

MINORITY GROUP AND CLASS STATUS AS RELATED TO SOCIAL AND PERSONALITY FACTORS IN SCHOLASTIC ACHIEVEMENT

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Chapter 1

Introduction

The evolution of social problems into critical issues offers social and behavioral scientists a special opportunity to study socio-psychological processes. Frequently, it is through addressing a practical problem that the psychology of the individual can be related to the social environment, and thus the psychologist can study the basic questions in his field. It may be that in physics a concentration on theoretical problems of relativity and atomic structure is the shortest path to the development of atomic power; but, in the social sciences, it is the concrete presence of the problem which leads to an investigation and theorizing about basic issues, and this, in turn, leads back to greater practical application. The very fact that social psychology deals with society, and the individual in it, dictates that its starting point be in the concrete problems and processes of society. Social necessities do provide impetus to social psychological inventions.

Various eras produce different necessities. Since the Supreme Court's desegregation decision in 1954, the necessity has been peaceful integration of schools, and the solving of problems arising when children of widely varying socio-economic levels and prior educational backgrounds are for the first time put together in the same

classroom. Although school segregation has been the law only in the South, for many years the semi-encapsulated living conditions of Negroes and other minorities in the North created semi-segregated school districts. From about 1950 on, the increased wartime and post-war birth-rate was being felt in overcrowded classroom conditions, and the teacher shortage became more and more acute. At the same time there was a great in-migration of both Negroes and whites from rural areas in the South to large urban centers in both the North and the South. These factors, too, provided additional focus on the school situations and social climate of minority group children in our population, and to a lesser extent, on all children from lower socio-economic groups.

It is well established that the favorability or unfavorability of environmental factors influences the development process, even though this process is biologically the same for all children, regardless of racial or ethnic group. The experiences and subsequent self- and "world" concepts of a child are determined by the conditions under which he lives and grows up. Dissimilarities in the growth processes of children become maximized when their actual life conditions are dissimilar. As a result, attitudes and patterns of behavior and learning, though basically reflecting the larger culture, assume particular and often marked sub-group characteristics.

It is generally recognized that emotional and learning factors are closely related. The influence of environmental factors on the intensity of motivation and on the growing child's self-attitudes regarding his own capabilities is significant. Psychologists have long recognized the intimate relationship that exists among internalized attitudes, motivation, and the general efficiency of individual

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learning and functioning. In general, educational concepts and techniques have developed from experiences with majority group children, and have then been generalized, with sometimes only minor modifications, to all children. It is reasonable to suppose that attitudes toward and response to the school situation might also have distinctive characteristics related to environmental conditions and sub-group membership.

It has been the general purpose of the present study to investigate the existence of special problems in minority group education, as well as to provide increased understanding into social and behavioral factors as they relate to perception of the self, frustration tolerance, group membership, and the rate of learning.

The present study was an extensive three-year research program conducted in a major northern city and centered in the schools and community of a large encapsulated all-Negro area. The area is characterized by severe social impoverishment and greater than usual stress in social and family life: social rejection, high rates of family breakdown, chronic economic anxiety, low aspiration level, and the absence of culturally approved symbols and individuals with whom to identify occur with monotonous regularity. The relative encapsulation of the community within a large urban area (a goodly proportion of the school children included in the study had never been more than 25 blocks in any direction from their homes) and the homogeneity of occurrence of the kinds of variables mentioned, make this area a particularly good community for research for the behavioral scientist.

Since educational conditions represented one of the most pressing practical problems in this area (the children were found to be seriously behind the national norms for their grade levels, especially in reading), since school children constituted a readily available population, and since classroom factors and the learning process represent good dependent variables for the study of cultural impact, the area singled out for intensive study was the school situation. Also, this represented an excellent microcosm within which cultural and personality variables could be studied in the context of daily activities. Two sets of problems were of focal interest: 1) the interrelationships among the social environment, class, ethnic, and racial factors, and specific aspects of intra-group behavior and personality in a population of children; and 2) the implications of this for learning and for scholastic achievement in the school, the organization of the school to meet the needs of these children, and the attitudes and values of the teachers in working with and stimulating these children.

Thus, in the interests of the real challenge which it was felt would be presented to the social sciences by the coming desegregation of schools, the study reported here was oriented to the determination of the manner in which social stress affects motivation, personal aspiration, concepts of self, and learning, and how it differentiates the minority group child from the majority group child of similar background. The study of these rather practical matters, it was felt, should also provide data relating to

the way in which social and cultural factors influence personality development, the role of the school in personality development, and the relationship of all these factors to individual motivation and learning.

Chapter 2

Related Literature

No attempt will be made here to survey the voluminous literature in this area, but some important representative studies should be mentioned.

Some of the most extensive work in the relationship of cultural, racial, and class factors to learning and intelligence and their measurement is that by Eells, Davis, and Havighurst (12), while Klineberg's work, done earlier, served as a foundation for much that followed (19, 20, 21). A recent publication by North (31) summarizes the studies of Negro intelligence, and, consistently with the previously mentioned studies, concludes that, although there are IQ differences between Negro and white groups, these differences are of an order of magnitude which could be produced by environmental factors. Further, he reports that the disparity is decreased by improvement of the environmental and educational opportunities of groups of Negro children—a factor which tends to raise their average IQ.

Both North's conclusions and Klineberg's earlier hypotheses are substantiated in a recent study by Lee (25) who showed that IQ's of Southern Negro children who migrated to Philadelphia increased with the length of their residence and schooling in the North.

Self-concept, motivation, aspiration level, and general ego and identity factors among Negro children, lower-class children, and other minorities have been studied, and results have been compared with those obtained from majority group children (2, 5, 7, 11, 14). The burden of all of these studies is that there are Negro-white differences and that the discriminatory implications of minority group status play a role at an early stage in personality development. The deleterious effects of segregation itself have been touched on by Ausubel (2), Chein (4), Clark and Clark (5), Milner (29), and Deutsch (11), among others. Another area which touches the present study is the relationship of social class to learning and socialization. Research in this area has repeatedly demonstrated the influence of class factors on these variables (e.g., Davis [9, 10], Mummery [30], among many others). Two other references indispensable to an understanding of this area are Frazier (13) and Klineberg (19).

Pasamanick, Knobloch, and their associates have pointed out that nutritional and general physiological factors have been too little considered in analyses and studies of learning and school handicaps. These investigators have demonstrated the extensive effects of en-

vironmental conditions on pre- and peri-natal factors and on nutritional status and the effects of these factors, in turn, on the child's learning and school progress (23, 24, 32, 33).

