

Diversity Effects on Student Outcomes: Social Science Evidence

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This Article examines the findings of social science research relative to the impact of diversity on student learning and various other social outcomes. The author outlines a conceptual model that identifies ability, effort, and opportunity as the primary determinants of learning. Research findings are related to the model to show how diversity creates social processes that affect student outcomes.

Empirical studies of desegregation at the elementary and secondary school levels show benefits of desegregation for the academic achievement of minority students attending predominantly white schools. Similarly, the racial attitudes and sociability of minority and majority students improve in desegregated schools. At the collegiate level, studies reveal advantages of racial and ethnic diversity in terms of specific kinds of learning. Students of all racial and ethnic backgrounds gain a better understanding of race and ethnicity, which teaches them to respect cultural differences in a multicultural environment. Institutional support for diversity is critical to insuring that minority students benefit from diversity.

I. INTRODUCTION

The goals of affirmative action are threefold. First, affirmative action policies aim to compensate minority groups and women for past discrimination. Second, affirmative action aims to counter present discrimination. Third, affirmative action endeavors to create multicultural institutions. Tierney refers to these three goals as compensation, correction, and diversification.¹ Affirmative action policies achieve their goals by widening the pool of candidates considered for admission to academic institutions and for employment.

Affirmative action policies and practices are highly controversial. This is not surprising because affirmative action has legal, philosophical, political, social, and ethical dimensions, all of which can be considered and argued.² Proponents of

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¹ See William G. Tierney, *The Parameters of Affirmative Action: Equity and Excellence in the Academy*, 67 REV. OF EDUC. RES. 165-170 (1997).

² See NATHAN GLAZER, AFFIRMATIVE DISCRIMINATION: ETHNIC INEQUALITY and PUBLIC

affirmative action assert that the practice redresses past injustices, creates equal opportunities for education and employment, and benefits society through diversification.³ Critics of affirmative action contend that contemporaries should not bear the burden of past discrimination, that minorities and women already have equal access to education and the job market, and that diversity is not a sufficient justification for affirmative action practices.⁴

The controversy surrounding affirmative action has led to a number of lawsuits and court decisions regarding the constitutionality of its implementation. The first justification for affirmative action policies, compensation, was struck down in *Regents of the University of California v. Bakke*.⁵ The second rationale for affirmative action, correction, was dismissed in *Wygant v. Jackson Board of Education*.⁶ The third goal of affirmative action, diversification, is the only allowable basis remaining for affirmative action policies, and legal scholars are also scrutinizing it for questionable constitutionality.⁷

The focus of the present Article is this third goal of affirmative action, diversification—the effort to create a diverse, multicultural environment in educational institutions. This Article examines the social science research on the effects of diversity on student outcomes. The relationship between diversity and student learning, attitudes, and behavior is a key factor in future decisions about affirmative action policies. If the social science literature shows that diversifying a student body produces measurable benefits for some or all students, affirmative action will stand on firmer ground. However, if the literature reveals negative effects of diversity on student achievement or social outcomes, then the last major rationale supporting the use of affirmative action in admissions policies will be seriously weakened.

Although the Supreme Court's majority opinion in *Bakke* stated that past discrimination was not a reasonable consideration in evaluating a student for admission to the law school, it concluded that race was a compelling factor in using affirmative action to attract a diverse student body.⁸ In March 1996, the

POLICY 197-221 (1975); see also Tierney, *supra* note 1, at 165-76.

³ See Faye J. Crosby, *Preface*, in *AFFIRMATIVE ACTION IN PERSPECTIVE* at vii-viii (Faye J. Crosby & Fletcher A. Blanchard eds., 1989); Leslie Pickering Francis, *In Defense of Affirmative Action*, in *AFFIRMATIVE ACTION AND THE UNIVERSITY: A PHILOSOPHICAL INQUIRY* 9, 23-32 (Steven M. Cahn ed., 1993).

⁴ See DINESH D'SOUSA, *THE END OF RACISM* 289-337 (1995); see also GLAZER, *supra* note 2, at 199-201; STEPHEN THERNSTROM & ABIGAIL THERNSTROM, *AMERICA IN BLACK AND WHITE: ONE NATION, INDIVISIBLE* (1997).

⁵ 438 U.S. 265 (1978).

⁶ 476 U.S. 267 (1986).

⁷ See *id.* at 286.

⁸ See *Bakke*, 438 U.S. at 313-14.

United States Court of Appeals for the Fifth Circuit repudiated the Supreme Court's decision in *Bakke* by forbidding the University of Texas at Austin from considering race in admissions.⁹ In *Hopwood*, the appeals court struck at the justification relied on by most colleges in using race-based preferences in admissions.¹⁰

Wording in the *Bakke* decision and the *Hopwood* decision is critical. In *Bakke*, the Supreme Court claimed that diversity provided sufficient grounds for affirmative action admissions policies.¹¹ In *Hopwood*, the appeals court opposed this very language and claimed that diversity was not a compelling reason for considering race in admissions.¹² The arguments supporting the courts' contradictory conclusions need to be scrutinized and additional information brought to bear to determine their validity. One way to shed new light on this issue is to examine social science studies investigating the consequences of diversity for students.

This Article examines the empirical and theoretical research in the social sciences on the effects of racial and ethnic diversity on student outcomes. If the research shows that diversity provides powerful, sustained advantages to some or all students in a school setting, while not creating unreasonable disadvantages for others, then the findings will lend support to the Supreme Court argument. If social science evidence demonstrates that the effects of diversity are negative for many students, or that positive or negative effects are short-lived, then the Fifth Circuit decision will be strengthened.

In the past, social scientists have frequently been asked to provide evidence supporting or refuting legal decisions regarding educational issues. For example, sociologists presented expert testimony in court cases about school desegregation, addressing questions about the impact of desegregation on the academic achievement of black and white students and on student social outcomes.¹³ Similarly, demographers and other social scientists provided empirical evidence related to the effects of busing on students, families, and neighborhoods.¹⁴ Typically, the social science research has not been a deciding factor in court decisions, but it has been treated as legitimate evidence to be considered in making judicial decisions.

The political climate surrounding the current affirmative action debate seems harsher than during the Civil Rights era when social science research played a

⁹ See *Hopwood v. Texas*, 78 F.3d 832 (5th Cir. 1996).

¹⁰ See *id.* at 945-46.

¹¹ See 438 U.S. at 313-14.

¹² See 78 F.3d at 945-46.

¹³ See David J. Armor, *The Evidence of Busing*, 28 THE PUB. INTEREST, Summer 1972, at 90, 99-106.

¹⁴ See *id.* at 121-23.

significant role in the outcomes of school desegregation cases. While social science research has been included in some affirmative action cases, it has been ignored or dismissed in others. For example, the Court of Appeals for the Fourth Circuit rejected as unconstitutional more than a dozen social science studies invoked by lawyers defending a blacks-only scholarship program at the University of Maryland.¹⁵ Similarly, in the recent Texas Law School admissions case, federal judges pronounced that race was not relevant to a person's views.¹⁶ This position summarily dismisses social science research examining race effects on student outcomes.

