strictest professional confidence.
 Sincerely, *Alexander W. Astin*
 Alexander W. Astin, Director
 Higher Education Research Institute

MARK IN THIS AREA ONLY IF DIRECTED												GRP. CODE
0	1	2	3	4	5	6	7	8	9	0	1	2
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9	0	1	2	3	4	5	6	7	8	9	0	1
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4	5	6	7	8	9	0	1	2	3	4	5	6
7	8	9	0	1	2	3	4	5	6	7	8	9
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8	9	0	1	2	3	4	5	6	7	8	9	0
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8	9	0	1	2	3	4	5	6	7	8	9	0
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4	5	6	7	8	9	0	1	2	3	4	5	6
7	8	9	0	1	2	3	4	5	6	7	8	9
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24. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark (F). If you engaged in an activity one or more times, but not frequently, mark (O) (occasionally). Mark (N) (not at all) if you have not performed the activity during the past year. (Mark one for each item)

	Frequently	Occasionally	Not at all
Used a personal computer	(F)	(O)	(N)
Played a musical instrument	(F)	(O)	(N)
Attended a religious service	(F)	(O)	(N)
Participated in a speech or debate contest	(F)	(O)	(N)
Elected president of one or more student organizations	(F)	(O)	(N)
Was bored in class	(F)	(O)	(N)
Had a major part in a play	(F)	(O)	(N)
Won a varsity letter for sports	(F)	(O)	(N)
Failed to complete a homework assignment on time	(F)	(O)	(N)
Won a prize or award in an art competition	(F)	(O)	(N)
Edited the school paper, year-book, or literary magazine	(F)	(O)	(N)
Tutored another student	(F)	(O)	(N)
Asked a teacher for advice after class	(F)	(O)	(N)
Participated in a science contest	(F)	(O)	(N)
Did extra (unassigned) work/reading for a course	(F)	(O)	(N)
Was a guest in a teacher's home	(F)	(O)	(N)
Studied with other students	(F)	(O)	(N)
Overslept and missed a class or appointment	(F)	(O)	(N)
Smoked cigarettes	(F)	(O)	(N)
Performed volunteer work	(F)	(O)	(N)
Missed school because of illness	(F)	(O)	(N)
Attended a recital or concert	(F)	(O)	(N)
Drank beer	(F)	(O)	(N)
Stayed up all night	(F)	(O)	(N)
Felt overwhelmed by all I had to do	(F)	(O)	(N)
Felt depressed	(F)	(O)	(N)

25. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability	()	()	()	()	()
Artistic ability	()	()	()	()	()
Drive to achieve	()	()	()	()	()
Emotional health	()	()	()	()	()
Leadership ability	()	()	()	()	()
Mathematical ability	()	()	()	()	()
Physical health	()	()	()	()	()
Popularity	()	()	()	()	()
Self-confidence (intellectual)	()	()	()	()	()
Self-confidence (social)	()	()	()	()	()
Writing ability	()	()	()	()	()

26. In deciding to go to college, how important to you was each of the following reasons? (Mark one answer for each possible reason)

Very important
2
Somewhat important
3
Not important
1

To be able to get a better job (V) (S) (N)
To gain a general education and appreciation of ideas (V) (S) (N)
To improve my reading and study skills (V) (S) (N)
There was nothing better to do. (V) (S) (N)
To make me a more cultured person (V) (S) (N)
To be able to make more money. (V) (S) (N)
To learn more about things that interest me (V) (S) (N)
To prepare myself for graduate or professional school (V) (S) (N)
My parents wanted me to go (V) (S) (N)
I could not find a job (V) (S) (N)
Wanted to get away from home. (V) (S) (N)

27. Do you have any concern about your ability to finance your college education? (Mark one)

None (I am confident that I will have sufficient funds) ()
Some concern (but I will probably have enough funds) ()
Major concern (not sure I will have enough funds to complete college). ()

28. How would you characterize your political views? (Mark one)

Far left ()
Liberal ()
Middle-of-the-road ()
Conservative ()
Far right ()

29. What is your best estimate of your parents' total income last year? Consider income from all sources before taxes. (Mark one)

() Less than \$6 000 () \$35,000-39,999
() \$6 000-9 999 () \$40,000-49,999
() \$10,000-14 999 () \$50,000-59,999
() \$15,000-19 999 () \$60,000-74 999
() \$20,000-24 999 () \$75,000-99,999
() \$25,000-29 999 () \$100,000-149,999
() \$30,000-34 999 () \$150,000 or more

30. What is the highest level of formal education obtained by your parents? (Mark one in each column)

	Father	Mother
Grammar school or less	()	()
Some high school	()	()
High school graduate	()	()
Postsecondary school other than college	()	()
Some college	()	()
College degree	()	()
Some graduate school	()	()
Graduate degree	()	()

31. Mark only three responses, one in each column.

☒ Your mother's occupation
☒ Your father's occupation
☒ Your probable career occupation
 *E. If your father or mother is deceased, please indicate his or her last occupation.

Accountant or actuary	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Actor or entertainer	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Architect or urban planner	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Artist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Business (clerical)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Business executive (management, administrator)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Business owner or proprietor	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Business salesperson or buyer	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Clergyman (minister, priest)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Clergy (other religious)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Clinical psychologist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
College teacher	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Computer programmer or analyst	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Conservationist or forester	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Dentist (including orthodontist)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Dietician or home economist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Engineer	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Farmer or rancher	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Foreign service worker (including diplomat)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Homemaker (full-time)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Interior decorator (including designer)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Interpreter (translator)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Lab technician or hygienist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Law enforcement officer	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Lawyer (attorney) or judge	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Military service (career)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Musician (performer, composer)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Nurse	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Optometrist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Pharmacist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Physician	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
School counselor	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
School principal or superintendent	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Scientific researcher	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Social, welfare or recreation worker	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Statistician	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Therapist (physical, occupational, speech)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Teacher or administrator (elementary)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Teacher or administrator (secondary)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Veterinarian	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Writer or journalist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Skilled trades	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Other (include)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Laborer (unskilled)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Semi-skilled worker	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Other occupation	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Unemployed	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

32. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

My relatives wanted me to come here.	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
My teacher advised me	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
This college has a very good academic reputation	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
This college has a good reputation for its social activities	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
I was offered financial assistance	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
This college offers special educational programs	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
This college has low tuition	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
My guidance counselor advised me	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
I wanted to live near home	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
A friend suggested attending	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
A college rep. recruited me	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The athletic dept. recruited me	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
This college's graduates gain admission to top graduate/professional schools	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
This college's graduates get good jobs	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Not offered financial aid by first choice college	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

33. Do you have a disability? (Mark all that apply)

None ☒ Learning disability ☒
 Hearing ☒ Health-related ☒
 Speech ☒ Partially sighted or blind ☒
 Orthopedic ☒ Other ☒

BE SURE TO ANSWER QUESTIONS 34, 35, AND 36.

37. Mark one in each row:

The Federal government is not doing enough to protect the consumer from faulty goods and services	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The Federal government is not doing enough to promote disarmament	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The Federal government is not doing enough to control environmental pollution	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The Federal government should do more to discourage energy consumption	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The Federal government should raise taxes to help reduce the deficit	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Federal military spending should be increased	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Nuclear disarmament is attainable	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The death penalty should be abolished	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
A national health care plan is needed to cover everybody's medical costs	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Abortion should be legalized	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Grading in the high schools has become too easy	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The activities of married women are best confined to the home and family	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
A couple should live together for some time before deciding to get married	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Women should receive the same salary and opportunities for advancement as men in comparable positions	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Wealthy people should pay a larger share of taxes than they do now	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Marijuana should be legalized	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Busing is O.K. if it helps to achieve racial balance in the schools	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
It is important to have laws prohibiting homosexual relationships	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
College officials have the right to regulate student behavior off-campus	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Faculty promotions should be based in part on student evaluations	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
College officials have the right to ban persons with extreme views from speaking on campus	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Realistically, an individual person can do little to bring about changes in our society	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
The chief benefit of a college education is that it increases one's earning power	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

34. Current religious preference: (Mark one in each column)

	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Baptist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Buddhist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Congregational (U.C.C.)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Eastern Orthodox	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Episcopal	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Islamic	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Jewish	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Latter Day Saints (Mormon)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Lutheran	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Methodist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Presbyterian	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Quaker (Society of Friends)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Roman Catholic	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Seventh Day Adventist	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Other Protestant	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Other Religion	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
None	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

35. Are you a born-again Christian?

Yes ☒ No ☒

36. During high school (grades 9-12) how many years did you study each of the following subjects? (Mark one for each item)

English	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Mathematics	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Foreign Language	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Physical Science	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Biological Science	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
History/Am. Govt.	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Computer Science	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Art and/or Music	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

☒ Disagree Strongly
☒ Disagree Somewhat
☒ Agree Somewhat
☒ Agree Strongly

38. Below is a list of different undergraduate major fields grouped into general categories. Mark only one circle to indicate your probable field of study.

- | | |
|--|--|
| ARTS AND HUMANITIES | PHYSICAL SCIENCE |
| Art, fine and applied | Astronomy |
| English (language and literature) | Atmospheric Science (incl. Meteorology) |
| History | Chemistry |
| Journalism | Earth Science |
| Language and Literature (except English) | Marine Science (incl. Oceanography) |
| Music | Mathematics |
| Philosophy | Physics |
| Speech | Statistics |
| Theater or Drama | Other Physical Science |
| Theology or Religion | PROFESSIONAL |
| Other Arts and Humanities | Architecture or Urban Planning |
| BIOLOGICAL SCIENCE | Home Economics |
| Biology (general) | Health Technology (medical, dental, laboratory) |
| Biochemistry or Biophysics | Library or Archival Science |
| Botany | Nursing |
| Marine (Life) Science | Pharmacy |
| Microbiology or Bacteriology | Pre dental, Pre medicine, Pre veterinary |
| Zoology | Therapy (occupational, physical, speech) |
| Other Biological Science | Other Professional |
| BUSINESS | SOCIAL SCIENCE |
| Accounting | Anthropology |
| Business Admin. (general) | Economics |
| Finance | Ethnic Studies |
| Marketing | Geography |
| Management | Political Science (gov't, international relations) |
| Secretarial Studies | Psychology |
| Other Business | Social Work |
| EDUCATION | Sociology |
| Business Education | Women's Studies |
| Elementary Education | Other Social Science |
| Music or Art Education | TECHNICAL |
| Physical Education or Recreation | Building Trades |
| Secondary Education | Data Processing or Computer Programming |
| Special Education | Drafting or Design |
| Other Education | Electronics |
| ENGINEERING | Mechanics |
| Aeronautical or Astronautical Eng. | Other Technical |
| Civil Engineering | OTHER FIELDS |
| Chemical Engineering | Agriculture |
| Electrical or Electronic Engineering | Communications (radio, TV, etc.) |
| Industrial Engineering | Computer Science |
| Mechanical Engineering | Forestry |
| Other Engineering | Law Enforcement |
| | Military Science |
| | Other Field |
| | Undecided |

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39. Indicate the importance to you personally of each of the following: (Mark one for each item)