The cumulative impact of all this literature is to emphasize the overwhelming importance of sub-group environment and life experience on total psychological and social development. An additional implication arising from the literature is that the more constricted an individual's social frame of reference and the greater its distance from the cultural mainstream, the less meaningful and the less effective are the dominant cultural values that impinge on him in the schools and other social institutions. A corollary of this for the psychologist is that the behavior of the individual becomes less interpretable by standardized tools, as these tools are more distant from his experience and foreign to his consciousness. This is underlined by Stone's study which found socio-economic differentials in comprehension of the words used as items or in the directions to common group intelligence tests (36).

A tremendous reservoir of human potential is lost when dominant culture is not reflected in the motivational energies, fantasies, and aspiration symbols of minority groups—symbols that are required as foundation for successful climbing of the educational and economic ladders. It is possible that it is not just symbols which are missing here, but rather that, for people living so much on the margin of the dominant culture, and experiencing so many immediate and overwhelming problems of existence, identification with a set of majority culture symbols is not personally relevant, and becomes cumulatively less relevant with the increasing impact of social alienation and individual hopelessness. It was part of the purpose of this research program to delineate some of the psychological, social, and educational properties of this process of alienation, and if possible to identify its patterning.

Chapter 3

School and Social Environment

School is an experience which for the children in the experimental group is discontinuous with the values, preparation, and experience they receive from their homes and particular community; it represents society's demand that they bridge social class orientations for a few hours a day, five days a week. No catalyst is provided for this transition, and few plans have been made to facilitate the child's daily journey across the chasm. Thus, to understand the school performance of these children, it is necessary to know something of the atmosphere and context within which they go to school and participate or fail to participate in the explicit educational objectives of the school. Before beginning the project proper, process

recorders were in other classes in the experimental school, so the "culture" of the school was already known, and the selection of techniques and results obtained must be seen against this background.

The experimental school was part of an "All-Day Neighborhood School" program, involving 20 percent of the children in organized after-school activities. Physical conditions in the school were somewhat better than average, and classes were not overcrowded. About 99 percent of the children in the school were Negro, and the bulk was drawn from a surrounding area of two square blocks: one of the most densely populated urban areas in the country. The majority of teachers (about 70 percent) in the school was Negro; the principal and assistant principal were white. Despite the seeming adequacy of the available physical facilities, in many classes (although not in all, and this will be discussed later) there was an atmosphere of disorganization, an emphasis on disciplining, minimal academic teaching, and much emphasis on "creative expression." Rarely, though, for the teacher or the administration did any activity take precedence over maintaining order, and nuclear subgroups of children in various classes preoccupied themselves with challenging behavior and disruption of any order which was obtained. The disorganization reflected a lack of motivation on the part of the pupils, and, to a lesser extent, on the part of the teachers, coupled for many of them with a cynicism as to the efficacy of standard educational procedures in this situation. Their aim was mainly to keep order, and their expectation was not in terms of the children actually learning.

It is important to emphasize here, before going into the results of the study, that actually much of the specific course content given to the children was quite outside their actual life experience. An assignment such as "write a page on 'The Trip I Took'" is not too appropriate for children who have never been more than 25 blocks from home. The primers in use present alien story content and offer, in their illustrations of pink-cheeked blond children, no figures with whom these children are familiar or with whom they can establish meaningful identifications. It must be stressed that these children have very little contact with the larger community, and therefore, in a sense, the school represents a foreign outpost in an encapsulated community which is surrounded by what, for the child, is unknown and foreign.

Masland *et al.* (27) point out that class differences are only minimally related to IQ test performance at the first-grade level, but that this relationship increases in the later grades. One partial explanation for this may be that for the middle-class child, school represents an experience continuous with his home experiences, whereas for the lower-class child as previously indicated, school is discontinuous, and thus he becomes more and more alienated from the school. Since testing becomes more and more embedded in school-inculcated cognitive styles, test performances of children who are less receptive to schooling are likely to suffer. Another, more subtle, factor evident in recent and as yet unreported research by the author, is that of class differences in auditory attention

span. Lower-class children in their homes have fewer demands made on them for auditory focusing or for sustained auditory attention. For example, commands are more likely to be one or several words rather than complete sentences, and are typically given without explanation or elaboration. This would indicate that, aside from school content, there are factors which can make school a frustrating experience for children who have not had experience in focusing and attending; one of the primary demands of the classroom situation is that of sustained attention, even for a short time span.

McCarthy and others have pointed out that varieties of experience are also very important to language and vocabulary development, and consequently to the mastery of reading (28). Therefore, to obtain additional information about the children's homes, a short questionnaire was individually administered. It was composed of items relating to presence of reading and writing materials in the home, presence of a television set, general family activities, number and relationship of family members, family intactness, and the like. It was impossible to obtain independent validation for much of these data, but the teachers who frequently visited the homes were asked for independent estimates. It was their feeling that the children's statements were highly accurate, and that if anything, there were instances of attempts to present a more positive picture than actually existed.

As will be discussed in the section on quantitative data, most of the children came from crowded, broken, and economically marginal homes. Sixty-five percent of these children, excluding school field trips, had never been beyond a 25-block radius of their homes. Their experiences at home are similarly restricted. About 50 percent, when asked, said they did not have a pencil or a pen at home. The majority reported no books at home, although a substantial number said there were magazines and newspapers. With probing, it was found that most of these magazines were comic books, *Ebony*, or sometimes *Life*. About 60 percent reported having a television set, but it was impossible to determine how much time was spent watching it.

The children reported that most of their talking was done with siblings and peers, and indicated that mothers, "grannies," and adults in general "ordered you" or "told you what to do." Only 20 percent reported receiving any help at all with their homework, about 30 percent reported being kissed good-night, usually by the mother or "grannie," while only 40 percent expected to spend Sunday in any family activity. About half the children said that "some of the time" or "most of the time" they took their own meals, or a sibling prepared them. A very large group—but here the reporting is not consistent—came to school without any breakfast or with only black coffee and perhaps a piece of bread. The observers noted that many of the children would doze off, look fatigued, and sometimes suck their thumbs until the morning milk and cookie break, after which they would stay awake and the thumb-sucking would decrease or stop. In other words, many of these children come to school hungry, and

it would probably be beneficial if the morning break were moved up to the beginning of the school day.

Although it could not be accurately quantified, the observers had the distinct impression that children in the experimental group who participated in the all-day school program reflected in their conversation and behavior wider experience, broader knowledge, and more curiosity than did others in the experimental school. This program did give the children the opportunity for creative expression and organized play under competent supervision by people who understood their needs.

The control school, similar to the experimental one in physical facilities, had more crowded classrooms, but the atmosphere was a considerably more orderly one, with a higher percentage of classroom time being spent in actual teaching. In the control school, too, all these percentages were between 80 and 95: for books in the home, organized meals and Sunday activities, breakfasts, and traveling a distance from the home. In other words, either the experiences of the two groups are widely divergent, or, if one does not trust the validity of the children's reports, the concepts are very far apart and reflect some poverty of experience and thought in one group, and a relative richness in the other.

