DOCUMENT RESUME

ED 030 188 EA 002 254

By-Schafer, Walter E.; Olexa, Carol

High School Track Position and Academic Achievement.

Pub Date Apr 69

Note-23p.; Paper presented at the Annual Meeting of the Pacific Sociological Assn. (Seattle, Wash., April 1969).

EDRS Price MF-$0.25 HC-$1.25

Descriptors-*Ability Grouping, *Academic Achievement, *College Bound Students, Comprehensive High Schools, Educational Research, *High School Students, *Noncollege Preparatory Students, Self Evaluation, Statistical Analysis, Student Attitudes, Teacher Attitudes

To test the hypothesis that track position exerts an independent, causal influence on the academic achievement of high school students, background data and complete high school records were compared for students who had begun as 10th graders in 1961 at two midwestern senior high schools. For statistical analysis, the two cohorts--753 students from the larger school in a university community of about 70,000 and 404 students from the smaller school in an industrial community of about 20,000--were combined into a single sample of 1,157 students. Control variables for the study included sex; father's occupation, intelligence test score, and GPA for the final semester of junior high school. Analysis of zero order correlation data supported the study's major hypothesis: tabulated findings indicated also that track position and academic achievement are positively correlated when controlling for the four confounding variables and when considered in the light of trend data showing the differential improvement in grades for college preparatory and noncollege preparatory students. Further research is suggested to determine the influence of five mediating processes as explanatory variables of the basic correlation. (JK)

HIGH SCHOOL TRACK POSITION AND ACADEMIC ACHIEVEMENT

Walter E. Schafer and Carol Olexa

University of Oregon

Presented at the Annual Meetings of the
Pacific Sociological Association

April, 1969
Seattle, Washington

INTRODUCTION

Since the turn of the century, a number of trends have converged to increase the pressure on American adolescents to enter and to graduate from high school: the disappearance of work roles for adolescents, the upgrading of educational requirements for job entry, and the declining need for teenagers to contribute to family income.[1] The effect of these pressures is reflected in the fact that 93% of the high school age population was in school in 1966, compared to 7% in 1890.[2] This vast increase in the magnitude of enrollment has forced the educational system not only to increase its facilities and manpower, but also to broaden its objectives and programs in order to serve student populations with much greater diversity in abilities, interests, and aspirations than before.

While some school systems, especially in the large cities, have adapted by creating separate high schools for students with different abilities or occupational destinations, most communities have developed comprehensive high schools serving all the youngsters in a neighborhood or community.[3] A common structural arrangement for serving the perceived needs and abilities of different student groups is some form of tracking system, usually consisting of two or more relatively distinct career lines with such titles as college preparatory, vocational, technical, industrial, business, general, basic, and remedial.[4] While students on different tracks may take some courses together in the same classroom, they are usually separated into entirely different courses or different sections of the same course.

Several different rationale are given for tracking systems.[5] Common to most rationale, however, is that college-bound students are academically more able, that they learn more rapidly and should not be deterred in their progress

by slower, non-college-bound students, and that they need courses for college preparation which non-college bound students do not need. It is thought that non-college bound students, on the other hand, are less bright, learn more slowly and should not be expected to progress as fast or learn as much as college bound students, and need only a general education or work-oriented training to prepare them for immediate entry into the world of work or a business or vocational school.

Numerous critics have contended that assignment to a college preparatory track independently enhances achievement, while assignment to a non-college preparatory track independently depresses achievement.[6] Since Negro and lower income youth are assigned more often than white and higher income youth to non-college preparatory curricula, the tracking system is seen as a barrier to equality of educational opportunity.[7] The present paper presents the results of a limited test of the curriculum-achievement hypothesis, which has never been systematically explored at the high school level, but receives plausibility from current social psychological theory and empirical knowledge about the normative influence of teachers and peers.[8]

Theoretical Framework

Theories of self and interaction hold that individuals' self evaluation, aspirations, and behavior are partially determined by the evaluations and expectations of significant others.[9] A more specific derivative proposition supported by considerable research is that students' evaluations of their ability are partly determined by the evaluations and expectations of them by teachers.[10] Another, also supported by several studies, is that academic performance is partly determined by self-evaluation of ability.[11] It follows,

then, that academic performance is affected by teachers' expectations.

Impressive recent evidence for this teacher expectation - student performance relationship comes from a study by Rosenthal and Jacobsen in which teachers of children randomly assigned to experimental groups were told at the beginning of the year to expect "unusual intellectual" gains, while teachers of the control group children were told nothing.[12] After eight months and again after two years, the experimental group children showed significantly greater gains in I.Q. and grades. The investigators interpret the findings as a result of a benign self-fulfilling prophecy. Although they were unable to determine from their data what specific mediating processes were operating, it is likely the heightened expectations produced higher performance through increased self-evaluation by pupils.