- | | | | | |
|--|-------------------|------------------------|--------------------|---------------|
| | (N) Not Important | (S) Somewhat Important | (V) Very Important | (E) Essential |
| Becoming accomplished in one of the performing arts (acting, dancing, etc.) | () | () | () | () |
| Becoming an authority in my field | () | () | () | () |
| Obtaining recognition from my colleagues for contributions to my special field | () | () | () | () |
| Influencing the political structure | () | () | () | () |
| Influencing social values | () | () | () | () |
| Raising a family | () | () | () | () |
| Having administrative responsibility for the work of others | () | () | () | () |
| Being very well off financially | () | () | () | () |
| Helping others who are in difficulty | () | () | () | () |
| Making a theoretical contribution to science | () | () | () | () |
| Writing original works (poems, novels, short stories, etc.) | () | () | () | () |
| Creating artistic work (painting, sculpture, decorating, etc.) | () | () | () | () |
| Being successful in a business of my own | () | () | () | () |
| Becoming involved in programs to clean up the environment | () | () | () | () |
| Developing a meaningful philosophy of life | () | () | () | () |
| Participating in a community action program | () | () | () | () |
| Helping to promote racial understanding | () | () | () | () |
| Becoming an expert on finance and commerce | () | () | () | () |

40. What is your best guess as to the chances that you will: (Mark one for each item)

- | | | | | |
|---|---------------|------------------------|-----------------|----------------------|
| | (N) No Chance | (V) Very Little Chance | (S) Some Chance | (E) Very Good Chance |
| Change major field? | () | () | () | () |
| Change career choice? | () | () | () | () |
| Fail one or more courses? | () | () | () | () |
| Graduate with honors? | () | () | () | () |
| Be elected to a student office? | () | () | () | () |
| Get a job to help pay for college expenses? | () | () | () | () |
| Work full time while attending college? | () | () | () | () |
| Join a social fraternity, sorority, or club? | () | () | () | () |
| Live in a coeducational dorm? | () | () | () | () |
| Play varsity/intercollegiate athletics? | () | () | () | () |
| Be elected to an academic honor society? | () | () | () | () |
| Make at least a "B" average? | () | () | () | () |
| Need extra time to complete your degree requirements? | () | () | () | () |
| Get tutoring help in specific courses? | () | () | () | () |
| Have to work at an outside job during college? | () | () | () | () |
| Seek vocational counseling? | () | () | () | () |
| Seek individual counseling on personal problems? | () | () | () | () |
| Get a bachelor's degree (B.A., B.S., etc.)? | () | () | () | () |
| Participate in student protests or demonstrations? | () | () | () | () |
| Drop out of this college temporarily (exclude transferring)? | () | () | () | () |
| Drop out permanently (exclude transferring)? | () | () | () | () |
| Transfer to another college before graduating? | () | () | () | () |
| Be satisfied with your college? | () | () | () | () |
| Find a job after college in the field for which you were trained? | () | () | () | () |
| Get married while in college? (skip if married) | () | () | () | () |
| Get married within a year after college? (skip if married) | () | () | () | () |

The Higher Education Research Institute at UCLA actively encourages the colleges that participate in this survey to conduct local studies of their students. If these studies involve collecting follow-up data, it is necessary for the institution to know the students' ID numbers so that follow-up data can be linked with the data from this survey. If your college asks for a tape copy of the data and signs an agreement to use it only for research purposes do we have your permission to include your ID number in such a tape?

- | | |
|---------------|---------------|
| 41. A B C D E | 46. A B C D E |
| 42. A B C D E | 47. A B C D E |
| 43. A B C D E | 48. A B C D E |
| 44. A B C D E | 49. A B C D E |
| 45. A B C D E | 50. A B C D E |

THANK YOU!

APPENDIX B: PILOT STUDY

**Racial Climates and Academic Self-Concept:
A Structural Equation Model for Minority Graduate Students**

During the 1970s graduate institutions made significant strides in increasing minority enrollments, making these predominantly white campuses alluring for the opportunities they offered and perhaps alienating in the social adjustments they required of students. Hispanic enrollments increased from 1.5 percent in 1974 to 2.6 percent of full-time graduate enrollment in 1978 (Morris, 1981). Black enrollments in graduate and professional schools reached a peak (6 percent) between 1976 and 1979 (Morris, 1981). While it is clear that increased minority enrollments in higher education during this era led to a variety of institutional changes (Peterson, Blackburn, Gamson, Arce, Davenport, & Mingle, 1978), little is known about the effect campus racial climates had on the students who entered these institutions.

Part of the problem is that much of the research focusing on minorities on white campuses has been descriptive (Brooks, Sedlacek, and Mindus, 1973; Sedlacek, 1987). There are only a few studies that have actually used multivariate analyses to link measures of campus racial attitudes with student outcomes. For example, Nettles, Thoeny, and Gosman (1986) found that lower feelings of discrimination on campus (i.e., students' perceptions of the racial climate) contribute to higher grade point averages for both Black and White students. Tracey and Sedlacek (1985) also found that an understanding and ability to deal with racism had a positive effect on persistence for Black students. Allen (1988) also suggests that campus race relations can significantly affect minority student involvement on campus. These studies provide

initial evidence regarding the importance of racial climate to a variety of educational outcomes for minority students in undergraduate institutions.

Although very little is known about the effects of the campus racial climate at the graduate level, it is clear that interactions with faculty and other students in the graduate program become more important to the academic achievement and career development of minority students at this stage. Hall and Allen (1982) found that the academic performance of Black graduate students was "clearly boosted by favorable relations with faculty" (p. 60). Astin (1982) also found that faculty expectations and attitudes constitute a significant part of the graduate and professional experience of minority students. Astin concluded that an "inhospitable" environment of a graduate institution has a major impact on minority participation and satisfaction with graduate education. Thus, it is reasonable to suggest that the racial climate of the graduate school may have as much of an effect on educational outcomes for minority students at this level as it does for students pursuing a baccalaureate degree.

Academic Self-Concept

Since graduate studies typically demand more independence, inner-direction and more resourcefulness than do undergraduate studies (Hedegard, 1972), one factor that may be particularly important to the academic success of a minority graduate student is his/her academic self-concept. Several studies have demonstrated that a positive self-concept is related to minority adjustment and success in predominantly white institutions (Bayer, 1972; Bohn, 1973; Stikes, 1975; Sedlacek, 1987). However, prior to examining academic achievement, it is important to establish the link between the racial climate and a student's self-concept.

Studies on integrated versus segregated school settings and minority self-concept, an area of research similar to the current study, have presented contradictory findings. Many studies suggest a negative self-concept is associated with integrated environments while others have found that, when compared with students in segregated settings, black students demonstrated a positive self-concept (see review in Katz, 1976). Meketon (cited in Katz, 1976) found that intergroup contact in the school can have different influences on the self-concept of minority students depending on the environment. Students in a peaceably integrated school demonstrated lower self-esteem than students in both a de facto segregated school and a school where hostility accompanied integration. Meketon attributed such results to the support in the black community that rallied behind the latter group, thereby enhancing student self-esteem.

While these studies suggest associations, they have yet to propose a theoretical model that could be used to test causal assumptions regarding the development of academic self-concept and racial climates. These works also provide little guidance for an examination of the effects of racial climates in graduate school, environments in which Black and Chicano students have almost always been in the minority. The current study proposes to test a model reflecting the effect of the racial climate of the graduate school on academic self-concept among graduate minority students. Figure 1 shows the proposed paths indicating the relationship of minority student background characteristic and racial climate on academic self-concept in 1980.

Method

Data Source

Researchers recommend using longitudinal data to investigate causal influences, such as socializing institutions (e.g., schools and colleges), on self-concept development

(Dusek and Flaherty, 1981). Data for the present study comes from a longitudinal survey, the 1980 Follow-up Survey of the 1971 American Freshmen, a project of the Cooperative Institutional Research Program (CIRP) conducted by the Higher Education Research Institute at UCLA. The data file includes a national representative sample of students who entered colleges as freshmen in the Fall of 1971 and were followed up nine years later in the Summer of 1980. The 1971 freshmen survey includes all first-time, full-time freshmen; although, participation rates varied (80 - 90%) depending on the institution type and their method of disseminating questionnaires. The Follow-up Survey was conducted in conjunction with a national study of minorities funded by the Ford Foundation. It included all American Indians, Chicanos, and Puerto Ricans; a 50% sample of all Blacks and a 10% sample of all White students from the 1971 survey. Undergraduate institutions provided updated student addresses for the 1980 survey, permitting two mailings of the questionnaire and a reminder postcard. Approximately 11,500 completed questionnaires were returned, representing about 35% of the original sample who received mailed questionnaires. The survey measures a wide variety of student characteristics (values, attitudes, demographics, and student self-ratings) as well as information regarding college experiences at undergraduate and graduate institutions.

Sample

Students who had either obtained or were working toward a masters, doctorate or advanced professional degree at the time of the 1980 Follow-up Survey were selected for the study. These students had experiences in graduate programs spanning the years 1975 to 1980. Only subjects with valid responses on most of the critical items were selected for the study, although imputation of within-group means was performed

in a few cases. The sample consisted of 95 Chicano, 405 Black, and 1,304 White students. The small number of American Indians, Asians, and Puerto Ricans were excluded from this analysis. Black and Chicano students constituted one group who were in the minority in most graduate programs. This group of 510 students formed the basis on which to test the proposed model.

Variables

In order to evaluate the effect of the graduate school's racial climate on 1980 academic self-concept, two latent constructs (socioeconomic status and 1971 academic self-concept) and a measured variable (gender) were used as controls. A student's socioeconomic (SES) is composed of 1971 parental income and the level of education of the student's mother and father, a six-point scale from "grammar school" or less to "postgraduate degree". Parental income was on a twelve-point scale with the low representing earnings of "less than \$4,000" and the high representing "\$40,000 or more". Gender was an exogenous, dichotomous variable that was coded 1 for male and 2 for female. Both SES and gender have proven to be important predictors of self-concept in previous studies (Duesek and Flaherty, 1981) and studies on academic self-concept conducted with data at HERI (Hurtado, Astin, Dey, 1989).

A student's 1971 academic self-concept was composed of student self-ratings of their abilities when they first entered college. Students were asked to rate themselves on a series of traits in comparison with the average student of their own age. Academic self-concept was a latent construct composed of three academic self-rating items, each on a five-point scale from "lowest ten percent" to "highest ten percent". The three items included student self-ratings on academic ability, intellectual self-confidence, and

writing ability. A preliminary factor analysis indicated that these items seemed to represent a single construct.

According to Dusek and Flaherty (1981), the impact of a sociocultural event on self-concept is a result of how the experience is interpreted by the individual. Therefore, the racial climate of the graduate campus was based on student perceptions of relations between minority students, white students, and faculty. Students were asked to indicate the extent to which a series of statements reflected minority and White relations on their campus. The latent construct was composed of 4 items, each on a three-point scale from "very little" to "substantial" (coded 1 to 3). The measured variables included student responses to the following items: Social interaction between minority and white students, social interaction between faculty and minority students, trust between faculty and minority students, and trust between minority and white students.

Academic self-concept in 1980 was a latent construct composed of the same self-rating measures used in the 1971 survey. This construct represents a "posttest" measure of academic self-concept taken nine years after college entry. A summary of measured variable characteristics is presented in Table 1.