Chapter 4

Project Procedures and Methods

The various phases of this study were organized around several general problems which were approached as broadly as possible within the practical restrictions imposed by financial and staff limitations and by various other circumstances. Some of the more specific questions whose answers would offer evidence and understanding of the possible interrelationships among social, emotional, and learning conditions were conceived as follows:

How are variables of emotional, personality, social, and behavioral functioning related to each other and to scholastic position in the class? What is the difference in this patterning between minority group children in a minority group area and majority group children in a majority group area?

Is the rate of learning related to previous standing in the class? To the child's attitudes toward himself? To home and family relationships? To social, behavioral and concentration factors in the classroom?

Is there a differential acquisition of the basic scholastic skills, and if so, is this differential related to special circumstances in the lives of minority group children?

Is scholastic retardation and/or relative failure to accelerate in learning (not based on mental deficiency) related to specific social, emotional, and intellectual patterning, and are

these general patterns related to problems of delinquency?

Do children in the minority group area who have the opportunity to participate in a specially organized after-school activity program differ in their behavior, self-attitudes, place in the social group, and in the general rate of scholastic change from those who do not?

What is the importance of the teacher's awareness of and sensitivity to the group processes in the class, to the learning process, and to the problems of the individual child? Will teachers' attitudes and behavior toward the class and themselves as teachers change as a consequence of their examination of their own socially influenced biases?

The over-all plan of the project designed to deal with these questions involved studying intensively a 99 percent Negro school in a Negro area and, somewhat less intensively (because of budgetary and staff restrictions), an almost all-white school in a white area. The white school served primarily as a control. The techniques used for the children measured academic performance, socio-economic variables, personality and self-attitude factors, and classroom group variables such as sociometric choice and classroom activity and behavior. Teachers' behavior and attitudes were also evaluated, primarily by the use of process recorders in the classrooms. In addition, a special arrangement was made whereby the teachers of some of the participating classes received in-service credit for attending a seminar conducted by the author. These seminars were oriented toward discussion and self-evaluation of attitudes and behavior in the classroom. A special value of these seminars was the opportunity to correlate the teachers' discussions with the process records of actual behaviors in the classroom. In addition, since the experimental school was a participant in a program of planned after-school activity, which 20 percent of the children attended, it was possible to compare children who participated in this enrichment program with those who did not.

A specific discussion of methods and procedures follows.

Population

The study used two samples of elementary school children from fourth, fifth, and sixth grades.¹ Two whole classes at each grade level from each of two schools were used, making a total of twelve classes, and including approximately 400 children.² One school from which subjects were drawn was in a racially encapsulated area and over 99 percent of its enrollment was Negro. This is the experimental school. The other, control school was in a white neighborhood of similar socio-economic level, with a white enrollment of 94 percent.

1. At the time of the study an automatic promotion policy was in effect, so the ages of the children at each grade level were homogeneous. Hence 90 percent of the entire population were between 9 and 12 years of age.
2. In the experimental school, an additional four classes served as controls for the teachers' seminar. The use of these controls will be explained more fully later.

It was impossible to achieve complete socio-economic comparability, but the children from the control school had living conditions very similar to the experimental school children. However, the white families had a slightly higher income level, greater job stability, and rentals were in general slightly lower and the landlords' upkeep of the houses was somewhat better. In addition, the number of relief cases was higher in the Negro group. Despite these differences the two groups can be considered basically comparable; there was considerable overlap over most of the continuum.

The experimental school was studied over a total time period of three years, although data from only the third year are reported here. (For the procedures constructed for this study, the first two years gave time for pilot study and refinement.) The control school data were collected during half of one school year, and for reasons of time are necessarily less complete, especially in qualitative data. Specific note will be made later on of what data were not obtained for the control school subjects.

Procedures and Measurements

Academic Achievement

This was measured by means of the Stanford Achievement Test which is so constructed as to yield grade-equivalent scores for reading and arithmetic separately, as well as to give a total grade equivalent for the whole test. In the experimental school, also, it was possible to administer the test twice: once at the beginning and once at the end of the school year. Hence for the experimental subjects there is a measure of progress $\frac{\text{(end of year total score)}}{\text{(beginning of year total score)}}$ in addition to the three scores already mentioned. Further treatment of the scores derived from this test included an arithmetic/reading ratio, applied to both experimental and control subjects.

Popularity of Child among Peers

This was measured by a sociometric index using three questions with three ranked choices for each.³ The questions were: "I would most like to sit next to", "I would most like to play with", "I would most like to go to the movies with" This was scored in the usual way, and the children in each class were ranked on the basis of total weighted score.

Socio-economic Measures

A short questionnaire was administered to each child individually, dealing with objective home and family factors. No attempt was made to inquire about family incomes because of the expected lack of validity of children's reports. However, it was possible to determine how many people in each home worked, and which families were on relief. Perhaps the most useful index derived from this questionnaire is the *crowding ratio*, defined as

3. This measure and all the others with the exception of the Stanford, were given orally and individually to avoid contamination of results by reading problems.

the number of people living in the home divided by the number of rooms in the apartment. Housing authorities generally consider that a ratio of over 1.0 represents crowded conditions, while a ratio of 1.5 or more indicates extremely crowded living conditions.

Intactness of Family

This was measured on a four-point scale, with 1 representing both parents in the home, 2 representing one parent in the home, 3 standing for the child living with relatives but with neither parent, and 4 indicating that the child lived with no relatives. For purposes of dichotomy, however, only the home in which the child lived with both true parents was classified as intact.

Family Focus on Child

This was evaluated through simple questions dealing with who made dinner for the child, the bedtime routine, whether he was taken places by his family, etc.

Sentence Completion Test

This was constructed to yield two kinds of data: attitudes toward self, and attitudes toward family. It included 22 sentences, selected from an original group of 36. Twelve of the sentences relate to self-image, and seven to family atmosphere. Specific examples of these items may be found in the section discussing the results from this procedure. Each response was rated independently by three raters on a five-point scale where one represented the most positive, and five the most negative response. Thus two quantitative measures were derived from this procedure: the Negative Self Image Score measures degree of self-acceptance, with a high score representing poor self-acceptance and a low one indicating positive self-acceptance. The second score obtained is the index of Negative Family Atmosphere, measuring the degree to which the child made negative statements about interpersonal relationships in the home and about the general family atmosphere. The higher the score here, the more negative the family atmosphere. Another direct measure obtained from this test was an occupational aspiration level.

Figure Drawing

Each subject was requested to draw a human figure and these productions were rated by three judges along a four-point scale ranging from "relatively good personal adjustment" to "signs of serious personal maladjustment." The average of the ratings was used as the child's final score. Analysis of these scores, however, indicates that this measure is highly dubious; this will be discussed later.

