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**ABSTRACT**

The question examined extensively in this document is why socioeconomic status and race are related to academic achievement. While most explanations look to the cognitive or cultural deficiencies of lower class and minority students, this volume considers an alternative explanation. Prevailing definitions of academic achievement undoubtedly contribute to unequal results, but probably do not entirely explain differential school achievement. The educational concepts, structures, and interactions operating in schools powerfully shape outcomes as well. While many examples could be considered, three are scrutinized here in depth, namely IQ testing, the structural arrangement of tracking, and teachers expectations and behaviors. The review of literature focuses on how these ideas and processes may depress the academic achievement of lower class or minority students and enhance the achievement of middle class or white children. Thus, this review has two purposes: to identify relationships between testing, tracking, teacher expectations, and unequal educational outcomes; and to try to specify the conditions under which those relationships occur. The evidence reviewed supports the assertion that schools substantially help to create and legitimize inequalities between children. (Author/DEP)

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TESTING, TRACKING AND TEACHERS'  
EXPECTATIONS: IMPLICATIONS FOR  
EDUCATION AND INEQUALITY

by  
Caroline Hodges Persell

1976

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TESTING, TRACKING AND TEACHERS' EXPECTATIONS:  
THEIR IMPLICATIONS FOR EDUCATION AND INEQUALITY

A Literature Review and Synthesis

©

By

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April 1976

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## INTRODUCTION

A question that has challenged educators and behavioral scientists for a long time is the question of why ethnicity and socioeconomic status (SES) are related to academic achievement. Mayske (1972) found that ethnicity accounts for 24 per cent of the variance in academic achievement. In an annotated bibliography of 80 studies from 1938-1965, Goldstein (1967) concludes that children of low-income families do not do as well in school as children of more affluent homes, by every conceivable measure.

Several explanations have been offered for these findings. Perhaps the most controversial is the genetic deficit thesis recently revitalized by Herrnstein (1973), Jensen (1969), and Shockley (1972). While there are many problems with this approach (discussed in Persell 1973 and 1976b), it will suffice for present purposes to note that racial and class difference in school achievement are much greater than differences in IQ (McCandless 1967). Further, McCandless suggests that SES may be more important for achievement than IQ is.

Various patterns of mental abilities have been identified in different ethnic groups. Lesser and Stodolsky (1967), for example, found that Jews are highest in verbal ability, Chinese highest in reasoning and space conceptualization, blacks higher in verbal ability than Chinese or Puerto



Ricans, but lower than Puerto Ricans in numerical abilities and spatial relations. Thus ethnicity is related to patterns of mental abilities. In addition, social class is related to levels of mental abilities. These findings were replicated by Marjoribanks (1972a and 1972b), with similar findings. Lesser and Stodolsky have not, however, related these abilities to differences in school achievement, so we do not know if they offer any explanation for differential achievement. Other evidence suggests that differences in mental abilities may not account for very much of the academic difference between groups. Cohen (1970) finds that IQ appears to be unrelated to school retention among different immigrant groups. He hypothesizes that variations in culture and motivation may be more important than intellectual differences.

A number of studies have tried to pinpoint culturally related attitudes that might be related to school achievement. Thus, Gross (1969) found cultural and value factors that differentiated Askenazic and Sephardic Jews in the United States; Siu (1972) found cultural differences between Chinese and Puerto Rican children that were related to achievement motives and academic performance; Schwartz (1971) found that traditional Japanese values were related to relatively high school achievement; and Friend and Neale (1972) reported differences in the ways black and white children perceived the source of their success or failure on an achievement

task, with whites judging ability and effort as more important, and blacks indicating task difficulty and luck as more notable determinants. There are many other such studies seeking to identify differences in the attitudes and values of different ethnic groups. What is most critical, however, is whether ethnicity per se is a causal determinant of different attitudes and values or whether such differences emerge from the school and society. An interesting study of Dutch, German, Irish, Italian and Polish students by Pollard (1973) indicates that children from different ethnic groups do show differences in motivational dynamics thought to underlie achievement, and motivations are related to achievement. However, ethnicity by itself does not seem to be a strong factor in determining what differentiates high from low achievers. This finding is quite consistent with that of Mayeske (1972).

In his reanalysis of the Coleman data, Mayeske (1972) found that when a variety of social conditions are made comparable statistically, the relationship between ethnicity and school achievement virtually disappears. The critical social factors which he identifies are: the social and economic well being of the family, the presence or absence of key family members, the students' and their parents' aspirations for his/her schooling, parental beliefs about how the student might benefit from education, parental activities to support these aspirations, region of residence, and the achievement and motivational levels of the students

with whom one attends school.

While Mayeske's analysis does not suggest how parental and child attitudes toward education are determined, I would suggest two types of explanations. First, attitudes toward education are undoubtedly affected by position in the stratification system. Interesting empirical evidence in support of this assertion comes from a study by Bacchus (1969), who examined the patterns of educational participation by two major ethnic groups in Guyana over a 40 year period. He found that structural changes in political and economic institutions resulting in increased opportunities for all groups, led to ethnic groups becoming increasingly similar with respect to their attitudes toward education, judged from their patterns of participation in educational institutions. The opportunity structure within education may also contribute to attitudes toward education. More specifically, in this volume I will examine testing, tracking and teachers' expectations, and suggest that they contribute substantially to educational attitudes and achievement.

While most research has looked to racial or SES differences to explain differential academic achievement, I think it is important to emphasize the problematic nature of academic achievement as well. Why do we tend to take for granted the validity and social worth of academic

achievement? I would argue that one reason academic achievement remains unquestioned is precisely because it is related to SES. Academic achievement becomes an objective device to justify and legitimate social and economic inequalities. But, skeptics would argue, how do we know that academic achievement is not a genuine means of status attainment rather than merely a legitimating device?

Several lines of evidence support the legitimating rather than facilitating view of educational achievement. For one thing, academic achievement is not related to success at work. Hoyt (1965) reviewed 46 studies analyzing college grades in relation to adult achievement in such occupations as business, teaching, engineering, medicine, scientific research, and others, and found little or no relationship between college grades and any measures of adult accomplishment. In a related vein, Price (1963) found no correlation between grade point average in medical school and performance in medical practice. Studies by Berg (1971), Cohen (1970), Collins (1974), Gintis (1971) and Holtzman (1971) find little relationship between educational achievement or attainment and performance in a variety of blue and white collar jobs. This suggests that neither academic aptitude nor academic achievement is the critical factor for occupational success that it is alleged to be.

Furthermore, academic aptitude is not especially related to educational attainment (Bowles and Gintis 1976, Cohen 1970) or achievement (McCandless 1967), when SES is held constant. If the meritocratic principle of advancement according to ability were in operation, we would expect IQ or scholastic aptitude to be strongly related to academic attainment, which in turn would be strongly related to adult status attainment. In fact, neither relationship is particularly strong. While IQ is related to academic achievement, it is not strongly related to attainment (the number of years of education completed). Academic achievement, in turn, is unrelated to occupational performance, and educational attainment is unrelated to income, when SES is constant.

These findings require us to ponder why academic achievement, which is usually measured on a standardized reading achievement test, is considered so important. Many would argue that reading achievement is important in its own right, whether or not it is related to "success" in life. While I would be inclined to agree, in a qualified way, with this position, I do not see how reading achievement can be declared more important than math, science or problem solving skills. What is especially interesting is that in a number of countries, family SES is somewhat more strongly related to reading achievement than to literature or science

achievement, while school characteristics are less related to reading achievement and more strongly related to science and literature achievement (Coleman 1975). Thus only certain types of achievement are defined as indicators of academic inferiority. Moreover, these particular measures of achievement are differentially related to school and home factors. Such evidence suggests that definitions of educational success may be related to the interests of dominant groups in society. In short, one explanation for why SES and ethnicity are related to academic achievement may rest in how academic achievement is defined and measured.

Having expressed these basic reservations about academic achievement, I am confronted with the results of considerable research on education. Many of these studies measure academic achievement as a key outcome. Do we reject these studies as totally useless? I think not, for several reasons. The knowledge of what affects "school achievement" may be of strategic value for certain groups, at least on a short-term basis. These measures are frequently used by the educational system to make critical decisions. Therefore, while I doubt their validity, it is important for immediate policy questions to know what affects academic achievement. If lower class or minority children "do well", it will be

more difficult to discriminate against them.

Moreover, some people will only be convinced that schools affect children when results are apparent on measures they value, such as achievement test scores. Thus I will present available evidence on the question of whether or not schools contribute to poorer academic achievement among minority and low SES children, not only with respect to the definitions of achievement used, but also in terms of educational processes that affect prevailing measures of achievement.

Finally, I will consider other educational outcomes as well as academic achievement. I see self-concept or self-esteem as a keystone to understanding how the school system operates (not always successfully) to persuade people to accept the inequalities of adulthood.

In analyzing education, we must notice both context and process. Part of that context consists of the prevailing ideas in education. While many educational ideas could be scrutinized, I have chosen to examine the concept of IQ testing and to analyze its validity, procedures and consequences (Chapter 1). Educational structures, or organizational forms, may also create important effects. Recent studies of school characteristics have treated features like the age of school buildings

or teacher salaries and, not surprisingly, learned they were unrelated to student achievement. Other school factors may be more powerful. In Chapter 2 I look at ability grouping and tracking, a structural feature of schools that may significantly affect educational outcomes, both cognitive and affective.

Educational ideas and structures are mediated by individual teachers, who interact with specific pupils. Therefore, I will look at a critical nexus in this process, namely the genesis, transmission and results of teacher expectations (Chapters 3 and 4). Throughout the critical review and synthesis of literature that follows, I will try to explicate a differentiated theory of academic achievement, that is a theory of what schools do to or for higher SES and ethnic majority students that facilitates their achievement, and what is done to lower SES and minority students that depresses their achievement.



TESTING

Alfred Binet developed the first usable intelligence test in France in 1905. His purpose was to identify children who might have trouble in regular schools. The first and major American users of the Binet test were Lewis Terman at Stanford, Henry Goddard at the Vineland Training School in New Jersey, and Robert Yerkes at Harvard (Kamin 1974: 5-6). Kamin's fascinating analysis of the sociopolitical views of these developers can only be briefly mentioned here. Goddard argued the existence of vast differences in mental capacities, and asked, "How can there be such a thing as social equality with this wide range of mental capacity?" (Kamin 1974: 8). Kamin reports that

The scientific documentation offered by the mental testers that degeneracy and feeble-mindedness were heritable did not occur in a vacuum. Their views were responsive to social problems of the gravest moment. Their findings were politically partisan, and they had consequences. . . . They fixed upon the succeeding generations of psychometricians, equipped with more sophisticated scientific tools, a clear predisposition toward a genetic interpretation of IQ data. That predisposition is still with us. (1974: 12)

The hereditarian orientation plus a stress on the scientific objectivity and validity of measured intelligence still predomi-

nate in psychometric circles. Therefore I think it is particularly important to assess evidence bearing on whether IQ or other standardized aptitude tests are valid, especially for lower class and minority individuals. Furthermore, we must ask how characteristics of aptitude tests and of test administration may affect the score attained. To do this, we will examine the content and validity of standardized IQ tests and then consider how features of test administration may contribute to the score obtained.

## I. CONTENT AND VALIDITY

### Test Content

The skills measured by IQ or scholastic aptitude tests are verbal and reasoning skills. They essentially require mastery of white American English and grammar. They are designed to test present facility in verbal and sometimes non-verbal skills, and from that to infer a student's capability for future learning. As well summarized in Hobson v. Hansen (1967),

the inference is expressed in the form of a test score which is a statement of how the individual student compares with the median score of the norming group. The median reflects an average ability to learn, a score above or below that

average indicating superior or inferior ability. A crucial assumption in this comparative statement, however, is that the individual is fairly comparable with the norming group in terms of environmental background and psychological make-up; to the extent the individual is not comparable, the test score may reflect those differences rather than innate differences. (Congressional Record (CR) 1967: 16750).

To demonstrate his presumed future ability to learn, a student must have had the opportunity to learn those skills relied upon for prediction (CR 1967: 16748). Most particularly, he needs to have learned white American English. The importance of this skill for one's IQ score is apparent on the individual version of the WISC. One section of that test requires the child to repeat sentences verbatim to the examiner. Thus, a test written in one language is taken by students who grow up speaking a different dialect of that language. Such children, who prove quite skilled at rendering a simultaneous translation of the sentence read by the examiner, are heavily penalized for not repeating the sentence exactly. They have demonstrated a far more difficult skill than rote memory by showing that they both understand the meaning of the statement and can state it immediately in their own dialect, but this skill is a handicap rather than an advantage in the test scoring.

Even the non-verbal components of the test may be viewed

as designed in ways that work to the relative advantage of children coming from certain kinds of homes. For instance, again in the WISC, children are given small blocks to stack and shapes to replace in a board. Many middle class homes have similar educational toys around for children to play with, while many lower class homes cannot afford them, but the children may be able to differentiate a number of keys that look very much alike, or might be able to do other tasks which demonstrate the same underlying skill.

Efforts have been made to develop test materials that are "culture free" or less "culturally loaded", but the results so far are generally disappointing, according to Findley and Bryan (1970c), and I concur with them.

#### Norming Populations

Most IQ and scholastic aptitude tests used in schools are nationally standardized on white middle class populations. The serious limitation of tests normed only on whites was perceived by the creator of the WISC:

We have eliminated the colored v. white factor by admitting at the outset that our norms cannot be used for the colored population of the United States. Though we have tested a large number of colored persons, our standardization is based

upon white subjects only. We omitted the colored population from our first standardization because we did not feel that norms derived by mixing the populations could be interpreted without special provisions and reservations (Wechsler 1944).

The greatest validity in test results is found when the tested student closely resembles the typical norming student, which is white and middle class. The average white middle class student may be assumed to have had the same opportunities to develop verbal and non-verbal skills as his peers. Under that assumption, the national median or norm could be seen as an accurate summary of what the average American student "ought to have learned in the way of verbal and non-verbal skills by a certain age and what can therefore be considered average intelligence or ability to learn". For this reason, standard aptitude tests are most precise and accurate in their measurements of innate ability when given to white middle class students (CR 1967: 16750).

"When standard aptitude tests are given to low income Negro children, or disadvantaged children, however, the tests are less precise and less accurate -- so much so that test scores become practically meaningless" (CR 1967: 16750).

Vivid documentation of the inaccuracy of standard tests is revealed in a study conducted at Lorton Youth Center, a penal institution in the District of Columbia. Students there

working for a high school equivalency diploma were tested before and after instruction. Ninety per cent of the students were school dropouts; 95 per cent were black. On the Otis Test (a verbal test used in a number of school systems), their average score was 78, substantially below normal. After one year of instruction, however, the average gain for students (as measured by the Stanford Achievement Test) was 1.3 years in reading and 1.8 in arithmetic, better than normal.

"This study reveals in hard fact that a disadvantaged Negro student with a supposedly low IQ can, given the opportunity, far surpass what might be expected of a truly sub-normal student" (CR 1967: 16751). It illustrates how a standardized IQ test can be a faulty predictor of actual achievement for disadvantaged students, and suggests that such tests may be inappropriate for inferring a student's academic ability.

While the problem of inappropriate standardization can be handled by restandardizing median scores according to performances in a particular school, in practice it is unlikely that very many school districts are able or willing to do this. Moreover, even a restandardized median does not deal

with inappropriate test questions. Another method to improve the predictive validity of a given test is to do a follow-up study of a group of students to ascertain the correlation between actual scholastic achievement and test scores. To prevent contamination, this would require that track placements not be based on the score and that teachers not be informed of the student's score. Such a validity study is even more difficult for schools to do.

#### Another Problem of Standardization

In a very original approach to educational testing, Roth (1974) suggests an additional, sociological meaning to the term standardization. Unlike the psychometric standardization of aptitude tests noted above, where the individual subject's performance is scored by reference to the mean score of the norming population, the sociological meaning refers to the assumption that "the testing process has a standard organization specified by the rules of the test" (1974: 152). The interactions that occur between testor and testee are normatively organized, i.e., there are rules that both are supposed to follow. It is this condition that

attempts to guarantee the uniform administration of tests to all subjects.

For example, testers are supposed to read the rules and statements exactly as they appear on the printed tests, with no variations. Subjects are supposed to follow the stated rules of a particular test, e.g., to give an answer for every question, even if they have to guess.

Roth takes the position that we cannot assume conformity by testers and subjects to specify testing rules, because it is difficult and unusual for actors to achieve complete conformity to any rules. He expects that rule variations are likely to occur in testing situations. Thus what happens in the testing situation may vary from occasion to occasion, "even though the outcomes, viewed as products, appear equivalent" (1974: 155). Hence, he argues, "we should not take for granted that children of equivalent age with equal IQ scores performed the test the same way " (1974: 155). In the process of test giving and taking, it is quite possible that non-rule bound situations occur. Therefore, the test record should be designed to note unexpected as well as predictable,



or "standard" events. However, as Roth so usefully points out,

A standardized intelligence test like the Peabody solves the problem of keeping records by taking for granted that the testing process will follow the rules and by arranging in advance to record only whether a child answered any item correctly or not. In other words, the Peabody, and many other tests, 'solve' the problem by denying its existence. Because the test record records only standard or anticipated events, the existence of a particular standard test record does not prove that the particular testing process was actually standardized (1974: 155).

He sees this recording procedure as sociologically naive, since it makes it impossible to ascertain in which situations the rules were followed and in which ones they were not. Hence, he argues, we can never know which test scores are valid and which are not.

Rather than taking the test record as a complete summary of what happened in the testing situation, Roth used audio and video tapes to analyze the entire session. He was able to learn much more about the instructions provided children, how children receive or respond to the instructions, how the children discover in the course of the test that the meanings of the test rules and test items are not what they first thought. He also saw how tester and child handled such unanticipated events as intruders, bells ringing, the need to go to the



bathroom, etc. Finally, certain children recognize the test as familiar, and testers emphasize children's previous experience with tests to help explain what they are supposed to do (1974: 156).