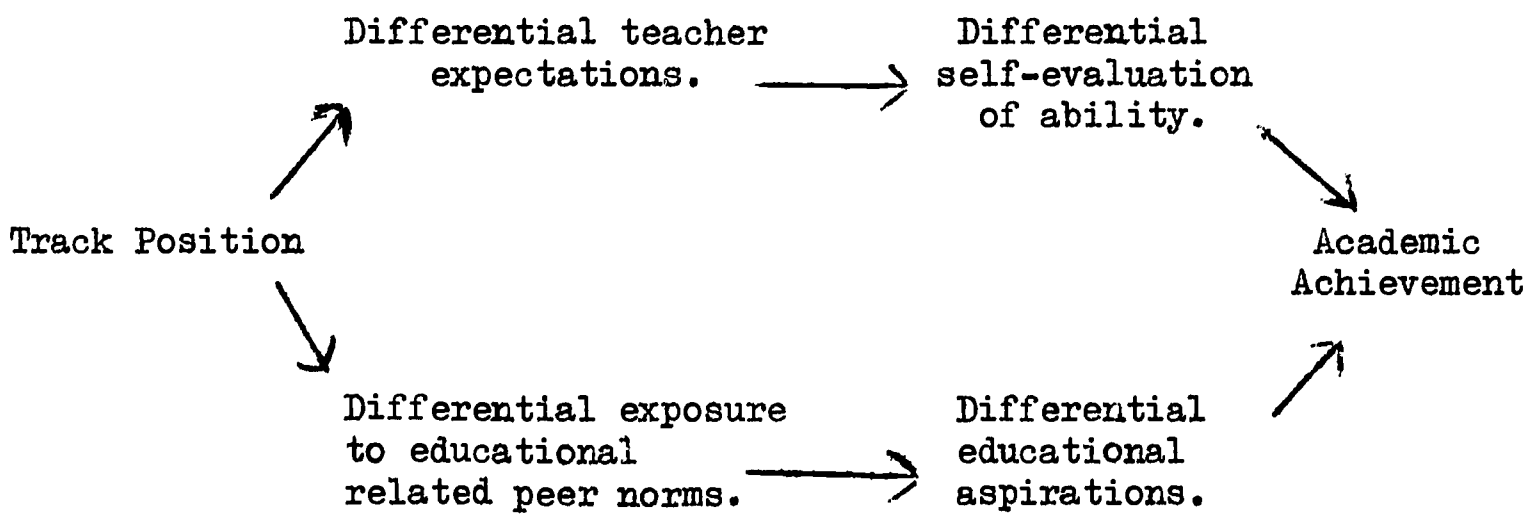
A number of writers have argued that teachers in college preparatory classes believe their students to be more capable and expect of them higher levels of performance than do teachers of non-college preparatory students of the same ability.[13] If this and the other propositions just stated are valid, then track position should exert a positive, causal influence on academic performance. This hypothesis is rendered plausible, not only by the above arguments, but by several studies showing a relationship between ability group placement and self-concept.[14]

A second basis for the same prediction has to do with normative influence from peers. Several studies in England and the United States suggest that upper track students tend to hold and support pro-school, pro-achievement attitudes, while lower track students more often manifest neutral or negative attitudes toward school and academic achievement.[15] These anti-school attitudes

are seen as a joint result of anti-school influences from home, frustrations of past failure, and reactions to stigmatization from teachers and college preparatory students.[16] Since most interactions occur within rather than across tracks, it follows that upper track students are more often exposed to pro-achievement attitudes and norms, while the reverse is true of lower track students.[17] And from what we know about peer influences on adolescent attitudes and behavior in general and on educational orientation and attainment in particular, it follows that college preparatory students will be influenced toward academic achievement, while non-college preparatory students will be drawn away from, or at least not toward, achievement.[18]

On the basis of the causal arguments, then, which are summarized in the following flow chart, we hypothesize that, other things being equal, college preparatory students will exceed non-college preparatory students in academic achievement.

CHART I



Data and Methods

During the summer of 1964, complete high school records and certain background data were collected for the 1157 students who had begun as 10th graders

three years earlier in two mid-western, three year senior high schools.[19] At the time the records were examined, most of the students had already graduated. One of the schools (labeled here Academic Heights High) had a total enrollment of 2565 in the fall of 1963, was located in a predominantly middle-class, university community of about 70,000 and contributed 753 students to the sample. The other school (called here Industrial City High) had a total enrollment of 1272 in the fall of 1963, was located in a nearby predominantly working class, industrial community of about 20,000, and contributed 404 students to the sample. Since all the findings of the study are virtually identical for both schools, the two cohorts were combined into a single sample in order to increase cell sizes.

The dependent variable, academic achievement, was measured by the grade point average (GPA) computed from each student's grades for all major courses during the six semesters of senior high school. The GPA's, which were based on as many semesters as the student stayed in school, were divided into quartiles for each school, although after the first table, the analysis is limited to achievement in the top half of the class.[20] The independent variable, track position, was indicated by whether the transcript designation for the first English course taken was "G" (non-college preparatory or "general") or "C" (college preparatory). If students took college preparatory English, they were also placed in the college preparatory sections of other courses and took such courses as foreign language and advanced mathematics, which were populated almost entirely by other college preparatory students.[21] Fifty-eight per cent of the Industrial City students were classified as college preparatory, as were 71 per cent of the Academic Heights students. Only a small number of students shifted tracks after the beginning of the tenth grade: at Industrial

City High, 22 students shifted downward, 5 upward, 21 Academic Heights students moved up, 17 down. The curriculum placement decision must be viewed, then, as a highly significant point in the educational selection process and the careers of individuals.