Digit Span Test

This test was used to determine the child's ability

to retain and manipulate a number series. Similar tests have also been widely interpreted in previous studies as measures of attention span and, perhaps, level of anxiety. The test in the present study included both forward and backward repetition. Three scores were used: a *forward* score, a *backward* score and a *total* score. Each represents the number of digits successfully reproduced.

Teacher-Attitude Questionnaire

This was a questionnaire administered to the children to evaluate their attitudes toward the teacher.

Behavioral Observations in Classroom

Running process records were taken by research assistants in each of the classrooms in the experimental school, and to a lesser extent in the control school. This was done for about three hours a week in each class, with the times being randomly distributed so that the teachers could not anticipate the arrival of the observer. In addition, an activity measure was devised, and by using time samples, each pupil was rated several times during each observed class period on the quality of his activity and participation. The data derived here are largely qualitative.

Teachers' Seminars

These were conducted over a period of two years in the experimental school, and included altogether about 12 teachers. Process and content analyses were done for each seminar meeting. The discussions dealt with attitudes toward teaching; education; Negroes, and on being Negro (9 of the 12 teachers were Negro); on conflict in class and racial identification; and on methods of handling group disorganization in the classroom. The seminars were established in such a way that the researcher could assure the teachers that all communications were privileged, and it was clearly understood that the researcher had no formal connection with the educational bureaucracy. This was essential for rapport, as the teachers had considerable negative feeling toward school administration and Board of Education. Nevertheless, it took a few months to accomplish this confidence building, and for the group to become sufficiently cohesive for individual problems to be tackled. The only other person at the seminars was a research assistant (white, female) who took the process records. The opportunity afforded to compare the teachers' reports of their classes with the process records of the same classes was an unusual one and yielded a wealth of information.

In addition to the research function, one of the prime purposes of these seminars for the teachers (they received inservice graduate credit for attendance at the seminars) was their learning of group dynamics techniques and how to apply them to classroom problems in an effort to stabilize the atmosphere, and to help them gain a primary self-perception as motivated teachers.

Additional Procedures

The researcher met with a few small groups of children from the experimental classes for discussion and play. Some of these sessions were tape recorded, and on others there are process records.

In addition, following from emphasis on the relation between nutrition and general intellectual functioning (20, 24), some inquiry was made into the children's dietary habits.

Chapter 5

Quantitative Results

As indicated in the procedure discussion, both quantitative and qualitative results were obtained from the study. While of course the two types of data are inter-related, for purposes of clarity in report they should be separated, to be recombined in discussion at the conclusion.

Some of the observational categories aimed at quantifying specific variables, while others were directed toward collecting qualitative data about school and classroom atmosphere, community-school interaction, and teachers' social class attitudes and their possible effects on the learning and behavior of the children. In addition, in a study of this complexity dealing with real social situations, there are many observations gathered on repeated occasions, often unanticipated, which are highly consistent and which enrich understanding of the educational process and its social basis. With this in view, some of the anecdotal material as well will be scattered through the following discussion.

The more specific quantitative results will be discussed first.

School Achievement and Retardation

Analysis of achievement data indicates that the experimental group was significantly retarded when compared with the control group, as can be seen in Table 1.

TABLE 1

Median Stanford Achievement Test Scores for Experimental and Control Groups, and Median Test Results

| Score | E Group | C Group | X^s value | P |
|------------|---------|---------|-------------|-------|
| Reading | 3.2 | 4.8 | 28.00 | <.001 |
| Arithmetic | 3.6 | 4.5 | 25.47 | <.001 |
| Total | 3.2 | 4.4 | 31.55 | <.001 |

However, the Stanford Achievement Test is based on national norms: a pupil in the fourth grade should achieve a fourth grade score on the test. Therefore, it is possible to compare both the experimental and control

groups with the national norms and calculate retardation on the basis of this external criterion. These findings, in terms of discrepancy of mean score from national average, are presented in Table 2.

TABLE 2
Retardation of Experimental and Control Groups,
Grouped by Grade,
as Measured by the Stanford Achievement Test

| Grade | Experimental Group | Control Group |
|-------|-----------------------------------|----------------------|
| 4 | 1 yr., 9 mos. (N:26) ^a | 9 mos. (N:64) |
| 5 | 2 yrs. (N:82) | 9 mos. (N:69) |
| 6 | 2 yrs., 1 mo. (N:62) | 1 yr., 3 mos. (N:66) |

^aThe N's will be somewhat variable throughout, because of the variability of the children's absences on days when procedures were administered.

It is seen that both the groups are behind grade-level expectations, and are falling farther behind as they progress in school. These findings are somewhat different from those of another study (35) which showed that although Negro third-grade pupils do slightly poorer than white pupils of that grade, the discrepancy increases as the children go farther in school, until white eighth graders are seen performing at an 8.4 grade level on a reading test, while Negro pupils in the same grade average at the sixth-grade level. In Table 2 there is a more-or-less stable discrepancy between the two groups. However, the differences between the two studies are probably explained by the homogeneity of social class in the present study, and the inclusion of white middle-class children in the other one referred to. In addition, the present study does not tap either the third- or the eighth-grade levels: the anchor points of the other study.

It was possible to administer the Stanford at both the beginning and the end of the school year in the experimental school. Unfortunately, the rate of absence was quite high at the end of the school year, so that only about two-thirds of the group was tested the second time. The teachers indicated that it was the children toward the bottom of the class in achievement who tended to absent themselves most frequently at this time. So it would appear that whatever bias exists in the re-testing data would tend to maximize improvement. According to the standards of the Stanford, one would expect a nine- to twelve-month improvement during the school year. In contrast to this expectation, the range of change in the six experimental classes was from a loss of 0.22 months to a gain of 0.26 months, with the mean change being a gain of .077 months.

It is of particular significance that with more schooling, there is proportionately decreased learning over time. For the moment, if we do not consider the absence of stimulation in the environment of these children, but rather look only at the school *zeitgeist*, we find in the random time-samples of classroom activity that 50 to 80 percent of all classroom time in the experimental

group is devoted to disciplining and various other essentially non-academic tasks.⁴ This is not true of the control group, where similar activity occupied about 30 percent of the class time, at a maximum. Thus, although the experimental and control groups have the same over-all time exposure to school, when the cumulative time is considered, each year there is a greater discrepancy in academic time between the two groups.