II. CRITERIA FOR SELECTING STUDIES

Because social science research varies in quality, one must select only the strongest studies to inform policy decisions about affirmative action. This is particularly true in a climate that may be hostile to scientific findings because it is more difficult to dismiss rigorous, high quality research findings than weaker studies. Hence, only the most reputable studies will be discussed here.

In terms of methodology, both large-scale surveys and small sample studies will be included; similarly, findings based on both quantitative and qualitative analyses will be reported. Ideally, the literature would contain studies using multiple methods with each research design complementing others. However, a multi-method approach to data analysis is not common in the social sciences, and few multi-method studies on the effects of diversity on student outcomes have been found.

An advantage of surveys is that their reliance on large, representative samples makes their findings generalizable.¹⁷ In addition, survey analysis takes into account the effects of other factors that might influence the outcome of interest. This inclusion makes it easier to avoid misattribution of causation when interpreting results.¹⁸ In contrast, a disadvantage of surveys is that they typically fail to identify the mechanisms that link inputs to outputs.¹⁹ Case studies, on the other hand, usually describe the processes that relate independent variables to outcomes.²⁰ However, the findings may not be generalizable. Moreover, the interpretation of

¹⁵ See Scott Jaschik, *A Valuable Tool or Bias in Reverse?*, CHRON. OF HIGHER EDUC., Apr. 28, 1995, at A14 (referring to Banneker Scholarships).

¹⁶ See *Hopwood v. Texas*, 999 F. Supp. 872, 896 (1998); Scott Jaschik & Douglass Lederman, *Appeals Court Bars Racial Preferences*, CHRON. OF HIGHER EDUC., Mar. 29, 1996, at A26.

¹⁷ See EARL R. BABBIE, *THE PRACTICE OF SOCIAL RESEARCH* 276 (2d ed. 1975).

¹⁸ See *id.*

¹⁹ See *id.* at 276-77.

²⁰ See *id.* at 196.

observational data is subject to the objectivity of the observer. Such as the case of research related to controversial social policies, like affirmative action, where maintaining an objective view represents a particular challenge.²¹

Before examining the social science literature on diversity, one must limit the scope of the review. This involves both defining the term diversity and specifying which effects of diversity are of interest. The focus of the review presented here will be racial and ethnic diversity. Although other types of diversity, including that based on gender, socioeconomic status, physical and cognitive ability, and cultural experiences, are important, space limitations preclude examining them here.

In the educational sphere, racial and ethnic diversity are believed to affect a number of student outcomes. Diversity is expected to affect students' academic growth, their attitudes and feelings toward intergroup relations, satisfaction with their educational institution, involvement in school and the learning process, and commitment to improving racial understanding. Moreover, student diversity is believed to have an impact on students' educational and occupational aspirations and attainment. On an institutional level, student diversity is expected to affect the recruitment and retention of minority students. The primary consideration of this Article is the effects of diversity on student learning, as indicated by measures of academic achievement, although other effects of diversity also will be considered.

III. A CONCEPTUAL MODEL OF LEARNING

To understand how diversity affects the educational achievement of students, it is important to have a conceptual model in mind of how students learn. While some learning models depict the cognitive dimensions of learning,²² other models specify the social psychological components of learning,²³ and even others portray the contextual influences on learning.²⁴ Aage B. Sørensen and Maureen T. Hallinan formulated a contextual model of learning that described how cognitive, social, and contextual factors interact to affect learning.²⁵ Any of these theoretical models may be used as a conceptual framework to explain how diversity is likely to produce the kinds of effects reported in the empirical literature.

²¹ See *id.* at 220.

²² See, e.g., John B. Carroll, *A Model of School Learning*, 64 TCHRS. C. REC. 723, 729-30 (1963).

²³ See Susan Stodolsky, *Frameworks for Studying Instructional Processes in Peer Work-Groups*, in THE SOCIAL CONTEXT OF INSTRUCTION 107, 107-124 (Penelope Peterson et al. eds., 1984).

²⁴ See Fred M. Newmann, *Beyond Common Sense in Educational Restructuring: The Issues of Content and Linkage*, EDUC. RES., Mar. 1993, at 3, 6.

²⁵ See Aage B. Sørensen & Maureen T. Hallinan, *A Reconceptualization of School Effects*, 50 SOC. OF EDUC. 273, 275-76 (1977).

The Sørensen-Hallinan model portrays learning as a function of student ability, student effort, and opportunities for learning.²⁶ These factors interact with each other to produce learning. The model depicts learning as an interactive, rather than an additive process because an increase in ability or effort leads to an increase in learning only when opportunities for learning are present.²⁷ Ability and effort are bound by opportunities and interact with them to produce learning.²⁸

The three components of the model—ability, effort, and opportunities to learn—vary both across individuals at points in time and within individuals across time. Intra-individual variation in ability and effort over time is expected to be small. While a student's cognitive ability may change as a function of time spent studying or quality of environment, and a student's effort may vary with motivation, typically, these personal factors remain fairly stable. On the other hand, opportunities to learn are created by external conditions that may change markedly over time. Consequently, student learning, that is dependent on learning opportunities, also can vary over time.

At a fixed point in time, ability and effort vary across individuals. Opportunities to learn also vary across individuals because they differ across schools and across smaller units within schools. Three factors directly affect the magnitude of learning opportunities to which a student has access: the way students are organized for instruction, teachers' pedagogical practices, and the content of the curriculum.²⁹ Each of these factors is subject to institutional influence and each enhances or constrains a student's likelihood of learning.³⁰

Organizing students for instruction is one of the primary ways educational institutions influence students' learning.³¹ Students are assigned to grades, classes, discussion groups, and other instructional units. Bases for assignment typically include student age, ability, career aspirations, course preference, and graduation requirements.³² In elementary, middle, and secondary school, students are frequently grouped by ability, with classes generally designated as Advanced, Honors, Regular, and Basic.³³ At the collegiate level, students typically select their

²⁶ See *id.* at 276.

²⁷ See *id.* at 277–78.

²⁸ See *id.* at 280–85.

²⁹ See Maureen T. Hallinan, *Ability Grouping and Student Learning*, in *THE SOCIAL ORGANIZATION OF SCHOOLS: NEW CONCEPTUALIZATIONS OF THE LEARNING PROCESS* 41, 53–66 (Maureen T. Hallinan ed., 1987).

³⁰ See *id.* at 38.

³¹ See *id.* at 54–63; see also Jeannie Oakes et al., *Curriculum Differentiation: Opportunities, Outcomes, and Meanings*, in *HANDBOOK OF RESEARCH ON CURRICULUM* 570, 573–78, 597–601 (Philip Jackson ed., 1992) (discussing policies and practices for differentiating curricula).

³² See Oakes et al., *supra* note 31, at 575–77.