Roth concludes,

The conception of children's intelligence in terms of measurably limited capacity is not justified by our intelligence test data. Instead of being a measure of the children's intrinsic capacity, the test cut-off point on the Peabody imposes arbitrary limits on our knowledge of the children's abilities. This is true of the lowest-scoring black child and the highest-scoring white child, as well as all the children in between. This means that both the geneticists and the environmentalists are wrong in treating the IQ tests as measures of children's intellectual capacities (1974: 216).

The tests fail to give us any understanding of how a child's mind is working, what in his background is considered by him to be relevant to a question or task, and why. Hence, we learn almost nothing about either the child's mental processes or his mental capacities in any dynamic sense.

In sum, problems of test content, norming populations and standardization raise serious doubts about the validity of IQ or aptitude tests. Problems of test administration exist as well.

## II. TEST ADMINISTRATION

Problems in the administration of IQ or aptitude tests to all children but particularly to lower class or minority children may be considered in terms of student anxiety, motivation, test environment, situational constraints, or examiner effects.

### Student Anxiety

Samuda (1975) notes that acting singly or together, various factors have been recognized as heightening test anxiety. They include: a strong achievement need, fear of failure or punishment, deflated self-concept and inferiority feelings, negative experiences with school examinations and tests, hostile test-center environment, and unfamiliarity with testing procedures and test-taking skills. Because minority students frequently show such characteristics, they are more prone to anxiety than white individuals (Hawkes and Furst 1971). It is questionable therefore, whether intelligence test scores adequately describe the underlying abilities of individuals who have high anxiety drive in the testing situation (Mandler and Sarason 1952: 172; Sarason and Mandler 1952: 817).

### Motivation

Past experience in school and on tests may decrease the minority or lower class child's motivation in the test situation. Eells et al. (1951) noted that to the average lower-class child a test is just another place to be punished, to have one's weaknesses shown up, and be reminded that one is at the bottom of the heap (1951: 21).

Katz showed experimentally with a group of Southern black male students in their freshman year of college that "the best motivation and performance occurred.... when the subject was told that he had a slightly better-than-even chance of succeeding. If his chances seemed very low or very high he apparently lost interest " (Katz 1968 : 279).

Turner (1964) suggests that students' attitudes with respect to their future education and occupation affect their performance on intelligence tests rather than the reverse. Turner interprets this causal sequence as showing that students "who have the motivations and attitudes which lead to high ambition may be those who are accordingly motivated to make their best performance in the test" (cited in Boocock 1972: 101).

### Test Environment

Performance may be affected by the test center itself, its location, organization, and supervisors. Samuda notes that a CEEB Committee on Hostile Test Center Environment was constituted in 1971. Their preliminary report noted that 65 per cent of minority students surveyed indicated their performance for a familiar test center conveniently located, and that minority and nonminority students were unanimous in stating that there was no minority person performing the role of supervisor, proctor, or examiner (1975: 92).

Boocock notes that Haggard's experiments with much younger children suggest that they can often raise their scores dramatically if the test is administered in a friendly atmosphere where they are both expected and helped to do well (1972: 101).

Kinnie and Sternlof (1971) found that familiarizing both middle class white children and lower class black and white children with test examiners, with the language and materials used on test to elicit responses, and with testlike situations in which questions are asked and performance required led to improved WPPSI scores. However, contrary to the experimentors' expectations, the scores of the lower-class children did

not increase significantly more than the scores of the middle-class children. Hence, familiarity alone does not seem to explain all of the difference between the groups.

### Situational Constraints

Other observers of testing situations have remarked upon how the test situation as well as the test environment may intimidate lower class or minority children more than it does middle class white children. Labov's interview material demonstrates how "the social situation is the most powerful determinant of verbal behavior" (1973: 33). Further, he notes that an adult must enter the appropriate social relationship with a child if he wants to learn what that child can do.

Labov reports on interviews demonstrating these constraints. Even with a skilled adult male Negro interviewer who grew up in Harlem and knows the boys he is talking with very well, Labov observed monosyllabic and nonverbal behavior by an eight year old boy. Not until the interviewer was able to break down the social constraints was he able to elicit rich and complex verbal statements from the youth. Labov changed the situation by having the interviewer bring in a

bag of potato chips, making it more of a party, by bringing along the boy's best friend; by having the interviewer get down on the floor (cutting his height from 6 feet 2 inches to 3 feet, 6 inches); and by introducing taboo words and taboo topics into the conversation, showing that anything could be said into the microphone without danger.

Labov suggests transferring this demonstration of the social constraints affecting speech to other test situations. It should be apparent that no standard tests will come close to measuring verbal capacity adequately. On such tests this boy will appear as "the monosyllabic, inept, ignorant, stumbling child of our first interview" (1973: 33). This work of Labov's suggests that there is not just one isolated feature of the test situation that affects the outcome, but the entire asymmetrical power relationship of that situation. Therefore, improving one or another aspect of the test situation is not likely to change it very much. Not even a very sympathetic, supportive individual, of similar background is able to alter the situation. The differences are too large. The result is repeated instances of test performances that are deemed inadequate and deficient. Other studies, however, have found that differences in examiner behavior are related to test performance.

### Examiner Effects

Thomas et al. (1973) studied 116 school children from 72 families of Puerto Rican working class origin residing in New York City. The children ranged between the ages of 6 to 15. The Wechsler Intelligence Scale for Children was administered to all of the children by one of two examiners. Both examiners were female, of Puerto Rican origin, fluent in Spanish and English, and had comparable experience in administering and scoring the WISC (1973). The children were tested in the examiners' homes, both located in upper middle-class high-rise apartment buildings adjacent to the lower Harlem area. However, while Examiner B had never met any of the children before testing them, Examiner A had known the children and their families for many years as a result of her participation in other phases of the ongoing research project. Curiously, the mean IQ's reported by Examiner A were all at least 10 points higher than those reported by B. The children tested by the two examiners did not differ significantly with respect to either age or sex.

The two examiners were interviewed in order to obtain a retrospective description of how each had conducted the testing session.



Careful questioning revealed that, although both examiners had operated within the boundaries of the rules of standardized test procedure, they appeared to differ markedly with respect to the manner in which they made initial contact with the child and sustained his interest in the situation. Despite the fact that A already was acquainted with the children, she reported that she spent considerable time with each child before beginning formal testing. She greeted the child in a lively and friendly manner, engaging him in conversation at once. She encouraged the child to ask questions about herself, the apartment, and features of the test itself. If the child did not bring up any questions, A made sure to spend time showing him around the apartment and describing the contents. She tried to create the atmosphere of a game, and made every effort to draw the child into the test situation as a joint pleasant activity. In the course of the actual testing, Examiner A reported that she encouraged the child to try again if his initial response was an "I don't know." Moreover, she tried to be sensitive to the child's needs, and she organized breaks and rest periods if she felt the child was tired.

In contrast, Examiner B described herself as being very reserved and quiet. She approached the children seriously. Although she emphasized that she replied willingly to spontaneous questions, she reported that she did so in an impersonal manner and did not pursue conversations unrelated to the formal testing session. She tended to follow a set routine that varied little from child to child. Examiner B reported that she tended to remain silent if the child hesitated or responded, "I don't know." She then went on to the next item without encouraging the child to try,

stating that she felt that, encouragement at that time would not bring them closer to the answer. It would be almost an act of cruelty... to encourage would continue the child's embarrassment (Thomas et al. 1973: 367-8).

Thus while both examiners were similar with respect to some very important characteristics -- sex, ethnic origin, and language facility -- nevertheless some very significant differences existed between them in the way they administered the test, even within the established boundaries of test administration procedures. Nineteen children were tested by each examiner, so it was possible to ascertain whether the same children behaved differently with the different examiners. This was done by examining the WISC protocols themselves, and comparing responses to the verbal sub-test items. Children tested by Examiner A tended to give fewer "I don't know" responses than those tested by Examiner B, and the answers of the former group were significantly longer than those in the latter group.

"For each sub-test of the verbal scale, more children made longer responses when the items were presented by Examiner A" (1973: 369). For the verbal scale as a whole, the children made a significantly greater proportion of "I don't know" responses to Examiner B than to Examiner A.

They note further:

These differences in examiner-child interaction appear to have contributed significantly to the differences in the level of measured intelligence obtained by the two examiners. Greater verbalization increases the opportunity of saying something right. Also, repeated efforts after an initial expression of ignorance also increases the possibility of success. This tendency is most dramatically illustrated by the fact that the greatest difference in performance level of the children were on the comprehension and similarities sub-scales. Thus, the examiner's ability to initiate and sustain interest in the cognitive tasks, to encourage working in the face of initial refusal, and to stimulate verbalization would appear to maximize the level of cognitive performance.

Our findings are reminiscent of those reported by Zigler and Butterfield in a study of changes in the Stanford-Binet test performance of culturally disadvantaged children of nursery school age. These workers contrasted the IQ scores obtained when 'optimizing' rather than 'standardized' testing procedures were employed. The 'optimizing' procedure consisted in altering the order of items presented so as to insure some degree of initial success and to maximize the number of successes early in the testing procedure. Non-responsiveness was countered by gentle encouragement, which was continued until it was felt that maximal responsiveness had been obtained. In the 'standardized' situation the examiner attempted to be neutral though friendly to the children (1973: 372).

Most "disadvantaged" children do not have IQ tests administered under the 'optimizing' conditions described above. To begin with, students rarely get a testor of their own ethnic origin,

or one who is fluent in their language. Further, they seldom have IQ tests administered to them individually. Instead they are given a group administration. All of these factors associated with the examiner and the testing situation undoubtedly affect their "performance."

Thomas and others remark that this examiner effect on IQ performance cannot be assumed to operate similarly for all groups of children. In their studies of the cognitive behavior of middle-class children "the mean IQ scores obtained by three different examiners in the testing of 116 children were identical, despite the fact that the examiners' testing styles and ways of making contact varied considerably. This finding is only suggestive, inasmuch as the retesting procedure used with the Puerto Rican children was not done" (1973: 373). There may be something unique about the sense of unease felt by lower class children in the testing situation that may affect their performance.

There is an additional very interesting aspect to the study by Thomas and others. They correlated the WISC test scores from the two examiners with the reading achievement scores of the children on a standardized test, and found that the IQ scores of Examiner B correlate better with reading achievement than do the IQ's obtained by Examiner A. They suggest that this may

occur because group reading tests are not administered under conditions designed to maximize performance. I agree with them as far as they go, but I would also suggest that this study provides a clue that a (perhaps substantial) portion of what is done in schools in the name of evaluation of pupil progress and performance may systematically penalize certain economic and ethnic groups.

They conclude, "Our study indicates that the performance level of disadvantaged children on standardized tests of intellectual functioning can be raised by employing examination procedures that are congruent with their spontaneous cognitive styles" (1973: 373).

Procedural issues in test administration may affect the test performance of lower class and minority students more than that of white middle class pupils. Such procedural problems, in conjunction with problems of test content and standardization, suggest grave limitations in IQ or aptitude testing. These limitations might be acceptable if testing were insignificant in its consequences. Therefore we must consider how tests are used.

### III. THE CONSEQUENCES OF TESTING

Aptitude tests of various kinds are used in at least three quarters of the public school system in the United States and in a large proportion of private schools as well (Samuda 1975). In a study of elementary school testing programs in New York, Connecticut, and New Jersey, Goslin et al. (1965) discovered only one school out of 700 that did not use at least one standardized test. Goslin (1965) cites similar findings for secondary schools on a nationwide basis. A number of consequences seem to flow from this widespread use of tests.

Before a testing program can have serious consequences, it needs to be accepted by the school system. I have heard of at least one school (according to a teacher in it) that rejected a testing program which yielded unfavorable results. The school officials changed to a test that made them and their students look better.

This is a very different situation from that of the Washington D. C. school system prior to 1967. There, the school accepted test results, and made very serious educational decisions on the basis of those tests. In the Hansen v. Hobson

case, the court ruled that school personnel were not able to ascertain "with reasonable accuracy the maximum potential of each student." This ruling was based upon more than the technical deficiencies of aptitude testing. The court was also concerned with the consequences of misjudgments for the education of disadvantaged children. Because of the false images test scores can create, teachers and principals may underestimate the capabilities of such children, and thus undereducate them.

As evidence for its conclusion about underestimation, the court noted how in one year, 60 per cent of the teachers' and principals' evaluations of children were overruled by an outside panel of testing experts. The court expressed concern for the thousands of youngsters who were not reevaluated so carefully, and judged that a "child's future is entitled to judgments giving better odds than one out of three" (CR 1967: 16752).

Related to this consequence of underestimation is the problem of mislabeling minority children as mentally retarded (MR), or as educable mentally retarded (EMR). Dunn (1968)

reports that minorities comprise more than 50 per cent of those designated mentally retarded in the nation. In California, blacks represent 9.1 per cent of the student population, yet they account for 27.5 per cent of the educable mentally retarded but only 2.5 per cent of the mentally gifted (Figures issued by the Bureau of Intergroup Relations of the State Department of Education for the State of California, reported in Samuda 1975: 113). Two major studies dramatized the effects of standardized tests on the mislabeling of minority children. Mercer (1971) found that the public schools in southern California were sending more children to MR classes than were any of the 241 other organizations Mercer and her colleagues contacted (such as law enforcement agencies, private organizations for the MR, medical facilities, religious organizations, and public welfare centers). The reason for this discrepancy seemed to be the placing of undue weight upon IQ test scores for placement, a nearly total absence of medical diagnosis, a higher than usual cutoff score (79 compared to the recommended score of 69 or below), and a failure to interpret IQ scores in the light of sociocultural factors. Mercer's study found more than four times as many Mexican-Americans and



twice as many blacks enrolled in classes for the mentally retarded than their proportions would justify. However, Mercer found that when MR was defined by adaptive behavior as well as IQ test score, and when those scores were interpreted in light of sociocultural considerations, then the racial imbalance in classes for the MR vanished. As a result, she argued, about 75 per cent of the children enrolled in MR classes were mislabeled, incorrectly placed, and suffered from stigmatization and lowered self-esteem and diminished learning opportunities (reported in Samuda 1975: 114).

The second study was the court case of Larry P. et al. v. Wilson Riles et al. (1972). Six black San Francisco elementary school-children claimed that they were placed in EMR classes on the basis of IQ tests alone, by the San Francisco School District. When the children were retested by certified black psychologists, who took account of the cultural and experiential backgrounds of the students, all scored above the cutoff point of 75. The Court ruled that placement in classes for the EMR could not be based primarily upon IQ tests as they are currently administered, if the consequence of using such criteria is racial imbalance in the composition of such classes (Samuda 1975).

In addition to the underestimation and mislabeling of minority children, a second major consequence of standardized ability testing is undereducation. By having curriculum differentiated according to presumed ability, schools determine the scope of subject matter and pace of learning. As Judge Skelly Wright noted, "When a misjudgment does occur, the result will be institutionally to shunt the student into a curriculum (paced) to his presumed abilities, where he is likely to progress only at the speed at which he is taught. A sixth grade student nourished on third grade instruction is apt to finish the year with a third grade education; yet the haunting question; could he have done better?" (CR 1967: 16753).

While Chapter 3 of this volume considers in detail the effect of test scores upon teachers' expectations, it is important to note here the likely consequence for undereducation inherent in a teacher's assessment of a child's potential based upon test scores. In *Hobson v. Hansen*, the "defendant's own testing expert, Dr. Roger Lennon, acknowledged this to be the common experience..... Although test publishers and school administrators may exhort against taking test scores at face value, the magic of numbers is strong" (1967: 16752).

Moreover, the school system can heighten the importance of tests when those scores are the basis for major administrative decisions within the system. By requiring a number of tests, Judge Wright stated, the school system is in effect placing its official imprimatur on these tests. Moreover, when track placement is based upon those scores, "the worth of a test score rises high" (1967: 16752). Thus, the weight an institution places upon test scores may increase the importance of those tests for the teachers' expectations.

If contact with peers of different backgrounds and skills contributes to a child's education, and if the use of test scores isolates children from such contact, then testing may contribute in yet another way to the undereducation of children so segregated.

Finally, the socioeconomic and ethnic segregation that occurred in Washington D. C. schools was accompanied by the assignment of more highly paid and more experienced teachers to predominately white schools. While national studies (e.g. Coleman et al 1966) have found teachers' salaries are unrelated to academic achievement, it is still possible that salaries could

be related within a particular school district.

Several additional consequences of underestimation and undereducation can be noted. The testing and tracking practices of Washington D. C. were accompanied by the persistence of low test scores and indeed even declines in academic achievement. Judge Wright noted that in grade 3, 67.2 per cent of students in District schools were reading at or above grade level, but by grade 8 fewer than half (45.5 per cent) of the students were at that level. If ability alone were the determining factor, one would not expect such a dramatic decline in achievement. Instead, educational factors must play a critical role.

Finally, students experiencing these consequences appear to lose self-esteem, become alienated, and may be more likely to drop out, although Judge Wright concluded that the evidence on this last charge was confused. In 1963, 37 per cent of the 1960 tenth grade did not graduate, making Washington the third worst of 19 large city school systems in the country, better only than New York and Detroit. While the proportional trend in Washington was gradually improving, the number of dropouts was increasing. Most of the dropouts were from the lowest two

tracks. The mixed findings left the Court unable to establish a clear link between tracking and dropouts (CR 16753).

To summarize, by virtue of their content and their administrative procedures, standardized IQ or aptitude tests are extremely inappropriate means for ascertaining the "ability" of lower class and minority children. The prevalent use of test scores for educational decisions has resulted in the misclassification and mislabeling of thousands of minority students, with the apparent additional consequences of undereducation, lower teacher expectations, diminished self-esteem and increased rates of dropping out. These latter assertions require more rigorous supporting evidence. The next three chapters review precisely this type of evidence.