Control variables for the study are sex, father's occupation, intelligence test score, and GPA for the final semester of junior high school, each of which relates to both track position and academic achievement, as we will show later. Sex, of course, was divided into males and females. Father's occupation, which was coded according to census categories, was divided into two categories here, white collar and blue collar.[22] Intelligence was measured by scores on the Lorge-Thorndike Test in one school and the California Test of Mental Maturity in the other. Scores on the two tests were treated as comparable, since the means and standard deviations are identical for national test samples, as well as for the two schools in this study.[23]

The first step in the analysis is to examine the zero-order relationship between track position and academic achievement using the direction and size of percentage differences and as the simple measure of association. The second step is to relate four potential confounding variables, sex, father's occupation, I.Q., and previous GPA to both the independent and dependent variables, in order to determine whether they should be controlled to reduce selection effects. The third step is to re-examine the relationship between track position and academic achievement, controlling for the factors shown in step two to relate to the independent and dependent variables. This step not only allows a retest of the hypothesis with several selection factors eliminated, but also allows an examination of the conditions under which the relationship may vary. Finally trend data are presented for each school showing the differential improvement

in grades for college preparatory and non-college preparatory students. These trend data make possible an additional limited test of the curriculum-achievement hypothesis.

Results

Table 1 presents the percentage data for the zero-order relationship between academic achievement. As predicted, a positive relationship exists between two variables: whereas 37 and 66 per cent of the college preparatory students achieved in the top half and quarter of their classes, respectively, only two and 17 per cent of the non-college preparatory students did so. At the other extreme, 50 per cent of the non-college preparatory students achieved in the lower quartile compared with 12 per cent of those on the college preparatory track.

Table 1. Percentage Data for the Academic Achievement and Track Position Relationship

	10A-12B G.P.A.					
Track Position	High	High-Avg.	Low-Avg.	Low	%	N
College Prep	37	29	22	12	100	752
Non-College Prep	2	17	31	50	100	405

While this finding is consistent with the hypothesis, it is possible that part or all of the relationship is the result of the effect of selection factors, rather than track position. That is, college preparatory students might well have been brighter, more motivated toward achievement or both, at the beginning of high school, accounting for this difference in performance. This is especially plausible since such factors as past performance, measured ability, and aspirations (perceived or real) for higher education went into

the curriculum assignment decision at the beginning of the tenth grade.[24] Therefore, it is necessary to identify possible confounding variables and then to re-examine the original relationship controlling out their effects.

Table 2 shows that four factors known from past research to relate to academic achievement do so in this sample as well. Thus, white collar, high I.Q., previously high achieving, and female students achieved higher GPA's than did blue collar, low I.Q., previously low achieving and male students. The table also indicates that each of the four factors relates in the same direction to track position. While these selection variables do not account

Table 2. Track Position and Academic Achievement, by Father's Occupation, I.Q., Previous GPA, and Sex (in percentages).

	Percentages on College Preparatory Track	Percentages in Top Half of Class
Father's Occupation		
White Collar	83	62
Blue Collar	48	39
I.Q.		
High	91	74
Low	43	29
Previous GPA		
High	70	59
Low	60	42
Sex		
Male	62	41
Female	68	59

for anywhere nearly all the variance in academic achievement either in past research or here, the elimination of their effects should substantially reduce the confounding influences of ability and motivation, thereby permitting a more arduous test of the track position-academic achievement hypothesis.

Tables 3 through 6 present the relationships between track position and academic achievement, indicated by performance in the top half of the class, at the first order of partialling. When each of the four control variables is

Table 3. Per Cent of High Achievers by Track Position and Previous Academic Achievement.*

	College Prep	Non-College Prep	Difference (Per Cent)
High 9B G.P.A.	77 (378)*	17 (161)	60
Low 9B G.P.A.	55 (340)	21 (228)	34

*The number of cases in the category to which the percentage applies is given in parentheses.

Table 4. Per Cent of High Achievers by Track Position and I.Q.

High I.Q.	College Prep	Non-College Prep	Difference (Per Cent)
High I.Q.	78 (499)	44 (50)	34
Low I.Q.	45 (242)	17 (322)	28

Table 5. Per Cent of High Achievers by Track Position and Father's Occupation

	College Prep	Non-College Prep	Difference (Per Cent)
White Collar	72 (484)	13 (99)	59
Blue Collar	57 (251)	23 (272)	34

Table 6. Per Cent of High Achievers by Track Position and Sex

	College Prep	Non-College Prep	Difference (Per Cent)
Male	57 (369)	16 (226)	41
Female	76 (382)	24 (180)	52

controlled separately, the original relationship persists at a rather high level of strength. In each case, the strength of the association is higher in the category of the control variable disposed toward high achievement. For example, the percentage difference between the two tracks in high achievement is 60 percentage points for high previous achievers, compared with 34 percentage points for low previous achievers. In both cases, of course, these are quite sizable percentage point differences. Differences of comparable magnitude occur in the other first-order tables as well.