Of interest also among achievement variables is the interrelationship for the individual child between reading and arithmetic scores. Since both arithmetic and reading level are measured in terms of grade level achieved according to nationwide norms, the scores should parallel each other: fifth-grade pupils, for example, normally score at 5.0 on both arithmetic and reading. Therefore, the "average" ratio between the two would be 1.0, the ratio being defined as arithmetic achievement score divided by reading achievement score. This ratio, which we called the "A/R ratio" was computed for each child, and when groups are compared, differences in the median ratios are seen. This median ratio was 1.12 for the experimental group (indicating a higher arithmetic score than reading achievement score) and .93 for the control group. The difference between these two values, computed by the median test, is significant at better than the .05 level of confidence. This finding reflects the fact that the experimental group children have an arithmetic average score on the Stanford which is higher than their reading average, while for the control group, the opposite is true. Reading, though emphasized in school for both groups, may represent a motivation arising from specific value systems, while arithmetic involves a concrete grocery-store transaction common to all groups.

Self and Social Variables

General Findings

Having established these findings, concomitant similarities and differences between the experimental and control groups were investigated. The groups were compared on all the variables quantitatively assessed.⁵ These results may be found in Table 3. In order to make these comparisons, the combined distribution of each variable was dichotomized as closely as possible to a 50-50 split. This method (which approximates the median test) allows comparison of both groups as to the percentage above and below the cut-off point on the combined dis-

tribution. Then the *chi-square* test with Yate's correction was used to determine significance. For clarity, the tables report these results in terms of the percentage of each group above the combined median, the value of which is given in the left column.

TABLE 3
Comparison of Experimental and Control Groups
on Self and Social Variables

| Variable | Experimental Group % | Control Group % |
|--|----------------------------|-----------------------|
| Crowding Ratio (more than 1.4 persons per room) | 57 | 59 |
| Broken Home | 55 | * 9 |
| Digit Span Forward (score 6 or higher) | 46 | 49 |
| Digit Span Backward | 39 | * 53 |
| Index of Negative Family Atmosphere (score 11 or higher) | 49 | * 37 |
| Index of Negative Self-Image (score 27 or higher) | 63 | * 35 |

*Differences significant at .05 level or better

On four of the variables compared, the two groups were significantly different. Interestingly, however, the two groups were *not* different on the crowding ratio, which is a fairly sensitive socio-economic indicator. While a majority of both groups comes from very overcrowded living conditions, the children in the experimental group have significantly more broken family backgrounds. The Index of Negative Family Atmosphere and the Index of Negative Self-Image also differentiate between the experimental and control groups. These are scores derived independently from the Sentence Completion Test and reflect the subjects' responses to incomplete sentences dealing with self and family.⁶ In terms, then, of family organization and intactness, the Negro children come from more unfavorable backgrounds, and, further, regard their home environment less favorably than do their white counterparts.

Although as was indicated earlier, and despite the overcrowding, the two groups are not fully comparable in socio-economic class, the family background data are far more disparate than the class backgrounds and thus these findings cannot be explained on a class basis. This is similarly true for the Index of Negative Self-Image, where the discrepancy between experimental and control

4. It may be noted that the 50 percent ratio was generally maintained by the somewhat more authoritative, more directive, and usually more experienced teachers. The children, on the other hand, seemed to be continually asking for greater structure and more discipline, but would accept it only from the consistent teacher whom they knew could not be intimidated. On the teacher-attitude measure, in fact, the most frequent association was, "She's real strict—she's good!"

5. The sociometric measure was omitted here, of course, since it is an intra-class measure and therefore has no significance for inter-group comparison. Also, the figure-drawing measure is excluded because of its apparent invalidity, to be discussed in greater detail later.

6. It should be noted, though, that the Family Atmosphere Index is consistent with the child's reported perceptions of his family, as gathered in the questionnaire dealing with the family's focus on the child.

groups is even greater. Also, the negative self-image of the Negro children cannot be wholly attributed to their more deprived family backgrounds, as the percentages having a negative self-image exceeds both of the family background measures.

Repetition of digits is considered to measure span of attention. In this more school-related variable, repetition of digits forward shows no significant difference between the two groups, but where the child must recall a series of digits and repeat them in *reverse order* (a task often interpreted as more stressful and more difficult) the experimental pupils drop in their performance as compared with the controls. Thus, in a task which requires a measure more of concentration and persistence, the experimental group falls behind the control.

The quantitative digit span results may reflect the observational data to be found in the process records and reaffirmed by the teachers: there is a general absence of persistence on the part of these children when they find a task to be difficult. Time after time, the experimental child would drop a problem posed by the teacher as soon as he met any difficulty in attempting to solve it. In questioning after, the child typically would respond "so what?" or "who cares?" or "what does it matter?" In the control group, there was an obvious competitive spirit, with a verbalized anticipation of "reward" for a correct response. In general, this anticipation was only infrequently present in the experimental group, and was not consistently or meaningfully reinforced by the teachers. It may well be that the cultural deprivation (or, as might be more descriptive, the stimulus deprivation) of the home and its general instability does not for the lower-class Negro child, create an expectation of future rewards for present activity.

This inconsistency between the lack of internalized reward anticipations on the part of the Negro child, and his teachers' expectations that he does have such anticipations, reflect the disharmony between the social environment of the home and the middle-class oriented demands of the school. This is reminiscent of Florence Kluckhohn's (22) description of Negro lower-class culture as being "present" and "past-present" in cognitive orientation.

Of the major socialization foci for the child, the most potent agent is the home and the family. Later on, the efficacy of the school and the larger environment increases. However, there is some evidence, in drop-out statistics and the like, that the school never does achieve much of its potential socialization influence for the children included in the experimental group. This presumably indicates that a poor home experience, predisposes the child to be *less*, rather than more, easily reached by the school as a socialization institution. The problem here is more than a simple disharmony between the implicit value system of the home, and the explicit values of the school. Rather, there seems to be a complete absence of preparation for the school experience. It is not that the parents are "anti-school," but that the rewards of schooling are foreign to their experiences. This would imply that the school cannot presuppose that the child

comes to it acculturated to its purposes.

For these reasons, the highly significant broken-home comparison between the experimental and control groups is of particular importance, and warrants full analysis, because it is reasonable to assume that a broken home is a poorer socializing agent than is an intact home.

When the experimental and control groups are combined and the children from broken homes are compared with those from intact homes, the broken-home group is found to be significantly inferior in scholastic performance.

Little emphasis can be placed on this finding in the current study, however, because of the exceedingly low N (15) in the control group broken-home category. Whether this is a stable and very significant finding or simply an artifact of the present sample cannot be determined by these data. What could be—and was—determined however, by three series of median tests, was that the patterning of significant differences for broken- versus intact-home comparisons for the total group was identical with the patterning for comparison of the broken-home children in the experimental group with the intact-home subjects of the control group. (The reverse—control-broken vs. experimental-intact—yielded no significance for any comparison.) Apparently, then, the differences between the broken- and intact-home groups for the total population are actually contributed by the broken-home experimental group and the intact-home control group categories, and therefore the total group comparisons using this dichotomy have questionable validity.