---Place Table 1 about here---

Analysis

Initial analyses were conducted with the full group, White and minority students, with minority (Black and Chicano students) as a dichotomous, exogenous control variable. Substantial modification of the model led me to realize that my hypothesized model was actually built on minority student experiences on predominantly white campuses. From that point forward I continued the analysis on

the 510 Black and Chicano students in the sample. The results that I report are from analysis of the minority data.

An inspection of Mardia's normalized coefficient revealed that two cases skewed the multivariate distribution in the sample of 510 minority students. After a series of analyses with and without these cases, I decided to drop the cases as outliers in the multidimensional space. Mardia's normalized coefficient dropped from 4.097 to 0.213, an acceptable level for analysis using normal distribution theory.

Since the initial hypothesized model did not adequately reflect the data, I added correlated residuals until an acceptable fit was achieved. These modifications were conducted in accordance with techniques used in previous research (Newcomb and Bentler, 1988). These changes did not disturb the critical features of the structural model.

All factor analytic structural equation model analyses (FASEM) were conducted using version 3.0 of the EQS computer program (Bentler, 1989). I generated a structural model in which academic self-concept in 1980 is determined by student background characteristics (academic self-concept in 1971, SES, gender) and the racial climate of the graduate school. Figure 1 illustrates the model with designated fixed paths for identification.

---Place Figure 1 about here---

Results and Discussion

The resulting model fits the data on minority graduate students quite well. The chi-square statistic is 72.5 based on 67 degrees of freedom ($p = .303$) and the Bentler-Bonett Normed Fit Index is .96 (CFI=.99). Parameter estimates of the model are

presented in two separate tables for reasons of clarity. Standardized parameter estimates are presented for both the measurement model (Table 2) and causal model (Table 3) for comparison purposes according to the recommendations of previous research (Bentler and Speckart, 1981). Information regarding tests of significance are based on non-standardized values.

Table 2 provides information on the relationships of the measured variables to the latent constructs. The standardized parameter estimates for the measurement model are equivalent to factor loadings that indicate the regression of each measured variable on its respective latent construct. The unique variances, or squared residuals, represent the amount of each measured variable's variance not accounted for by the latent construct. All factor loadings were highly significant ($p < .001$), confirming the hypothesized factor structure. However, it is interesting to note particular differences in the relationships of measured variables to latent constructs. For example, SES explains most of the variance in the level of mother's education (V3)—over and above father's education and parental income. This is not unusual given the era under investigation. Those women, with children in college, that were most educated in the early 1970s came from high socioeconomic backgrounds. Women of more variant social classes were just beginning to enter higher education in greater numbers during this era to obtain baccalaureates and advanced degrees.

Another more striking difference in relationships among the factor structures is the relationship of a student's self-rating of writing ability to academic self-concept. A student's estimation of writing ability (V8 in 1971 and V15 in 1980) becomes more integral to his/her academic self-concept in graduate school. This is to be expected, given the skill demands of most graduate programs. These differences indicate that

academic self-concept changes over time, suggesting that it can be influenced by environmental situations.

---Place Table 2 about here---

Table 3 shows both across time and with-time parameter estimates for the measured and latent variables in the causal model. Critical ratios, representing levels of significance, corresponding to each parameter are also presented. Parameters with a critical ratio of less than 1.96 are non-significant. In addition to the direct effects, indirect causal influences of SES and gender are presented for interpretation. Finally, to complete the model, correlations among residuals that were added during model modification are presented in Table 3.

A measure of a students' SES had a significant direct effect (.15) on academic self-concept as they began college in 1971. That is, the higher the socioeconomic background of the student the more likely he/she is to have a high academic self-concept. Although SES has an indirect effect (.09) on academic self-concept in 1980, it has no significant direct effect across time. (Nor does it directly affect the racial climate of the graduate school in 1980, indicating that racial climate may be entered as a exogenous variable in future studies.) These results suggest that more immediate environmental influences on academic self-concept may take precedence, and nine years may be considered sufficient time to change the life chances and opportunities for minority students. Yet, undeniably, the significant indirect effect (.09) suggests that social origins play a role in access to initial academic opportunities and feelings about self.

In contrast, gender plays a persistent role in academic self-concept for minority students across time. Female minority students tend to have a lower academic self-

concept at college entry (-.20) and nine years later. After controlling for initial academic self-concept in 1971, and although students are working toward or have already obtained advanced degrees, gender maintains a negative direct effect (-.12) on academic self-concept in 1980. Generally, females tend to outperform males on particular academic outcomes such as retention and college grades at the undergraduate level (Dey and Astin, 1988), yet it appears that minority females continue to be more critical of themselves in terms of their intellectual abilities. Whether these feelings persist into their professional careers remains to be seen.

---Place Table 3 about here---

The hypothesis explicit in the model regarding the direct effect of the racial climate of graduate school on academic self-concept for minority students is confirmed. Racial climate has a small but significant direct effect (-.09), even after controlling for prior academic self-concept and gender. This effect provides further evidence that academic self-concept can be affected by environmental influences, as perceived by students. However, the negative influence of more hospitable racial climates on academic self-concept was an unexpected result.

How would adverse racial environments cause higher academic self-concept? As stated earlier, black graduate enrollment peaked during this time period and Hispanic enrollment was growing at a much more rapid pace. Interracial contact sharpens the differences between groups (Hail and Allen, 1989), often promoting group solidarity. Pride in one's ethnic group was popular during this time period and may have been translated into high academic self-concept in environments where social interaction and trust between groups was low. This interpretation is consistent with some of the research on integrated and segregated environments and minority self-concept (Katz,

1976). It may be also be that, for the era in question, students at the most adverse educational environments (elite, predominantly white institutions) also felt they were among the top students academically precisely because they were admitted to such racially and academically selective institutions.

Conclusion

The current study contributes to the research on self-concept development by establishing that one particular type of self-concept, academic self-concept, changes during young adulthood. First, longitudinal research on minority graduate students demonstrates how elements that make up one's conception of the academic self changes. That is, writing ability appears to become much more central to academic self-concept in educational attainment beyond the baccalaureate degree. Second, differences in the effect of student background characteristics (SES and gender) over time also suggest the changing nature of academic self-concept. Finally, the most important finding for educational settings is that certain types of environments can affect academic self-concept. Further analyses using structural equation modeling can be used to investigate the stability of academic self-concept over time.

The most consistent finding in this study is the negative effect of gender on academic self-concept. Minority females were new arrivals to graduate education in the mid-1970s. Perhaps fewer women, and even fewer minorities, made minority females less likely to report high academic self-concept—despite their level of accomplishment relative to their population. It would be interesting to note whether these feelings persist in a more current sample of minority graduate students. This information will provide new insights into whether minority women consistently underestimate their academic abilities.

The unexpected positive effects of an adverse racial climate on academic self-concept suggests that further research is necessary to understand the complex ways in which students mediate the effects of adverse environments. I suggest that this unexpected effect may be particular to the era under study. Student may have had collective support upon entering environments in which faculty and students had very little experience in dealing with minority students in the 1970s. There is much less ethnic group cohesion among graduate students on predominantly white campuses today. More legitimacy is attributed to "the system" than in previous eras, perhaps contributing to more individualism. That is, students' academic self-concept may be much more dependent on the approval of others at the university. Further tests of the model on a current group of graduate, or undergraduate, students at predominantly white universities will test this hypothesis. If these results hold true, further investigation will help determine the strategies minority students adopt in adverse climates.

Since graduate school environments can affect a variety of academic outcomes, including how minority students feel about themselves, clearly the next step in research is to test a larger model linking academic self-concept to academic achievement variables. This model can be used to investigate the relationships among campus racial climates, academic self-concept and such educational outcomes as grade point average, time to degree, and persistence in graduate school for minority students.

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TABLE 1
Summary of Variable Characteristics
(N=510)

Variable Name	Mean	Std. Dev	Kurtosis	Skewness
V1 Parental Income in 1971	4.161	2.309	.474	.806
V2 Father's Education	2.957	1.565	-.835	.482
V3 Mother's Education	3.216	1.465	-.771	.277
V5 Student's sex	1.559	.497	-1.951	-.238
V6 1971 Self-rating: Academic Ability	3.659	.729	-.597	.291
V7 1971 Self-rating: Self-confidence (Intellectual)	3.506	.833	.137	-.090
V8 1971 Self-rating: Writing Ability	3.327	.778	.262	.260
V9 Race Relations: Trust between minority and white students	1.847	.645	-.649	.155
V10 Race Relations: Trust between minority students and faculty	1.798	.684	-.870	.280
V11 Race Relations: Social interaction-Minority and white students	1.841	.678	-.839	.206
V12 Race Relations: Social interaction-Minority students and faculty	1.669	.694	-.814	.550
V13 1980 Self-rating: Academic Ability	4.124	.691	.554	-.454
V14 1980 Self-rating: Self-confidence (Intellectual)	4.055	.748	-.356	-.373
V15 1980 Self-rating: Writing Ability	3.888	.779	-.469	-.229

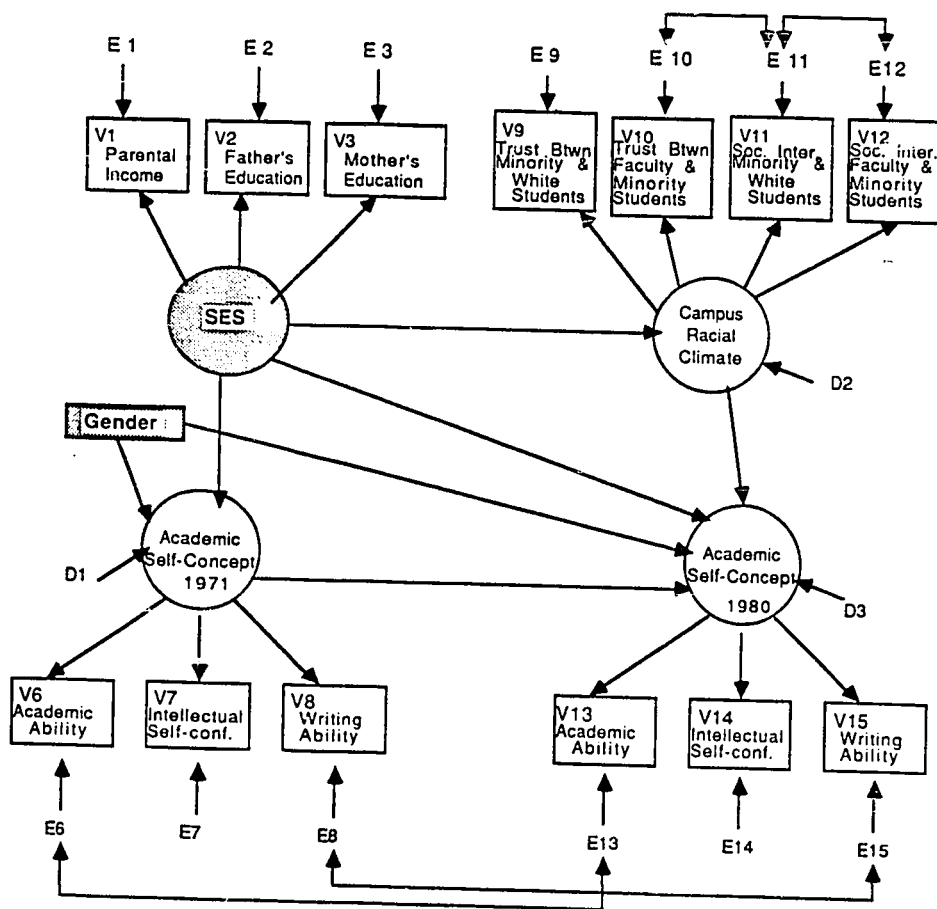
Table 2
Standardized Parameter Estimates for Latent Constructs
 (Measurement Model Parameters)

Factor	Factor Loading	Unique Variance*
Socioeconomic Status		
V1	.61	.64
V2	.79	.37
V3	.86	.27
Academic Self-Concept 1971		
V6	.64	.58
V7	.72	.49
V8	.40	.84
Racial Climate of Graduate School		
V9	.68	.55
V10	.86	.27
V11	.78	.39
V12	.62	.62
Academic Self-Concept 1980		
V13	.64	.59
V14	.77	.41
V15	.62	.62

*Coefficient associated with standardized residual has been squared.