A more rigorous test, of course, calls for the simultaneous control of the four control factors. Because of diminishing cell sizes, it is necessary to create two third-order tables. Thus, Table 7 shows the relationship with track position and academic achievement, with father's occupation, I.Q., and previous achievement controlled, while Table 8 shows the same relationship with sex substituted for I.Q. as a control variable.

Table 7. Percentage of High Achievers by Track Position, Previous Achievement, Father's Occupation and I.Q.*

	White Collar		Blue Collar	
	High 9B GPA	Low 9B	High 9B	Low 9B
High I.Q.				
College Prep	90 (218)	68 (106)	62 (53)	71 (96)
Non-College Prep	2* (6)	2* (7)	5* (13)	52 (21)
Low I.Q.				
College Prep	71 (52)	30 (76)	49 (43)	43 (49)
Non-College Prep	20 (20)	8 (62)	19 (85)	24 (122)

*Indicates actual cases since cell N's are too small to justify computation of percentages.

In each of the five comparisons in Table 7 with large enough cell sizes to be meaningful, the same relationship persists with somewhat diminished, but

still sizable strength. One comparison remaining very strong is the white collar low I.Q. - high previous achievement category where 71 per cent of the college preparatory students, compared with 20 per cent of the non-college preparatory students, achieved in the top half of their class. The other differences range from 19 to 30 percentage points.

Table 8. Percentage of High Achievers by Track Position, Previous Achievement, Father's Occupation and Sex

	White Collar		Blue Collar	
	High 9B GPA	Low 9B GPA	High 9B GPA	Low 9B GPA
Males				
College Prep	77 (126)	44 (106)	52 (51)	45 (55)
Non-College Prep	1* (14)	11 (46)	22 (60)	18 (82)
Females				
College Prep	93 (145)	67 (76)	61 (46)	78 (95)
Non-College Prep	5* (14)	8 (25)	18 (51)	39 (68)

*Indicates actual Cases

The six possible comparisons in Table 8 also show continuing positive associations between track position and academic achievement, with differences ranging from 27 to 59 percentage points. For example, 67 per cent of the white collar girls with low previous achievement who were enrolled in the upper track achieved in the top half of their class, compared with 8 per cent of comparable non-college preparatory girls. Both third-order tables clearly lend support to the track position-academic achievement hypothesis, since all the comparisons remain relatively strong and in the predicted direction.

The data in Table 9 show that, not why does track position positively relate to academic achievement at the third-order of partialling, but that it relates more strongly than does father's occupation, I.Q. previous academic

achievement, or sex. While we no doubt have failed to control for all selection or extraneous influences, the data do suggest that track position may exert a more important independent influence on academic achievement than previously supposed.

Table 9. Weighted Mean Difference in Per cent of High Achievers by Track Position and the Four Control Variables with Other Variables Held Constant

Variables Compared	Mean Difference (Per Cent)
Track Position	46
I.Q.	44 (sex not held constant)
Previous Achievement	41
Socio-Economic-Status	20
Sex	21 (I.Q. not held constant)

Additional support for this position comes from Table 10, which shows the upward movement in grades for each track between the first and last semesters of high school. At each beginning level of achievement, a higher percentage of college preparatory than non-college preparatory students moved up. This pattern is especially strong at the lower beginning levels, where the track differentials in teacher expectations were perhaps the greatest.

Table 10. Percentage of Students Whose Grades Improved by Track Position and Beginning Grades.*

	10A G.P.A.		
Track Position	2.0-2.9	1.0-1.9	0-0.9
College Preparatory	5(294)	34 (207)	61 (36)
Non-College Preparatory	3(116)	15 (181)	27 (60)

*218 Cases whose beginning grades were 3.0 or above have been excluded from this table.

Discussion

In summary, the data here lend substantial support to the hypothesis that track position exerts an independent, causal influence on the academic achievement of high school students. The relatively small and non-representative nature of the sample and the likely continued effect of uncontrolled selection factors preclude firm acceptance of the hypothesis, but the findings are in the predicted direction. Certainly, the relationship is as strong as any reported in the literature between school-related variables and academic achievement. At the very least, the hypothesis warrants further testing with a larger and more representative sample and with more controls for selection factors.

If the relationship is real and not spurious, the question of the mediating processes between track position and academic achievement needs to be raised. Why, in short, should one's curriculum placement make a difference in GPA outcomes? At the beginning, we suggested two possible reasons, both derivable from existing theory and research on the effects of evaluations and expectations on an individual's performance. On one hand, it may be as suggested earlier, that teachers of non-college preparatory students expect less and get less - than do teachers of college preparatory students because of a negative effect on students' self-evaluations or other interpersonal processes. On the other hand, it is conceivable that, since college preparatory students tend to interact mostly with other college-bound, achievement supporting pupils, they are drawn by peer influence toward higher grades, while the reverse is true of non-college preparatory students.

But several alternative mediating processes also warrant investigation.