TRACKING

The process of homogeneous ability grouping, which is placing children together in a class because of similar aptitude test scores, has a long history in the United States. The first recorded example was the Harris plan in St. Louis in 1867. In the 1920's and 1930's, the practice of ability grouping greatly increased. Some suggest that homogeneous grouping grew in response to the expansion of secondary education (e.g., Trow 1966 and Bowles and Gintis 1976). From 1935 to 1950 ability grouping fell into disuse, and then in the late 1950's it was revived, apparently in response to the Russian launching of Sputnik and American concern with identifying and educating the "gifted." That period was also marked by the increasing migration of rural southern blacks to northern cities and by an influx of Puerto Rican and Mexican-American migrants. While hundreds of research studies have been done on ability grouping since the 1920's (for a review of these, see Goldberg et al. 1966), we will generally be concerned with the more recent research.

Early proponents of ability grouping stressed flexible subject area assignments. Over time, however, grouping has be-

come increasingly rigid. When homogeneous ability grouping occurs throughout a school, it is termed tracking in the United States and streaming in England. The prevalence of tracking systems, especially in large metropolitan school systems, seems to have increased in recent years.

In a survey of how ability grouping is done, Findley and Bryan (1970a) note that 76 percent of elementary and secondary school administrators report some degree of ability grouping. In 1958 the National Education Association (NEA) survey found that grouping was practiced in 78 percent of elementary schools and 91 percent of high schools. This figure may somewhat underestimate the extent of grouping, since Heynes (1966) found that administrators reported less ability grouping than did teachers or students (cited in Rosenbaum 1974).

This chapter will address three questions about ability grouping and tracking. What is the basis for allocating students to different sections? Do different processes occur within different groups? What are the consequences of homogeneous ability grouping or tracking?

## I. BASIS FOR ALLOCATION

Three major criteria for allocating students to homo-

geneous ability groups have been noted in the vast literature: 1) standardized test scores, 2) teacher grades, recommendations or opinions about pupils, and 3) pupil race and socio-economic class (SES).

### Standardized Test Scores

The NEA survey of 1962 found that achievement tests and IQ tests were the primary basis for grouping in secondary schools. Findley and Bryan (1970a) reported that 82 percent of the districts reporting ability grouping used tests in whole or in part, although only 13 percent indicated they used test scores alone. In a reanalysis of the Coleman (1966) data, Heynes learned that tested verbal ability explains 17.6 percent of the variance in curriculum placement in secondary schools (which is 65 percent of the total variance explained). Thus, she concluded, curriculum placement is primarily dependent upon test scores.

In Washington D.C., the track system was based completely on "ability" as judged by standardized tests (Findley and Bryan 1970b: 51). However, track placement was "directly related" to SES, in the eyes of Court of Appeals Judge Skelly Wright in the Hobson vs. Hansen (1967) case. The Hobson case was the first to raise the issue of ethnic and social strati-



fication that so often accompanies tracking. This consequence will be considered below.

Carter (1970) found that tracking was widely practiced in southwestern schools in the United States, where there are large numbers of Mexican-American children. Track placement rested upon the appraisal of intellectual capacity and academic achievement (through tests or other means).

In short, standardized tests of academic ability with all their limitations discussed in the previous chapter, are a major basis for homogeneous ability grouping or tracking.

#### Teacher Recommendations

Teacher recommendations are used by some school districts instead of, or in addition to, standardized test scores (Findley and Bryan 1970a). The National Education Association survey (1962) found that elementary school group placement was based primarily upon teachers' judgments. Rist (1970) reports that the teacher's judgment was the basis for assigning children into learning groups on the eighth day of school. Mackler (1969) suggests that teacher judgments may be based on other than purely academic achievement grounds. In his observations of Harlem schools, he noticed that the price for success (high group placement) is behaving in a way that the school finds

acceptable. Thus behavioral elements may play a considerable role in grouping, when assignment is mediated by teacher recommendations.

In a study of three junior high schools in the midwest, Kariger (1962) found that track placement was based upon teacher grades, study habits, citizenship, industry, and social and emotional maturity. He found that this practice resulted in less ethnic and social class diversity within the various tracks than would have occurred if test scores alone had been used as the basis for track assignment. Subsequent changes in track assignment were also patterned. Among upper class children who were shifted, 93 percent were moved upward; among middle class children, 68 percent were moved upward; and among lower class children, 61 percent were moved upward. The original track placements were highly related to social class, and the ensuing "corrections" pushed further toward homogeneous groupings with respect to social class.

#### Pupil Race and Socio-Economic Status

While few can disagree that race and class are associated with track placement (more evidence on this subject is presented below), many would deny that race or class is a basis for allocation to track. Mehl (1965), for example, found that

the pupils in the top two homogeneous groups and those in the bottom two groups were segregated along social class lines. Moreover, he found only a low correlation between SES and IQ or achievement. Unfortunately, he did not analyze class and academic ability simultaneously in relation to track placement. Other research studies, however, have done this. Both Kariger and Brookover et al. found that SES was related to track placement even when student achievement was held constant (data reported in Jones 1972: 347).

Heynes (1974) did an analysis of covariance and found that SES explained only 3.2 percent of the total variance in curriculum placement in schools, although the joint effects of socioeconomic status and verbal ability accounted for nearly 25 percent of the total variance explained. Thus, while SES had only a small independent effect on track placement when verbal ability was held constant, SES and verbal ability interacted with each other in a way that also affected track placement.

Schafer and Olexa (1971) observed that placement in the non-college track was highly related to both race and class. Even when prior school achievement and IQ were controlled, 40 percent of blue collar and 60 percent of blacks with high IQ

and high achievement were placed in the non-college preparatory curriculum, while 60 percent of the white middle class students with low IQ and achievement were put in the academic track (cited in Trimberger 1973: 41). Skeptics would reply that student choice might account for this discrepancy, with fewer blue collar or black students wanting the college preparatory curriculum. As Jencks et al. (1972) report, by the time a student has entered the eighth grade his educational and occupational aspirations are fairly fixed. Without knowing more about how track assignments were made, we cannot conclude from the Schafer and Olexa study that race and class were the criteria used to place students in the non-college curriculum.

Work by Baker (1974), however, does show that race was very salient for placement into the lower tracks of a specialized vocational high school in New York City. By spending several years at the school, getting to know teachers, sitting in on entrance interviews, and observing decision-making sessions, Baker saw how labor market criteria relating to race were brought into educational decisions regarding track placement. While we cannot know its generalizability, this instance indicates that allocation decisions were made by the school, not by students, and that one criteria used was race.

The relationship between social class and track placement has been observed in England. Douglas (1964) found 11 percent more middle class children in the upper streams and 26 percent fewer in the lower streams than would be expected on the basis of measured ability. Judging from his own observations of schools, he noted that cleanliness, good clothes and shoes were even more important than a child's SES. In that situation, the appearance of gentility was more important than the underlying social and economic position of the family. Husen found that lower class students with equal tested ability in Sweden were not in the able student classes as often as higher class students (cited in Goldberg et al. 1966: 166).

In an analysis of the British educational system, Elder (1965) observed that the lower the measured ability of the child, the more educational placement was determined by the family's SES. This interpretation is clearly consistent with Kariger's data about placement and changes in track position.

In brief, standardized test scores, teachers' recommendations and pupil SES and race are related to ability group placement, sometimes directly and sometimes indirectly. Tests and teacher recommendations themselves appear to be related to

race and class. How these criteria are selected, and by whom, are questions worthy of further investigation.

## II. PROCESSES ASSOCIATED WITH ABILITY GROUPING

At least three different processes have been observed to vary according to ability group or track placement: the instruction offered, the student-teacher interactions which occur, and the extent of "cooling out" mechanisms.

### Type of Instruction

While many studies of ability grouping or tracking unfortunately fail to control for the type and amount of instruction offered, a number of instructional differences have been observed. Heathers (1967) found that teachers indicated they stressed basic skills and facts with slow learners and used drill a great deal with such students, while they emphasized conceptual learning with high ability groups, and encouraged such students to conduct independent projects (cited in Heathers 1969: 566). In a like vein, Squire's (1966) national study of the teaching of English in American high schools revealed that teachers tended to employ dull, unimaginative instructional approaches with so-called slow-learning groups (cited in Heathers 1969: 566).

In a study of a British comprehensive school, Keddie realized that students in different streams received different educational content, within a given topic. She notes one economics teacher who reported that with the A stream children, "I'd be much more concerned with how the different types of taxation work," whereas with the C stream pupils the teacher would teach "how to fill in tax forms" (1971: 148). Keddie notes that this differential treatment of the economy means that certain categories of analysis are made available to some students but withheld from others (1971: 149). Similar differences in curricular offerings in middle class and working class schools were noted by Leacock (1969).

Two useful curricular variables were suggested by Sorenson (1970). Tracking systems may vary with respect to the amount of choice they allow students among curriculums and regarding attendance (he calls this the degree of selectivity) and as to the range of alternatives they provide. Anselone has discovered that "disadvantaged" students tracked into a special university program had a more limited choice of majors, were allowed fewer cuts, and could choose fewer electives. These findings reveal that a tracking program highly related to social class shows different structural arrangements in different

tracks.

While we need to know much more than we presently do about variations in the content and structure of different curricula, the available evidence suggests differential treatment, with lower groups receiving less material and less desirable types of instruction.

#### Teacher-Student Interactions

Most of the research on ability grouping has not inspected the nature or frequency of teacher-pupil interactions within various groups. Freiberg (1970) was one researcher who did, however. He found that the higher group received more empathy, praise, and use of their ideas, as well as less direction and criticisms than the lower groups. As Rosenshine (1970) has indicated, we do not yet know how behaviors such as these are related to student achievement, but it seems reasonable to expect them to be related to self-esteem at least. Unfortunately, I located no research on such consequences.

Cornbleth et al. (1974) have provided some information about possible conditions under which differential teacher behavior appears. They found that elementary teachers gave low and high groups equal response opportunities, while secondary teachers gave lows fewer response opportunities. This is con-



sistent with the work of Alpert (1974, 1975) who found that reading ability group placement in first grade was not related to a number of teaching behaviors. Her work was done in five Roman Catholic middle class white schools in New York City. Class or racial homogeneity may be related to treating different ability groups in similar ways.

#### Access to Resources

In addition to variations in the curriculum and teaching received by students in different ability groups, several studies suggest the differential access to educational resources associated with track placement. Hargreaves (1967) found that poorer teachers were regularly assigned to teach lower streams. Apparently both the teachers and the students knew this.

Heynes (1974) found that curriculum placement was related to differential access to school resources, specifically the number of meetings with school counselors and the amount of encouragement students felt they received from counselors. Armor (1969) and Weinberg and Skager (1966) also report greater use of career guidance services by middle and upper SES students. Heynes suggests that other school resources, such as science equipment or library facilities may also be differentially distributed by curriculum track, although she did not measure that

possibility. If this is the case, studies of the effect of schooling which treat schools as units of analysis may completely overlook the possibility of internal differentiation in the availability and use of resources.

### "Cooling Out"

A feature associated with the two-year community college was noted by Clark (1969) and reaffirmed by Karabel (1972). That was the process of "cooling out" which they noticed occurring within the junior college. Clark noticed three types of students in the community college: the terminal student, the transfer student, and the "latent terminal" student who aspires to transfer but probably cannot, in the eyes of college officials. As Karabel notes, "the crux of the dilemma is how to gently convince the latent terminal student that a transfer program is inappropriate for him without seeming to deny him the equal educational opportunity that Americans value so highly" (Karabel 1972: 537). The mechanisms outlined by Clark include: 1) pre-entrance testing, often leading to required enrollment in remedial classes, 2) a counseling interview before registration each semester, when a student is told his chances for success in particular courses, 3) a special required course called "Orientation to College" designed to help students eval-

uate their own interests, abilities, and aptitudes in view of the required training for their desired occupation, 4) grades in courses, and 5) probation (Clark 1960: 559-76). Probation serves to "kill off the lingering hopes of the most stubborn latent terminal students," according to Clark. "Cooling out" is furthered by efforts to provide alternative forms of achievement; a series of steps designed to gradually disengage the student; providing denial on the basis of test scores, grades and the student's cumulative record, thus placing the spotlight on the student's failure rather than on the structural features and the presence of "agents of consolation" in the form of counselors who are experienced at helping students adjust to the idea of lower status occupations (Clark 1960). Clark stresses that this "cooling out" process must be concealed. Thus the rhetoric of the junior college stresses the transfer and terminal programs rather than the role it plays in transforming transfer aspirants into terminal students.

To my knowledge "cooling out" processes have not been analyzed in secondary schools or in four year colleges, although similar practices probably occur there as well.

### III. THE CONSEQUENCES OF ABILITY GROUPING OR TRACKING

The extent to which ability grouping is related to segregation by class and SES has important implications for academic achievement, self concept, attitudes, subcultures and teacher expectations.

#### SES and Ethnic Segregation

A number of American and international studies have shown that children from the middle and upper classes are found mainly in high-ability groups, while children from the lower classes are found disproportionately in low-ability groups. This finding appears in reports by Douglas (1964), Husen and Svensson (1960), Kariger (1952), Mehl (1965), Sarthory (1968), and Willig (1963). Reviewing a number of studies, Eash (1961) noted that at an early age, ability grouping seems to favor unduly the placement of higher SES children into higher ability groups.

Racial as well as SES separation has been associated with grouping, as noted by Esposito (1973), Hobson vs. Hansen (1967), Mayeske (1970), and Racial and Social Isolation in the Schools (1969). Several studies, including McPartland (1969), Matzen (1965), and Wilson (1967) have suggested that such class and racial segregation may reduce the educational stimulation

of low-achieving students. These research studies lend substance to Heathers' (1969) statement that ability grouping may be "an agency for maintaining and enhancing caste and class stratification in a society." Class stratification might also be maintained via the academic outcomes of tracking.

#### Academic Outcomes

An assessment of the effects of ability grouping on academic achievement is based on an examination of single studies and review articles. Articles reviewing a total of more than 217 studies have been written by Miller and Otto (1930), Billett (1932), Goodlad (1960), Daniels (1961), Eash (1961), Ekstrom (1961), Goldberg et al. (1966), Yates (1966), the National Educational Association (1968), and Findley and Bryan (1970b). On the basis of these contributions to the literature, it is possible to conclude, as Findley and Bryan (1970b) did, that separation into ability groups has no clear-cut positive or negative effect on the average scholastic achievement of the students affected. There is a slight trend toward improving the achievement of "high ability" groups, but that is offset by substantial losses by the average and low groups.

A number of studies, however, indicate that gains for the "higher ability" group only appear when the content, mater-

ials, and teaching methods are enriched for them, and when they are "pushed" (Eash 1961, Ekstrom 1961, Goodlad 1960, National Educational Association 1968). Thus it is not ability grouping per se that explains the gains of the "higher ability" groups, but the differentiated teaching and curriculum they receive. This conclusion is consistent with the finding by Douglas that "higher ability" students in the A stream improved, while students of comparable ability in the B stream deteriorated. Similarly, "lower ability" students in the A stream gained while similar pupils in a lower stream lost. In the Douglas study we cannot tell whether there were different curricula involved or differential teacher expectations.

The direct result of the differential gains and losses in academic achievement is increased academic differentiation of pupils in schools with ability grouping. Daniels (1961), Borg (1966), and Heathers (1967, cited in Heathers 1969) found that ability grouping in schools was related to an increase in the dispersion of students' scores on standardized tests of academic achievement. More recently, Rosenbaum (1974) has argued that the variance in IQ scores over time is a better indicator of the effect of tracking on the students in a school than is a change in mean scores. Schafer, Olexa and Polk (1973)

report a widening gap in academic performance (measured by student grades) from ninth grade to twelfth grade between the college and non-college tracks.

This increased differentiation could be one factor helping to support the relative stability of ability group or track placement. Daniels (1961) found that children were very likely to remain in their assigned ability levels. In his study, teachers thought that about 17 percent of the students were shifted from one level to another each year, while in fact only about 2 percent were shifted. Schafer, Olexa and Polk (1973) learned that only about 7 percent of the students moved from the college track to the non-college track and vice versa. Similarly, Rosenbaum (1975) reports that virtually all of the upper college track students stayed there, as did all of the non-college students. Many lower college track students change to non-college tracks. He sees stability as the chief characteristic of the system, with the main openness being for downward change. This is very consistent with the Washington D.C. system where track placement was permanent for 90 percent of the students (CR 1967: 16760).

A final implication of this stable system which produces academic differentiation is the effect it has upon the

pursuit of further education. Ability group or track assignment tends to become stabilized, and curriculum tracking is an important determinant of further education. In a national sample of high school graduates, Jaffe and Adams (1970) found that track in high school (and not ability) was the variable most importantly related to whether a student went to college and whether to a two or four year college. In addition to academic outcomes such as these, it is possible that ability grouping affects one's sense of self.

#### Self-concept and Attitudes

Findley and Bryan (1970b) note that research on ability grouping in the 1920's and 1930's did not study the affective domain. Those studies were concerned only with the consequences of grouping for achievement. Studies in the early 1960's were concerned with the effects of ability grouping on the "gifted." Today, Findley and Bryan remind us, low and high ability groupings have socioeconomic and ethnic overtones.

In general, the effects of ability grouping on self concept are mixed. Four studies have discovered that ability grouping is positively related to self-concept for "low ability" students, but negatively related for "high ability" groups (Cowles 1963, Drews 1963, Olavarri 1967, and Wilcox 1963). At



least one (Olavarri 1967) found that special adjustments were made by teachers of the "low ability" classes to provide increased chances for student success. The "high ability" students only slightly favored the grouped settings.

A few studies find that ability grouping is not related to different self-concepts (Bacher 1964, Dyson 1965, Fick 1962, Goldberg et al. 1966, and Lovell 1960). At least two of these studies (Bacher and Goldberg et al.) were in predominantly white middle class schools, suggesting that racial and socioeconomic homogeneity might sometimes reduce the relation between grouping and self-concept.

The majority of studies, however, report negative consequences for the self-concept of "average" and "low ability" students (Adkison 1964, Barker Lunn 1970, Borg 1966, Byers 1961, Kelly 1975, Levenson 1972, Luchins and Luchins 1948, Mann 1960, Ogletree 1969). Reviewing numerous other studies in addition to these, Findley and Bryan (1970b) conclude that ability grouping builds (inflates?) the egos of the "high ability" groups and reduces the self esteem of "average" and "low ability" groups. They think that ability grouping does not "promote desirable attitudes and healthy self-concepts" (1970b: 24). Most of the studies mentioned above did not con-

sider ethnicity or SES, so we do not know whether ethnic minorities and low SES students are affected in similar ways by ability grouping. This question needs further investigation.