When differences between the experimental and control groups within the broken-home category are tested, two of the three Stanford scores are significantly lower for the Negro group. (The arithmetic subtest average does not differentiate between the Negro and white children.) However, when differences between the Negro and white children in the intact-home category are assessed, there are also significant differences in achievement in favor of the control group. These results are presented in Table 4. (The intact-home category results are presented because the low control group N in the broken-home category renders those results statistically less reliable. It should be noted, however, that the only differences in significant items between the broken-home and the intact-home comparisons were in the arithmetic subtest and Negative Family Atmosphere variables, both of which did not achieve significance in the broken-home group.)

From these results it is apparent that the broken-home factor is not the basic determinant of the experimental-control group differences.

To investigate further the differential effect of broken and intact homes, the experimental group was divided on this basis and the differences assessed. These results are presented in Table 5.

Interestingly, intact homes are more crowded than broken ones, although the children from intact homes do better in scholastic achievement. This can be quite important, as it seems to indicate that crowding in the home is less likely to have a negative effect on scholastic

TABLE 4
Comparison of Experimental and Control Group
Children from Intact Homes

| Variable | Experimental Group % | Control Group % |
|--|----------------------------|-----------------------|
| Crowding Ratio (more than 1.3 persons per room) | 45 | 52 |
| Digit Span Forward (score 6 or more) | 52 | 49 |
| Digit Span Backward (score 4 or more) | 41 | 53 |
| Stanford Test Total (score 4.2 or higher) | 28 * | 57 |
| Stanford Reading Subtest (score 4.7 or higher) | 30 * | 55 |
| Stanford Arithmetic Subtest (score 4.4 or higher) | 31 * | 58 |
| A/R Ratio (score 1.0 or higher) | 67 | 49 |
| Index of Negative Family Atmosphere (score 11 or higher) | 57 * | 37 |
| Index of Negative Self-Image | 67 | 43 |

*Differences significant at .05 level or better

achievement than is the fact of coming from a broken family background. This was further tested by examining differences between high and low achievers, and this finding was confirmed. Apparently, *who* lives in the home is more important than *how many*. As the broken home was presumed to be the poorer agent of socialization, so could it be expected that in the intact home there would be relatively more stability and focusing on the child, and perhaps some awareness and concern for his school performance. Hence it is surprising to find no differences on the indices of Negative Family Atmosphere or Negative Self-Image although the latter variable approaches significance. It might well be that these factors are most strongly influenced by the larger environment, or, again, that they are so massive in the Negro group that their influence exceeds the effect produced by home conditions. While the broken home is more likely to be receiving its income from public assistance, the intact home has very little additional economic security. Frequently both parents are working, and the father holds down two jobs. A more psychological reason for the absence of difference in perception of the home atmosphere might be that children from the intact homes have higher expectations of their parents which the parents can meet only inconsistently under the conditions of great stress in their lives, thereby increasing the frustration and dissatisfaction of their children.

Considering that those Negro children who come from broken homes have a lower level of academic per-

TABLE 5
Comparison of Experimental Group Children
from Broken and Intact Homes

| Variable | Broken Home % | Intact Home - % |
|--|---------------------|-----------------------|
| Crowding Ratio (more than 1.4 persons per room) | 42 * | 60 |
| Digit Span Forward (score 6 or higher) | 38 | 52 |
| Digit Span Backward (score 4 or higher) | 38 | 41 |
| Stanford Test Total (score 2.8 or higher) | 38 * | 65 |
| Stanford Reading Subtest (score 2.6 or higher) | 40 * | 61 |
| Stanford Arithmetic Subtest (score 3.5 or higher) | 41 * | 64 |
| A/R Ratio (score 1.1 or higher) | 54 | 55 |
| Index of Negative Family Atmosphere (score 12 or higher) | 45 | 41 |
| Index of Negative Self-Image (score 29 or higher) | 53 | 40 |
| Popularity in Class (top half of class) | 58 | 45 |

*Difference significant at .05 level or better.

formance than those who come from intact families, but that there is no gross difference in degree of negative self-image between these two categories, it must be inferred that academic performance has little effect on self-image for these children, and that in fact the school experience exercises little influence on developing self-attitudes.

The general assumption can be made that, in order to feel comfortable in, and cope effectively with, both the subculture and the larger culture, it is necessary for the child to be developing an image of himself which allows him to establish some positive expectations as to his present abilities and potential future achievement. Thus, the concept of self of the minority group child must be one of the first factors studied in evaluating the effects of segregation, cultural separation, and inferior social status on his personality development and general socialization, including school performance.

In all comparisons made with the data reported here, the Negro children had significantly more negative self-images than did the white children. That this was not artifactually caused simply by a lower achievement level (also a universal finding) is shown by the lack of difference in self-image when experimental and control intra-group comparisons are made, including comparisons

between high and low achievers within the groups. Further, in the cluster analysis to be reported here, a negative self-image is seen to relate strongly to being Negro.

Some examples make this association even more revealing. In completion of the sentence "If someone makes fun of me", 47 percent of all the white children respond with the suggestion of some kind of counteraction, while only 6 percent of the Negro children respond in this way. In completion of the sentence "When I look in the mirror I", the most frequent answer in both groups (about 50 percent in the white, 30 percent in the Negro) is "I see myself." But 20 percent of the Negro boys give such dysphoric responses as "I cry," "am sad," "look ugly," and the like, while such responses occur in only 9 percent of the white boys.

From these examples it is also clear that a relatively high proportion of the white lower-class children in this sample have negative self-responses, but not nearly as many as in the Negro group. In general, the Negro group tends to be more passive, more fearful, and more dysphoric than the white. Although the Negro children do show less aggressive content in their responses, it is of great interest that, when asked to complete the sentence "If I could be an animal I would most like to be", 31 percent identified with an aggressive animal as compared with only 16 percent of the white children. Although in general, boys of both groups are significantly more likely to identify with a highly aggressive animal (40 percent) than are girls (12 percent), more Negro girls give such responses than do white girls (21 percent to 3 percent). On the other extreme, 23 percent of the white children, while only 9 percent of the Negro, named animals which they associated with warm and positive contact.

It is highly unlikely that any one factor could account for the poor performance and deprived psychological state of the experimental group; it is more realistic to see the urban Negro child as subject to many influences which converge on him, all contributing to the effects noted. Among these influences certainly not the least is his sensing that the larger society views him as inferior and *expects* inferior performance from him, as evidenced by the general denial to him of realistic vertical mobility possibilities. Under these conditions, it is understandable that the Negro child—the experimental group in the present study—would tend strongly to question his own competencies, and in so questioning would be acting largely as others expect him to act. This is an example of what Merton has called the "self-fulfilling prophecy"—the very expectation itself is a cause of its fulfillment. The middle-class orientation of the school helps little in recognizing the realities of the problem, and contributes little toward the development of value systems and activities directed toward breaking this circular dynamic process. With all this, however, it is necessary not to lose sight of the fact that objective depriving circumstances such as a broken home and family instability, contribute to the poorer performance and self-image noted, even though these factors may not be considered the primary ones.