³³ See Maureen T. Hallinan, *School Differences in Tracking Structures and Track*

courses based on university and major requirements, interest in subject matter, friends' influence, and scheduling considerations. Research demonstrates there is an effect of instructional grouping on student learning, as transmitted through the quality and quantity of instruction provided within the group.³⁴

The instructional unit to which a student belongs also determines the demographic, social, and ability composition of a student's learning environment.³⁵ The characteristics of students in an instructional group stimulates the social processes that develop during the group's life.³⁶ Students taking the same class tend to develop similar norms about effort and achievement and about social interactions.³⁷ Moreover, instructional groups form a comparative reference for students against which they can evaluate their academic performance and social behavior.³⁸ Hence, opportunities to learn are channeled through characteristics of the instructional group to which a student belongs within a school or university.³⁹

Teacher pedagogy is the second determinant of learning opportunities.⁴⁰ Teachers vary in the pedagogical techniques they employ in the instructional process and in their success in using these techniques to communicate information to students.⁴¹ Among the factors that affect the quality of instruction are also those that affect opportunities to learn by influencing the learning atmosphere of a classroom. Teachers who interest students in the content of a course, who motivate quality performance, and who inspire a love of learning in students increase students' opportunities to learn.⁴²

Assignments, 1 J. OF RES. ON ADOLESCENTS 251, 260-64 (1991); Maureen T. Hallinan, *The Organization of Students for Instruction in the Middle School*, 65 SOC. OF EDUC. 114, 118-22 (1992).

³⁴ See Oakes et al., *supra* note 31, at 583-85.

³⁵ See Hallinan, *supra* note 29, at 60-63.

³⁶ See Oakes et al., *supra* note 31, at 585-90; Adam Gamoran & Maureen T. Hallinan, *Tracking Students for Instruction: Consequences and Implications for School Restructuring*, in RESTRUCTURING SCHOOLS 112, 117-18 (Maureen T. Hallinan ed., 1995).

³⁷ See Donna Elder, *Ability-Grouping as a Self-Fulfilling Prophecy: A Microanalysis of Teacher-Student Interaction*, 54 SOC. OF EDUC. 151, 159-61 (1981).

³⁸ See James E. Rosenbaum, *Social Implications of Educational Grouping*, in REVIEW OF RESEARCH IN EDUCATION 361, 365-74 (D.C. Benlinger ed., 1980).

³⁹ See Aage B. Sørensen, *The Organizational Differentiation of Students in Schools as an Opportunity Structure*, in THE SOCIAL ORGANIZATION OF SCHOOLS: NEW CONCEPTUALIZATIONS OF THE LEARNING PROCESS 103, 103-29 (Maureen T. Hallinan ed., 1987); see also Hallinan, *supra* note 29, at 41-69.

⁴⁰ See Jere E. Brophy & Thomas L. Good, *Teacher Behavior and Student Achievement*, in HANDBOOK OF RESEARCH ON TEACHING 338, 360-65 (Merlin C. Wittrock ed., 3d ed. 1986); Aage B. Sørensen & Maureen T. Hallinan, *supra* note 25, at 278.

⁴¹ See Hallinan, *supra* note 29, at 53.

⁴² See ROBERT ROSENTHAL & LENORE JACOBSON, PYGMALION IN THE CLASSROOM:

Finally, opportunities to learn are presented through the curriculum. The more engaging and challenging the curriculum, the more learning opportunities it presents to a student.⁴³ Curriculum materials that present the subject-matter from a multicultural perspective are likely to be especially successful in affecting students with diverse backgrounds.⁴⁴

As exemplified in the preceding discussion, a conceptual framework specifies mechanisms that link causal agents to outcomes. Relating empirical studies to a conceptual model, such as the Sørensen-Hallinan learning model, reveals how and why student diversity affects learning.⁴⁵ According to the Sørensen-Hallinan model, student diversity influences learning by affecting the determinants of learning, namely student ability, effort, and opportunities to learn.⁴⁶

IV. EMPIRICAL STUDIES ON THE EFFECTS OF DIVERSITY ON STUDENT ACHIEVEMENT AND OTHER OUTCOMES

A. *Elementary and Secondary School Studies*

Research on the effects of racial and ethnic diversity on student outcomes has been conducted both at the elementary and secondary school level and at the college and university level. The amount of research on diversity in elementary and secondary schools far exceeds the number of studies at the collegiate level. The more intense focus on the pre-collegiate institutions stems primarily from public interest about desegregating the public schools, an issue that has been of general concern since the civil rights movement in the 1960s. Research on the effects of diversity on student achievement has been used to support and undermine legal arguments in favor of mandatory desegregation of the public school system.

The dependent variable in most of the diversity research on elementary and secondary schools is student academic achievement, as measured by standardized test scores or grades. The main independent variable in most of these studies is the

TEACHER EXPECTATION AND PUPILS' INTELLECTUAL DEVELOPMENT 99-100 (1968); Brophy & Good, *supra* note 40, at 95-100, 331-50; Ray Rist, *Student Social Class and Teacher Expectations: The Self-Fulfilling Prophecy in Ghetto Education*, 40 HARV. EDUC. REV. 411, 426-30, 443-49 (1970).

⁴³ See Hallinan, *supra* note 29, at 49.

⁴⁴ See, e.g., GARY D. GOTTFREDSON ET AL., MEETING THE CHALLENGES OF MULTICULTURAL EDUCATION: A REPORT FROM THE EVALUATION OF PITTSBURGH'S PROSPECT MULTICULTURAL EDUCATION CENTER 38, 90 (1992); Linda Davis, *Equality in Education: An Agenda for Urban Schools*, 29 EQUITY & EXCELLENCE IN EDUC., Apr. 1996, at 61, 61-66.

⁴⁵ See Hallinan, *supra* note 29, at 44.

⁴⁶ See *id.* at 44-66.

racial or ethnic composition of the school. A few studies use the racial or ethnic composition of an instructional group or of an informal, social group within the school as a predictor of performance. At the college level, the research that examines diversity effects on achievement typically focuses on specific kinds of learning, rather than academic achievement in general, and uses various measures of performance. Other studies at both the pre-collegiate and the college level investigate the effects of diversity on student attitudes and beliefs and on their behavior toward members of other racial or ethnic groups.

B. Student Achievement

In *Brown v. Board of Education*,⁴⁷ the United States Supreme Court held that racially segregated public schools in America are unconstitutional. Since that time, the public school system has been desegregated *de jure*, if not *de facto*.⁴⁸ In response to public concern about the effects of desegregation on student achievement and other student outcomes, social scientists have accumulated a large body of research on desegregation effects.⁴⁹ As will be shown, while the research reveals a few inconsistencies, the major results receive wide empirical support in well-designed and well-executed studies.