Qualitative data vividly depict the effect of ability sorting on the self-concept of the children involved. Reporting on the British system prior to its reform, Elder (1965) quotes one headmaster as saying, "I have not found any pupil who failed the eleven plus exam who has overcome his sense of inferiority at this failure, irrespective of his performance even at university level" (1965: 184).

Mann (1960) interviewed 102 fifth graders in one American school with ability grouping. She asked them which fifth grade section they were in, and why they were in that section. She found that the highest and lowest groups were most aware of their level, and replied that they were in the "best" or "high" or the "low" group, rather than by giving their teacher's name. The reasons they gave? "I'm smart," "We're smarter," "I'm too dumb," "We don't know very much," "We are lazy." She concluded that ability grouping was cruel to all but the top students.

Thomas Cottle (1974) gives a very telling account of the effects of grouping on one eleven year old black boy:

Ollie Taylor is 11 years old. He lives with his family in Boston. They are very poor even though his father works almost 50 hours a week. Ollie and his five brothers and sisters have all attended their neighborhood school, and all of them have ended up in the so-called bottom tracks. For this boy failure is an inevitability. Almost every action he takes ends in convincing him that he is, in his own words, worthless. And from speaking with him for three years, I know that feeling can be traced directly to his school, not to his family from whom he receives encouragement, love, and respect. His parents and grandparents tell me that the inner strength given him by God, and sustained by their enduring care for him, is going to be shattered by years of schooling and a tracking system which every day pounds into his head the notion that he is dumb, talentless, hopeless. And the assessments, he reminds me every time I see him, are based on scientific tests scored by computers. They cannot, in other words, be argued with.

"I won't buy it," I told him one day after school, walking home from the ice cream store. "What about me, Ollie? Doesn't my assessment matter to you?" I asked immodestly. "I know a little something about children too."

"You know what, Tom?" he said, looking down at his ice cream as though it suddenly had lost its flavor, "nobody, not even you or my dad can fix things now. The only thing that matters in my life is school and there they think I'm dumb and always will be. I'm starting to think they're right. Hell, I know they put all the Black kids together in one group if they can, but that doesn't make any difference either. I'm still dumb. Even if I look around and know that I'm the smartest in my group, all that means is that I'm the smartest of the dumbest, so I haven't gotten anywhere at all, have I? I'm right where I always was. Every word those teachers tell me, even the ones I like most, I can hear in their voice that what they're really saying is, 'All right you dumb kids. I'll make it as easy as I can, and if you don't get it then, then you'll never get it. Ever.' That's what I hear every day, man. From every one of them. Even the other kids talk that way to me too."

"You mean the kids in the upper tracks?" I asked, barely able to hold back my feelings of outrage.

"Upper tracks? Man, when do you think I see those kids?"

I never see them. Why should I? Some of them don't even go to class in the same building with me. If I ever walked into one of their rooms they'd throw me out before the teacher even came in. They'd say I'd only be holding them back from their learning. I wouldn't go near them," he grumbled. "And they wouldn't come around us neither, I'm sure."

We crossed the street and I had to grab his shoulder to keep him from walking in front of a bicyclist. He wasn't seeing anything except the insides of his school and perhaps, too, the visions that had been accumulating for so long in his mind.

"I'll tell you something else," he was saying, unaware of the ice cream that was melting on his hand. "I used to think, man, that even if I wasn't so smart, that I could talk in any class in that school, if I did my studying, I mean, and have everybody in that class, all the kids and the teacher too, think I was all right. Maybe better than all right too. You know what I mean?"

"That you were intelligent," I said softly.

"Right. That I was intelligent like they were. I used to think that all the time, man. Had myself convinced that whenever I had to stand up and give a little speech, you know, about something, that I'd just be able to go to it and do it." He tilted his head back and forth. "Just like that," he added excitedly.

"I'm sure you could too."

"I could have once, but not anymore."

"How do you know, Ollie?"

"I know."

"But how?" I persisted.

"Because just last year before they tested us and talked to us, you know, to see what we were like, I was in this one class and doing real good. As good as anybody else. Did everything they told me to do. Read what they said, wrote what they said, listened when they talked."

"How long was this?"

"Almost two weeks," he answered proudly, the ice cream continuing to fall over his hand. "Then they told me on a Friday that today would be my last day in that class. That I should go to it today, you know, but that on Monday I had to switch to this other one. They just gave me a

different room number but I knew what they were doing. Like they were giving me one more day with the brains, and then I had to go be with the dummies, where I was supposed to be. Like my vacation was over. So I went with the brains one more day, on that Friday like I said, in the afternoon. . But the teacher didn't know I was moving, so she acted like I belonged there. Wasn't her fault. All the time I was just sitting there thinking 'this is the last day for me. This is the last time I'm ever going to learn anything,' you know what I mean? Real learning."

He had not looked up at me even once since leaving the ice cream store. In fact I couldn't recall him having licked at the cone more than once or twice. "From then on," he was saying, "I knew I had to go back where they made me believe I belonged. I didn't even argue. I was just sitting there thinking I was like some prisoner, you know, who thought he was free. Like they let him out of jail and he was walking around, like you and me here, having a great old time. Then the warden meets him on the street and tells him they made a mistake and he has to go back to prison. That's what I was thinking of in that class."

"So then the teacher called on me--and this is how I know just how not smart I am--she called on me, like she always did, like she'd call on anybody, and she asked me a question. I knew the answer 'cause I'd read it the night before in my book which I bought, and then my mother read the book to me, too, after I'd already read it. So I began to speak and suddenly I couldn't say nothing. Nothing, man. Not a word. Like my mind died in there. And everybody was looking at me, you know, like I was crazy or something. My heart was beating real fast. I knew the answer, man. And she was just waiting, and I couldn't say nothing. And you know what I did? I cried. I sat there and cried, man, 'cause I couldn't say nothing. That's how I know how smart I am. That's when I really learned at that school how smart I was. I mean, how smart I thought I was. I had no business being there. Nobody smart's sitting in no class crying. That's the day I found out for real. That's the day that made me know for sure."

Now there are people who would say that this is not scientific data, that we cannot generalize from a <sup>S</sup>sample of one,

and of course that is true. But, if even a few children begin to indicate how they feel as a result of an educational practice that has no visible benefits for the academic learning of the children involved, how can we ignore these painful utterances? They suggest a very powerful effect that schools may have on children, and one that may affect ethnic minorities and lower class students in particularly negative ways. Before we rush to the conclusion that schools have no consequences for pupils (based upon statistical studies that ignore affective consequences and compare averages across schools rather than looking for differentiation within schools), we must investigate how schools may affect the self-concepts of children and how those children see themselves in society.

School differentiation is directly related to pupil attitudes toward stratification in a study of the social consequences of streaming in the Netherlands, by Lennards (1969). In that country there are no comprehensive schools at the secondary level. Students are selected at age 11 on the basis of a test of academic ability, and segregated into three different types of schools. Each school aims at a different level in the occupational hierarchy. Teachers from different educational backgrounds present different curricula. In this system,

Lennards observed that only 20 percent of students in all types of school reject the principle of deferring to the opinions of an educated elite, and 40 percent felt that less educated people should not earn more than better educated people (1969: 25). While he suggests that this type of school structure "causes" these attitudes, it seems more reasonable to suggest a correlation. Clearly this work suggests fruitful lines for further cross-cultural research into the ways that school structures create attitudes and values consonant with a society's stratification system.

Attitudes toward school are also related to one's ability group position. Griffin (1969) found that comprehensive school children in England had more positive attitudes toward school than did grammar school students. Levenson (1972) reported that ability grouping in the teaching of reading was related to negative attitudes toward reading. Adkison (1964) noted that being in a "low ability" group was related to negative attitudes about one's group. Similarly, the students Peterson (1966) studied who were in the middle group felt they could have learned more in another section. He also remarked that students in "low ability" sections felt their teachers liked teaching their classes to a lesser extent. (This

may well be an accurate perception, since most teachers like ability grouping and prefer teaching average or higher sections.) It is thus not surprising that Lesyke and others (1971) learned that higher achievers are more favorable toward grouping than lower achievers.

Students in the "lower group" tend to develop their own subculture which becomes increasingly antagonistic toward the teachers and the school, according to Hargreaves (1967). Knowing the school's opinion of them and perceiving their life chances, the boys he studied felt little desire or need to conform to the school's demands. Indeed, they received much more ego support from their peers in the opposition subculture. Just as Barker Lunn noticed how the structure of the school affected students' attitudes, Hargreaves saw this continuing and leading to the development of an alternative structure of values and rewards.

In summary, track placement relies heavily upon standardized test scores, although teacher recommendations and pupil race or social class may also influence a student's assignment. While we lack systematic evidence about the educational processes that occur in different tracks, there is reason to believe that the curricular content, type of instruction, de-



gree of selectivity, frequency and type of teacher-pupil interaction, amount of educational resources, and degree of "cooling out" may tend to favor higher over lower tracks.

Since tracking practices so often result in racial and economic homogeneity within classes, the above differences in content and experience may help to explain variations in academic achievement by race and class.

There is no clearcut effect of ability grouping or tracking on the average academic achievement of students, in most of the research studies. There is a slight trend toward improving the achievement of "high ability" groups, but that is offset by substantial losses by the "average" and "low" groups. Moreover, the observed gains appear to be due to changes in the content, materials and teaching methods rather than to ability grouping per se. It would be nice to know exactly what changes were effective. With respect to the range of academic achievement, ability grouping seems to increase the dispersion of student achievement scores. This seems to be because the top scorers go up somewhat, while the lower students decline.

Perhaps as a result, the stability of ability group placement increases over time, with any change being in a downward rather than upward direction. A final academic consequence

is the way track placement affects continued education.'

Ability grouping appears to reduce the self esteem of many students and build (inflate?) the egos of only a few chosen students. This outcome has interesting implications for explaining why substantial inequalities in society are accepted, as Lennards (1969) suggests.

One way tracking may influence achievement, self concept, and attitudes is via the expectations teachers hold for different students. Hargreaves (1967) noted that teachers held lower standards for lower stream children, but most studies of tracking have not measured possible consequences for teachers' expectations. Therefore we need to analyze the effects of track placement and other factors on the genesis of teachers' expectations.

THE GENESIS OF TEACHER EXPECTATIONS

Do teachers' expectations affect the learning and school success of the children encountering those expectations? More specifically, can differential teacher expectations for children of different races and classes help to explain why low income minority pupils often do poorly in school? Underlying this seemingly straightforward question is a heated controversy, ignited by the publication of Pygmalion in the Classroom by Rosenthal and Jacobson (1968). Methodological problems (Snow 1969; Thorndike 1968), apparently contradictory findings, and a burgeoning literature on this subject have made it difficult to get a clear answer to the above question. This chapter and the following one attempt to make sense out of the numerous studies since the Rosenthal and Jacobson book.

To focus the review of literature dealing with teacher expectations, I have organized it around three questions. First, what do we know about the sources of teacher expectations? Specifically, is there evidence to suggest that a pupil's race or social class influence the expectations teachers hold? What other factors influence the genesis of teacher expectations, and might any of those factors be related to race

or class? Second, if teachers do in fact formulate certain expectations for particular children, are these expectations related to the teaching and interpersonal behaviors of teachers? Third, if teachers hold differential expectations on the basis of race or class, and show varied behaviors, are those expectations and behaviors related to personal or academic changes in the children? The first of these sets of questions is addressed in this chapter, the latter two in the next chapter.

Influences on teacher expectations can be located in three sources: student characteristics, teacher characteristics, and school system characteristics.

## I. PUPIL CHARACTERISTICS

Not surprisingly, in view of the general focus of research on education in America (see Hill 1971 and Persell 1976a), the largest body of research deals with student characteristics, followed by teacher characteristics. Relatively little research has been done on how the characteristics of school systems influence teacher expectations. The following classifications of the many types of pupil characteristics are used here: 1) Demographic characteristics, 2) Personality characteristics, 3) Academic ability, 4) Pupil behavior, 5) Pupil

appearance, and 6) Pupil characteristics inferred from cumulative records in the school or from school characteristics, such as the fact of being a Title I school.

### Demographic Characteristics

#### RACE

Pupil race or ethnicity is the most frequently studied demographic characteristic of students. Many research studies have found that pupil race is related to teacher expectations, and only two studies were located that found no relation between pupil race and teacher expectations.

The two studies that found race to be unrelated to expectations were by Deitz and Purkey (1969) and by Roeber (1970). Deitz and Purkey studied 147 white graduate students in the College of Education of the University of Florida. The students had been employed as classroom teachers within the previous 24 months. They described a hypothetical adolescent boy in a paragraph describing his economic and family background, likes and dislikes, and prior year's discipline record in school. The "experimental" paragraph was identical except for the inclusion of the word "Negro" before the word "boy" in the first sentence. Either an experimental or a control paragraph was randomly distributed to each of the subjects. Subjects

were asked to read the paragraph and then estimate the boy's future academic performance on a 7-point scale ranging from "far below average" (1) to "far above average" (7). They report that the mean rating of the "Negro" paragraph was 3.82 (SD = .75), while for the plain "Boy" paragraph it was 3.95 (SD = .87). The difference between the means was not significant at .05. They conclude that these results "question the commonly held assumption that teachers enter the classroom with differential expectation levels for students based on the variable of race" (1969: 694).

What we do not know from their report, is how they described the socioeconomic and family background, likes and dislikes, and school discipline record for the two boys. It is quite possible that certain kinds of descriptions might minimize the salience of race for teachers, for example, if the boys were described as coming from upper middle class professional families, and as having intellectual or scientific interests and no disciplinary problems in school. Under less favorable circumstances, it is possible that race might become more salient for teachers. The purpose of the review of positive findings below will be to try to identify conditions under which the variable of pupil race was found to be salient for

teachers in their formulation of academic or other expectations for students.

Roeber (1970) enables us to specify some of the conditions under which race is not seen as salient to teachers in the formation of their expectations. Studying 30 female elementary school personnel in a school district near Detroit, he found that teachers' expectations for student ability and achievement were influenced by test scores, record of achievement, and comments of former teachers, but not by the race or the socioeconomic status of the students. The subjects were given "Student Information Files," apparently constructed by the researcher, which contained five types of information: test scores, record of achievement, comments of former teachers, the race and SES of student (presented ecologically by describing the school district and elementary school). It may well be that when teachers have other "objective" information about a pupil, race no longer directly influences the expectations they hold for children. In this sense, it resembles Guskin and Guskin's observation that "labels and stereotypes can have an important impact on perception when more reliable information is absent, but tend to have little significance when more directly observable and relevant cues are present" (1970: 30).

If expectations are related to comments of former teachers, record of achievement, and test scores, which may be biased by race, then the so-called reliable information merely provides an illusory scientific objectivity in support of a stereotype. The issue of bias in assessment procedures is discussed in Chapter 1 of this report. For the moment, Roeber's work suggests that the presence of certain information may minimize the effect of race on expectations.

Three of the seven studies finding positive relationships between pupil race and teacher expectations or evaluations asked teacher to listen to tape recordings of black and white students reading a sample passage (Guskin 1970; Pugh 1974; Williams and Whitehead 1971). Both Guskin and Pugh found that white student speakers were perceived in more favorable terms. The 41 black and 41 white teachers in Guskin's study (1970) agreed on the greater ability of white speakers compared to black ones to succeed in present and future educational settings. Some might argue that this was a realistic appraisal, given the success rates of black students in our schools, but it is nevertheless significant that both black and white teachers in this case do have lower expectations for black students. In addition, the teachers tended to perceive black speakers



as being of lower social class status than they actually were, which suggests that they may be perceiving them in biased terms.

In a similar vein, Pugh (1974) found that both male and female teachers judged the academic ability and school behavior of white students as higher or more favorable than that of black students, even when the students were matched for upper middle class, middle class, and lower class backgrounds.

Williams and Whitehead (1971) found that teachers' evaluations of the stereotypes of a particular ethnic group tended to be related to their ratings of children belonging to that particular group. Thus, if a teacher rated an Anglo stereotypical example as relatively high on the confidence-eagerness scale they developed, or low in ethnicity-non-standardness, that teacher tended to rate the videotaped child from that group accordingly. They suggest that teachers may evaluate individual children relative to their stereotypes for particular groups. Hence, they suggest that "stereotypes may mediate in the differentiation of the speech samples, but the teacher-rater nevertheless is still somewhat sensitive to individual differences within ethnic categories" (1971: 112).

Rosenfeld's work (1973) adds to the above studies. He

addressed the question of whether teachers stereotype students of different ethnic and SES background when using actual classroom evaluative criteria and the question of the relative effects of audio, visual, and audio-visual cues in eliciting teachers' stereotypes. When presented with audio, visual, and audio-visual materials portraying students from different ethnic and SES groups, teachers were asked to evaluate the students using a semantic differential scale. Rosenfeld found that teachers do stereotype students on the basis of ethnic and SES cues, and that these cues are transmitted through both the audio and visual modes, with the audio mode providing more information for making judgments. This suggests that the language practices of ethnic children may stimulate less favorable expectations in the minds of their teachers, especially in view of how negatively language differences have been presented in the literature. As Baratz and Baratz (1970), Dillard (1969), Labov (1973), and Williams and Whitehead (1971) remind us, differences in language habits have all too often been considered as deficits. Hence, Rosenfeld's work suggests that language may be one of the factors that mediates between pupil race and teacher expectations.