Within a given class or racial group, with its various

cultural components, there are usual differences in the socializing experiences of the two sexes. To some extent, these experiences of course reflect the larger and more modal attitudes of the culture toward sex roles, but since the sub-group has its own history, semi-isolation, and social pressures, sex role delineations often come in conflict, or are incongruent, with these role expectations of the larger culture. For example, the Negro man does not have the same opportunities as the white for status mobility, job security, or individual power expression in his work relationships. These limitations inherent in the class position of the Negro man influence the developing system of self-identification of the Negro boy, his motivation, and his ability to operate on a delayed reward system. Considering the high proportion of broken homes among the Negro group, and the fact that most of the homes are broken by virtue of the absence of the father, the Negro boy very often has no close male adult with whom to identify. Further, even in an intact family, the Negro boy does not generally have the opportunity to identify with a male figure who has had a history of reinforcement for accomplishment.

In contrast, the majority of Negro girls has an adult female with whom to identify, and the dominant role that female subserves is not too inconsistent with the role prescription of the larger culture, i. e., housewife and mother. Further, many higher-status positions frequently aspired to by lower-class women are open to Negro women as well as white: e. g., nurse and secretary.

For these reasons, sex differentials in the present data were carefully evaluated.

There is educational evidence that in the early school years, girls on the average do better than boys in certain school subjects, especially reading. However, in the current study, there are greater sex differences in the experimental group than in the control group, and these differences are found in many areas in addition to reading. The results of the sex comparisons within the experimental group are presented in Table 6.

Among the Negro pupils, the girls outperform boys in both reading and arithmetic, as well as on the Stanford test total score. Girls often demonstrate superior span of attention, less often report a negative family atmosphere, and are much more popular with their classmates. Of special interest is the fact that the A/R ratio indicates that the boys are more frequently superior in arithmetic, as compared to their reading average, than are the girls. In the control group, only one comparison is statistically significant (girls do better than boys in reading achievement) but the A/R ratio also shows a relatively large difference, even though it is not quite significant statistically at the level accepted for this analysis. Thus there seems to be some general sex difference operative in regard to reading achievement and in the relationship between arithmetic and reading scores. All the other sex differences found in the experimental group, however, are exclusive to that group, and on all of them it is the Negro boys who are found to be significantly poorer than the girls.

A rather interesting difference found between the

TABLE 6
Comparison of Boys and Girls within the
Experimental Group

| <i>Variable</i> | <i>Boys percent</i> | | <i>Girls percent</i> |
|--|-------------------------|---|--------------------------|
| Crowding Ratio (more than 1.4 persons per room) | 56 | | 54 |
| Digit Span Forward (score 6 or higher) | 33 | * | 55 |
| Digit Span Backward (score 4 or higher) | 33 | | 43 |
| Stanford Test Total (score 3.3 or higher) | 32 | * | 62 |
| Stanford Reading Subtest (score 3.2 or higher) | 35 | * | 63 |
| Stanford Arithmetic Subtest (score 3.8 or higher) | 41 | * | 63 |
| A/R Ratio (score 1.1 or higher) | 68 | * | 43 |
| Index of Negative Family Atmosphere (score 11 or higher) | 58 | * | 42 |
| Index of Negative Self-Image (score 29 or higher) | 47 | * | 42 |
| Popularity in Class (top half of class) | 36 | * | 58 |

* Difference significant at .05 level of confidence or better.

experimental males and females is in the Digit Span Test: an attention-retention measure. Here the boys do significantly more poorly on the forward digits, but, although they also score lower on backward digits, this latter difference does not meet the significance criterion. This finding might indicate that, although both the boys and girls have difficulty with a harder and more stressful situation (digits backward was significant between the total experimental and control groups), the girls respond much better to a simpler test of attention. (Again, there was no significant difference on this comparison between the control group boys and girls.) This difference is stressed here because of the importance of attention for any academic learning and therefore the potential contribution of lowered attentivity to the achievement differences found.

When the control and experimental group males are compared with each other, and when the females of the two groups are compared, the resulting patterns of significant differences are similar to those previously found in the other comparisons of the control and experimental groups. These differences are similar but minimized when the control group boys are compared to the experimental group girls, and they are maximized in the comparison between the control group girls and the experimental group boys. Thus the Negro males' performance contributes the most to the differences between the experi-

mental and control groups. It is important, though, to remember that all four subgroups are behind the national norms in school achievement, with the white girls being the least behind.

In these sex comparisons, the sociometric analysis shows significance for the first time. A determinant of this is that, although boys list girls among their preferences, very few girls list boys. Questioning on this revealed that the girls do not list the boys because they "are bad," "play tricks on us," "make the teacher angry," and the like. Process data indicate that the girls, in general, are less mischievous, and it was usually the boys who would initiate a period of classroom disruption. In most classes there seemed to be a core of relatively well-behaved girls who were the teachers' favorites, and there was a tendency for these girls to be given high sociometric ratings. Also, behaviorally the female subgroups formed tighter and more permanent alliances than did the male. Again the process material suggests that this might be a defensive reaction against a core of the boys who were literally continually pushing, kicking, and playing tricks on the girls.

The finding of strong sex differences in the current report seems to indicate that, within the social processes and psychological reactions discussed earlier, there is a selective factor operative which determines that the Negro boy receives the brunt of the negative implications of his situation, while the Negro girl is possibly more removed from these effects.

The relative position of the Negro boy seen in these data necessitates an examination of the social and cultural context of his life. As was indicated previously, it seems likely that the social role expectations for the Negro girl are less in conflict with middle-class value systems, presenting her with choices which are both more realistic and more acceptable than those offered to the male. In the great majority of the broken homes it is the father who is absent, and consequently the only stable sex role is the female one. Even in intact homes, the Negro family tends to be matriarchal (13).

Thus it is the Negro girl who is far more frequently provided with an identification model, while the boy is often left with no strong personal male figure with whom to identify. The impersonal ones, from TV, movies, and other mass media, are nearly invariably white and middle class, with the exception of a few sports and entertainment figures. Interestingly, during Negro History Week, the process records showed a tremendous spurt of interest on the part of the Negro boys, including those who were real behavior problems, with a number of tussles over who would take the parts in skits of such figures as Carver, Turner, and Booker T. Washington. Also, the one male teacher in the experimental classes—a strong Negro man—had the most control over his class, and received considerable respect from the boys.