First, college preparatory students might seek after and, in fact, attain better grades, other things being equal, because grades are more important for their futures (college entrance) than for the futures of non-college preparatory students. Whereas for college-bound students, grades are a means toward the identifiable and meaningful end of qualifying for college, grades are far less important for entry into an occupation or a vocational school for non-college bound students. It has been contended that this difference in instrumental importance of grades is magnified by the perception among many non-college bound students that it is pointless to put much effort into school work, since it will be unrelated to the later world of work anyway. This is likely to be especially true of boys, particularly Negro boys, for whom non-college bound school work is not only unrelated to later work life, but is more likely to fail to qualify them for any kind of job.[25]

Second, informal interviews in the schools studied here suggest the operation of unofficial grade ceilings for non-college preparatory students and grade floors for college-bound students. That is, by virtue of being located in a college preparatory section or course, college preparatory students apparently were unlikely to receive any grade lower than "B" or "C", while students in non-college bound sections or courses found it difficult to gain any grade higher than "C", even though their objective performance may have been equivalent to a college preparatory "B". Several teachers explicitly called attention to this practice, the stated rationale being that non-college preparatory students do not deserve the same objective grade rewards as college preparatory students since they "clearly" are less bright and perform less well. To the extent that grade ceilings do operate for non-college bound students, lower GPA's will only be further insured by the absence of available

potential rewards for achievement, with resulting deterioration of motivation and commitment.

Third, it is possible that the subject matter in college preparatory courses is inherently more interesting and motivating than that in non-college preparatory courses. This interpretation is consistent with the criticisms of so-called general, vocational or basic education leveled by Clark, Pearl and others.

Fourth, numerous investigations of ability grouping have reported that teachers of higher ability groups are likely to teach in a more interesting and effective manner than teachers of lower-ability groups. Such a difference is predictable from what we know about the effects of reciprocal interaction between teacher and class. Even when the same individual teaches both types of classes in the course of the day, as was the case for most teachers in the two schools in this study, he is likely to be "up" for college preparatory classes and "down" for non-college preparatory classes - and to elicit the same reaction from his students.[26]

Fifth, the stigma attached to the non-college bound track in many American high schools may lessen achievement by depressing the self-evaluations of non-college bound students.[27] This interpretation is rendered plausible by existing theory and research on the negative personal effects of public stigma, past research and comment on the low status associated with being outside the non-college bound track, and several studies mentioned in the first section on the relationship between self-evaluation and academic achievement. Such stigma was illustrated in one of the two schools we studied by one girls's report that she was embarrassed to carry her books face-up because "everyone knew" they were for general classes.

Summary

This paper reported a limited test of the hypothesis that track position exerts a causal influence on the academic achievement of high-school students. Even when father's occupation, I.Q., previous achievement, and sex were controlled, a rather strong relationship persisted in the predicted direction. College preparatory students were also known to more often increase their GPA's through the high school career, further suggesting a differential impact of track position on grades.

The limited size and non-representativeness of the sample and the likely persistence of other selection factors preclude definite acceptance of the hypothesis, but certainly further investigation is warranted, especially since track position - and by implication the tracking system itself - may represent an important school-related barrier to equality of educational opportunity, especially for blue-collar boys, who were found to be over-represented on the lower track.

Several possible mediating processes between track position and academic achievement were suggested. Hopefully, this investigation will stimulate further research on the basic track position - academic achievement hypothesis, as well as on the processes connecting the two variables. We also hope it will call attention to other possible consequences of track position. Most of the mediating linkages suggested here might also account for track-related differences in dropout and delinquency rates which we have found and will report in other papers.

FOOTNOTES

1. These trends and their educational implications are discussed by James S. Coleman, The Adolescent Society. New York: Free Press, 1961, Chapter I; Ronald G. Corwin, A Sociology of Education. New York: Appleton-Century-Crofts, 1965, Chapter 4; Francis S. Chase, "Social Change in Perspective," in John I. Goodlad, editor, The Changing American School (The Sixty-Fifth Yearbook of the National Society for the Study of Education, Part II), Chicago: The University of Chicago Press, 1966, pp. 271-306; Robert Perrucci, "Education, Stratification and Mobility," in Donald A. Hansen and Joel E. Gerstl, editors, On Education: Sociological Perspectives. New York: John Wiley and Sons, Inc., 1967, pp. 105-155; Harold L. Wilensky and Charles N. LeBeaux. Industrial Society and Social Welfare. New York: The Russell Sage Foundation, 1958, Chapter III; and Frank Musgrove, Youth and the Social Order. Bloomington: Indiana University Press, 1964, Chapter 4.

2. U.S. Office of Education, Digest of Educational Statistics: 1967 Edition. Washington, D.C., p. 29.

3. James B. Conant, The Comprehensive American High School. New York: McGraw-Hill, 1967; James B. Conant, The American High School Today. New York: McGraw-Hill, 1959; Edward Frankel, "The Comprensive High School," The Urban Review, Volume 2, No. 7 (June, 1968), pp. 20-24.

4. For the results of national investations of curriculum structures and the allocation of students within them, see Edith S. Greer and Richard M. Harbeck, What High School Pupils Study. Washington, D.C.: U.S. Government Printing Office, 1962; also see Conant, The American High School Today, Ibid., and The Comprehensive American High School, Ibid.; Natalie Rogoff Ramsy, "College Recruitment and High School Curricula," Sociology of Education, 38 (Summer, 1965), pp. 297-309; Carl F. Hansen, The Four-Track Curriculum in Todays High Schools. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1964.