The possible mediating effect of language on the relationship between pupil race and teacher expectations may under-

lie Buford's (1973) finding that teachers expected greater achievement from Anglo-American students than was warranted by objective predictions, and significantly under-expected for Mexican-Americans and black students. Buford studied 15 third and fourth grade teachers in Title I schools in a Central Texas city. During the two years of the study, those teachers taught 715 students. Buford asked the teachers to indicate their expected achievement for the children they were teaching. In addition, she computed an "objectively predicted achievement" for the same students, based upon information in the student's cumulative record. Thus, by comparing the "objective" predictions with the teachers' expectations for different ethnic groups, Buford could assess the degree to which a teacher's expectations were affected by race. Given the fact that the "objectively" predicted achievement was based upon information which was itself probably already somewhat biased against black and Mexican-Americans, it is all the more remarkable that she obtained significant differences between the ethnic groups. Moreover, the use of cumulative records containing grades, teachers' evaluations, and test scores, may have helped to control for SES, which was not introduced as a formal control in the study.

It is apparent, however, that language alone is not a complete explanation of why teachers may tend to have lower expectations for black pupils. Harvey and Slatin (1975) studied 96 elementary teachers from four schools serving lower class and middle class neighborhoods. They were given full-length photographs of 9 white and 9 black children, and asked to judge the performance potential of each child (by classifying the child according to eight categories related to academic performance). They were also asked to indicate their perception of the child's SES. They found that regardless of the perceived SES of the child, white children were more often expected by the teachers to succeed, and black children were more often expected to fail. This study was based solely on the visual cues in a photograph and involved no verbal exposure to the child, and controlled for SES.

Judging from these studies, it seems that when teachers have relatively few cues, as in Harvey and Slatin (1975) and Buford (1973), they are influenced in their expectations by race. When they have more information, particularly verbal behavior cues, the effect of race on expectations is directly mediated through that information. Finally, when even more information is available, as in the Roeber (1970) study, the ef-

fect of race upon expectations is no longer visible. That study, however, did not examine the possibility that race was correlated with teacher comments, pupil record of achievement, and test scores. Those factors might have effectively mediated the effect of pupil race on teacher expectations.

In short, there is a substantial body of evidence of varying kinds that suggests that teacher expectations may be related to student race. In five out of these seven studies, the teachers appear to be from semi-Southern states (Virginia, Texas, Florida, Kentucky) and in the other two the state is not indicated. In general, it is dangerous to generalize too strongly to national population from small, non-random samples of teachers in a few experiments. Nevertheless, the frequency with which the relationship between pupil race and teacher expectation appears suggests that a student's race is probably an important influence on many teachers' expectations.

#### SES

At first glance, student socioeconomic status seems to have a mixed relationship with teacher expectations. Of the seven studies dealing with this subject, four found teacher expectations to be positively influenced by social class, and three found no relationship between pupil SES and teacher ex-

pectations. From these apparently conflicting studies, is it possible to ascertain anything about the conditions under which SES is independently related to the genesis of teacher expectations?

One possibility is that SES may be less important a source of teacher expectations when other important information about the student is present. This may be particularly true when those other characteristics of students are themselves related to SES. Thus Pugh (1974) found that 13 teachers hearing tape recordings to judge the academic ability and school behavior of 3 black and white male student speakers representing upper middle class, middle class, and lower class backgrounds, perceived students more favorably by race, but not by social class. But perhaps in this Florida county, racial differences were more salient to the teachers than SES differences.

In the Wise study (1972), race was not mentioned as a possibly confounding factor, but teachers were given information about their pupils' behavior, specifically whether the pupils were "unteachable" or "teachable" and "controllable," in addition to information about pupil SES. So perhaps the behavioral data about the students offset any influence of social class.

Roeber (1970) provided teachers with information about

the pupils' test scores, records of achievement, and prior teacher comments. It may be, as he concludes, that this information is more important an influence on the development of teacher expectation than social class data, but I have some hesitation about how SES was presented to teachers. Apparently SES of pupil was conveyed by describing a school district and a particular elementary school. Thus, an individual child's SES was suggested by sociological rather than individual data. Therefore, it is difficult to decide from Roeber's study whether the lack of relationship between SES and teacher expectations is explainable in terms of the presence of other factors (which might themselves be related to SES), such as comments by former teachers, or whether it was due to an unconvincing portrayal of the individual child's SES.

At least one study (Miller et al. 1968) has found that SES is related to teacher expectations. Lower class case studies were viewed as having more detentions, being lower in arithmetic, participating less in extracurricular activities, having parents less involved in school, leaving school younger, reading fewer books independently, completing fewer homework assignments, and having lower future IQ's even when IQ and achievement were comparable. So, it may not be under all circum-

stances that other student information eliminates the relationship between SES and expectations.

An additional difference characterizes the studies with mixed results on this subject. All of the positive findings appeared in studies where either real children were the stimulus for teacher perception of SES or the teachers were given information from which they formed a perception of the child's SES, and it was that perception of SES which was related to their expectations. For example, Miller et al. (1968) provided case histories containing cues concerning lower class origins. Harvey and Slatin (1975) presented teacher subjects with pictures of students, and asked the teachers to rank the SES of children in the photographs with respect to whether it was high, medium or low (1975: 143). Perceived SES was related to expected success and failure. Thus, in both of these studies, the teachers themselves evaluated the child's SES, based on either verbal or visual cues. They were not simply presented with the researchers' portrayal of the child as "middle class" or "lower class."

The two studies of the natural genesis of expectations that examine SES assume an inference about the child's SES by the teacher who receives various cues from observing the child-



dren. Both the studies by Davidson and Lang (1960) and by Rist (1970), used indicators gathered by the researchers to categorize a child's social class. Then teacher expectations were examined in relation to these "objective" class differences.

Davidson and Lang divided the 203 children they studied into three groups: the upper group coming from families of professional people, white collar workers and businessmen; the middle social class whose parents were skilled workers, policemen and firemen; and the lower group, whose parents were semi-skilled, unskilled, or unemployed.

Davidson and Lang measured teacher expectations, or perceived teacher feelings, by asking the children to respond to a checklist of 35 trait names, including "not eager to learn," "a hard worker," "clever," "not eager to study," "smart," etc. Children were asked to decide how their teacher felt toward them with each trait name, and then to rate it on a three-point scale as being true most of the time, half of the time, seldom or almost never. They computed an Index of Favorability by totalling all these ratings. Davidson and Lang (1960) found that children in the upper and middle social class groups perceived their teachers' feelings toward them more favorably than did the children in the lower social class groups. This was true even when pupil achievement level was held constant. Thus,

although teacher expectations are measured here by pupils' perceptions, the results suggest that teacher expectations and sentiments toward children may be influenced by the child's class background.

Rist (1970) did an ethnography of an all black kindergarten class. He saw teacher expectations indicated by table assignment of pupils. Rist considered pupil SES to be indicated by the family's income, whether or not they received welfare, and by the educational level of the parents. The pupils from higher SES backgrounds were much more likely to be at Tables 1 and 2 and much less likely to be at Table 3. Rist felt that pupil SES was salient to teachers in their formulation of expectations for pupils.

In brief, then, student SES has been found to be related to teacher expectations when other factors such as race were not more salient, when expectations were engendered by real children, or when there was a chance for teachers to draw inferences about the student's SES rather than simply being told what the student's class background was.

#### OTHER DEMOGRAPHIC CHARACTERISTICS

Several studies (Palardy 1969; Krupczak 1972) have found that pupil sex is related to teacher expectations, with elemen-

tary teachers holding higher expectations for girls than for boys, even when the pupils were comparable on IQ or reading readiness scores.

Knowledge of siblings in a family may be a factor in the stimulation of teacher expectations. In an interesting natural quasi-experiment, Seaver (1973) hypothesized that younger siblings who had been preceded in school by bright older siblings would perform better when taught by their sibling's teacher than when taught by a different teacher (control situation), and that they would perform below the controls if their sibling had done badly with the same teacher. Students were not matched for academic ability, and younger siblings were not randomly assigned to their siblings' teachers or not, but nevertheless Seaver argues that this study provides an indication of one means by which expectancies are naturally induced in the classroom.

Besides race or ethnicity, socioeconomic status, sex and knowledge of siblings, other demographic characteristics of pupils which might be related to teacher expectations are pupil age, religion, and region. To my knowledge, these characteristics of pupils have not been analyzed in relation to teacher expectations.

### Tested Ability

Rivaling demographic characteristics in the frequency with which it is examined in relation to teacher expectations, is the so-called "measured ability" of pupils. Eleven studies were located that purport to examine pupil test scores in relation to teacher expectations. Of these, 8 (73 percent) found positive relationships between known test scores and expectations, and 3 found no relationships. First studies reporting negative findings will be considered, and then those with positive findings, to see if we can understand the conditions under which teacher expectations may be influenced by pupil test scores.

Pitt (1955), Fleming and Anttonen (1971), and Sorotzkin, Fleming and Anttonen (1974) all report no relationship between pupil test scores and teacher expectations. The three studies share some remarkable similarities. First, they are all induced expectations, where the manipulation of test score data is the only stimulus variable. That is, teachers were given false IQ information about children in their class. A control group of students had no IQ information reported to the teacher. Secondly, in none of the studies were the teachers' expectations measured directly, for example by asking them what ex-

pectations they held for particular students. Instead, teacher expectation was inferred from the lack of effects on the children whose scores were manipulated. Since José and Cody (1969) discovered that in 61 percent of the teachers they studied, teacher expectancy had not been modified by the experimenter, "there may be a serious problem in "inducing" an expectancy in a teacher. It certainly cannot be assumed that such an expectancy has been induced without measuring it directly.

Pitt (1956) found that inflated or deflated IQ scores reported to teachers were not related to the pupils' achievement scores or to the teachers' marks given to those students. This illustrates the importance of considering expectations and outcomes as two separate concepts, which need to be measured independently. Otherwise, we have no way of knowing whether teacher expectations were affected, and if so, how. All we know is that an attempt to manipulate teacher expectations was not related to measured outcomes, but we do not know whether this was because 1) the attempt to induce an expectation failed, 2) teachers believed the false test scores but did not treat the variously designated children differently, or

3) they believed the scores and treated the children differently, with no effect. Fleming and Anttonen (1971) suggest that teachers recognized the inflated group as less accurate, and may have placed greater credence on their own perception of the academic performance and behavior of this group of children. These are interesting speculations, but basically unanswerable until expectations per se are directly measured. Fleming and Anttonen also raise some interesting questions about the usefulness for teachers of group IQ tests, suggesting that the tests may not really assist in the instructional program except insofar as the teacher "feels more comfortable for having had them" (1971). They do not suggest why the teacher might feel more comfortable with tests than without them, and they also do not speculate about possibly negative consequences of test information. Finally, they suggest that teachers' knowledge of testing and their attitudes toward testing might be critical factors affecting how teachers use test information.

In sum, the three studies that found no relationship between test scores and teacher expectations manipulated only test score information. Moreover, these studies did not measure expectations directly. Therefore I am not convinced by these studies that IQ or other test scores are unimportant in-

studies finding positive correlations between test information and expectations.

Positive studies differ markedly from negative studies in several critical respects. I thought they might differ in terms of whether or not expectations were induced or natural. While four of the positive results were based upon natural expectations (Barnard, Zimbardo and Sarason 1968; Given 1974; T. Williams 1975; and S. L. Willis 1972), four were not (Brown 1969; Beez 1970; Roeber 1970; and Long and Henderson 1974). Significantly, however, in none of these studies was test information the only data teachers had. In the three natural situations, the teachers knew the students from classes and could use that information as well. In those situations, IQ or other scores were not manipulated, but were themselves "natural." This raises the question perceptively suggested by Barnard, Zimbardo and Sarason (1968) about whether teacher perceptions and expectations associated with IQ are a reflection of actually occurring behavioral differences among children or whether they are distortions of reality. They found that pupils with high IQ scores tended to be perceived by their teachers as ones who learn quickly, pay attention, retain material, over-achieve, and are ambitious, relative to the child with a

low IQ. Also, higher IQ children were viewed as less dependent and daydreamy and more aggressive, while at the same time more sensitive, mature, sociable, popular and active. They present and discuss several lines of converging evidence suggesting that the positive traits associated with IQ may distort reality somewhat. Since children were also tested on anxiety level as well as IQ, the authors could see that teachers evaluated anxious children who were bright differently from anxious children who were not bright, and did so on traits shown by previous research not to be characteristic of the bright, anxious child (1968: 584). Hence, their evidence suggests somewhat of a halo effect between IQ score and teacher expectations.

The four induced positive studies seem to have been more effective in the way they induce the expectancy compared to the negative ones. Beez (1970), for example, presented similar IQ scores but interpreted them differently. Reports for "low ability" children termed their scores "low average," interpreted the results negatively, and predicted poor school performance. The reports for "high ability" children stressed positive fictional behaviors in the test situation and good prior school adjustment (Beez 1970: 330). In Brown's study (1969), he gave fictitious psychological reports to teachers, with dichotomous



classification of IQ scores. After the teachers read the reports, the experimenter reiterated the information. These means of inducing expectations, in short, may be more effective than merely reporting a score without comment to a teacher.

An additional factor affecting the genesis of particular teacher expectations may have been the presence of other information about the child in addition to IQ data. In all of the studies reporting positive findings, teachers had more than test scores on which to formulate their expectations for a child (Darnard, Zimbardo and Sarason 1968; Peez 1970; Brown 1969; Given 1974; Long and Henderson 1974; Rucker 1970; T. Williams 1975; and S. L. Willis 1972). In each of these studies, the teachers either knew the actual children, received a fictional psychological report or a student file. Thus there was more information than simply the child's test score. It may be that test scores are even more influential when they can be viewed in the context of additional information about a child and that they have less of an effect when they are presented to teachers all by themselves.

A final major difference between the studies reporting positive and negative results concerns the question of whether teacher expectations were measured directly or inferred from

the outcomes. In seven out of the eight positive result studies, teacher expectations were measured directly in some way, e.g., often by asking teachers to rate children in terms of what kind of future school achievement they expected from them. Only one positive result study did not directly measure teachers' expectations. Brown (1969) inferred expectation from teacher behavior, which is closer to the source than are measures of pupil achievement or growth. In brief, the fact that negative studies did not measure teacher expectations directly while positive studies generally did, may explain the variable results.

#### Student Appearance and Behavior

A variety of pupil behaviors--verbal, academic and social--also appear to influence teacher expectations.

#### VERBAL BEHAVIOR

Guskin (1970) found that teachers hearing tape recordings of students held higher expectations for those speaking white American English than for those speaking black American English. In both cases the material presented was identical, so the observed difference in expectations was based upon style rather than content.

Finn et al. (1975) studied the expectations teachers

hold for their entire class, rather than for individual pupils. They found that the general verbal skill of the class was the factor most strongly related to the expectations held for that class.

#### PAST PERFORMANCE

Knowledge of a pupil's past performance in school was pinpointed by at least three studies (Pellegrini and Hicks 1972; Roeber 1970; and T. Williams 1975) as a major factor in influencing teacher expectations. While this observation does not indicate how the first teacher a child has forms her expectations, it does suggest one way that school success or failure tends to become cumulative.

#### SPEED

An interesting behavioral trait in children was identified by Lawlor and Lawlor (1973). They gave 72 undergraduate elementary science students two 10 minute tapes of a science lesson. The soundtrack was so noisy that there were few audible verbal cues. There were five pupils in the first lesson and four in the second. After seeing the tape, the prospective teachers were asked to rank order the children in terms of their ability and to give the clues which they used in making their judgments. The researchers were very surprised to find

that 86 percent of the subjects did rank the children. Most of the reasons given for their rankings were unsubstantiated inferences, such as saying that the child seemed "interested," "independent," "lost," etc. In conjunction with these inference statements, 109 factual observations were reported. Of these, 46 percent referred to the speed with which children accomplished the task. Speed was the most common basis for making judgments, in the absence of verbal cues. The Lawlors conclude, "This is consistent with our use of timed intelligence tests, the criteria for the College Quiz championships and the brief "wait time" exhibited by teachers on all levels" (1973). While only suggestive, their work indicates that speed of task performance may favorably influence teachers' expectations for a given child.

#### ACTIVITY AND ATTENTION

Long and Henderson (1974) found that teachers expected better reading success from children described as active rather than passive, and ones portrayed as attentive rather than inattentive. They caution that the higher expectations for more active children may be due to the definition of active that they used. They meant one who talks and participates as opposed to one who is quiet and shy. While there are obviously per-

sonality differences in degree of outgoingness, it is probably also true that children who feel more comfortable and at home in the school situation might be more likely to be talkative, while children who notice the difference between what they have known before and school may be quieter. Similarly, attention may be linked to interest, which may be in part a function of what one has experienced before.

#### APPEARANCE

The possibility that the physical appearance of children might affect teacher expectations was first noted by Clifford and Walster (1973). They found that the physical attractiveness of children was significantly related to teachers' expectations about how intelligent a child was, how interested in school, and how popular he would be with his peers.

Adams and Cohen (1974) would agree with Clifford and Walster up to a point. They found that teacher interactions appear to be initially influenced by physical characteristics of the child. They note, however, that facial attractiveness appeared to influence teachers more than overall personal appearance, and they speculate that this might be due to the location of their study in a middle class school, where the children were not very differently dressed. They suggest that in

certain ghetto schools where there may be a wider range of personal appearance and dress that overall appearance may exert more of an influence. They conclude that their findings provide some support for Adams and LaVoie's view that a child's physical characteristics influence a teacher more during initial teacher-student interactions than later.

Adams and LaVoie (1974) asked 350 male and female elementary teachers in a large metropolitan school district to predict a student's attitudes, work habits, parental interest, and peer relations, after studying a Student Progress Report and a color photograph of the student. The teachers' ratings were affected more by the student's conduct as reported in his file, than by the child's physical attractiveness. Thus, their work suggests that while attractiveness may be influential at first, or when a teacher knows nothing else about a student, but subsequently, the student record, particularly reports of student behavior, are most important.

#### CONDUCT

Not only did Adams and LaVoie (1974) find that the student record was more influential than physical attractiveness, they found that conduct appeared to be the most important fea-

ture of the record. Students who had low grades on personal and social growth were negatively evaluated by teachers on a number of criteria, even though they had received mostly A's and B's in their academic courses. They conclude that the child who does not conform to behavioral expectations is viewed as a special type of student, who had less potential for the educative process. They note how in an earlier study (LaVoie and Adams 1972) they found that students with poor conduct ratings were perceived by teachers to have lower ability. Moreover, such students were less likely to receive post-high school training or to attain a status occupation. This is direct evidence in support of Bowles and Gintis' (1976) thesis that the social control aspects and social relations of school are much more important than cognitive aspects for occupational attainment.