The central question about the effects of desegregation is how the racial composition of a school affects the achievement of students of various racial and ethnic backgrounds. Much of the research examining this issue is based on large, survey data sets, many of which are longitudinal. The data generally are analyzed using statistical models that control for relevant background factors, including socioeconomic status, gender, and ability, as well as school factors, such as school sector (public or private), school size, and geographic locale. The results of these studies are remarkably consistent. In general, these studies support seven related findings:

- 1) Black students attain higher academic achievement in majority white schools than in predominantly or majority black schools.⁵⁰

⁴⁷ 347 U.S. 483 (1954).

⁴⁸ See *Armor*, *supra* note 13, at 91.

⁴⁹ See, e.g., *id.* at 99–106; MORGAN APPEL ET AL., THE IMPACT OF DIVERSITY ON STUDENTS: A PRELIMINARY REVIEW OF THE RESEARCH LITERATURE 15 (1996).

⁵⁰ For reviews of empirical studies supporting this finding, see CARLA J. STEVENS & MICAH DIAL, COMPARISON OF STUDENT ACADEMIC PERFORMANCE AT MULTI-ETHNIC SCHOOLS VERSUS SINGLE-ETHNIC SCHOOLS 14–32 (1993); Carl L. Bankston, III & Stephen J. Caldas, *Majority African American Schools and Social Injustice: The Influence of De Facto Segregation on Academic Achievement*, 75 SOC. FORCES 535, 552–53 (1996); Carl L. Bankston, III & Stephen J. Caldas, *The American School Dilemma: Race and Scholastic Performance*, 38 SOC. Q. 423, 425–28 (1997); Robert L. Crain & Rita E. Mahard, *School Racial Composition and*

- 2) Black students attain higher academic achievement in majority white classes than in majority non-white classes.⁵¹
- 3) The earlier a black student is placed in a majority white school or classroom, the higher the student's academic achievement.
- 4) Hispanic students attain higher academic achievement in majority white schools than in minority white schools.⁵²
- 5) White students attain higher academic achievement in majority white schools than in majority black or Hispanic schools.⁵³
- 6) Cooperative learning techniques increase the achievement of all students in racially and ethnically heterogeneous groups.⁵⁴

In summary, the findings above show that black and Hispanic students benefit academically from majority white schools and classrooms and that white students are not disadvantaged academically by the size of minority enrollment, except in minority white schools, which demonstrates the role of racial and ethnic context in improving the academic performance of minority students. The achievement of black and Hispanic students is improved when they have a significant number of white classmates.⁵⁵ Related research shows that the advantage of a white majority school for minority students is intensified when the white students are middle class and when minority students become friends with their white peers.⁵⁶

Black College Attendance and Achievement Test Performance, 51 SOC. OF EDUC. 81, 98 (1978) (result as to children in the north); Doris R. Entwisle & Karl L. Alexander, *Summer Setback: Race, Poverty, School Composition, and Mathematics Achievement in the First Two Years of School*, 57 AM. SOC. REV. 72, 81-82 (1992); William G. Spady, *The Impact of School Resources on Students*, in REVIEW OF RESEARCH IN EDUCATION 135, 155-62 (Fred N. Kerlinger ed., 1973).

⁵¹ See David K. Cohen et al., *Race and the Outcomes of Schooling*, in ON EQUALITY OF EDUCATIONAL OPPORTUNITY 343, 345-58 (Frederick Mosteller & Daniel P. Moynihan eds., 1972); James McPartland & Robert York, *Further Analysis of Equality of Educational Opportunity Survey*, in 2 RACIAL ISOLATION IN PUBLIC SCHOOLS 35, 37-39 (U.S. Commission on Civil Rights ed., 1967); James McPartland, *The Relative Influence of School Desegregation and of Classroom Desegregation on the Academic Achievement of Ninth Grade Negro Students*, 25 J. OF SOC. ISSUES, Summer 1969, at 93, 94, 101-02.

⁵² See STEVENS & DIAL, *supra* note 50, at 14.

⁵³ See *id.*; David J. Armor, *School and Family Effects on Black and White Achievement: A Reexamination of the USOE Data*, in ON EQUALITY OF EDUCATIONAL OPPORTUNITY, *supra* note 51, at 197.

⁵⁴ For a review of meta-analyses on the effectiveness of cooperative learning, see Cecilia Salazar Parrenas & Florante Yap Parrenas, *Cooperative Learning, Multicultural Functioning, and Student Achievement*, in ANNUAL CONFERENCE JOURNAL: PROCEEDINGS OF THE NATIONAL ASSOCIATION FOR BILINGUAL EDUCATION CONFERENCES 181 (Lilliam M. Malave ed., 1993).

⁵⁵ See *supra* notes 51, 53 and accompanying text.

⁵⁶ See McPartland & York, *supra* note 51, at 40-43.

Another question about the effects of desegregation concerns the relative impact of school desegregation and family background on student achievement. A landmark school effects study demonstrated that family background has a significantly stronger effect on student achievement than any other single school factor or constellation of school factors, including school racial and ethnic composition.⁵⁷ A number of subsequent research studies corroborated this finding. The studies consistently report that family income has a greater impact on the academic achievement of both black and white students than does the racial composition of the school.⁵⁸

In other words, this finding has been used to argue that differences across schools in racial composition, academic climate, resources, and other characteristics are inconsequential in terms of promoting academic achievement.⁵⁹ The counter-argument is that while family socioeconomic status is a stronger predictor of achievement than school composition, the latter continues to affect achievement even when family background factors are taken into account.⁶⁰

Another question of interest in the desegregation debate concerns the impact of the racial or ethnic composition of the faculty on student achievement.⁶¹ Role theory suggests that faculty members influence students by acting as role models.⁶² Faculties are expected to have a stronger influence on same-race students than on those of a different racial or ethnic background.⁶³ Consequently, a racially or ethnically mixed faculty should have a positive effect on students in a desegregated school.⁶⁴ Only a few studies examine this relationship and those that do rely on small data sets.⁶⁵ Nevertheless, the question is important and the findings are provocative. The studies show that the academic achievement of black students, and to a lesser

⁵⁷ See David J. Armor, *supra* note 53, at 175, 211–28; Christopher S. Jencks, *The Coleman Report and the Conventional Wisdom*, in ON EQUALITY OF EDUCATIONAL OPPORTUNITY, *supra* note 51, at 69, 86–88. See generally JAMES S. COLEMAN ET AL., EQUALITY OF EDUCATIONAL OPPORTUNITY 183 (1966).

⁵⁸ For a review of studies demonstrating this finding, see Spady, *supra* note 50, at 162–67.

⁵⁹ See Armor, *supra* note 53, at 168–229; Maureen T. Hallinan, *Equality of Educational Opportunity*, 14 ANN. REV. OF SOC. 249, 255 (1988); Jencks, *supra* note 57, at 69–115.

⁶⁰ See Spady, *supra* note 50, at 135–77.

⁶¹ See, e.g., Jimmy M. Sanders, *Faculty Desegregation and Student Achievement*, 21 AMER. EDUC. RES. J. 605, 613 (1984) (stating that a faculty desegregation policy directly affects student achievement).