5. See, for example, Hansen, Ibid., especially pp. vii-viii; Dorothy Westby-Gibson, Grouping Students for Improved Instruction. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966. Herbert A. Thelenz, Classroom Grouping for Teachability. New York: John Wiley and Sons, Inc., 1967; for a review of writings on the rationale and effects of ability grouping in general, see Miriam L. Goldberg, A. Harry Passow, and Joseph Justman, The Effects of Ability Grouping. New York: Teachers College Press, Columbia, 1966, Chapter 1.

6. While we know of no studies of the effects of curriculum placement on academic achievement in American high schools, a large number of studies have been conducted on the effects of ability grouping in specific classes on achievement. The findings are mixed, some showing a positive effect of grouping, others a negative effect, and still others no effect. For reviews of such studies, see Goldberg, Passow and Justman, Ibid., and Thelan, Ibid. For examples of studies of the effects of streaming in English schools, which in many ways is analogous to tracking in American high schools, see David . Hargreaves, Social Relations in a Secondary School. New York: Humanities Press,

6. (continued) 1967; Brian Jackson, Streaming: An Education System in Miniature. London: Routledgex and Kegan Paul, 1964; and J.W.B. Douglas, "Streaming by Ability," New Society, 71 (February, 1964) pp. 6-7; Glen H. Elder, "Life Opportunity and Personality: Some Consequences of Stratified Secondary Education in Great Britain," Sociology of Education 38 (Spring, 1965), pp. 173-202.

7. See, for example Arthur Pearl, "Youth in Lower Class Settings," in Muzafer Sherif and Carolyn Sherif, Editors, Problems of Youth. Chicago: Aldine Publishing Company, 1965, p. 92; Arthur Pearl, "Education, Employment, and Civil Rights for Negro Youth," in William C. Kvaraceus, John S. Gibson and Thomas J. Curtin, editors, Poverty, Education and Race Relations. Boston, Allyn and Bacon, 1967, pp. 54-56; Arthur Pearl, "Slim and None--The Poor's Two Chances," in Daniel Scheiber, editor, Profile of the School Dropout. New York: Vintage Books, 1967, pp. 313-327; Nathaniel Hickerson, Education for Alienation. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966, Chapter 3; Kenneth B. Clark, "Educational Stimulation of Racially Disadvantaged Children," in A. Harry Passow, editor, Education in Depressed Areas. New York: Teachers College Press, Columbia University, 1963, p. 152; Kenneth B. Clark, Dark Ghetto. New York: Harper and Row, 1965, p. 128; Walter E. Schafer and Kenneth Polk, "Delinquency and the Schools," in Task Force Report: Juvenile Delinquency and Youth Crime, The President's Commission on Law Enforcement and Administration of Justice, Washington, D.C.: U.S.Government Printing Office, 1967, especially pp. 240-242; Gaylord L. Thorne, Roland G. Tharp and Ralph J. Wetzel, "Education and Mental Health: The Development of New Resources," a publication of the Office of Juvenile Delinquency and Youth Development, U.S. Department of Health, Education and Welfare, Washington, D.C., 1966; Irwin Katz, "Review of Evidence Relating to Effects of Desegregation on the Intellectual Performance of Negroes," American Psychologist, XIX, No. 6 (June, 1964), p. 397.

8. See, for example, Pearl, "Education, Employment, and Civil Rights for Negro Youth," Ibid., p. 56; Clark, "Educational Stimulation of Racially Disadvantaged Children," Ibid., p. 152; Clark, Dark Ghetto, Ibid., p. 128; John I. Goodlad, "Desegregating the Integrated School," in Racial Isolation in the Public Schools: Appendices, U.S. Commission on Civil Rights, Washington, D.C., 1967, pp. 263-264; Bruno Bettleheim, "Segregation: New Style," School Review, Vol. 66 (Autumn, 1958), p. 261. For an investigation of race and tracking in the Detroit Public Schools, see Detroit, Michigan: A Study of Barriers to Equal Educational Opportunity in a Large City. Washington, D.C., National Commission on Professional Rights and Responsibilities of the National Education Association, 1967, pp. 38-46.

9. For statements of such theories, see, for example, Orville G. Brim, Jr., "Socialization Through the Life Cycle," in Orville G. Brim, Jr., and Stanton Wheeler, Socialization After Childhood. New York: John Wiley and Sons, Inc., 1966, pp. 1-49; Arnold M. Rose, editor, Human Behaviors and Social Processes: An Interactionist View. Boston: Houghton Mifflin Company, 1962; Paul F. Secord and Carl W. Backman, Social Psychology. New York: McGraw-Hill, 1964, Chapter 14; Theodore M. Newcomb, Ralph H. Turner and Philip E. Converse, Social Psychology. New York: Holt, Rinehart and Winston, 1965, pp. 142-143.