Additional evidence in this direction comes from Keeley's (1973) study investigating whether teacher expectations were affected by the inclusion of the juvenile delinquent label on the cumulative record folders of hypothetical, delinquency prone students. Teachers reacted to the cumulative record folders with their expectations of how these students would perform and behave if they were pupils in their classrooms. Keeley

found that white teachers (N=27) significantly lowered their expectations for academic and emotional maturity for labeled delinquent students, but not their expectations for social maturity. Black teachers (N=9) indicated lowered expectations regarding labeled students' social maturity but not of expectations for labeled students' academic and emotional maturity. In short, teachers held lower expectations for students labeled delinquent than for students who were not so labeled, with some variation according to teacher race.

A label of being a juvenile delinquent, like being active and attentive, being attractive, performing tasks with greater speed, having a past record of good performance, and using white rather than black styles of language all appear to contribute to the expectations teachers form for individual children.

All of these behavioral and appearance characteristics may be culturally defined and class-linked, suggesting that social class or race may influence expectations in subtle or indirect ways as well as in the more direct ways observed above.

Overall, a number of pupil characteristics seem to be related to the genesis of teacher expectations. Race, socioeconomic status, test scores, appearance and behavior, all seem



to be related to teacher expectations. Where they have been found not to be related, we notice that often the experimental manipulation (whether it be of race, SES, IQ or other test scores) may appear obvious to teachers. Where the experimental manipulation is very badly done, it seems to be less effective an influence on expectations. Teachers, like anyone else, do not seem to want to look like dupes. But where the cues are more subtle and teachers can draw their own conclusions, or in natural situations, then race, SES, and test scores seem to be more influential in affecting teacher expectations. An additional specification of the conditions under which teacher expectations are influenced by information about pupil characteristics was noted by Mason (1973). He found that 79 teachers and teachers-in-training were more influenced in their expectations for pupils by negative than by positive or neutral information. This is a particularly interesting finding, since so much of the impression that teachers seem to gain of low income or minority children is negative.

Do teachers vary in the expectations they form, depending upon their own characteristics?

## II. TEACHER CHARACTERISTICS

Teacher expectations may be influenced by (1) the teacher's demographic characteristics, by (2) their personality or attitudes, or by (3) their career experiences.

### Demographic Characteristics

Educational observers often assume that a teacher's sex, race, socioeconomic background, religion, or community of origin influence the way he/she perceives students. Are these assumptions supported?

#### SEX

In many studies, especially those of elementary teachers, most of the teachers are female, so that the effect of sex upon teacher expectations cannot even be analyzed. While studies of higher levels of education could examine whether sex of teacher was related to expectations for different types of students, I found no studies that did so.

#### RACE

Teachers' race is related to their expectations, with most investigators learning that black teachers general hold higher expectations for all students, both black and white (see Keeley 1973; Krupczak 1972; Pugh 1974). In addition, Krupczak (1972) found that black and white teachers ranked children of

various ethnic groups differently on the ability dimension. Black teachers in that Florida study ranked black pupils first, followed by Spanish students, and trailed by white students. For white teachers, the rank ordering by ability was: white students, Spanish students, and black students (Krupczak 1972). (The study surveyed 35 teachers of 520 sixth grade students.) He does not indicate whether the socioeconomic status was comparable for all three types of children.

Keeley (1973) inquired into whether teacher expectations were affected by the inclusion of the juvenile delinquent label in the cumulative record folders of hypothetical, delinquency-prone students. White teachers (N=27) significantly lowered their expectations for the academic and emotional maturity of students labeled juvenile delinquent, but did not change their expectations for the social maturity of such students. Black teachers, on the other hand (N=9), indicated lower expectations for the labeled students' social maturity, but not for their academic and emotional maturity.

Gottlieb (1964) found significant differences between white and black teachers in their attitudes toward pupils of both races from low income families. White teachers saw such students as "talkative, lazy, fun loving, high strung and re-

bellious," and tended to blame the children and their parents for teaching problems. By way of contrast, black teachers described the same children as "fun loving, happy, cooperative, energetic and ambitious," and blamed problems on the physical environment.

In short, four studies have found black teachers to be somewhat more favorable than white teachers in their expectations toward all children. In addition, three studies suggest that the teacher's race may be a factor which mediates how they perceive and react to pupil characteristics. It seems premature at this point to try to draw firm conclusions about how teacher race affects the genesis of expectations for children. It does seem reasonable, however, to conclude that teacher race may well be an important factor.

#### SOCIOECONOMIC STATUS

Many studies assume that teachers are middle class, by virtue of their educational and occupational attainment if not their origin. While a number of researchers have examined the class origins of teachers none, to my knowledge, have examined social origins in relation to the genesis of expectations for pupils. A study that is suggestive of directions future work might take is the Goldenberg (1971) study of 32

Head Start master teachers and a second group of teacher aides matched for sex, age, marital status, race, ethnicity, and religion. Using the Minnesota Teacher Attitude Inventory, Gold-  
enberg found that the middle class master teachers were more permissive and less puritanical in outlook than the lower class aides, that they took more pleasure in the emotional aspects of teacher-pupil relationships, and showed less authoritarian attitudes toward children. It is possible that the middle class teachers were better able to perceive what would be considered favorable response to the MTAI. Moreover, it would be interesting to see how these test results correlate with attitudes and behaviors expressed in classroom teaching situations. If possible objection such as these could be met, it may be that these attitudinal variables could influence the expectations teachers held for particular types of pupils.

#### RELIGION

Religious background of teachers might conceivably influence the expectations they would hold toward certain children, although I found no studies that examined this possibility.

#### REGION OR TYPE OF COMMUNITY

While it is conceivable that urban or rural background might affect teacher expectations, I found no research on this.

One study did examine whether Southern or non-Southern background was related to teacher expectations (Long and Henderson 1974). They found that Southern teachers expected more of passive black students than of passive white students, but that they expected more of active white students than of active blacks (1974: 146). Apparently non-Southern teachers are positively biased toward low-scoring blacks, whereas Southern teachers have a bias for lower-scoring whites (1974: 146).

#### Personality Characteristics

A number of personality characteristics of teachers have been studied in relation to teacher expectations, including locus of control, trust in self, conceptual system, mental set, and prejudice.

Both Machowsky (1973) and Murray (1972) failed to find any relationship between Locus of Control, as measured on Rotter's scale, and teacher expectancy. Together they studied a total of 117 teachers. Similarly, Harris (1972) found no relationship between the conceptual system of 81 female education majors and the formation of expectations of students' abilities.

On the other hand, Wise (1972) studied 301 teachers in rural New York State and found that teachers' trust in the validity of their own experiences (TVE) was moderately related to

their expectations for four of the students in their class. While related to Rotter's scale and other measures of personal competence, confidence and independence, Wise's measure did not have as high a reliability coefficient as he would have liked (.65 and .43 on samples of 62 and 237). Moreover, the correlation between TVE and expectation was low (.16). Finally, TVE and information about pupils' behavior interacted in their effect on teachers' expectations. Therefore, it is hard to place too much credence in the importance of the TVE factor. To the degree that we do, it may be interpreted as indicating an affective trait rather than a cognitive personality trait.

What might be deemed "mental set" was found by Anastasiow (1964) to be related to teachers' expectations. That study found that teachers perceived their classes' mean reading levels to be at the class grade level, regardless of actual reading achievement. A third grade teacher (teaching eight and nine year olds) assigned reading books considered suited to that level to her average students in the class, even though they were actually reading at the sixth grade level!

A number of critics of American education have suggested that prejudice of teachers may be an important factor affecting their expectations for children. Prejudice can be examined as

a function of teacher personality or conformity (below) and as a response to a characteristic of children (next section).

According to Guskin and Guskin,

Prejudice can be said to exist when an individual has a negative stereotype and negative attitude toward a particular group of people. It should be added that prejudice is more often the result of an individual's acceptance of general community attitudes (norms) than a function of his own personality. This was demonstrated by a study by Pettigrew (1958). He administered a measure of authoritarian personality and an anti-Negro questionnaire along with a conformity scale to many people in South Africa and the Southern part of the United States. His findings indicated that while a small minority, in both groups, had an authoritarian personality related to prejudicial attitudes and a stereotype of Negroes, the overwhelming majority of those who had a negative, prejudicial attitude toward Negroes were conforming to general societal standards (norms). When these prejudicial norms are held by the teacher as well as community members, the negative consequences for the Negro pupil are obvious (1970: 32).

Both mental set and prejudice may be interpreted in terms of conformity to social norms. Thus, to the degree that teacher personality variables have been found to be importantly related to the expectations they hold for children, it seems to be in terms of the social norms to which they conform. Therefore, knowledge of those norms would be very important for further studies of the genesis of teacher expectation. Purely cognitive personality traits such as locus of control and conceptual system have not been found to be importantly related to expectations.



### General Teaching and Career Experience

Teacher training, length of teaching experience, type of teaching experience, and socialization by fellow teachers have all been suggested as possible influences upon teacher expectations.

### SOCIAL SCIENCE RESEARCH

Both Stein (1971) and Hill (1971) have suggested that the content of social science research on ethnic minorities and low income groups might be a major source of teacher expectations, although neither of them tested that hypothesis. Hill (1971) did a content analysis on 71 research articles selected from the 1970 editions of Educational Index and Psychological Abstracts in order to classify the proposed causes of poor academic performance among low-income youth. Articles were coded in terms of three possible models for explaining these causes: 1) the clinical perspective which assumes that poor academic performance is due to cognitive, cultural or personal deficiencies in the child or his environment; 2) the structural approach which posits defects in the nature and organization of school processes; and 3) the systemic perspective which proposes that pervasive structural defects in the schooling process restrict a youth's options to attain cultural, economic,

political or personal competence (Hill 1971). Hill found that the vast majority of research on the education of disadvantaged students was conducted from a clinical perspective. The research literature assumes that disadvantaged youth have: inadequate families (35 observations in 71 articles), personality deficiencies (27 observations), undeveloped language (21 observations), gaps in perceptual and motor readiness (21 observations), inadequate motivation (18 observations), and/or intellectual deficiencies (11 observations). Hill reports further that far fewer studies were based on even minor alterations of educational structure. Those that did were concerned with teacher change (9 observations,) classroom grouping (8 observations), and curriculum relevance (6 observations). No studies were predicated on the need for massive system overhaul. While these results may be biased somewhat by the exclusion of Sociological Abstracts from the sampling frame, still they reflect the general state of research on education at that time (cf. Persell 1976a, which found that less than 9 percent of all the research on education published in the United States in 1967-68 was concerned with education in relation to its societal context).

Moreover, the influence of these research perspectives

upon teacher training textbooks is apparent (Stein 1971) as it is in the way many teachers discuss the education of disadvantaged students (see, e.g., Arnez 1966). Thus, it is plausible to suggest that these intellectual influences might be a factor in setting social norms and engendering teacher expectations. Unfortunately, to my knowledge, we have no research about the way behavioral research and teacher training affects the expectations teachers hold.

#### TEACHER TRAINING

A slightly less pessimistic note is suggested by Harvey and Slatin (1975) who found that less experienced teachers in lower class schools were less willing than teachers in middle class schools or teachers with more experience to judge children based on photographs alone. When they did judge them, they were less likely to associate perceived SES with the child's perceived IQ and perceived motivation. Harvey and Slatin speculate about whether this could be due to the humanizing effect of more recent teacher training. In general, however, since most of the teachers did make expectancy judgments about children based upon their pictures alone, the authors are relatively gloomy about the effects of teacher training upon sensitizing teachers to the possible effects of their middle-class biases.

## PEER SOCIALIZATION

Socialization by more experienced teachers appears to affect expectations. Fuchs, for example, reports the following diary account of a beginning teacher in an inner-city elementary school:

Mrs. Jones (an experienced teacher) explained about the problems that these children have. "Some of them never see a newspaper. Some of them have never been on the subway. The parents are so busy having parties and things that they have no time for their children. They can't even take them to a museum or anything. It's very important that the teacher stress books."

Mrs. Jones tells her class, "If anyone asks you what you want for Christmas, you can say you want a book." She told me that she had a 6-1 class last year, and it was absolutely amazing how many children had never even seen a newspaper. They can't read Spanish either. So she said that the educational problem lies with the parents. They are the ones that have to be educated (1973: 76).

At least two features of this "socializing account" are interesting. First, the more experienced teacher seems to feel very strongly the need to "explain the problem" to the new teacher. It would be interesting to see how widespread this type of socialization is in the lives of all teachers. Is it more frequent in inner-city schools than in suburban ones? Secondly, even if it occurs in all schools that the old initiate and prepare the young, does it always take this form, that is, does it always stress the deficiencies of the children? Does it

never indicate what they do know, what they are good at, what experiences they have had, so that a new teacher might find ways of relating to these experiences and backgrounds? This socialization in terms of what's missing from the lives and experiences of the children rather than in terms of what is positive and present, is also apparent in the accounts of Wax and Wax (1971) about teaching in American Indian schools. They have observed the "wilderness ideology" as they call it, that is articulated by the administrators of the school. No studies, to my knowledge, have been done to examine how this socializing by more experienced teachers may systematically engender particular types of expectations.

In the same diary of a beginning teacher, Fuchs presents anecdotal evidence about how the new teacher reacts: "It's just a shame that the children suffer. This problem will take an awful lot to straighten it out. I guess it won't take one day or even a year; it will take time" (1973: 76). In this instance, the teacher already seems to feel somewhat hopeless about the situation. There seems to be very little that a teacher or a school can do, since the problem is rooted in the homes and lives of the children. Therefore, the teacher may be inferred as having relatively pessimistic expectations for

the children. In addition, the teacher has no concrete ideas about what to do that might be helpful for the children. She wishes she could get some help in learning how to be a more effective teacher. "I never had a course in college for teaching phonetics to children. In this school we had conferences about it, but I really wish that one of the reading teachers would come in and specifically show me how to go about teaching phonetics. . . . It is a difficult thing, especially when there is a language barrier and words are quite strange to these children who can't speak English. How can they read English? We have a great responsibility on our shoulders and the teachers should take these things seriously" (1973: 76).

Thus, this account indicates that other teachers are very ready to indicate to the new teacher what the problems of the children are, and thereby perhaps influence their expectations for what the children will be able to learn, but no one in the school is providing ways of dealing with the situation.

Two others have studied the influence of peer interaction on the genesis of teacher expectations. Dalton (1973) examined the consistency between the expectations of teachers who taught students for two consecutive years. As expected,

he found significant relationships in the ratings of the same teachers within one school year, and between teachers who taught the child one year and those who taught them the next year. He found that the extent to which the location of year 1 and year 2 teachers permit inter-teacher, inter-year communication about pupils was significantly related to rating consistency from one teacher to the next. From this he inferred that the prior-year teacher's ratings of pupils is an important source of a teacher's expectations. While this is a plausible interpretation, it is not as conclusive as one would like. As far as I can tell, Dalton did not directly measure the amount of communication between teachers. Because the ratings are more congruent than would have occurred by chance and because the teachers were located in a way that allowed communication between them, he infers that such communication did occur, and was indeed the cause of the similarity in their ratings. Therefore, while it is quite plausible that teacher talk is related to similarity of expectations, it remains to be conclusively demonstrated.

Meichenbaum, Bowers and Ross (1969) provide additional indirect evidence for the importance of communication among

teachers for engendering expectations. They hypothesized that administering expectancy instructions in a group would prove more effective in establishing behavioral changes than individually administering expectancy instructions. The chief psychologist of a training school for institutionalized adolescent offenders met with a group of four teachers and informed them that 6 of 14 girls were "potential intellectual bloomers" (1969: 306). Three of the six were selected because all four teachers identified them as having high academic potential, while the other three had been named as having low potential. Unlike many of the studies in the Rosenthal and Jacobson (1968) tradition, the expectancy in this instance was induced by means of a detailed presentation by the psychologist about the observations and testing he and his staff had done with the girls. He discussed the alleged validity of the measurement procedures used, and then the teachers discussed their surprise over the inclusion of certain students. As they did so, they began to mention their own observations that seemed to support the psychologist's prediction, and they considered ways they had already been effective in helping to develop the potential of those girls, and practices they might follow to accelerate that process. The authors note, "The teachers concluded the meeting



on a high note of interest and enthusiasm. . ." (1965: 309).

Several factors in this situation may have been operating to influence the teachers' expectations: 1) the lengthy and detailed discussion by the staff psychologist; 2) the chance to express their surprise, followed by consideration of their evidence to support the prediction, so they "owned the prediction" and it was not merely imposed upon them by someone else; 3) their gain in total knowledge of the students by pooling their observations; and 4) their agreement as a group upon their expectations. There are several factors operating simultaneously in this situation, and it is impossible to ascertain which was most potent for influencing expectations. In the natural situation of teachers' lounges and lunchrooms, both the pooling of anecdotes and the possibility of group consensus about the potential of a particular student are likely. Therefore, this form of informal interaction seems a very likely source for expectations that teachers develop about individuals or particular groups of students.

#### Summary

Most demographic characteristics of teachers, including sex, religion and SES, have not been analyzed in relation to their expectations for children. Race, which has been studied,

is related to expectations, with black teachers having higher expectations for students in general than do white teachers. The samples are small, however, and do not warrant generalizing to all teachers in the United States. The findings suggest the importance of further research on teacher race, using carefully drawn samples from national populations. One study also suggested the possibility that Southern and non-Southern teachers vary in the expectations they held for different types of black students (Long and Henderson 1974).

With respect to teacher personality characteristics, neither locus of control nor conceptual system were found to be important factors, but mental set was suggested as a possibly biasing factor that could hurt children who were above grade level in reading skill. Mental set might also operate in conjunction with prejudice, if teachers believe that groups of children cannot learn as well as others. Social norms were identified as a potential influence on expectations. The clinical orientation which dominates social science research literature and teacher training was suggested as one source of such norms. Norms appear to emerge as well from peers and from group discussions.