⁶² See KENNETH J. MEIER ET AL., RACE, CLASS, AND EDUCATION: THE POLITICS OF SECOND-GENERATION DISCRIMINATION 34–35 (1989).

⁶³ See *id.*

⁶⁴ See *id.*

⁶⁵ See Sanders, *supra* note 61, at 605–16.

extent of white students, is lower in schools with court-ordered faculty desegregation than in schools without mandatory faculty desegregation.⁶⁶

This finding is inconsistent with the predictions of role theory that would suggest that a mixed faculty would serve as a stimulus to achievement. The negative effect of faculty desegregation on student performance suggests that other more powerful factors may be offsetting the positive influence of faculty desegregation. Or, when faculty desegregation is mandatory rather than voluntary, faculty morale may be reduced, resulting in a negative impact on the learning process.

In general, the research provides strong evidence of a positive effect of desegregated schools on student achievement. Enrolling minority students in majority white schools, especially those with a significant enrollment of middle class students, increases the achievement of minority students without disadvantaging white pupils. However, while these survey analyses are consistent in demonstrating a desegregation effect, they do not identify the mechanisms that explain the observed relationship. A few case studies and small sample studies provide some insights into the social processes involved. These studies show that peer influence, role modeling, instructional quality, and educational expectations are factors that transmit the effects of desegregation to student achievement.⁶⁷

The desegregation research raises an important issue. Majority white schools typically have higher mean achievement and a stronger academic climate than minority white schools.⁶⁸ This finding, coupled with the predictions of the Sørensen-Hallinan learning model,⁶⁹ suggests that the main reason white and minority students perform better academically in majority white schools is likely that these schools provide greater opportunities to learn. In other words, it is not desegregation per se that improves achievement, but rather the learning advantages some desegregated schools provide.

C. *Student Aspirations, Social Attitudes, and Behaviors*

While the main focus of research on desegregation effects in elementary and secondary schools is academic achievement, some research has examined its impact on other student outcomes. For example, several studies investigate the

⁶⁶ See *id.*

⁶⁷ See, e.g., James E. Rosenbaum et al., *Low-Income Black Children in White Suburban Schools: A Study of School and Student Responses*, 86 J. OF NEGRO EDUC. 35, 38-42 (1987); Janet Ward Schofield, *Uncharted Territory: Speculations on Some Positive Effects of Desegregation on White Students*, 13 URBAN REV. 227, 235-39 (1981).

⁶⁸ See generally COLEMAN ET AL., *supra* note 57, at 8-23 (providing a detailed survey on segregation in public schools).

⁶⁹ See Sørensen & Hallinan, *supra* note 25, at 275-78.

effects of desegregation on the educational aspirations of black students.⁷⁰

One study found that black students in primarily black schools have higher educational aspirations than those in desegregated schools. However, further analysis of these students showed that their aspirations were unrealistic, and they were less likely than white students to attend college.⁷¹

Another study found that black students without white friends had the highest but least realistic aspirations when they attended predominantly black schools.⁷² Their aspirations decreased and became more realistic as the percentage of whites in the school increased. Black students had the highest and most realistic educational aspirations in majority white schools. These studies suggest that blacks benefit most in terms of college expectations and attendance when they attend majority white schools and have white friends. Apparently, both contextual influences and peer influences in majority white schools support black educational aspirations and college attendance.

A number of studies examine the effects of desegregation on students' racial attitudes and social behavior. This research is fairly consistent in reporting that black and white students in desegregated schools are less racially prejudiced than those in segregated schools.⁷³ Other studies examine the effects of desegregation on students' social integration and friendships. These studies generally find that interracial contact in desegregated schools leads to an increase in interracial sociability and friendship.⁷⁴

⁷⁰ See *infra* notes 71–73.

⁷¹ See Joseph Veroff & Stanton Peele, *Initial Effects of Desegregation on the Achievement Motivation of Negro Elementary School Children*, 25 J. OF SOC. ISSUES 71, 71–79 (Summer 1969).

⁷² See RACIAL ISOLATION IN THE PUBLIC SCHOOLS 105 (U.S. Commission on Civil Rights ed., 1967).

⁷³ See, e.g., Maureen T. Hallinan & Steven S. Smith, *The Effects of Classroom Racial Composition on Students' Interracial Friendliness*, 48 SOC. PSYCHOL. Q. 3, 13–15 (1985); Janet Ward Schofield & H. Andrew Sagar, *Desegregation, School Practices, and Student Race Relations*, in THE CONSEQUENCES OF SCHOOL DESEGREGATION 65, 65–72 (Christine H. Rossell & Willis D. Hawley eds., 1983); Amy Stuart Wells & Robert L. Crain, *Perpetuation Theory and the Long-Term Effects of School Desegregation*, 64 REV. OF EDUC. RES. 531, 533–35, 552–53 (1994); Peter B. Wood & Nancy Sonleitner, *The Effect of Childhood Interracial Contact on Adult Antiblack Prejudice*, 20 INT'L J. OF INTERCULTURAL REL. 1, 1–17 (1996).

⁷⁴ See Maureen T. Hallinan & Richard A. Williams, *Interracial Friendship Choices in Secondary Schools*, 54 AMER. SOC. REV. 67, 68–69, 76–77 (1989); Maureen T. Hallinan & Ruy A. Teixeira, *Opportunities and Constraints: Black-White Differences in the Formation of Interracial Friendships*, 58 CHILD DEV. 1358, 1360–61 (1987) [hereinafter Hallinan & Teixeira, *Opportunities and Constraints*]; Maureen T. Hallinan & Ruy A. Teixeira, *Students' Interracial Friendships: Individual Characteristics, Structural Effects and Racial Differences*, 95 AMER. J. OF EDUC. 563, 580–81 (1987) [hereinafter Hallinan & Teixeira, *Students' Interracial Friendships*]; Amy Stuart Wells et al., *When School Desegregation Fuels Educational Reform:*

Several studies point to the importance of school or classroom context in promoting positive social relations among white and non-white students. One instructional setting that fosters interracial respect and friendship is the cooperative learning group. When students work together on a common task toward a shared goal, they form more positive attitudes and sentiment toward each other.⁷⁵ Assigning students to the same ability groups for instruction also promotes both same-race and cross-race friendships within the group.⁷⁶

In general, the desegregation studies indicate that students in racially and ethnically mixed schools will have positive attitudes and establish positive social ties with students from other racial and ethnic groups under certain conditions. These conditions include a school climate supportive of cross-racial and cross-ethnic social interactions and structural and organizational features of the school that permit and encourage social interactions.

V. COLLEGE AND UNIVERSITY STUDIES

A. *Student Achievement*

Few studies of the effects of racial and ethnic diversity on student achievement at the college level are available. The scarcity of survey research in this area results from the difficulty of measuring the achievement of college students.⁷⁷ In elementary and secondary schools, students take standardized achievement tests that permit comparisons across schools.⁷⁸ At the college level, standardized tests are rarely administered. Consequently, rigorous comparisons between the achievement of students who attend racially integrated institutions and those who attend segregated colleges are not possible.