Table 3
Standardized Parameter Estimates for Causal Model

Direct Effects of Observed and Latent Constructs On:	Regression Weights	Critical Ratio
Academic Self-Concept 1971		
F1 SES	.15	2.44
V5 Gender (female)	-.20	-3.70
Racial Climate of Graduate School		
F1 SES	-.01	-1.06
Academic Self-Concept 1980		
F1 SES	.01	0.18
V5 Gender (female)	-.12	-2.51
F2 Academic Self-Concept 1971	.57	7.12
F3 Racial Climate	-.09	-2.01
Indirect Effects on Academic Self-Concept in 1980		
F1 SES	.09	2.42
V5 Gender (female)	-.12	-2.40
Correlations Among Residuals	Simple r	Critical Ratio
E6,E15	.27	4.45
E8,E15	.26	5.00
E10,E11	-.94	-6.00
E11,E12	.21	2.13
Residual Variances of Endogenous Variables		
Academic Self-Concept 1971	.97	6.16
Racial Climate	.99	8.90
Academic Self-Concept 1980	.79	6.03



Model - Figure 1.

APPENDIX C: TABLES

Table C.1

Means of Key Independent Variables for Nonrespondents and Respondents

Variable (Label)	Whites		Blacks		Chicanos	
	Responded to survey No	Yes	Responded to survey No	Yes	Responded to survey No	Yes
<i>Pretest Measures</i>						
Social Self-Confidence Factor (SLFCON85)	10.84	10.66	11.28	10.96	10.66	10.51 ^a
Academic Ability (RATE8501)	3.96	4.15	3.69	3.88	3.71	3.90
Highest Degree Planned (DEGASP85)	3.96	4.10	4.09	4.29	3.92	4.12
Pronote Racial Understanding (GOAL8517)	2.25	2.28	3.13	3.15 ^a	2.61	2.53 ^a
May Drop Out Temporarily (FUTACT20)	1.60	1.58 ^b	1.51	1.45 ^a	1.56	1.53 ^a
May Drop Out Permanently (FUTACT21)	1.32	1.28	1.31	1.22 ^b	1.28	1.29 ^a
<i>Ability Measures</i>						
Average High School Grades (HSGPA)	5.69	6.24	4.97	5.58	5.38	5.89
SAT (Math score) (SATM)	542.27	572.91	447.25	497.73	460.91	489.26
SAT (Verbal score) (SATV)	496.09	531.30	418.11	474.58	425.14	446.91 ^b
ACT Composite Score (ACTTOTAL)	22.20	24.01	16.54	20.38	20.56	19.18 ^a
Rank In High School (HSRANK)	4.33	4.59	4.06	4.32	4.22	4.45
<i>Demographic Measures</i>						
Mother's Education (MOTHEDUC)	5.01	5.25	4.53	5.03	3.26	3.50 ^a
Father's Education (FATHEDUC)	5.67	5.92	4.44	4.83	3.50	3.89
Estimated Parental Income (INCOME)	8.70	8.86	6.03	6.70	5.93	6.55
Sex- Female (SEX85)	1.48	1.60	1.56	1.61 ^a	1.56	1.65
Student's Age on 12/31/89 (AGE)	3.17	3.12	3.18	3.04	3.28	3.20
<i>Institutional Measures</i>						
Institutional Selectivity (SELECT)	1020.74	1055.52	1010.89	1079.59	951.26	981.61
Public University (PUBUNIV)	1.45	1.36	1.43	1.26	1.57	1.52 ^a
Private University (PVTUNIV)	1.12	1.16	1.11	1.19	1.05	1.08 ^a
Public four-year college (PUB4)	1.12	1.08	1.14	1.10 ^b	1.01	1.03
Nonsectarian four-year college (NONS4)	1.18	1.26	1.18	1.30	1.05	1.10
Catholic four-year college (CATH4)	1.05	1.04 ^b	1.06	1.05 ^a	1.31	1.25 ^a
Protestant four-year college (PROT4)	1.08	1.11	1.08	1.12 ^b	1.02	1.03 ^a

^a Indicates the differences between means for nonrespondents and respondents are nonsignificant.^b Indicates the differences between means for nonrespondents and respondents are significant at $p < .05$, all other comparisons are significant at $p < .001$.

Table C.2

Racial Climate Effects on Student Academic Achievement, Pearson Correlation and Standardized Regression Coefficients by Outcome and Race, Controlling for SAT

Climate Measures	Academic self-concept						College GPA						Persistence/Degree Attainment					
	Black			Chicano			White			Black			Chicano			White		
	r	β		r	β		r	β		r	β		r	β		r	β	
<i>Student Perceptions</i>																		
Racial Tension	.15	.14*		.11	.04		.11	-.01		.01	-.02		.09	.09		.07	-.01	
Institutional Commitment	-.13	-.06		.00	.09		.04	.02		-.13	-.06		-.13	-.12		.03	.03	
Faculty sensitivity to min. issues	-.09	-.07		.06	.10		.03	.04		.01	.06		.01	-.01		.01	.01	
Minority perspectives in courses	-.20	-.15*a		.10	.10		.03	.03		.01	.08		-.06	-.06		-.04	-.03	
<i>Student Behaviors</i>																		
Took an ethnic studies course	.03	.00		.03	.10		.04	.04		.05	.02		.10	.10		.01	.00	
Attended awareness workshop	.02	-.03		.14	.13		.04	-.02a		.08	.00		.17	.10		.07	.00	
Discussed racial/ethnic issues	.16	.08		.14	.14*		.13	.05*a		.13	.05		.14	.07		.17	.10#a	
Participated in campus protests	.12	.12*		.32	.28#a		.06	.00		.08	.03		.13	.08		.05	.00	
Socialized with other races	.09	-.01		.09	.03		.09	.05*		.00	-.03		.07	.01		.08	.03	
<i>Diversity Measures (Distal)</i>																		
White enrollment growth	.03	.06		.01	.01		-.14	-.03		.05	.04		-.03	.00		-.12	-.03	
Black percentage in 1986	.00	.00		-.11	.02		.12	.05*		.06	.05		-.08	-.04		.08	.03	
Hispanic percentage in 1986	.03	.02		-.31	-.03		.00	.06*		-.01	-.03		-.20	-.10		.09	.12#	
Black FTE in 1986	-.13	-.06		.15	-.01		-.01	.00		-.09	.00		.03	-.03		-.04	-.03	
Hispanic FTE in 1986	-.01	-.02		.06	.02		-.05	.00		.07	.08		.05	.03		-.01	.03	
Black enrollment growth	-.12	-.10		.08	.04		.03	.00		.14	.13*a		.10	.06		.02	.00	
Hispanic enrollment growth	-.10	-.09		.04	.02		-.04	.00		.04	.06		.06	.05		-.01	.03a	
Sample Size	199			140			1,020			202			140			1,020		

Note: 1. Other variables related to academic achievement are not shown in this table. See Appendix C for summary of effects.
 a Variable remained significant at final step; * $p < .05$, # $p < .01$.

Table C.3
Regression Predicting Academic Ability, White Students (N = 1,722)

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) At Each Step														
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Academic ability (1985)	1	.5192	.52	.52	.42	.41	.40	.39	.39	.38	.37	.35	.36	.36	.36	.36	.36	.36
High school GPA	2	.5382	.41	.17	.17	.18	.19	.19	.20	.20	.20	.20	.16	.17	.17	.17	.17	.18
Parental income	3	.5447	.10	.07	.08	.08	.07	.06	.05	.05	.05	.03	.03	.04	.03	.04	.05	.05
Female student	4	.5498	-.12	-.06	-.08	-.08	-.08	-.08	-.08	-.07	-.06	-.07	-.07	-.07	-.07	-.08	-.08	-.08
Mother's education	5	.5526	.13	.07	.08	.06	.06	.06	.06	.06	.05	.02	.02	.02	.02	.01	.02	.02
Student religion: Protestant	6	.5546	-.03	-.04	-.05	-.05	-.05	-.05	-.05	-.05	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04
Social self-confidence (1985)	7	.5577	.14	.07	.07	.06	.06	.06	.06	.06	.06	.06	.05	.06	.05	.05	.06	.06
Degree aspiration (1985)	8	.5602	.20	.08	.07	.07	.06	.06	.06	.06	.06	.03	.03	.03	.03	.03	.03	.03
Institutional selectivity	9	.5733	.35	.20	.18	.17	.16	.15	.15	.15	.14	.14	.14	.13	.13	.12	.11	.11
Attended coed college	10	.5768	.00	-.05	-.05	-.07	-.07	-.07	-.07	-.07	-.07	-.07	-.07	-.06	-.06	-.06	-.06	-.06
Faculty sensitivity	11	.5787	.04	.06	.07	.07	.07	.07	.07	.07	.06	.05	.05	.05	.04	.04	.04	.03
Socialized w/other races	12	.5806	.10	.08	.07	.07	.07	.07	.07	.07	.06	.05	.05	.05	.05	.04	.04	.04
Was guest in professor's home	13	.5845	.14	.11	.11	.11	.11	.10	.11	.10	.10	.08	.08	.07	.07	.07	.07	.06
Member of frat/sorority	14	.5863	-.07	-.05	-.05	-.06	-.07	-.07	-.06	-.07	-.07	-.06	-.05	-.05	-.05	-.05	-.05	-.05
Competition among students	15	.5877	.01	-.02	-.03	-.03	-.04	-.04	-.04	-.04	-.04	-.05	-.05	-.05	-.05	-.04	-.04	-.04
<i>Variables not in equation</i>																		
Growth White FTE				-.06	-.04	-.04	-.03	-.03	-.03	-.03	-.03	-.02	-.02	-.02	-.02	-.02	-.03	-.03
Black percent 1986				.04	.03	.03	.03	.03	.03	.04	.04	.03	.03	.03	.03	.03	.03	.03
Hispanic percent 1986				-.01	-.01	-.02	-.01	-.01	-.01	-.01	-.01	.05	.04	.04	.03	.03	.03	.03
Black FTE 1986				-.03	-.04	-.04	-.05	-.04	-.04	-.04	-.04	-.02	-.01	.00	.00	.02	.02	.03
Hispanic FTE 1986				-.08	-.08	-.09	-.09	-.09	-.09	-.09	-.09	-.05	-.04	-.03	-.03	-.01	-.01	-.00
Growth Black FTE				-.04	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.04	-.04	-.04	-.03	-.02	-.02	-.02
Growth Hispanic FTE				-.06	-.07	-.08	-.07	-.07	-.07	-.07	-.07	-.04	-.03	-.03	-.03	-.01	-.01	-.00
Racial tension				.02	.01	.01	.01	.01	.00	.00	.00	-.02	-.02	-.01	-.01	-.01	-.01	-.01
Institutional commitment				.02	.02	.02	.02	.02	.02	.02	.02	.00	-.01	-.03	-.04	-.04	-.04	-.04
Minority perspectives				.04	.04	.04	.04	.04	.04	.04	.04	.02	.00	.00	.00	.00	.00	.01
Took ethnic studies				.01	.01	.01	.02	.01	.01	.01	.01	-.01	-.01	-.02	-.02	-.03	-.03	-.03
Racial workshops				.03	.02	.03	.03	.02	.02	.02	.02	-.01	-.01	-.02	-.03	-.05	-.05	-.05
Discussed racial issues				.08	.08	.08	.09	.08	.08	.08	.07	.05	.04	.03	.02	.02	.02	.02
Protested on campus				.03	.04	.03	.04	.03	.03	.03	.02	.00	.00	-.01	-.01	-.03	-.03	-.03

Note: Decimals omitted from Beta coefficients.