### III. SCHOOL AND COMMUNITY CHARACTERISTICS

School characteristics are seldom thought to influence teacher expectations. When they are, researchers have examined: 1) the composition of the school and/or community; 2) the climate of opinion in the school; and 3) educational practices, such as ability grouping or tracking, assessment and evaluation procedures, and within-school communication practices.

#### The Composition of the School and/or Community

The type of community in which the school is located, or the racial and socioeconomic composition of the school may affect teachers' expectations. Hankinson (1970), for example, found significant differences in the expectations of teachers for pupils in Title I schools and non-Title I schools, suggesting that knowledge of the economic composition of the school, as indicated by Title I status, may affect general teacher expectations for the children in the school.

As already noted, Finn et al. (1975) found that the verbal ability of a class was related to the expectations held for that class. While no one, to my knowledge, has studied this, it seems reasonable to expect that if teachers are influenced by a characteristic of one classroom, they might be similarly influenced by information about the general verbal ability of

an entire school. Since in a number of cities the reading scores of pupils are listed by school, it may be that teachers entering a particular school have already begun to form expectations about the verbal ability of the students in the school.

With respect to community characteristics, Gigliotti and Brookover (1975) identified several features that were positively related to student achievement, namely, community stability and community support. These characteristics were also positively related to students' perceptions of the level of academic performance their teachers and principal held for them. While the study is not designed to measure causal relationships, the coexistence of community stability, community support and higher expectations on the part of teachers and principal suggests important contextual factors that should be explored further. Gigliotti and Brookover did find that stability is more strongly related to community and parental support of the schools in lower income neighborhoods than in middle income areas. As they see it, the key seems to be the possibility of increased communication between teachers and parents. Both parents and teachers seem to be fearful, with parents worried about being humiliated by the school, and teachers concerned about potential parental interference (1975: 259). Where stability leads to more and better communication, the result seems

to be greater parental support of the work of the schools. We do not know whether this communication leads to the higher expectations on the part of the teachers and principal, or whether the high expectations of school personnel help to facilitate parental trust and support. Until we know the time sequence, we cannot say that community stability and support influence teacher expectations.

#### The Climate of Attitudes in the School

Gigliotti and Brookover (1975) measured principal's and teachers' expectations for pupils, and students' perception of principal's and teachers' expectations as well. For teachers, the relationship between the two measures was fairly high and positive, while for principals it was relatively low (1975: 254). What is particularly interesting for the genesis of teacher expectations is the possibility (which was beyond the concern of their study) that the climate of opinion shared by teachers in a school may influence the development of expectations on the part of individual teachers, either new ones or ones who do not have high expectations. In other words, their work suggests the possibility that a normative climate may exist in schools, which is not only important for pupil self-concept and achievement, but is also important for its effect on

the expectations engendered in other teachers in the school. Just as Fuchs (1973) commented upon the influence of a single, more experienced, teacher on a new teacher, we may speculate that an even more potent influence may be the general tenor of expectations held by the faculty in a school. To my knowledge, no one has systematically studied this in relation to the genesis of individual teacher expectations.

In Crisis in the Classroom (1970), Charles Silberman identified three elementary schools in New York City that were succeeding in teaching low income minority children to read at or above grade level. While an impressionistic account rather than rigorous research, his book suggests one mechanism that may be operating to set a "tone" of high expectations for student achievement within a school. Silberman reports that all three principals of these successful schools are really convinced that their students could learn. Given the teachers' past experience and probable biases that many white middle-class Americans possess, Silberman asks, "How do the principals' positive expectations prevail?" In answer, he cites Robert K. Merton, who notes that "the self-fulfilling prophecy, whereby fears are translated into reality, operates only in

the absence of deliberate institutional controls" (1970: 105). Silberman observed each of the three principals providing such controls by holding "themselves and their teachers accountable if their students fail" (1970: 105). "One principal tells his teachers, 'There's no excuse for our kids not succeeding. I don't want to hear any talk about apathetic parents or hungry children or sleepy children or anything else. We have enough riches to overcome such handicaps, and we are accountable if these children fail'" (1970: 106). Silberman indicates that "the schools are run accordingly: the expectation of success, and accountability for failure, are built into their structure, despite their wide differences in administrative style and approach" (1970: 106). While anecdotal material like this gives little basis for broad generalizations, it does suggest two school characteristics that warrant further investigation. First, the possibility that a principal, or a cadre of teachers, might have very strong positive expectations about the learning potential of all children, which might influence other teachers in the situation. And secondly, the need to identify mechanisms and processes to convert effectively these expectations to other teachers. Existing educational practices may contribute to the genesis of negative expectations.

## Educational Practices

### ABILITY GROUPING

Ability grouping, or tracking, has been pinpointed as a factor affecting teachers' expectations in at least seven studies. In Great Britain, Morrison and McIntyre report that surveys carried out in different educational systems and various types of schools (e.g., Pidgeon 1970) indicate that "streaming and tracking practices, school objectives and curricula can all have a bearing on teachers' attitudes about what should be taught, how it should be taught and what kinds of responses can be expected from pupils" (1969: 181-2).

In a study of more than 10,000 students in Toronto, Williams (1975) found that the single most important source of teacher expectations was the school's certification of the student's aptitude via ability grouping, even when the student's past performance, current ambition, and academic aptitude were held constant (1975: 22).

Hargreave's observational study, Social Relations in a Secondary School (1967), also noted that teachers in one English comprehensive school held lower standards for the lower stream students than for the higher stream ones. Keddie (1971) reports similar attitudes among teachers.



Thus two large scale surveys and several observational studies have identified a source of teacher expectations, independently of student performance and attitudes. It is curious that both of these studies were conducted outside of the United States. Major studies of the effects of tracking in the United States (see Findley and Bryan 1970 for a good review of these studies) do not usually examine the effect of tracking upon teacher expectations. An interesting exception is the work of Flowers (1966). He shifted two experimental groups of seventh grade students to higher ability sections than their test scores warranted, without the students' or teachers' knowledge. Two control groups, who were matched on IQ and achievement scores, were not so shifted. On the basis of questionnaire replies by the teachers, Flowers inferred that track placement affects the teachers' expectations. Teachers favored the high ability groups, they seemed more aware when high ability students needed remedial help, and they appeared to try to motivate higher ability students more than the comparable control groups. These findings suggest that track placement somehow becomes another "fact" that influences the teachers' expectations, apparently in addition to other information they have about pupils from test scores, performance in class, etc.

Schrank (1968, 1970) performed a similar manipulation of assignment to teaching groups. He randomly assigned 100 enlisted airmen at the United States Air Force Academy Preparatory School to one of five instructional sections. Instructors were told the sections were homogeneously grouped by ability. When section grade averages were compared at the end of the term, there were significant differences, with the groups labeled "higher ability" receiving higher grades. In a second experiment, he followed the identical procedure, except instructors knew that the students had not been grouped according to ability. Under those circumstances, there were no significant differences in the average grades between classes. Different outcomes, he concludes, appear to be due to differences in the teacher's perception of pupil ability, which appears to be reflected in the teacher's grading standards and teaching methods. Although teacher expectations per se were not measured, but only inferred from differences in educational outcomes, his work indicates that a critical influence on teacher expectations may be the track or ability group to which a student is assigned. This result is very consistent with Tuckman and Bierman's findings as well (1971).

Tuckman and Bierman (1971) moved 421 randomly selected

black high school and junior high school students in a suburban-city school system into the next higher ability group, while 384 comparable students were retained in their assigned ability groups as controls. By the end of the year the two groups received quite different recommendations for ability group placement the next year. Teachers recommended 54 percent of experimental students for the same (higher) group in the following year, compared to 1 percent of the controls who were recommended for that group. If we are willing to infer teacher expectations from recommendation for track placement, we can see the potent effect of ability grouping on teacher expectations.

In sum, evidence from seven studies consistently shows that ability group is related to teacher expectations. Teachers expect more from "higher" groups and less from "lower" groups, even when students have actually been randomly assigned to those groups. This means that grouping itself affects teacher expectations, independently of "student ability." Therefore, it seems possible that additional institutional practices may be important for expectations.

#### ASSESSMENT AND EVALUATION PRACTICES

In the first section of this chapter, I treated a number of factors such as test scores and school performance as

characteristics of children. Here I suggest they may be viewed in an alternative fashion, as characteristics of schools which are produced by particular practices. Educational systems vary with respect to how they assess and evaluate pupils. In earlier epochs of American education, grading and testing did not exist or took different forms (Bowles and Gintis 1976). Today differences exist between schools. Hence it is possible that variations in testing, evaluation and record-keeping may influence teacher expectations.

Whether or not schools use standardized tests, who receives that test information, and what is done with it are procedures that may affect teacher expectations. I know of no study that compares schools which use and do not use standardized tests in terms of the expectations teachers hold for students. Given the substantial influence test scores appear to have on teacher expectations, as observed in section I of this chapter, this possibility warrants exploration.

Fleming and Anttonen (1971) concluded that "teachers assess children on the basis of previously developed attitudes toward children and tests" (1971: 251). Thus, in certain schools, teachers may be very unimpressed by tests and this

factor may affect testing practices and the way tests are interpreted on a school-wide basis, whereas in other schools, the reverse is true.

Related to assessment practices are the ways assessments are recorded and attached to children as part of their permanent record. Formalized record keeping practices allow future teachers to learn what past teachers have thought of individual children. Teacher reports influence subsequent teachers' expectations (as noted by Keeley 1973, Long and Henderson 1974, Mason 1973, and Rober 1970). Therefore, school record keeping practices probably contribute to the expectations of future teachers. Legislative action and court decisions which have begun to open student records to pupil and parental view are an indication of the importance parents and teachers accord those records.

Informal as well as formal communication within schools undoubtedly contribute to the teachers' expectations for individual students. Teachers' ratings of pupils between one year and the next were more consistent in schools where the physical design permitted communication between teachers (Dalton 1973). Group discussion among teachers about expectations for particular students seemed to affect the nature and potency of those

expectations (Meichenbaum et al. 1969). While inferential, this evidence suggests that teacher communication probably contributes to the transmission of expectations from one teacher to another.

One of the most striking aspects of American education is the requirement that schools evaluate and differentiate students, beginning at the earliest age. Both Lawlor and Lawlor (1973) and Harvey and Slatin (1975) were astounded at the readiness with which teachers or student teachers were willing to rate pupils based upon a brief video tape or a photograph. Both of them told subjects that they did not need to do the ratings if they felt they had insufficient information, but in both experiments, the vast majority of subjects readily made evaluations of the pupils. The Lawlors conclude that the function of the evaluator "is so much a part of the teacher role that the student teacher is very easily pushed into making judgments even when the evidence for judging is extremely skimpy" (1973: 13).

I suggest that this requisite differentiation is so ingrained in the American educational system that it is bound to influence teacher expectations. Specifically, it pushes toward a belief that all children cannot learn certain material,

that differences are to be expected and, are therefore beyond the control of the teacher. Thus, what may be "real" differences in the speed or ease with which certain children learn particular materials or skills may lead to expectations that some children cannot learn certain things. Cross-national studies are needed to discover variations in the amount and types of differentiation practiced in schools.

In sum, several community and school characteristics may contribute to teacher expectations. Community stability and support are related to higher teacher and principal expectations (Gigliotti and Brookover 1975). Among school practices, ability grouping is the single most powerful and consistent influence on teacher expectations. Surveys, field observations and natural experiments have all demonstrated its potency. Other educational practices may also contribute to expectations, including evaluation, record-keeping, and teacher communications. Finally, the pervasive compulsion to differentiate students is a global characteristic of American education that may affect teacher expectations. Much more research needs to be done on how educational assumptions and procedures shape the images of children teachers hold.

What do we know about how teachers form expectations?

Pupil characteristics are very important. The race, socioeconomic status and test scores of children clearly influence teacher expectations. Generally, teachers have lower expectations for minority students (black, Puerto Rican, and Mexican-American pupils are the minorities most often studied). Test scores, which we noted in Chapter 1 are biased against lower class or minority children, are influential in natural situations and under certain experimental conditions. Specifically, when teachers draw their own conclusions about a child from several "facts" and when the child was previously unknown, then bogus test scores seem to influence teacher expectations. In natural situations, teachers seem to be swayed by the appearance, conduct, attentiveness and speed of children, as well as test scores.

The teacher's race is related to expectations, with black teachers generally having higher expectations for children than do white teachers, although this finding is based on several small non-random samples. Teachers who hold stereotypical views of different ethnic or socioeconomic groups tend to hold differential expectations for students from those groups. However, teacher differences with respect to personality scales



or to teaching experience are not significantly related to their expectations.

While seldom studied, educational practices seem to be crucial determinants of teacher expectations. Ability grouping strongly shapes expectations. Evaluation and record-keeping may also create or modify expectations. Once these expectations are formed, do they have behavioral consequences for teachers and children?

## Chapter 4

### THE TRANSMISSION AND CONSEQUENCES OF TEACHER EXPECTATIONS

#### I. THE RELATIONSHIP BETWEEN TEACHER EXPECTATIONS AND TEACHER BEHAVIORS

Once teachers' expectations are generated, do they affect the teachers' behavior toward children? The original Rosenthal and Jacobson study (1968) did not study teacher behaviors at all, efforts since then have tried to identify teacher behaviors that stem from expectations. I located 28 studies that purport to analyze the relationship between expectations and teacher behavior.

These 28 studies vary considerably, both with respect to whether the expectations of teachers were natural or "induced" and with respect to their results. About half of the studies assess the natural expectations of teachers, usually by having them rate or rank their own students in terms of expected academic achievement. Slightly more than half are closer replications of the Rosenthal and Jacobson study, in that they

attempt to induce an expectation in the teachers, by manipulating test score information, by random assignment to pseudo-ability groups, and so forth. Most of these efforts at induced expectations do not measure the teachers' expectations directly but assume that it has been affected by the experimental manipulation. There are three studies of natural situations that infer the presence of particular teacher expectations. In two studies (Alpert 1974; Martinez 1973), expectations are inferred from reading ability group placement or the achievement level of the class. Gabbert (1973) goes further, and appears to infer expectations from student SES. In none of these cases, as in most of the induced expectations studies, are teacher expectations independently measured.

The absence of measurement of teacher expectations may help to explain the variations in results. When the origin of teachers' expectations is natural, and those expectations are directly measured, we find that expectations are related to substantial variations in teacher behaviors, in 11 out of 12 studies, and in the twelfth study, the results were mixed,

that is, differences were noted in some behaviors but not in others. Thus, natural teacher expectations appear to be rather clearly related to differential teacher behaviors. Where the researchers inferred expectations from something such as ability group placement, expectations had a mixed relation to teacher behaviors in one case and no relation in the other two studies.

Of the 13 studies attempting to induce expectations, eight had positive or mixed results, suggesting that even relatively weakly induced expectations may influence teacher expectations under certain conditions. The five studies reporting no relation leave us with several questions. Only one of these studies measured Ss expectations. In that report 11 out of 18 (or 61%) of the Ss said they expected no more of the experimental pupils than of the others in their class (José and Cody 1971). Apparently the experimental manipulation failed. Perhaps the induced expectation did not "take." This interpretation gains support when we compare how expectations were induced in studies reporting positive results. We have already considered

how Meichenbaum et al. (1969) presented the pupils predicted to bloom to teachers, with considerable elaboration and group discussion. Kester (1969, 1972) also held meetings with participating teachers during one part of the induction phase. Other studies suggest that only expectations which are truly believed by teachers are likely to affect their behaviors. Clearly the naturally induced expectations meet this criterion. Where teachers formulate their own expectations they will obviously seem plausible to them.

Having learned something about the conditions under which teacher expectations appear to be related to differential behaviors, what do we know about how teacher behavior varies? Behavior differs with respect to the frequency or rates of interaction between teachers and pupils and in terms of the kinds of behaviors teachers show different children.

#### Frequency of Interaction

Teachers spend more time interacting with pupils for whom they have higher expectations, compared with those for whom they hold lower expectations (Adams and Cohen 1974,

Blakey 1970, Brophy and Good 1970, Cornbleth et al. 1974, Given 1974, Jeter 1972, Kranz 1970, Rist 1970, Rubovits and Maehr 1971 1973, M. Silberman 1969, B.J. Willis 1969). Different studies use different coding schemes for analyzing rates of interaction. Most frequently used are Bales' Interaction Analysis, Flanders Interaction Analysis, and Brophy and Good's Dyadic Interaction Analysis. The purpose of the coding scheme is to facilitate the observer's reliability in coding behaviors of different frequency and type, including who initiates the interaction. For example, Brophy and Good (1970) found that students for whom teachers held high expectations were more frequently praised when correct and less frequently criticized when wrong or unresponsive than were pupils for whom teachers had low expectations. Similarly, Given (1974) found that high expectancy students received more of Flander's different modes of verbal interaction than did low expectancy students. Rist (1970) observed that the teacher initiated many more interactions with pupils for whom she had higher expectations than for the other pupils.

### Type of Interaction

The type or quality of interactions differ as well. In addition to the above mentioned research, other studies examine how teacher behaviors differ (Dalton 1969, Kester 1969 1972, Meichenbaum et al. 1969, Parsons 1973, Peng 1974, and Rothbart et al. 1971). Teachers were more friendly, encouraging and supportive of students who had been designated as particularly "bright" to participating teachers (Kester 1969). Meichenbaum et al. (1969) saw some differences between teachers, with some significantly increasing positive interactions with purported "late bloomers" and others reducing negative interactions with the girls so designated. While Parsons (1973) inferred teacher expectations from the achievement level of the classes, he observed teachers showing somewhat more praise and acceptance of the better classes, although the differences were not significant. The code category he termed "the restricting behavior index" was the most responsible for the differences that he did observe. While we do not know whether the behavior of the classes was substantially different, these results are particularly interesting in light of Bowles and Gintis' (1976) assertion

that social control aspects of schooling are more important than cognitive learning features. Bowles and Gintis suggest that schools serve to recreate the social relations of production by organizing the behavioral requirements of school in different ways for different social classes. While Parsons (1973) does not reflect on his findings in these terms, his work suggests another dimension of interaction that may not be captured in the coding schemes widely used in studies of classroom interaction, namely the degree of behavioral restriction that occurs.