In the few studies that do examine the effects of diversity on student learning at the college level, achievement is conceptualized in various ways. Definitions of achievement include cognitive development, creativity, problem solving skills, study habits, and understanding and appreciation of others' perspectives and opinions. Achievement has been measured by grades, responses to problem solving tests, group participation, course completion, and, occasionally,

Lessons from Suburban St. Louis, 8 EDUC. POL'Y 68, 71-87 (1994).

⁷⁵ See, e.g., Hallinan & Teixeira, *Opportunities and Constraints*, *supra* note 74, at 1359; Parrenas & Parrenas, *supra* note 54, at 181-89.

⁷⁶ See Maureen T. Hallinan & Aage B. Sørensen, *Ability Grouping and Student Friendships*, 22 AM. EDUC. RES. J. 485, 486, 497-99 (1985).

⁷⁷ See ALEXANDER W. ASTIN, *ASSESSMENT FOR EXCELLENCE: THE PHILOSOPHY AND PRACTICE OF ASSESSMENT AND EVALUATION IN HIGHER EDUCATION* 16-37, 46-65 (1991).

⁷⁸ See A.N. Heironymus et al., *IOWA TESTS OF BASIC SKILLS, TEACHER'S GUIDE: MULTILEVEL BATTERY, LEVELS 9-14*, at 27-41 (1986).

standardized test scores.

The studies are fairly consistent in showing that, under certain conditions, diversity promotes achievement, at least for minority students. It has been reported that in a sample of undergraduate and graduate students, ethnic diversity in problem solving tasks leads to solutions that are more feasible and more effective than in all-Anglo groups.⁷⁹ There is no evidence found that diversity decreases the achievement of white or minority students.

The most frequently cited research on the effects of college racial and ethnic composition on student achievement compares black student achievement in segregated black colleges and majority white colleges. Among the most rigorous of these studies is an analysis based on longitudinal data on freshman in a sample of eighteen colleges.⁸⁰ The colleges were selected to reflect different four-year colleges and universities nationwide on a variety of institutional factors.⁸¹ Two of the colleges in the sample were historically black institutions while the remaining sixteen were predominantly white institutions.⁸² The students participated in the National Study of Student Learning (NSSL) and took the Collegiate Assessment of Academic Proficiency (CAAP) test, developed by the American College Testing Program (ACT).⁸³ The analysis revealed small and statistically insignificant differences between the test scores of the black students in historically black colleges and those in predominantly white colleges on measures of reading comprehension, mathematics, and critical thinking.⁸⁴

Because this study only examined students at the end of freshman year, arguably too short of a time to measure institutional effects on learning, another study extended Bohr's study by testing the students again at the end of sophomore year.⁸⁵ They used writing skills and science reasoning as their measure of achievement.⁸⁶ The results showed no difference between the science scores of

⁷⁹ See Poppy Laurretta McLeod et al., *Ethnic Diversity and Creativity in Small Groups*, 27 SMALL GROUP RES. 248, 253 (1996).

⁸⁰ See, e.g., Louise Bohr et al., *Do Black Students Learn More at Historically Black or Predominantly White Colleges?*, 36 J. OF C. STUDENT DEV. 75, 77-79 (1995).

⁸¹ See *id.*

⁸² See *id.*

⁸³ See *id.*; see also Ernest T. Pascarella et al., *What Have We Learned from the First Year of the National Study of Student Learning?*, 37 J. OF C. STUDENT DEV. 182, 182-91 (1996) (summarizing findings from the first year of the NSSL, collecting data from students who had taken the CAAP).

⁸⁴ See Bohr et al., *supra* note 80, at 81.

⁸⁵ See Ernest T. Pascarella et al., *Influences on Students' Openness to Diversity and Challenge in the First Year of College*, 67 J. OF HIGHER EDUC. 174 (1996).

⁸⁶ See *id.*

black students in the two kinds of institutions.⁸⁷ However, black students in historically black institutions scored significantly higher than their black peers at predominantly white colleges and universities on the writing skill scale.⁸⁸ These results are subject to various interpretations. One may conclude that racial or ethnic diversity has little measurable effect on student learning in college. Conversely, one may focus on the writing skills difference and conclude that the advantage for blacks of attending a black college lies in the training they receive in writing, which may be more extensive or better directed to their learning needs than in an integrated college. Clearly, further research is needed before firm conclusions can be reached about the advantages or disadvantages of attendance at historically black colleges for the academic achievement of black students.

Examining the relationship between institutional response to diversity and student achievement, it has been demonstrated that both minority and white students are aware of discrimination toward minorities on campus.⁸⁹ Racial prejudice is revealed through campus climate, faculty and staff attitudes, and classroom interactions. These perceptions are related to lower academic performance and attainment of minority students.⁹⁰

Other studies focusing on institutional response to diversity and its effects on student achievement explore institutional efforts to support a multicultural climate on campus.⁹¹ These efforts include adding multicultural courses to the curriculum, incorporating multicultural material into existing courses, instituting Black and Ethnic Studies majors and concentrations, hiring racial and ethnic minority faculty, creating co-curricular programs to increase multicultural awareness and reduce prejudice, and employing pedagogical techniques that place diverse students together to work on common tasks in a cooperative learning environment.⁹² The research is fairly consistent in showing a positive effect of institutional efforts to support multiculturalism and the achievement of minority students.⁹³

It has been reported that cognitive development advances among students participating in a course on multiculturalism.⁹⁴ Another report shows that white

⁸⁷ See *id.*

⁸⁸ See *id.*

⁸⁹ See generally Amaury Nora & Alberto F. Cabrera, *The Role of Perceptions of Prejudice and Discrimination on the Adjustment of Minority Students to College*, 67 J. OF HIGHER EDUC. 119 (1996).

⁹⁰ See *id.* at 133–134.

⁹¹ See, e.g., APPEL ET AL., *supra* note 49, at 15–18.

⁹² See *id.*

⁹³ See *id.*

⁹⁴ See Maurianne Adams & Yu-Hui Zhou-McGovern, *The Sociomoral Development of Undergraduates in a "Social Diversity" Course: Developmental Theory, Research, and Instructional Applications* (paper presented at the Annual meeting of the American Educational

students enrolled in a college cultural diversity course increase their understanding of the concept of race.⁹⁵

Institutional responses to diversity also affect the retention and graduation rates of minority students.⁹⁶ In a study of ten large universities, those that made institutional changes to adapt to diversity had greater minority enrollment and higher retention rates than those with a weak institutional response to diversity.⁹⁷ Similarly, a separate report finds that minority students enrolled in colleges that implement institutional plans to adapt to diversity are more likely to graduate than those in colleges that do not institutionalize diversity plans.⁹⁸ Additionally, another study finds that a special counseling program increases the college retention and graduation rate of black students.⁹⁹

Institutional commitment to diversity also affects student satisfaction with college. In a major multi-institutional study, it was found that students' satisfaction with college increases with their perception of their institution's commitment to diversity.¹⁰⁰ Another study obtains the same result, after controlling for student background.¹⁰¹ Others also report a positive effect of diversity on student satisfaction with college.¹⁰²

Research Association, New Orleans, LA (1994)).