Table C.4
Regression Predicting Academic Ability, Black Students (N= 297)

Variable	Step	Mult. Simp.		Standardized Coefficients (Betas) at Each Step			
		R	r	1	2	3	4
Academic ability (1985)	1	.5021	.50	50	49	47	47
Mother's education	2	.5126	.18	10	10	10	09
Lived on-campus (1985)	3	.5235	.19	11	11	11	11
Minority perspectives	4	.5386	-.15	-13	-13	-13	-13
<i>Variables not in equation</i>							
Growth White FTE				06	07	05	06
Black percent 1986				-02	-01	-00	00
Hispanic percent 1986				02	03	04	04
Black FTE 1986				-08	-08	-05	-06
Hispanic FTE 1986				-05	-05	-02	-01
Growth Black FTE				-06	-07	-04	-03
Growth Hispanic FTE				-07	-07	-04	-04
Racial tension				10	10	09	05
Institutional commitment				-04	-04	-04	01
Faculty sensitivity				01	01	-00	09
Took ethnic studies				05	04	02	02
Racial workshops				-01	-01	-04	-05
Discussed racial issues				11	09	07	05
Protested on campus				14	13	11	10
Socialized w/other races				00	-01	-03	-03

Note: Decimals omitted from Beta coefficients.

Table C.5
Regression Predicting Academic Ability, Chicano Students (N = 319)

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) at Each Step								
				1	2	3	4	5	6	7	8	9
Academic ability (1985)	1	.5020	.50	.50	.37	.34	.30	.31	.27	.28	.29	.28
High school GPA	2	.5329	.44	.22	.22	.22	.24	.24	.23	.22	.21	.20
Father's education	3	.5553	.25	.16	.16	.16	.16	.18	.16	.14	.14	.14
Female student	4	.5758	-.25	-.14	-.16	-.16	-.16	-.14	-.11	-.11	-.12	-.13
Student age	5	.5874	.04	.10	.11	.14	.12	.12	.13	.13	.13	.13
Institutional selectivity	6	.5996	.36	.19	.18	.15	.12	.14	.14	.07	.07	.06
Lived on-campus (1985)	7	.6153	.30	.22	.21	.19	.17	.18	.15	.15	.15	.15
Talked w/faculty outside class	8	.6217	.09	.12	.10	.10	.11	.11	.10	.09	.09	.11
Took remedial courses	9	.6279	-.19	-.09	-.08	-.06	-.07	-.08	-.07	-.08	-.09	-.09
<i>Variables not in equation</i>												
Growth White FTE				-.09	-.08	-.08	-.07	-.06	-.04	-.03	-.03	-.04
Black percent 1986				.04	.03	.05	.05	.05	.06	.05	.05	.05
Hispanic percent 1986				-.07	-.08	-.05	-.02	-.04	.07	.05	.04	.06
Black FTE 1986				-.00	.00	.01	-.01	.00	-.01	.02	.04	.04
Hispanic FTE 1986				-.06	-.05	-.05	-.05	-.04	-.02	.04	.05	.04
Growth Black FTE				.02	.02	.02	.01	.03	.02	.06	.07	.07
Growth Hispanic FTE				-.02	-.02	-.02	-.02	-.01	.00	.05	.06	.05
Racial tension				-.00	.00	.02	.01	.01	-.02	-.01	-.01	-.02
Institutional commitment				.06	.05	.06	.06	.05	.04	.04	.03	.04
Faculty sensitivity				.08	.07	.05	.05	.05	.05	.04	.03	.04
Minority perspectives				.01	.01	.00	.01	.00	.00	.01	-.01	-.00
Took ethnic studies				-.01	-.01	-.02	.00	.01	-.02	-.02	-.03	-.03
Racial workshops				.07	.06	.06	.06	.07	.04	.01	-.01	-.01
Discussed racial issues				.09	.08	.07	.08	.08	.05	.03	.01	.02
Protested on campus				.13	.13	.14	.13	.12	.10	.08	.06	.07
Socialized w/other races				.06	.06	.04	.05	.06	.03	.01	-.01	-.01

Note: Decimals omitted from Beta coefficients.

Table C.6
Regression Predicting College Grade Point Average, White Students (N = 1,726)

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) At Each Step																			
				1	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
High school GPA	1	.4535	.45	45	37	38	37	37	37	37	37	37	37	37	37	37	35	35	35	35	35	35	35
Academic ability (1985)	2	.4698	.36	15	15	16	15	15	15	15	15	15	14	14	13	13	13	13	13	13	13	13	12
Student Religion: Protestant	3	.4775	-.05	-09	-08	-08	-07	-06	-06	-06	-06	-06	-06	-06	-06	-07	-07	-07	-07	-07	-07	-06	
Mother's education	4	.4814	.09	08	04	04	04	04	03	03	03	03	03	03	03	02	02	02	01	01	01	01	
Female student	5	.4841	.05	03	05	04	04	04	04	04	04	04	04	04	04	03	03	03	04	04	03	03	
Planned to participate in protests	6	.4896	.09	09	06	05	05	06	06	05	05	05	05	05	05	05	05	05	05	05	05	05	
Political view (Liberalism-1985)	7	.4924	.08	09	05	05	05	05	05	05	05	05	05	05	05	05	04	04	05	05	05	05	
Social self-confidence (1985)	8	.4945	-.00	-03	-04	-04	-04	-04	-04	-04	-05	-05	-05	-05	-05	-05	-05	-05	-05	-05	-05	-05	
Attended public university	9	.5032	-.10	-09	-09	-08	-06	-04	00	03	03	04	04	04	04	07	08	08	15	15	15	15	
Attended coed college	10	.5071	-.06	-08	-07	-07	-07	-07	-06	-06	-06	-06	-06	-06	-06	-05	-06	-06	-06	-06	-06	-06	
Attended private university	11	.5096	.17	09	05	06	06	07	11	10	11	11	11	09	10	11	11	12	13	13	13	13	
Attended catholic college	12	.5122	-.00	06	05	04	06	06	08	09	08	08	08	08	10	10	10	09	09	09	09	09	
Attended nonsectarian college	13	.5140	.06	05	00	-01	02	07	07	06	05	06	05	05	05	05	03	04	04	03	03	03	
Lived on-campus (1985)	14	.5165	.14	10	06	06	06	06	06	06	06	05	05	05	04	03	03	02	02	01	01	01	
Faculty sensitivity	15	.5195	.06	08	06	06	06	07	06	06	06	06	08	07	07	06	06	06	04	04	04	04	
Minority perspectives	16	.5220	-.02	-01	-03	-03	-03	-02	-03	-03	-06	-06	-06	-05	-06	-06	-06	-06	-06	-06	-06	-06	
Discussed racial issues	17	.5241	.12	10	06	06	06	06	06	05	05	05	05	05	04	03	03	03	03	03	03	03	
Hours spent studying	18	.5458	.28	19	17	17	16	17	17	16	16	16	16	16	16	16	15	15	14	14	15	15	
Was guest in professor's home	19	.5561	.18	15	12	13	14	15	14	14	14	14	13	12	12	10	10	10	10	10	10	10	
Was undergrad TA	20	.5606	.11	10	09	09	10	10	10	10	10	10	10	10	09	07	07	08	07	07	07	07	
Hour/week working at job	21	.5623	-.08	-07	-06	-06	-06	-07	-06	-06	-06	-06	-06	-06	-06	-04	-04	-05	-05	-04	-04	-04	
Students treated like numbers	22	.5697	-.16	-16	-16	-15	-16	-16	-16	-15	-14	-15	-15	-14	-15	-14	-13	-13	-13	-12	-12	-12	
Competition among students	23	.5715	-.02	-07	-05	-05	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-05	-05	-05	
<i>Variables not in equation</i>																							
Growth White FTE				-01	-01	-00	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-01	-02	-02	-02	-02	
Black percent 1986				01	00	-00	-01	00	01	01	01	02	02	03	03	03	03	03	03	03	03	03	
Hispanic percent 1986				05	07	06	06	04	04	05	04	05	05	05	05	05	05	05	05	05	05	05	
Black FTE 1986				-08	-03	-02	-03	-03	-02	-02	-02	-02	-01	-01	-01	-00	00	01	02	02	02	02	
Hispanic FTE 1986				-06	02	02	01	00	01	01	01	01	01	01	01	02	03	04	04	05	05	05	
Growth Black FTE				-03	01	01	02	02	02	02	02	02	02	02	02	02	03	03	04	05	05	05	
Growth Hispanic FTE				-05	01	01	01	01	01	01	01	02	02	02	02	04	04	04	05	06	06	06	
Racial tension				01	-01	-01	-02	-01	-01	-01	-00	-00	-01	-02	-02	-02	-02	-02	-01	-01	-01	-01	
Institutional commitment				04	03	03	03	04	03	02	00	02	02	02	02	02	02	02	02	02	02	02	
Took ethnic studies				03	00	00	00	01	00	00	00	00	00	00	-00	-01	-01	-01	-01	-01	-01	-01	
Racial workshops				06	02	01	02	03	02	02	02	02	01	01	-00	-02	-03	-04	-04	-04	-04	-04	
Protested on campus				07	02	01	01	02	01	01	01	01	01	00	-00	-02	-02	-02	-02	-02	-03	-03	
Socialized w/other races				06	03	03	03	03	03	02	02	03	02	02	02	02	01	01	01	01	01	01	

Note: Decimals omitted from Beta coefficients.