10. For studies showing a relationship between real or perceived evaluation by teachers and pupil self-concept, see Helen H. Davidson and Gerhard Lang, "Children's Perceptions of Their Teachers' Feelings Toward Them Related to Self-Perception, School Achievement and Behavior," Journal of Experimental Education, Vol. 29, Number 2 (December, 1960), pp. 107-118; Wilbur B. Brookover and Shailer Thomas, "Self-Concept of Ability and School Achievement," Sociology of Education, 37 (Spring, 1964), pp. 271-278; Wilbur B. Brrokover and David Gettleib, A Sociology of Education, second edition, New York: American Book Company, 1964, Chapter 16.

11. For studies on the relationship between self-concept and achievement, see Brookover and Thomas, Ibid.; Brookover and Gottleib, Ibid.; Ernest Dyson, "A Study of Ability Grouping and the Self-Concept," The Journal of Educational Research (Vol. 60, No. 9, May-June, 1967), pp. 403-405; R. M. Roth, "Role of Self-Concept in Achievement," Journal of Experimental Education, 27 (1959), pp. 265-281; F. B. Bodwin, The Relationship Between Self-Concept and Certain Educational Disabilities. (Unpublished Doctoral Dissertation), Michigan State University, 1957; S. Coopersmith, "A Method for Determining Types of Self Esteem," Journal of Educational Research, 59 (1959), pp. 87-94; Richard Videbeok, "Self-Conception and the Reaction of Others," Sociometry, 23 (December 1960), pp. 351-359.

12. Robert Rosenthal and Lenore Jacobson, "Teacher Expectations for the Disadvantaged," Scientific American. 218 (April, 1968), pp. 19-24; Robert Rosenthal and Lenore Jacobson, Pygmalion in the Classroom: Teacher Expectations and Pupils's Intellectual Development. New York: Holt, Rinehart and Winston, 1968; Robert Rosenthal, "Self-Fulfilling Prophecy," Psychology Today, 4 (September, 1968), pp. 46-51. For a somewhat similar study in which no relationship was found between telling teachers inaccurate IQ scores and subsequent changes in achievement, see C.C.V. Pitt, An Experimental Study of the Effects of Teachers' Knowledge or Inaccurate Knowledge of Pupil IQ's on Teachers' Attitudes and Practices and Pupils' Attitudes and Achievement. (Unpublished Doctoral Dissertation), Teachers College, Columbia University, 1956. Results similar to Rosenthal and Jacobson's were reported by C.E. Florers, Effects of an Arbitrary Accelerated Group Placement on the Tested Academic Achievement of Educationally Disadvantaged Students. (Unpublished Doctoral Dissertation), Teachers College, Columbia University, 1966. See Rosenthal and Jacobson, Pygmalion in Classroom, Ibid., for careful reviews of the above two studies. For an illustration of what happens when locker numbers are inadvertently substituted for IQ scores, see Samuel Shepard's report in Wallace Mendelson, Discrimination. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962, p. 54.

13. For discussions and studies on track-related differences in teachers' expectations, see, for example, Pearl, "Youth in Lower Class Settings," op.cit.; Clark, "Educational Stimulation of Racially Disadvantaged Children," op.cit.; Hickerson, op.cit.; Richard J. Mueller and Allen H. Frerichs, "Alienation in the Low-Ability Classroom," School and Society, 95 (April 17, 1967), pp. 254-256; Jim Olsen, "Should We Group by Ability," The Journal of Teacher Education. Volume XVIII, Number 2 (Summer, 1967), pp. 201-205; Martin Deutsch, "Aspects of Ability Grouping," Integrated Education, 2 (February-March, 1964), pp. 48-49; Martin Deutsch, "Dimensions of the Schools' Role in the Problems of Integration," in Martin Deutsch and Associates, The Disadvantaged Child. New York: Basic Books, Inc., 1967, p. 289; Elder, op.cit., pp. 184-188; Hargreaves, op.cit.,

Chapter 5; A.B.Hollingshead, Elmtown's Youth. New York: John Wiley and Sons, Inc., 1949, 1961, p. 171. Track-related differences in teachers' expectations in many ways parallel differences in expectations by social class and racial composition of the school. For examples of such arguments and studies, see, Alan B. Wilson, "Social Stratification and Academic Achievement," in Passow, op. cit., pp. 217-235; Harlem Youth Opportunities Unlimited, Inc., Youth in the Ghetto. New York: Haryou, 1964, Chapter 5; Richard Boyle, also McDill, et.al.

14. Ernest Dysen, "A Study of Ability Grouping and the Self-Concept," The Journal of Educational Research (Vol. 60, No. 9, May-June, 1967), pp. 403-405; Macine Mann, "What Does Ability Grouping Do to the Self-Concept?" Childhood Education, XXXVI (April, 1960), pp. 357-360; Goldberg, Passow and Justman, op.cit., pp. ; W.G.A. Rudd, "The Psychological Effects of Streaming by Attainment," British Journal of Educational Psychology, XXVIII (1958), pp. 47-60; Patricia Sexton, Education and Income. New York: Viking Press, 1961, p. 52; Elder, op.cit., pp. 184-188.