⁹⁵ See Thomas R. Bidell et al., *Developing Conceptions of Racism Among Young White Adults in the Context of Cultural Diversity Coursework* (paper presented at the Annual meeting of the American Educational Research Association, New Orleans, LA (1994)).

⁹⁶ See, e.g., Edwin D. Bell & Robert W. Drakeford, *A Case Study of the Black Student Peer Mentor Program at the University of North Carolina at Greensboro and Its Policy Implications*, 26 C. STUDENT J. 381, 381-86 (1992); Jacqueline Conciatore, *From Flunking to Mastering Calculus: Treisman's Retention Model Proves to be Too Good on Some Campuses*, 6 BLACK ISSUES IN HIGHER EDUC. 5-6 (1990).

⁹⁷ See RICHARD C. RICHARDSON, Jr. & ELIZABETH FISK SKINNER, *ACHIEVING QUALITY AND DIVERSITY: UNIVERSITIES IN A MULTICULTURAL SOCIETY* 238-53 (1990).

⁹⁸ See Beatriz C. Clewell & Myra S. Ficklen, *Improving Minority Retention, in HIGHER EDUCATION: A SEARCH FOR EFFECTIVE INSTITUTIONAL PRACTICES* 1, 2, 39-55 (1986).

⁹⁹ See Joseph Trippi & Harold E. Cheatham, *Effects of Special Counseling Programs for Black Freshmen on a Predominantly White Campus*, 30 J. OF C. STUDENT DEV. 35, 35-40 (1989).

¹⁰⁰ See Alexander W. Astin, *Diversity and Multiculturalism on Campus: How are Students Affected?*, 25 CHANGE 44, 44-49 (Mar.-Apr. 1993).

¹⁰¹ See Octavio Villalpando, *Comparing the Effects of Multiculturalism and Diversity on Minority and White Students' Satisfaction with College* (paper presented at the Annual Meeting of the Association for the Study of Higher Education, Tucson, AZ (1994)).

¹⁰² See Daryl G. Smith et al., *Paths to Success: Factors Related to the Impact of Women's Colleges*, 66 J. OF HIGHER EDUC. 245, 262-64 (1995).

B. Student Social Attitudes and Behaviors

The commitment of a college or university to diversity affects student social attitudes and behavior, as well as their academic achievement and attainment. A number of colleges and universities have established race-conscious programs designed to increase interracial and inter-ethnic understanding and to dispel stereotypes and prejudice. Research shows these programs are effective in reducing racism and increasing interracial understanding and sociability.

A study shows that students who are exposed to a multicultural education through course work increase their level of racial awareness and understanding of multiple cultures.¹⁰³ A report shows that white pre-service teachers given formal instruction in multiculturalism improved their attitudes toward other racial and ethnic groups.¹⁰⁴ Additionally, another report showed a positive impact of multiculturalism on the sense of community, cultural awareness, and racial understanding of white college students. Yet another report shows that programs designed to improve communication across racial and ethnic groups increase the facility of white students to interact with minority peers.¹⁰⁵ Lastly, it has been reported that an intergroup dialogue program decreases interracial prejudice.¹⁰⁶

In general, the research shows that the effects of diversity on college students are predominantly positive. Studies examining the impact of diversity on student academic achievement, educational attainment, satisfaction with college, racial and ethnic attitudes, multicultural understanding, and social behavior provide broad support for the conclusion that racial and ethnic diversity benefit both white and minority students without measurable disadvantages for any group of students. The research identifies institutional commitment to diversity as a major factor in insuring the positive impact of diversity on college campuses.

¹⁰³ See WILLIAM G. SPARKS & M. ELIZABETH VERNER, INTERVENTION STRATEGIES IN MULTICULTURAL EDUCATION: A COMPARISON OF PRE-SERVICE MODELS 18, 20 (1993).

¹⁰⁴ See Thomas L. Moore & Carolyn Reeves-Kazelskis, *Effects of Formal Instruction on Pre-Service Teachers' Beliefs About Multicultural Education* (paper presented at the Annual meeting of the Mid-South Educational Research Association, Knoxville, TN (1992)); M.A. Garmon, *Missed Messages: How Prospective Teachers' Racial Attitudes Mediate What They Learn from a Course on Diversity* (1996) (unpublished Ph.D. dissertation, Michigan State University).

¹⁰⁵ See Lori J. Nelson et al., *The Effects of Participation in an Intergroup Communication Program: An Assessment of Shippensburg University's Building Bridges Program* (paper presented at the Annual meeting of the Eastern Psychological Association, Providence, RI (1994)).

¹⁰⁶ See X. Zuniga et al., *Speaking the Unspeakable: Student Learning Outcomes in Intergroup Dialogues on a College Campus* (paper presented at the Annual meeting of the Association for the Study of Higher Education, Orlando, FL (1995)).

C. Theoretical Research on Diversity Effects

In addition to the growing body of empirical research on diversity, several sociological and social psychological theories provide insights into how diversity affects student cognitive development, attitudes, and social behavior.¹⁰⁷ Although some of these theories do not directly address issues of race and ethnicity, they are applied easily to interracial and inter-ethnic situations.¹⁰⁸

Author Gordon Allport's contact theory states that intergroup contact typically leads to improved relationships between persons who differ by race and ethnicity.¹⁰⁹ However, intergroup contact may reinforce previously held stereotypes and increase intergroup hostility if the situation is structured in such a way that it provides unequal status for members of different racial and ethnic groups or fails to provide strong institutional support for positive social relationships.¹¹⁰ Allport emphasizes that cooperative interracial interaction aimed at attaining shared goals must be promoted to insure positive intergroup relations.¹¹¹ The empirical research cited above, showing the effects of institutional commitment to implementation of diversity in college curricula and on college campuses, supports this theory.

Berger's "expectations states" theory claims that a cooperative equal-status environment promotes social participation by members of all groups, regardless of racial or ethnic affiliation.¹¹² Unequal status relations, on the other hand, suppress participation by lower status group members.¹¹³ The theory suggests that equalizing status by providing the lower status person with additional resources needed for the group interaction should equalize power and participation rates.¹¹⁴ Cohen applies expectations states theory to interracial interaction in desegregated schools and argues that a cooperative equal-status environment is a necessary but insufficient condition to improve black-white interactions in school because biased expectations for the behavior of both races will lead whites to dominate.¹¹⁵ To

¹⁰⁷ See *infra* notes 110, 113, 118.