Table C.7

Regression Predicting College Grade Point Average, Black Students (N = 305)

Variable	Step	Mult. Simp.		Standardized Coefficients (Betas) at Each Step			
		R	r	1	2	3	4
High school GPA	1	.4088	.41	.41	.39	.39	.39
Father's education	2	.4239	.17	.11	.11	.10	.10
Attended catholic college	3	.4377	-.12	-.12	-.11	-.11	-.11
Competition among students	4	.4550	-.13	-.13	-.12	-.12	-.12
<i>Variables not in equation</i>							
Growth White FTE				.02	.03	.03	.01
Black percent 1986				.03	.03	.02	.01
Hispanic percent 1986				-.01	-.01	.04	.05
Black FTE 1986				-.03	-.03	-.05	-.03
Hispanic FTE 1986				.00	.00	-.00	.02
Growth Black FTE				.04	.03	.03	.04
Growth Hispanic FTE				-.01	-.01	-.02	.00
Racial tension				.03	.03	.02	.02
Institutional commitment				-.06	-.06	-.06	-.07
Faculty sensitivity				.05	.05	.06	.05
Minority perspectives				.02	.02	.01	.00
Track ethnic studies				.05	.05	.04	.05
Racial workshops				-.01	-.01	-.03	-.03
Discussed racial issues				.09	.08	.08	.07
Protested on campus				.07	.06	.05	.05
Socialized w/other races				.01	.00	.00	.01

Note: Decimals omitted from Beta coefficients.

Table C.8

Regression Predicting College Grade Point Average, Chicano Students (N = 318)

Variable	Step	Mult. Simp.		Standardized Coefficients (Betas) at Each Step								
		R	r	1	2	3	4	5	6	7	8	9
High school GPA	1	.3390	.34	34	35	33	32	30	29	29	28	26
Female student	2	.3614	.10	13	13	14	15	18	18	18	18	18
Mother's education	3	.3860	.16	12	14	14	11	10	09	10	10	10
Attended nonsectarian college	4	.4216	.20	17	19	17	17	13	14	13	13	11
Institutional selectivity	5	.4336	.23	15	19	17	12	12	12	09	05	06
Institutional commitment	6	.4464	-.11	-10	-10	-10	-11	-11	-11	-12	-14	-14
Racial workshops	7	.4587	.16	14	14	14	11	09	11	11	08	05
Hours spent studying	8	.4978	.27	23	24	23	22	21	22	20	20	20
Hours/week in student clubs	9	.5131	.23	17	18	18	15	15	16	14	13	13
<i>Variables not in equation</i>												
Growth White FTE				-.02	-.03	-.03	-.02	-.01	-.02	-.03	-.02	-.04
Black percent 1986				-.06	-.07	-.05	-.03	-.02	00	01	-.01	-.01
Hispanic percent 1986				-.12	-.15	-.13	-.10	-.05	-.02	-.02	-.06	-.06
Black FTE 1986				-.03	-.02	-.02	03	00	01	02	04	06
Hispanic FTE 1986				-.05	-.05	-.04	02	02	02	03	04	06
Growth Black FTE				00	01	01	04	03	03	05	05	08
Growth Hispanic FTE				-.02	-.02	-.01	04	03	03	04	05	07
Racial tension				06	07	07	08	05	02	00	00	01
Faculty sensitivity				-.02	-.02	-.02	-.04	-.04	01	01	-.00	-.00
Minority perspectives				-.05	-.06	-.06	-.07	-.07	-.03	-.03	-.03	-.03
Took ethnic studies				13	11	10	08	06	07	03	03	03
Discussed racial issues				10	09	08	07	04	06	01	-.01	-.02
Protested on campus				04	05	06	01	-.02	-.00	-.04	-.05	-.09
Socialized w/other races				07	06	05	03	01	02	01	00	-.02

Note: Decimals omitted from Beta coefficients.

Table C.9
Regression Predicting College Persistence, White Students (N = 1,734)

Variable	Mult. Simp.			Standardized Coefficients (Betas) At Each Step																				
	Step	R	r	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Expects to earn BA degree	1	.0317	.03	.03	.03	.02	.01	.01	.01	.00	.00	.01	.00	.00	.00	.00	.01	.01	.01	.01	.01	.01	.01	.01
Expect to drop out temporarily	2	.0751	.07	.07	.07	.07	.06	.05	.06	.05	.05	.06	.06	.06	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
Father's education	3	.1409	.12	.12	.12	.12	.10	.11	.07	.07	.07	.08	.06	.06	.05	.05	.05	.06	.06	.06	.06	.05	.05	.04
Academic ability (1985)	4	.1699	.12	.12	.12	.10	.11	.10	.07	.07	.07	.08	.06	.07	.06	.06	.06	.06	.07	.07	.07	.06	.06	.06
Student religion: none	5	.1889	.07	.07	.07	.07	.08	.08	.09	.08	.07	.07	.08	.08	.08	.06	.06	.06	.06	.06	.05	.05	.05	.05
Mother's education	6	.1965	.11	.11	.11	.06	.06	.07	.07	.07	.07	.08	.07	.05	.04	.04	.04	.04	.04	.04	.04	.03	.03	.03
High school GPA	7	.2025	.11	.11	.10	.10	.06	.06	.06	.06	.06	.06	.05	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Student religion: Catholic	8	.2078	.04	.04	.04	.05	.06	.04	.05	.05	.05	.04	.04	.03	.04	.03	.03	.03	.03	.03	.03	.03	.03	.04
Institutional size	9	.2324	-.09	-.09	-.10	-.11	-.11	-.11	-.11	-.11	-.11	-.08	-.10	-.05	-.08	-.09	-.12	-.11	-.11	-.11	-.11	-.09	-.04	-.04
Institutional selectivity	10	.2447	.17	.16	.17	.15	.13	.13	.13	.12	.12	.09	.09	.09	.04	.07	.06	.05	.02	.02	.02	.01	.01	.02
City size	11	.2497	.05	.05	.04	.04	.03	.03	.03	.03	.02	.06	.05	.05	.07	.08	.09	.08	.10	.10	.09	.10	.10	.10
Lived on-campus (1985)	12	.2985	.23	.23	.23	.22	.21	.21	.20	.20	.19	.18	.19	.19	.20	.20	.19	.19	.19	.19	.17	.16	.16	.15
Student aid expenditures	13	.3021	.12	.12	.12	.11	.10	.10	.09	.09	.09	.03	.02	.03	.07	.06	.06	.06	.08	.08	.07	.07	.07	.07
Black percent 1986	14	.3081	-.05	-.05	-.04	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.06	-.07	-.06	-.06	-.06	-.06	-.07	-.07	-.06	-.05	-.05
Growth White FTE	15	.3124	-.06	-.06	-.06	-.05	-.04	-.04	-.04	-.03	-.03	-.08	-.06	-.05	-.02	-.03	-.06	-.06	-.06	-.06	-.07	-.07	-.06	-.05
Hispanic percent 1986	16	.3158	-.07	-.07	-.07	-.07	-.07	-.07	-.07	-.07	-.07	-.06	-.03	-.05	-.06	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05
Took ethnic studies	17	.3211	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.05	.05
Hours/week in student clubs	18	.3343	.17	.17	.17	.16	.15	.15	.14	.14	.14	.13	.13	.13	.10	.10	.10	.10	.10	.10	.10	.09	.09	.08
Hour/week working at job	19	.3417	-.14	-.14	-.14	-.12	-.12	-.11	-.11	-.11	-.11	-.11	-.10	-.10	-.08	-.08	-.08	-.08	-.08	-.07	-.07	-.07	-.07	-.07
Was guest in professor's home	20	.3486	.15	.15	.15	.14	.14	.14	.13	.13	.13	.11	.10	.10	.09	.10	.10	.09	.09	.09	.08	.08	.07	.07
Students treated like numbers	21	.3533	-.15	-.15	-.15	-.14	-.14	-.14	-.14	-.14	-.14	-.12	-.11	-.11	-.08	-.09	-.10	-.09	-.09	-.09	-.08	-.08	-.08	-.08
Variables not in equation																								
Black FTE 1986				-.07	-.07	-.07	-.08	-.08	-.08	-.08	-.08	.03	.02	-.00	-.01	-.01	.13	.07	.04	.03	.03	.04	.04	.05
Hispanic FTE 1986				-.09	-.10	-.11	-.12	-.12	-.12	-.12	-.10	-.07	-.08	-.08	-.07	-.10	-.09	-.05	-.05	-.04	-.05	-.07	-.07	-.07
Growth Black FTE				-.04	-.04	-.05	-.06	-.06	-.06	-.06	.05	.04	.03	.01	.02	.02	-.01	.00	-.01	.00	-.00	-.01	-.02	
Growth Hispanic FTE				-.07	-.08	-.09	-.10	-.10	-.10	-.10	.00	.03	-.05	-.03	-.03	-.07	-.04	-.04	-.04	-.04	-.04	-.05	-.07	
Racial tension				-.00	.00	-.01	-.02	-.02	-.02	-.02	.00	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.03	-.04	-.03	-.03	-.02	
Institutional commitment				.03	.04	.04	.03	.03	.03	.03	.02	.02	.02	.00	.01	.01	.01	.01	.00	.00	.00	.00	.00	
Faculty sensitivity				.04	.04	.04	.04	.04	.04	.04	.02	.02	.02	.01	.02	.02	.02	.02	.02	.02	.01	.01	.01	
Minority perspectives				-.01	-.00	-.01	-.00	-.01	-.01	-.01	-.01	-.02	-.02	-.02	-.02	-.01	-.01	-.01	-.01	-.01	-.01	-.02	-.02	
Racial workshops				.10	.11	.10	.10	.09	.09	.09	.07	.06	.05	.05	.05	.05	.05	.05	.05	.03	.02	.02	.01	.01
Discussed racial issues				.07	.07	.06	.06	.06	.05	.05	.04	.03	.02	.03	.02	.02	.02	.02	.02	.01	.00	.01	-.00	-.01
Protested on campus				.06	.06	.05	.05	.05	.05	.05	.04	.03	.03	.03	.03	.03	.03	.03	.03	.01	.00	.01	-.00	-.00
Socialized w/other races				.08	.08	.08	.07	.07	.07	.07	.06	.06	.05	.04	.04	.04	.04	.04	.04	.05	.04	.03	.04	.03

Note: Decimals omitted from Beta coefficients

Note: Decimals omitted from Beta coefficients.