15. Hargreaves, op.cit., Chapters 5, 6, and 8; Elder, op.cit., pp. 184-188; Arthur Stinchombe, Rebellion in a High School. Chicago: Quadrangle Books, 1964; David Mallery, High School Students Speak Out. New York: Harper and Brothers, 1962, p. 113; Schafer and Polk, op.cit., pp. 231-232; Walter E. Schafer, "Deviance and the Public Schools An Interactional View, in Edwin J. Thomas, editors, Behavioral Science for Social Workers. New York: Free Press, 1967.

16. Schafer and Polk, op.cit.; Pearl, "Slim and None--The Poor's Two Chances," op.cit.; Mueller and Frerichs, op. cit.

17. For studies showing the peer interaction patterns of college bound and non-college youth, see Ernest Q. Campbell and Norman C. Alexander, "Structural Effects and Interpersonal Relations," American Journal of Sociology, Coleman, op.cit., Chapter VII. For an investigation of the effects of the English streaming system on peer relations, see Hargreaves, op.cit., Chapter 4.

18. For examples of studies of peer expectations on adolescent behavior, see Coleman, op.cit.; Lyle Larson (Unpublished Doctoral Dissertation) University of Oregon, 1968; Norman C. Alexander and Ernest Q. Campbell, "Peer Influence on Adolescent Educational Aspirations and Attainment," American Sociological Review, 22 (December, 1957), 704-712; Richard C. Simpson, "Parental Influence, Anticipatory Socialization, and Social Mobility," American Sociological Review, 27 (August, 1962), pp. 517-522; Musgrove, op.cit., Chapter 5; Bernard C. Rosen, Adolescence and Religion: The Jewish Teenager and American Society. Cambridge, Massachusettes: Schenkman Publishing Company, 1965.

19. Students who transferred into the schools after the fall of the sophomore year were not included in the sample. For further details of the sample and methods, see Walter E. Schafer, Student Careers in Two Public High Schools, (Unpublished Doctoral Dissertation) The University of Michigan, p. 965.

20. The cutting points for GPA are presented below (A=4.00, E=0.00):

	Industrial City	Academic Heights
Top Quartile	2.58-4.00	2.81-4.00
Second Quartile	1.89-2.57	2.24-2.80
Third Quartile	1.37-1.88	1.69-2.23
Fourth Quartile	0.00-1.36	0.00-1.68

21. At Industrial City High, there were two tracks labelled College Preparatory and General. At Academic Heights High, there were seven: University Preparatory, College Preparatory, Retailing, Stenographic, General Office, and Industrial. For this study, the first two curriculum at Academic Heights High were combined into College Preparatory, the others into Non-college Preparatory. This dichotomy corresponds to the two types of English courses offered.

22. Census occupational categories were collapsed as follows:

White Collar: Professional, technical, and kindred workers; managers, officials and proprietors; clerical and kindred workers; sales workers.

Blue Collar: Craftsmen, Foremen and kindred; operatives and kindred; private household and service workers; laborers.

Because of their small numbers, students from farm backgrounds were omitted from the analyses where father's occupation is used.

23. See Manual: California Achievement Tests. Los Angeles: California Test Bureau, 1957; Examiners' Manual: California Short-form Test of Mental Maturity. Monterey: California Test Bureau, 1963. Cutting points for the two schools are given below:

	Industrial City	Academic Heights
Top Quartile	118 and above	120 and above
Second Quartile	109-117	109-119
Third Quartile	097-108	097-108
Bottom Quartile	096 and below	096 and below

24. For a study of the determinants and processes of curriculum placement for this sample, see Walter E. Schafer and J. Michael Armer, "High School Curriculum Placement: A Study of Educational Selection," paper presented at the annual meetings of the Pacific Sociological Association, April, 1966. For a more complete study, see Aaron V. Cicoural and John I. Kitsuse, The Educational Decision-Makers. Indianapolis: The Bobbs-Merril Company, 1963.

25. See Schafer and Polk, op.cit.; Stinchcombe, op.cit.; Pearl, "Youth in Lower Class Settings," op.cit.; Buford Rhea, Measures of Child Involvement and Alienation from the School Program. Chestnut Hill, Massachusetts: Department of Sociology, Boston, Cooperative Research Project No. S-383; Buford Rhea, "Paternalism in the High School," paper presented at the annual meetings of the American Sociological Association, August, 1967.

26. Sexton, P., op.cit.,Found that inexperienced teachers were more often assigned to low track class, while a survey of teachers found an overwhelming negative attitude toward low track courses; see "Teacher Opinion Poll," NEA Journal, 57 (February, 1958), p. 53. For related discussions, see Olsen, op.cit.; Bettleheim, op.cit., p. 262; Hollinghead, op.cit., p. 171.

27. See especially Sexton, op.cit., p. 179; Mallery, op.cit., p. ; Stinchcombe, op.cit., p. 107; Olson, op.cit.; Schafer and Polk, op.cit., pp.240-242; A.S. Luchins and E.H. Luchins, "Children's Attitudes Toward Homogeneous Groupings," Pedagogical Seminary and Journal of Genetic Psychology, 72 (March, 1948), pp. 3-9; Burton Clark, Educating the Expert Society. San Francisco: Chandler Publishing Company, 196 , pp. 82-84. For a general treatment of stigma, as a social process, see Erving Goffman, Stigma: Notes of the Management of Spoiled Identity. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963.