¹⁰⁸ See *infra* note 118.

¹⁰⁹ See GORDON W. ALLPORT, *THE NATURE OF PREJUDICE* (1954).

¹¹⁰ See *id.* at 261-81.

¹¹¹ See *id.* at 276.

¹¹² See Joseph Berger, *Expectation States Theory: A Theoretical Research Program*, in *EXPECTATION STATES THEORY: A THEORETICAL RESEARCH PROGRAM* 3, 3-10 (Joseph Berger et al. eds., 1974).

¹¹³ See Joseph Berger & M. Hamit Fisek, *A Generalization of the Theory of Status Characteristics and Expectation States*, in *EXPECTATION STATES THEORY: A THEORETICAL RESEARCH PROGRAM*, *supra* note 112, at 163, 202-03.

¹¹⁴ See *id.*

¹¹⁵ See E.G. Cohen, *Expectation States and Interracial Interaction in School Settings*, 8

equalize status, she claims the roles of superior and subordinate must be reversed, at least initially.¹¹⁶

Galaskiewicz's "network" theory provides further conceptual insight into the processes that link student diversity to student outcomes. The theoretical research on social networks views networks as a set of individuals linked in a way that facilitates communication and interaction, or as a set of relationships that tie individuals together giving them a shared identity.¹¹⁷ A distinction is made between weak and strong social ties, where weak ties may be categorized as acquaintances and strong ties as friendships.¹¹⁸ One author argues that while strong ties give emotional support, weak ties may be more functional in terms of providing access to useful information and other important resources.¹¹⁹ Interracial and inter-ethnic social relationships are more likely to be weak ties. These weak ties can be advantageous to members of different groups by affording them easier access to other social networks on campus, by yielding information about the curriculum and faculty, and providing access to job opportunities.¹²⁰

Social psychological theories of interpersonal attraction identify personal characteristics that affect the likelihood of friendship. These characteristics include proximity, similarity, status, and reciprocity.¹²¹ Contact theory predicts the effects of proximity on friendship formation.¹²² One group of researchers claims that individuals form friendships with those who are similar to them in background, values, attitudes, and interests.¹²³ Another researcher argues that persons are attracted to those of equal or higher status than themselves.¹²⁴ Yet another

ANN. REV. OF SOC. 209-35 (1982).

¹¹⁶ See *id.*

¹¹⁷ See JOSEPH GALASKIEWICZ, EXCHANGE NETWORKS AND COMMUNITY POLITICS 13-16 (1979); see also Edward O. Laumann et al., *Community Structure as Interorganizational Linkages*, 4 ANN. REV. OF SOC. 455, 457-60 (1978) (discussing how interorganized networks are structured).

¹¹⁸ See GALASKIEWICZ, *supra* note 117, at 21-32.

¹¹⁹ See Mark Granovetter, *The Strength of Weak Ties*, 78 AM. J. OF SOC. 1360, 1377-80 (1973).

¹²⁰ See *id.* at 1365-73.

¹²¹ See *id.*

¹²² See ALLPORT, *supra* note 109, at 250-68.

¹²³ See STANLEY SCHACHTER, THE PSYCHOLOGY OF AFFILIATION: EXPERIMENTAL STUDIES OF THE SOURCES OF GREGARIOUSNESS 1-6 (1959); MUZAFER SHERIF ET AL., INTERGROUP CONFLICT AND COOPERATION: THE ROBBER'S CAVE EXPERIMENT 30-31 (1961); THEODORE M. NEWCOMB, THE ACQUAINTANCE PROCESS 24-25, 132-33 (1961); Theodore M. Newcomb, *The Prediction of Interpersonal Attraction*, 11 THE AM. PSYCHOLOGIST 575, 578-81 (1956).

¹²⁴ See GEORGE C. HOMANS, THE HUMAN GROUP 4-12, 443-69 (1950); GEORGE C. HOMANS, SOCIAL BEHAVIOR: ITS ELEMENTARY FORMS 181-90, 203 (Robert K. Merton ed., 1974).

researcher states that friendship is more likely with those who reciprocate friendship overtures.¹²⁵ These interpersonal bases of attraction likely operate to improve interracial and inter-ethnic relationships on a college campus. Cross-race and cross-ethnic friendships are likely to form when students of different racial and ethnic backgrounds discuss diversity issues through the curriculum or special programs, when students respect diverse abilities and recognize them in their status hierarchies, when a college or university supports diversity, and when students are encouraged to interact and work together to achieve common goals.

VI. CONCLUSION

A growing body of social science research examines the impact of diversity on college and university campuses for student academic and social outcomes. A large number of studies on school desegregation at the elementary and secondary school levels demonstrate that minority students benefit academically from attendance at majority white schools.¹²⁶ While fewer studies of the impact of diversity on student learning are available at the collegiate levels, existing studies provide evidence that racial and ethnic diversity on college campuses promotes learning, increases understanding of racial groups and cultures, reduces racism and prejudice, and leads to cordial relationships between students of different racial and ethnic heritage.¹²⁷

The positive effects of student diversity are conditioned on the college or university context. Under conditions of institutional support for multiculturalism and the active promotion of diversity, students of all racial and ethnic groups tend to benefit.¹²⁸ In particular, minority students perceive less discrimination, experience greater satisfaction with college, and are more likely to graduate in institutions promoting multiculturalism.¹²⁹ When institutional support for student diversity is weak or absent, the positive effects of diversity are reduced or eliminated.

Most of the social science studies reported in this Article are based on high quality data sets, rely on appropriate research designs, and employ rigorous analytic techniques. No comparable body of research is available that contradicts the major findings of these studies or that demonstrates widespread negative effects of diversity on student learning or race and ethnic relations.

Although further study is needed to specify more exactly the mechanisms that

¹²⁵ See Alvin Gouldner, *The Norm of Reciprocity: A Preliminary Statement*, 25 AMER. SOC. REV. 161, 176-77 (1960).

¹²⁶ See *id.*

¹²⁷ See *id.*

¹²⁸ See *id.*

¹²⁹ See *id.*

link diversity to student outcomes, the present research provides direction for those studies. Both the survey research and case studies point to a number of social processes that may link diversity to student learning and social behavior.¹³⁰ These social processes should become the objects of future study. Research is also needed to examine the long-term effects of diversity. The present studies hint at those effects by demonstrating higher rates of retention and graduation and a higher level of satisfaction with college for minority students in multicultural environments.¹³¹ These results suggest that experiencing racial and ethnic diversity in college and learning to live in a pluralistic environment provide educational and occupational advantages to minority and white students.

Whether the current research on diversity would be judged convincing in a court of law is an open question. The answer partially depends on the political and economic climate in which the case is argued. As research on diversity accumulates, however, lawyers and justices will find it increasingly more difficult to ignore these social science findings as they search for an understanding of the impact of affirmative action policies on all students.

¹³⁰ See *supra* note 50–54.

¹³¹ See *supra* notes 91–98.