Table C.10
Regression Predicting College Persistence, Black Students (N = 305)

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) at Each Step											
				1	2	3	4	5	6	7	8	9	10	11	12
Expects to earn BA degree	1	.0061	-.01	-.01	.00	-.02	-.04	-.04	-.05	-.04	-.04	-.04	-.04	-.05	-.03
Drop out temporarily	2	.0413	.04	.04	.04	.03	.02	.04	.05	.04	.05	.05	.05	.06	.05
Student age	3	.1747	-.17	-.17	-.17	-.17	-.15	-.15	-.16	-.16	-.14	-.13	-.14	-.14	-.14
High school GPA	4	.2250	.17	.17	.17	.15	.15	.15	.14	.14	.09	.08	.08	.08	.07
Social self-confidence (1985)	5	.2532	.10	.10	.11	.12	.12	.12	.12	.10	.10	.09	.08	.08	.07
Attended nonsectarian college	6	.2969	.15	.15	.16	.16	.15	.16	.16	.18	.10	.09	.08	.09	.04
Attended protestant college	7	.3164	.07	.07	.06	.08	.09	.07	.11	.11	.07	.08	.07	.06	.03
Lived on-campus (1985)	8	.3938	.33	.33	.33	.31	.30	.29	.27	.26	.26	.23	.21	.18	.15
Protested on campus	9	.4136	.23	.23	.23	.22	.20	.20	.18	.18	.13	.13	.12	.08	.08
Talked w/faculty outside class	10	.4299	.20	.20	.20	.22	.21	.20	.19	.18	.14	.12	.12	.11	.12
Hours/week in student clubs	11	.4431	.25	.25	.25	.24	.23	.22	.22	.21	.16	.13	.12	.12	.12
Students treated like numbers	12	.4567	-.27	-.27	-.27	-.26	-.25	-.24	-.21	-.19	-.14	-.13	-.14	-.13	-.13
<i>Variables not in equation</i>															
Growth White FTE				.02	.03	.03	.03	.03	.02	.01	-.01	-.00	-.02	-.01	-.03
Black percent 1986				-.08	-.08	-.08	-.08	-.09	-.08	-.06	-.06	-.06	-.06	-.06	-.07
Hispanic percent 1986				.01	.01	.01	-.00	-.01	.01	.04	.05	.04	.05	.05	.05
Black FTE 1986				-.11	-.11	-.10	-.09	-.09	-.03	.03	.06	.05	.06	.06	.12
Hispanic FTE 1986				-.11	-.11	-.11	-.11	-.11	-.07	-.04	.01	.00	.02	.02	.05
Growth Black FTE				-.17	-.18	-.17	-.17	-.16	-.15	-.14	-.09	-.09	-.09	-.09	-.07
Growth Hispanic FTE				-.11	-.12	-.11	-.11	-.11	-.08	-.06	.00	-.00	.01	.01	.04
Racial tension				.08	.07	.06	.05	.05	.06	.06	.04	.01	.02	.02	.04
Institutional commitment				-.04	-.04	-.02	.00	-.01	-.04	-.03	-.03	-.03	-.03	-.03	-.04
Faculty sensitivity				.08	.08	.11	.11	.12	.09	.10	.09	.10	.09	.08	.06
Minority perspectives				-.08	-.07	-.06	-.05	-.04	-.06	-.06	-.06	-.05	-.05	-.05	-.06
Took ethnic studies				.06	.06	.06	.06	.05	.04	.04	-.00	-.03	-.05	-.05	-.04
Racial workshops				.11	.11	.11	.09	.08	.05	.04	.00	-.04	-.04	-.06	-.05
Discussed racial issues				.16	.15	.15	.14	.12	.10	.09	.06	.02	.01	-.01	-.02
Socialized w/other races				.18	.18	.19	.18	.17	.16	.15	.10	.09	.08	.08	.07

Note: Decimals omitted from Beta coefficients.

Table C.11
Regression Predicting College Persistence, Chicano Students (N = 320)

Variable	Step	Mult. Simp.		Standardized Coefficients (Betas) at Each Step						
		R	r	1	2	3	4	5	6	7
Expects to earn BA degree	1	.0260	-.03	-.03	-.03	-.06	-.08	-.07	-.07	-.07
Drop out temporarily	2	.0592	-.05	-.05	-.05	-.03	-.03	-.04	-.05	-.06
High school GPA	3	.2128	.20	.21	.21	.21	.19	.17	.16	.15
Father's education	4	.2509	.15	.15	.16	.13	.13	.10	.11	.12
Lived on-campus (1985)	5	.3034	.22	.22	.22	.19	.18	.18	.17	.14
Racial tension	6	.3284	.13	.13	.14	.13	.14	.13	.13	.12
Hours spent studying	7	.3467	.17	.17	.17	.15	.15	.12	.11	.11
<i>Variables not in equation</i>										
Growth White FTE				-.01	-.02	-.01	-.01	.02	.03	.03
Black percent 1986				-.03	-.03	-.03	-.01	-.02	.00	-.01
Hispanic percent 1986				-.12	-.13	-.10	-.07	-.04	-.00	-.00
Black FTE 1986				.04	.04	.03	.03	.06	.02	.02
Hispanic FTE 1986				.03	.04	.03	.03	.11	.07	.07
Growth Black FTE				.05	.06	.05	.04	.08	.04	.04
Growth Hispanic FTE				.04	.05	.04	.04	.09	.06	.06
Institutional commitment				-.06	-.05	-.05	-.04	-.05	-.02	-.03
Faculty sensitivity				.03	.03	.03	.01	.00	.06	.05
Minority perspectives				.01	.01	.00	.00	.00	.04	.04
Took ethnic studies				.01	.01	.02	.01	.00	-.02	-.03
Racial workshops				.14	.14	.13	.13	.09	.06	.04
Discussed racial issues				.09	.09	.08	.08	.04	.01	-.01
Protested on campus				.07	.07	.05	.05	.01	-.01	-.03
Socialized w/other races				.05	.05	.05	.03	-.01	-.01	-.02

Note: Decimals omitted from Beta coefficients.

Table C.12
Regression Predicting Social self-confidence, White Students (N = 1,725)

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) A																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Social self-confidence (1985)	1	.5957	.60	60	60	59	59	59	59	59	59	58	58	58	58	57	57	57	56	56	
High school GPA	2	.5994	-.03	-07	-07	-07	-06	-06	-06	-05	-05	-06	-06	-05	-05	-07	-05	-05	-05	-06	
Student religion: none	3	.6016	-.10	-05	-05	-05	-05	-05	-05	-05	-06	-05	-05	-05	-05	-04	-04	-04	-04	-03	
Female student	4	.6033	-.07	-05	-04	-05	-05	-04	-05	-06	-05	-05	-05	-05	-06	-06	-05	-05	-05	-04	
Parental Income	5	.6048	.14	05	04	05	04	04	05	05	04	04	04	04	04	04	04	04	04	03	
Degree Aspiration (1985)	6	.6061	-.01	-05	-04	-03	-04	-04	-04	-04	-04	-04	-04	-05	-04	-05	-05	-05	-05	-05	
Attended coed college	7	.6077	-.00	-04	-03	-03	-04	-04	-04	-04	-04	-04	-03	-03	-03	-02	-02	-02	-03	-02	
Distance from home to college	8	.6093	.12	05	05	05	05	04	05	04	04	03	02	03	03	02	02	02	03	03	
Lived on-campus (1985)	9	.6113	.12	07	07	07	07	07	07	06	05	05	05	05	04	03	02	02	02	02	
Institutional commitment	10	.6146	.12	08	08	08	08	08	08	07	07	07	07	06	06	05	05	05	05	05	
Racial tension	11	.6161	-.00	-05	-04	-04	-04	-04	-04	-04	-05	-05	-04	-04	-04	-05	-05	-05	-05	-05	
Socialized w/other races	12	.6196	.12	07	08	08	08	08	08	08	07	07	07	07	06	06	06	06	05	06	
Racial workshops	13	.6212	.10	06	07	07	07	07	07	07	07	06	05	06	05	05	03	04	03	04	
Hours/week in student clubs	14	.6294	.20	12	13	13	13	12	13	12	12	12	11	12	11	11	11	10	09	09	
Hours spent studying	15	.6326	-.07	-06	-05	-05	-05	-05	-05	-05	-06	-06	-06	-06	-06	-07	-07	-07	-06	-06	
Was undergrad TA	16	.6350	.08	07	07	07	07	07	07	07	07	07	07	07	07	06	06	06	06	06	
Member of frat/sorority	17	.6367	.19	09	09	08	08	08	07	08	08	07	08	08	08	08	06	05	05	05	
Competition among students	18	.6389	.08	05	05	05	05	04	04	04	05	05	05	06	05	06	05	06	06	06	
<i>Variables not in equation</i>																					
Growth White FTE				-01	-02	-02	-02	-02	-02	-01	-02	-02	-01	-02	-02	-03	-03	-03	-02	-02	
Black percent 1986				-00	00	00	00	00	00	00	00	-01	00	-00	00	00	00	00	00	01	
Hispanic percent 1986				-01	-01	-01	00	00	00	-01	-01	00	00	-00	-01	-01	-01	-01	-01	-01	
Black FTE 1986				-03	-02	-02	-02	-02	-03	-02	-01	00	00	01	01	02	03	03	03	02	
Hispanic FTE 1986				-04	-03	-03	-03	-03	-03	-03	-02	-00	00	00	00	01	01	01	01	00	
Growth Black FTE				-02	01	-01	-01	-01	-00	00	01	01	01	01	02	02	02	02	02	01	
Growth Hispanic FTE				-04	-03	-03	-02	-03	-03	-02	-02	-00	00	00	01	01	01	01	01	00	
Faculty sensitivity				06	05	06	06	06	06	05	05	04	02	02	02	01	01	01	01	01	
Minority perspectives				03	02	03	03	03	03	02	02	02	01	-01	-01	-02	-01	-01	-01	-01	
Took ethnic studies				01	01	01	02	02	02	02	01	01	01	01	00	-01	-01	-01	-01	-01	
Discussed racial issues				01	02	02	02	02	02	02	02	01	00	01	-01	-02	-02	-02	-02	-01	
Protested on campus				00	00	01	01	01	01	01	00	00	00	01	00	-01	-02	-02	-02	-01	

Note: Decimals omitted from Beta coefficients.

Note: Decimals omitted from Beta coefficients.

Table C.13
Social Self-Confidence, Black Students (N = 300)

Variable	Step	Mult. Simp.		Standardized Coefficients (Betas) at Each Step				
		R	r	1	2	3	4	5
Social self-confidence (1985)	1	.6335	.63	.63	.62	.64	.62	.62
Institutional size	2	.6427	-.16	-.11	-.11	-.29	-.28	-.27
Attended public university	3	.6521	-.12	-.04	.21	.21	.21	.21
Racial workshops	4	.6604	.19	.12	.11	.11	.11	.07
Hours/week in student clubs	5	.6692	.20	.14	.13	.13	.11	.11
<i>Variables not in equation</i>								
Growth White FTE				.01	-.07	-.10	-.09	-.09
Black percent 1986				.03	.02	.03	.03	.03
Hispanic percent 1986				-.06	-.03	-.02	-.01	-.02
Black FTE 1986				-.07	.05	.04	.04	.03
Hispanic FTE 1986				-.11	-.06	-.03	-.02	-.02
Growth Black FTE				-.06	.01	.03	.03	.04
Growth Hispanic FTE				-.10	-.04	-.01	.00	.00
Racial tension				-.04	-.02	-.02	-.04	-.05
Institutional commitment				.07	.06	.06	.06	.07
Faculty sensitivity				.06	.05	.06	.07	.07
Minority perspectives				-.01	-.01	-.01	.01	.00
Took ethnic studies				.09	.09	.09	.07	.07
Discussed racial issues				.11	.10	.11	.08	.06
Protested on campus				.09	.08	.08	.05	.02
Socialized w/other races				.07	.07	.07	.06	.06

Note: Decimals omitted from Beta coefficients.