#### Rosenthal's Specification of How Expectancy is Mediated

Rosenthal (1974) believes there are at least four related ways that expectancy effects are mediated. He bases this judgement upon his review of 285 studies of interpersonal influence, including at least 80 in classrooms or other natural settings.

First, he sees a general climate factor, consisting of the overall warmth a teacher shows to children, with more shown to high expectancy students. While he does not discuss individual studies, I located at least three that suggested various non-verbal ways that teacher expectancy could be communicated.



Johnson (1970) hypothesized that when Ss experience a discrepancy between their expectations for someone and that person's performance, they may provide certain feedback that serves to maintain congruency between expectations and performance. Specifically, Johnson expected that Ss experiencing expectancy-performance discrepancy would be more likely to avoid eye contact with the other person. This was confirmed for one confederate testee and insignificant for the other. While not conclusive, this evidence suggests one means, namely, the amount of eye contact, through which teachers' expectations may be conveyed.

Further evidence in this direction is provided by Cooper (1971), who found that the amount of eye contact an experimenter showed a testee was related to the testee's feelings about himself. Therefore Cooper suggests that primary visual cues may be an important determinant of expectancy transmission.

Chaikin, Sigler and Derlega (1974) examined whether tutors holding different expectations for students in a microteaching situation exhibit different patterns of nonverbal behavior. They observed that tutors did behave differently toward designated bright students, showing greater forward lean, eye gaze, affirma-

tive head nods, and smiles--"all indices of approval and attraction, as established by Mehrabian (1971), Exline (1971), Hall (1966) and others. It would seem, judging by these non-verbal behaviors, that bright pupils are liked more by their tutors than are control or dull students" (1974:148).

A second way that expectancy is mediated is identified by Rosenthal as more praise or differential warmth for doing something right. Thus it provides feedback about the pupil's specific behavior. This feature is supported by Brophy and Good's findings reported above (1970).

Third, Rosenthal notes the input factor, or the actual amount of teaching pupils receive. As Beez noted (1970), tutors taught many more words to students they thought were bright than to pupils designated slow. Similar presentation of more vocabulary words to students of alleged higher ability was noted by Carter (1969) and by McQueen (1970). In a natural setting, Martinez (1973) found that teachers spent more time on reading instruction in high achieving classes than in low achieving classes. Rist (1970) observed that pupils in teacher-designated lower groups could not see as much of the material presented as the better group.

Fourth, Rosenthal indicates that expectancy may be mediated by a response opportunity factor, or an output factor. Students for whom the teacher has higher expectations are given more chance to reply, more and tougher questions, they are called on more often, and given more time to respond. Robinsen (1973) found that teachers made a larger proportion (44%) of cognitive demand upon perceived high achiever and a smaller proportion (24%) upon perceived low achievers.

A fifth way that Rosenthal does not mention but which has been observed by others is the different type of curriculum that teachers may present to children for whom they have different expectations. Keddie (1971) notes teachers reporting that they teach a completely different type of economics to students of differently perceived abilities (1971). Alpert (1975) reports that teachers use more readers and more difficult ones with the top reading group, but concludes that such differences are consistent with differences in group need. Group need is measured by the readability level of the books used in relation to the reading ability of the pupils. But need might be evident in other criteria as well, such as interest in the story, need for

variety, relevance of the book to one's own life, and so on. By using more books with the higher ability group, the teacher is increasing the chance that a pupil will find a book that they especially like. More work needs to be done on the question of whether and how teacher expectations affect what is taught in a classroom.

In brief, we have seen that teacher expectations are most likely to be related to teacher behaviors in natural situations, or in situations that effectively induce an expectation and then measure whether that expectation exists. We noted a number of studies indicating that teacher expectations are related to variations in frequency and type of interactions between teacher and pupil. More specifically, Rosenthal specifies four ways that positive expectancy may be communicated: 1) general climate of warmth, 2) more praise for performance, 3) more actual teaching, and 4) more opportunities to respond. To these I added a fifth possibility, the amount and type of material taught. If some students learn subjects or skills that others do not, especially when those subjects are differentially evaluated by the school or the society, then educational content can

convey expectations as well.

The critical questions remain--do expectations or these behaviors actually affect students? Do students think differently about themselves or do they learn more, as a result of the expectations teachers hold?

## II. THE EFFECTS OF TEACHER EXPECTATIONS

There are some striking patterns in the findings of 61 studies that measure the effects of teacher expectations. In all 10 studies of natural teacher expectations, those expectations were related to cognitive changes. The results of induced expectations, on the other hand, are very mixed. Of 42 such studies, 14 report a positive relationship between expectations and cognitive changes, 9 report mixed results, and 19 indicate no relationship. The first and most global conclusion from these studies is that teacher expectations appear always to be related to pupil changes when those expectations are "naturally" held by the teacher and only sometimes related when expectations are induced by an experimenter. Of course, the problem with "natural" expectations is that the teachers may be "right", i.e., they may have successfully identified students who will gain more. Because of this difficulty, it is particularly important to try to specify the conditions under which the experimental expectancy effect operates. Having done that, we will be in a better position to consider the consequences of

teacher expectations for lower class and minority children.

At least three types of specifying conditions appear to exist: 1) experimental conditions, 2) teacher characteristics and behaviors, and 3) pupil characteristics.

#### Experimental Conditions

In order for induced expectations to be related to changes in students, the expectations need to have been effectively induced. That is, the teacher subjects must believe that children designated by the experimenter will in fact make gains (See Anderson 1971, Goldsmith and Fry 1970, José 1969). Only four out of the 42 induced expectancy studies measured whether or not the teacher's expectancy had been influenced by the experimenter. José and Goldsmith and Fry discovered that the majority of teachers did not hold the expectations the experimenter had tried to induce. Hence, they were not surprised to observe little cognitive change in students. Anderson (1971) specified that positive cognitive changes were contingent upon changes in teacher expectations. Spielberg (1973), however, suggests that teachers' statements alone may be an inadequate measure of the expectation held, since he found that teacher statements

were not related to their behavior. Teacher expectations may often be unaffected by the inducement procedure. Moreover, even if the teacher's stated expectancy changes, that may not modify their behaviors, The result may be the absence of an experimental expectancy and therefore a lack of results.

One possible explanation for the failure to induce expectancies is offered by Dan Smith, who is doing an M.A. thesis on teacher expectations at New York University. Now, he wonders, can teachers believe in a test claiming to predict future growth? The notion of gains to come seems implausible to him. Therefore, a number of teachers may have been skeptical of studies which purported to measure something that would happen in the future.

An additional source of skepticism is suggested by Spielberg (1973) who feels there may be a Rosenthal and Jacobson "sensitizing effect" operating now that so many people have heard of the "Pygmalion" study, making it virtually impossible to find naive teacher subjects any longer.

The teacher's skepticism, or conversely, the effectiveness of an induced expectancy, may depend in part upon the prior



knowledge a teacher has of a pupil. A number of induced-expectancy studies reporting no relationship started in the middle of the academic year, allowing considerable time for teachers to gain other grounds for their expectations (See, e.g., Claiborn 1969, Fiedler, Cohen and Feeney 1971, Gosciowski 1970, Havlin 1969, Pelligrini and Hicks 1972).

Teachers' experiences with children may operate any time during an experiment, not only prior to experimental intervention. This possibility may help explain Spielberg's (1973) finding that teacher expectations are not very stable over time. Even if they are successfully induced at one time, they may be changed with subsequent teacher-child interaction.

Besides factors affecting the credibility of an induced expectation, an ethical constraint operates in experimental situations which may reduce the efficacy of induced expectations. Seaver (1973) suggests that negative expectations may have more potent effects on student cognitive change than positive expectations. Ethical concerns have understandably precluded most experimenters from attempting to induce negative expectations in teachers. As a result, however, the limited range of expecta-

tions in induced situations may have diminished the effects of such experimental expectations.

In brief, we can identify a number of factors impairing the credibility of induced expectations and hence reducing the likelihood that experimental expectations are believed. Further, more potent negative expectations are not operating in experimental situations. Experimental conditions such as these may help to explain why the results of induced expectancy studies are mixed. Besides these experimental conditions, teacher characteristics may mediate the expectancy effect as well.

#### Teacher Characteristics and Behaviors

As already noted, one basis for forming expectations may be a pupil's test scores. Moreover, teacher opinions about tests may affect how seriously they consider score information (Fleming and Anttonen 1971, Sorotzkin, Fleming and Anttonen 1974). Hence, attempts to manipulate expectancies by reporting false test scores may be effective with some teachers and completely ignored by others, depending upon their attitudes toward test

results. Thus teacher attitudes toward tests may mediate the effectiveness of experimental manipulations.

Out of 42 induced expectancy studies, there were 18 in which both teacher behaviors and cognitive outcomes were measured. What is interesting is that in all but two studies, there were consistent relationships between teacher behaviors and cognitive outcomes. That is, in the 12 studies where teacher behaviors changed, pupils changed also, and in the four studies where teacher behaviors remained constant pupil test scores showed no significant gains. In short, induced expectancies affect students when the expectancy is believed by teachers and they change their behavior. Thus, where induced expectations appear to approximate natural ones, both in credibility and behavioral manifestations, they appear to affect children.

What teacher behaviors affect student outcomes? General possibilities were suggested above by Rosenthal (1974). We cannot tell from Rosenthal which behaviors were related to expectations and which affected pupils. From the studies reviewed here we can identify two types of instrumental teacher behaviors: 1) the amount of material taught and 2) the amount

and type of teacher interaction.

Regarding the amount taught, Beez (1970) reported that tutors given higher expectations for a child tried to teach more words than those given lower expectations. Moreover, teachers of children designated "low ability" explained the meaning of a word more often, gave more examples, and spent more time on non-teaching activities than did teachers of "high ability" children. In a like vein, Carter (1969) reported that teachers given positive expectancy information presented significantly more words to the pupils.

Peng (1974) found that provision of learning opportunities was correlated with pupil problem solving ability. He measured teacher instructional behavior related to learning opportunities through the perceptions of pupils. Such ratings may be biased by individual pupil variations, Peng cautions, but since he uses classes as the units of analysis he is able to get the mean score from all students in the class, thus assuring higher reliability. By provision of learning opportunities, Peng means "the extent and degree of assistance, and amount of time, space and materials provided for the class; the willingness

exhibited in helping pupils." He reports that this behavior was measured by scales constructed from 27 questionnaires. Students were asked, for example, "I can always use the books when I need them: Yes No."

Meichenbaum et al. (1969) found that the amount of positively toned interaction increased and the amount of negative interaction decreased at least among some teachers after the experimental expectancy had been induced. But Blakey (1970), on the other hand, found that the amount and type of teacher-pupil interaction measured on the Flanders Interaction Analysis scale was not related to achievement gains, and even though behaviors were related to expectations and expectations were related to student gains. Blakey concluded that verbal cues alone are probably insufficient to mediate expectancy effectively. This highlights the importance of studies delineating critical non-verbal cues.

In brief, what little we know of the behaviors deriving from expectations that are related to cognitive gains, the amount of teacher affective tone and of the amount taught.

### Pupil Characteristics Mediating the Expectancy Effect

Both psychological and social characteristics of students affect how pupils respond to teacher expectations. Kohn suggests further that students comprehending the teacher's message can yield or resist the behavioral implications to a varying extent. He predicts that such differences should generally be greater for negative messages than positive ones. This assertion is very consistent with Asbury's finding (1970) that students reporting internal and external locus of control responded differently to different expectancy conditions. Under conditions of positive expectation, student locus of control was not related to performance. Under negative expectancy condition, however, pupils with an external locus of control performed significantly more poorly than those with internal locus of control. This suggests that at least one personality trait of pupils is related to their receptivity to expectations.

Kohn suggests that the distinction in the persuasion and communication literature between understanding the position of a communicator and yielding to it exists in teacher-pupil

relationships as well (1973:502). Children may vary in their sensitivity to the emotional content of a communication. This is exactly what Conn et al. (1968) discovered.

Peng's (1974) work provides some suggestion as to how teacher expectations, behaviors and pupil self-expectations may interact to produce differential pupil achievement. Congruence between teacher and self-expectations was related to achievement. Students with high teacher and self-expectations were high achievers and those with low teacher and self-expectations were low achievers. Teacher behaviors, rated in terms of clarity, provision of learning opportunities, and enthusiasm, were related to pupil achievement only for pupils with high teacher and self expectations. This indicates that positive teacher behaviors may produce student gains only when they occur in an already positive situation, with respect to both the teacher's expectations and the student's self-expectations.

Sociological factors also modify a student's susceptibility to teacher expectations. Race was noted by Krupczak (1972), who found that black pupils were more affected by teacher expectations

than were white students. Yee (1968) and Baker (1973) suggest that lower class students are more vulnerable to teacher expectations than are middle class pupils. Rosenthal and Jacobson (1968) found that younger children showed more expectancy effects than pupils in higher elementary grades. All of these characteristics--race, class, and age--may be viewed as indicators of pupil efficacy, that they may be seen as resources a student can marshal to negotiate the teacher's definition of the situation. These characteristics reflect the child's power, prestige and experience in the world.

In sum, teacher expectations seem to influence pupil achievement when those expectations are strongly held, and are related to modified teacher behavior. Specifically, students of teachers who teach more and show more affect toward them show more cognitive gains. Pupil personality characteristics, including sensitivity to verbal communication of emotions, internal locus of control and self-expectations seem to interact with teacher expectations with consequences for their cognitive gains. The race, social class and age of pupils influence their susceptibility to teacher expectations.



### Consequences of Teacher Expectations for Lower Class and Minority Students

The implications of teacher expectations for lower class and minority students can now be considered. First, teachers are more likely to hold negative expectations for lower class and minority children than for middle class and white children (Chapter 3 and Buford 1973). Second, teacher expectations are affected by testing and tracking procedures which are themselves biased against lower class and minority children (Chapters 1 and 2). Third, it is precisely such negative expectations that Asbury (1970), Kohn (1973), and Seaver (1973) suggest are more potent in their consequences than positive expectations. Fourth, expectations are related to teacher behaviors and to student cognitive changes even when pupil IQ and achievement are controlled. Fifth, given the less powerful position of lower class and minority children in society, they appear to be more vulnerable to teacher expectations. Thus, the educational experiences of lower class and minority children work to depress their academic achievement, while the educational exposure of white middle class students helps them achieve.

CONCLUSIONS

We began with the question of why socioeconomic status and race are related to academic achievement. While most explanations look to the cognitive or cultural deficiencies of lower class and minority students, this volume considers an alternative explanation. Prevailing definitions of academic achievement undoubtedly contribute to unequal results, but probably do not entirely explain differential school achievement. The educational concepts, structures and interactions operating in schools powerfully shape outcomes as well. While many examples could be considered, three are scrutinized here in depth, namely IQ testing, the structural arrangement of tracking, and teachers expectations and behaviors. The review of literature focuses on how these ideas and processes may depress the academic achievement of lower class or minority students and enhance the achievement of middle class or white children.

IQ testing rests on three premises: 1) the hereditarian

assumption, which believes academic capability is relatively fixed at birth; 2) the assumption that a high IQ is requisite for success in life; and 3) the assumption that IQ is objective and accurate. We considered evidence suggesting that these assumptions are fallacious. In practice, however, IQ testing is widespread, believed to be accurate, and deified by the administrative practices of many schools. As a result, many children are misperceived and mislabeled. Such "mistakes" occur much more frequently to lower class or ethnic minority children.

Educational decisions based on aptitude test scores may dramatically change a child's educational program. Like testing, ability grouping has an ideology that diverges from its reality. Homogeneous grouping is touted as a device for maximizing the achievement of all. Like testing, it is widely practiced. Ability grouping is based heavily upon testing (with its attendant problems), and teachers' recommendations often play an important role as well. However ability grouping is done, lower class and minority children are more likely to be in "lower ability" groups or in Mentally Retarded or

Educable Mentally Retarded programs than are white middle class students. Hence one consequence of ability grouping in the last two decades has been considerable class and racial segregation.

While hundreds of research studies have examined ability grouping or tracking, we still know very little about the educational content and processes associated with different groups. What we do know suggests that curricula differ in scope, pace, use of supplemental materials, teaching styles, electivity, and access to other educational resources in the school, with less desirable features more often the lot of lower class and minority students.

Where achievement differences between "high ability" and "low ability" groups are noted, gains are attributed to improved curriculum, teaching, or materials, rather than to grouping per se. So, ability grouping by itself does not enhance overall student achievement, while enriched curriculum may. Instead of maximizing the achievement of all, ability grouping differentiates students even more. Where changes occur, the "high" make small gains while the "average" and "low" students decline. Thus, students are farther apart at the end of their educational

experiences than they were at the beginning.

Tracking may also affect consciousness. Thus students are not only cognitively differentiated, but such distinctions appear to be internalized. Students in higher tracks tend to gain in self esteem, while those in lower tracks decline. Selves are thus differentiated in a hierarchical way. Some youngsters begin to see themselves as better or more worthy, while others feel less deserving. This crucial non-cognitive outcome helps to explain how schools create and legitimate inequalities.

Testing affects tracking decisions, and both influence what teachers expect of children. Teachers also share the beliefs and prejudices of society. Therefore it is not surprising that race and social class influence teachers' expectations for children in addition to test scores and tracking. Teachers tend to expect less of lower class and minority students than they do of white middle class students. Moreover, teachers behave differently toward students for whom they hold higher expectations. Teachers interact more, they show more warmth, they provide more praise and acceptance, they

teach more and they teach differently. The amount taught and teacher warmth affect student gains, even on standardized tests. Teachers' expectations are mediated by pupil characteristics, especially age, race, and SES. Thus the very pupils who confront negative expectations most often are the most vulnerable to those expectations.

This review has had two purposes: to identify relationships between testing, tracking, teacher expectations and unequal educational outcomes; and to try to specify the conditions under which those relationships occur. The evidence reviewed supports the assertion that schools substantially help to create and legitimize inequalities between children.

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