Table C.14
Social Self-Confidence, Chicano Students (N = 319)

Variable	Step	Mult. Simp.		Standardized Coefficients (Betas) at Each Step									
		R	r	1	2	3	4	5	6	7	8	9	10
Social self-confidence (1985)	1	.5384	.54	.54	.52	.51	.51	.51	.51	.50	.48	.47	.47
Female student	2	.5627	-.24	-.17	-.17	-.15	-.15	-.15	-.15	-.17	-.16	-.14	-.15
Distance from home to college	3	.5762	.19	.14	.13	.13	.13	.11	.10	.08	.05	.05	.04
Attended midwestern college	4	.5844	-.08	-.08	-.09	-.10	-.10	-.09	-.08	-.07	-.08	-.07	-.07
Well supported student serv.	5	.5960	.15	.16	.15	.13	.12	.12	.12	.11	.11	.10	.09
Institutional commitment	6	.6042	.10	.11	.12	.11	.10	.10	.10	.09	.09	.09	.07
Socialized w/other races	7	.6156	.19	.14	.16	.14	.14	.13	.12	.12	.11	.11	.09
Member of frat/sorority	8	.6371	.29	.20	.19	.17	.18	.18	.18	.17	.17	.17	.18
Was undergrad TA	9	.6533	.22	.19	.17	.16	.16	.15	.15	.14	.15	.15	.13
Talked w/faculty outside class	10	.6644	.17	.17	.18	.17	.17	.17	.16	.14	.15	.13	.13
<i>Variables not in equation</i>													
Growth White FTE				-.02	-.01	.01	.01	.02	.03	.04	.04	.03	.02
Black percent 1986				.01	.03	.03	.02	.01	-.02	-.02	-.01	.00	.01
Hispanic percent 1986				-.03	.00	.03	.01	.01	-.01	.01	.03	.03	.03
Black FTE 1986				-.03	-.04	-.03	-.03	-.01	-.01	-.02	-.02	.00	.02
Hispanic FTE 1986				-.05	-.05	-.01	-.04	.01	.01	.00	.02	.03	.04
Growth Black FTE				-.02	-.03	-.01	-.03	-.01	-.01	-.02	-.02	-.01	.01
Growth Hispanic FTE				-.04	-.04	-.01	-.03	.00	.00	-.01	-.00	.01	.03
Racial tension				-.06	-.06	-.06	-.06	-.06	-.03	-.04	-.05	-.04	-.04
Faculty sensitivity				.06	.06	.06	.05	.04	.00	-.01	-.01	-.02	-.03
Minority perspectives				.03	.03	.02	.02	.02	-.03	-.04	-.05	-.07	-.08
Took ethnic studies				-.00	.02	.01	.00	.00	.00	-.02	-.02	-.03	-.04
Racial workshops				.09	.08	.07	.07	.06	.04	.02	.02	.01	-.02
Discussed racial issues				.05	.06	.04	.04	.04	.03	-.01	.01	.01	-.01
Protested on campus				.10	.09	.07	.07	.06	.05	.04	.05	.04	.02

Note: Decimals omitted from Beta coefficients.

Table C.15

Regression Predicting Student Commitment to Promoting Racial Understanding, White Students (N=1,731)

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) At Each Step																					
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Goal: Promote rac. understanding	1	.3970	.40	40	39	39	39	36	35	35	34	34	34	34	34	33	33	29	28	27	26	27	26	27	26
Female student	2	.4099	.11	10	10	10	11	11	10	10	10	10	10	10	10	10	09	07	07	07	06	05	05	05	05
Mother's education	3	.4171	.10	08	08	08	07	06	05	05	04	03	03	01	01	02	01	00	00	00	01	01	01	01	01
Academic ability (1985)	4	.4199	.05	05	06	05	05	04	04	04	04	03	04	02	02	02	02	01	00	01	01	01	01	01	00
Planned to participate in protests	5	.4330	.23	12	12	11	11	11	09	09	09	08	08	08	08	08	07	03	00	00	00	00	00	00	00
Political view (Liberalism-1985)	6	.4397	.18	12	11	10	10	08	08	08	08	08	08	08	08	08	07	05	05	05	05	05	05	05	05
Social self-confidence (1985)	7	.4418	.07	05	05	04	04	04	04	04	04	04	04	04	04	04	03	02	01	01	01	01	01	01	
Attended nonsectarian college	8	.4487	.14	10	10	09	09	08	08	08	08	07	05	03	02	00	01	03	04	03	04	05	05	05	05
Attended public college	9	.4530	-.09	10	09	08	08	07	07	07	06	06	06	06	06	06	07	05	04	04	04	04	04	04	04
Institutional size	10	.4551	-.11	06	06	06	07	06	06	06	06	06	06	06	06	06	07	05	04	04	04	04	04	04	04
Instructional expenditures	11	.4592	.10	10	10	09	08	07	07	07	06	05	07	07	08	07	04	02	02	00	01	01	01	01	01
Inst. offers minority studies maj.	12	.4634	.02	04	03	03	03	03	03	02	04	02	08	08	08	07	07	05	04	04	04	03	04	04	04
Institutional commitment	13	.4739	.17	13	13	13	12	13	13	12	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10
Racial tension	14	.4835	.15	12	12	11	11	09	09	09	09	09	11	10	10	10	10	10	10	10	10	10	10	10	10
Discussed racial issues	15	.5841	.47	41	40	40	40	39	39	39	38	38	38	37	37	36	36	33	30	29	27	27	26	26	26
Protested on campus	16	.5991	.33	27	27	27	26	25	25	25	24	24	23	23	23	23	22	15	14	13	11	11	11	11	11
Socialized w/other races	17	.6111	.29	24	24	23	23	22	22	22	22	22	22	21	21	20	20	14	13	12	11	11	11	11	11
Took ethnic studies	18	.6195	.30	25	24	24	24	23	22	22	22	21	21	21	21	20	20	14	12	11	11	10	10	10	10
Racial workshops	19	.6225	.35	28	27	27	26	26	25	25	25	24	24	24	24	23	23	13	10	09	07	07	07	07	
Talked w/faculty outside class	20	.6258	.18	16	15	15	15	14	15	14	13	13	13	13	13	13	13	09	08	07	07	07	07	07	
Member of frat/sorority	21	.6270	-.10	08	08	09	08	08	08	08	08	08	08	08	08	08	07	04	04	04	04	04	04	04	04
Little contact with faculty	22	.6286	-.02	01	02	01	01	01	01	01	01	00	02	02	02	02	03	02	03	04	04	04	04	05	05

Variables not in equation

Growth White FTE

Black percent 1986

Hispanic percent 1986

Black FTE 1986

Hispanic FTE 1986

Growth Black FTE

Growth Hispanic FTE

Faculty sensitivity

Minority perspectives

Note: Decimals omitted from beta coefficients

Note: Decimals omitted from Beta coefficients.

Table C.15
*Regression Predicting Student Commitment to Promoting
 Racial Understanding, Black Students (N = 304)*

Variable	Step	Mult. R	Simp. r	Standardized Coefficients (Betas) at Each Step					
				1	2	3	4	5	6
Goal: Promote rac. understanding	1	.3191	.32	32	32	31	30	24	23
Student religion: none	2	.3486	-.15	-14	-14	-15	-15	-15	-15
Degree aspiration (1985)	3	.3734	.13	12	13	13	12	08	07
Lived on-campus (1985)	4	.3915	.17	13	13	12	12	07	05
Discussed racial issues	5	.4833	.37	32	32	31	30	30	26
Racial workshops	6	.4998	.29	24	23	22	21	14	14
<i>Variables not in equation</i>									
Growth White FTE				06	06	05	04	04	05
Black percent 1986				-05	-05	-04	-04	-03	-04
Hispanic percent 1986				-01	-01	-02	-01	-01	00
Black FTE 1986				-09	-09	-08	-05	-02	-03
Hispanic FTE 1986				-02	-01	-02	02	03	03
Growth Black FTE				-02	-02	-02	01	01	02
Growth Hispanic FTE				-04	-03	-04	00	00	01
Racial tension				10	11	11	10	03	02
Institutional commitment				-01	-02	-01	-01	01	01
Faculty sensitivity				-03	-02	-01	-02	04	04
Minority perspectives				-10	-10	-10	-10	-06	-05
Took ethnic studies				12	13	12	10	05	03
Protested on campus				21	19	19	17	09	07
Socialized w/other races				09	09	09	06	05	05

Note: Decimals omitted from Beta coefficients.

Table C.17

Regression Predicting Student Commitment to Promoting Racial Understanding, Chicano Students (N= 320)

Variable	Step	Mult. Simp. R	Standardized Coefficients (Betas) At Each Step													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
Goal: Promote rac. understanding	1	.2641	.26	26	24	25	16	16	17	16	13	05	03	03	03	04
Female student	2	.3063	.19	16	16	16	20	20	24	23	23	20	20	18	18	17
Student religion: none	3	.3261	.08	10	11	11	08	09	06	07	07	08	06	07	08	10
Planned to participate in protests	4	.3840	.27	20	24	22	22	25	21	22	20	13	12	12	13	13
Expects to earn BA degree	5	.4097	-.09	-10	-10	-11	-15	-15	-16	-14	-14	-12	-09	-09	-10	-11
Institutional selectivity	6	.4432	.16	17	23	21	17	18	18	18	13	05	01	00	-02	-00
Institutional commitment	7	.4607	.15	13	12	13	15	14	13	13	17	11	09	09	09	10
Racial tension	8	.4891	.22	19	20	20	17	17	13	18	18	09	07	07	08	08
Discussed racial issues	9	.6155	.54	51	51	50	48	48	46	45	43	43	39	35	31	30
Protested on campus	10	.6359	.38	34	37	36	34	32	29	28	26	18	18	16	17	16
Took ethnic studies	11	.6476	.36	33	32	33	31	31	29	29	27	16	14	14	13	14
Socialized w/other races	12	.6544	.28	25	24	25	24	25	22	21	22	11	12	11	11	12
Member of frat/corority	13	.6637	-.09	-09	-08	-10	-11	-11	-13	-14	-14	-11	-10	-11	-12	-12
Was undergrad TA	14	.6699	-.08	-08	-06	-06	-06	-07	-07	-07	-07	-07	-08	-09	-09	-09
<i>Variables not in equation</i>																
Growth White FTE			-.05	-.06	-.05	-.03	-.04	-.02	00	02	00	-01	-03	-02	-02	-01
Black percent 1986			02	01	01	01	02	05	02	03	04	05	06	05	05	05
Hispanic percent 1986			-.07	-11	-10	-07	-.08	08	03	05	03	03	05	04	03	03
Black FTE 1986			-00	02	02	00	03	-00	-01	-07	-01	01	02	01	00	-01
Hispanic FTE 1986			-.05	-.05	-.04	-.03	-01	-00	00	-07	-00	02	02	01	-00	-01
Growth Black FTE			-00	00	01	-01	01	00	-01	-07	-01	02	02	01	00	-00
Growth Hispanic FTE			-.03	-.03	-.02	-.03	-01	-01	-01	-08	-01	02	02	01	-00	-01
Faculty sensitivity			08	08	08	09	08	09	04	11	06	04	04	03	03	04
Minority perspectives			00	00	-00	01	-01	-01	-08	-05	-09	-09	-12	-12	-11	-11
Racial workshops			36	37	36	36	34	33	31	29	27	14	10	07	07	08

Note: Decimals omitted from Beta coefficients.

Note: Decimals omitted from Beta coefficients.

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