In addition to this special handicap of the Negro boy—i. e., lack of a strong male with whom to identify—there is the particularly dismal aspect of his future relative to competition for jobs. In our culture a man is

expected to achieve, to provide, to compete, and this necessarily involves more contact with the larger society. Whatever handicaps the Negro boy starts with are likely to be increased by his contact with the majority group as a minority group member with consequent lower status. We really cannot calculate the full extent of the deleterious effects on personality development of the continual reaffirmation of inferior status, segregation and quasi-segregation, and discrimination. These realities are especially met with in the job area, where in our upward mobile society the Negro is most often forced to remain stationary. These effects are somewhat cushioned for the Negro girl by her more definitely defined and attainable roles within the family and by the lesser importance of occupational prestige in work outside the home. It also cannot be overlooked that the female role within the family is not only attainable for the Negro female, but also is a role prescribed and valued by the larger society; hence she is able to aspire to a socially valued goal.

The data on occupational aspirations are consistent with this formulation. Boys in both groups tend to aspire to very unlikely jobs—about a third want high-prestige professions such as medicine or engineering. In contrast, the most popular job among the girls is nursing, also high in prestige but more realistic.

When aspirations of the experimental and control group boys are compared, there are no significant differences between the two groups. These comparisons are presented in Table 7. Both white and Negro lower-class boys of this age equally tend to aspire in an unrealistic way to the high-prestige professions.

It is surprising that more of the Negro boys do not identify more strongly with, and aspire to, sports careers. Perhaps the successful Negro sports figures are too remote to these isolated lower-class children. It would be most interesting to determine if such identifications are more frequent in a sample of middle-class Negro boys. (Of course, class differences would be informative on all levels of the study.)

When the occupational aspirations of the two groups of girls are compared, the differences are of such magnitude that the likelihood of their being due to chance fluctuations is less than one in a thousand. Table 8 shows these comparisons.

The great majority of the girls indicated much more realistic occupational aspirations. The most popular job in both groups is that of nurse. Among the white girls, housewife (or mother), teacher, and movie star are the next three most popular occupations, with 12 percent or more giving each of these as her wished-for occupation. The pattern for Negro girls is markedly different, with white-collar jobs and teaching being the only two other occupations chosen by more than 12 percent of the girls.

TABLE 7
Comparison of Occupational Aspirations
of Experimental and Control Group Boys

| <i>Occupational Choice Category</i> | <i>Experimental Group Percent</i> | <i>Control Group Percent</i> | <i>Total Group Percent</i> |
|--|-----------------------------------|------------------------------|----------------------------|
| High prestige profession (doctor, lawyer, etc.) | 26 | 38 | 34 |
| Sports (baseball player, prize fighter, etc.) | 13 | 16 | 15 |
| Policeman or fireman | 11 | 14 | 13 |
| Skilled or semi-skilled laborer | 13 | 8 | 10 |
| Pilot, air force | 5 | 8 | 7 |
| Army, navy, marines | 11 | 4 | 7 |
| Entertainment (movie star, actor, etc.) | 8 | 1 | 4 |
| Music or art (artist, trumpet player, etc.) | 3 | 3 | 3 |
| Markedly childish response (cowboy, Superman) | 3 | 2 | 3 |
| Other occupations (druggist, farmer, etc.) | 2 | 3 | 3 |
| Non-occupational response (a man, rich, etc.) | 5 | 2 | 3 |

Chi-square=13.30

df=10

P=>.20<.30

The fact that the experimental group here chooses white-collar jobs apparently at the expense of both the glamorous (movie star) and mundane (housewife) categories probably reflects the different social conditions under which the two groups live. For Negro women, often consigned to domestic-type work, white-collar jobs enjoy considerably more prestige than among their white counterparts. Movie star, while an unrealistic aspiration for both groups, would be even farther afield for a Negro girl in view of the almost 100 percent white ranks in that occupation nationally. As was noted earlier, in the Negro family the mother is likely to be the strongest figure, but she is also very likely to work outside the home. Hence, not only is this less a full time occupation for the Negro girl (and therefore perhaps less likely to be picked as an occupational choice), but also it is one which will involve much more work, responsibility, and hardship for the Negro than for the white woman.

TABLE 8

Comparison of Occupational Aspirations
of Experimental and Control Group Girls

| Occupational Choice Category | Experimental | Control | Total |
|---|------------------|------------------|------------------|
| | Group Percent | Group Percent | Group Percent |
| Nurse | 35 | 25 | 30 |
| *White Collar (Secretary, bookkeeper, etc.) | 25 | 4 | 14 |
| Teacher | 13 | 13 | 13 |
| Dancer | 10 | 13 | 12 |
| *Housewife, mother | 3 | 16 | 10 |
| *Movie star, actress | 4 | 12 | 8 |
| Other (Hairdresser, fashion designer, etc.) | 7 | 10 | 8 |
| Musician, singer | 1 | 4 | 3 |
| Other self-display (model, ice skater, etc.) | 0 | 4 | 2 |
| Non-occupational response (myself, etc.) | 3 | 1 | 2 |

$Chi-square=28.25$

$df=9$

$P=<.001$

*Individual categories significantly different at the .05 level or better.

Chapter 6

Interrelationships Among Variables: Cluster Analysis

Since the study was suggestive of the importance of the interrelationships among social, personality, and school achievement factors, further treatment of the data to analyze these interrelationships was indicated, as such investigation could be important to an understanding of the role of lower-class status and of segregated and semi-segregated living in the socializing and teaching functions of the school.

For this purpose, Tryon's method of cluster analysis was used (37). This is a method of analyzing interrelationships among a series of variables, with the aim of delineating groups of associated variables. Following Tryon's procedure, it is possible to discover sets of variables with similar *patterns* (profiles) of correlation; such a set of variables is called a *cluster*. Tetrachoric correlations are used in this method of analysis.

In the present analysis, three tetrachoric correlational matrices were computed. For each matrix continuous variables were dichotomized as closely as possible to a 50-50 split; the attribute data were already dichotomous. Twenty-one variables were used in one or more of the matrices, and the numerical designation of each one remained constant, even when matrix order was changed. These variables are listed in Table 9.

TABLE 9

Variables Used in Correlational
Matrices for Cluster Analysis

1. Negro-white^a
2. Broken home—intact home
3. Negative self-image^b
4. Male—female
5. Figure-drawing score. A high score indicates poorer adjustment as measured in this technique.
6. Digit Span Forward
7. Digit Span Backward
8. Reading (for sex and class). A high score on this variable indicates that the pupil was in the upper half of his (or her) sex group in his class on the Reading Subtest. It thus measures relative reading performance apart from differences associated with sex, race, school or class.
9. Arithmetic (for sex and class). Defined as variable 8, but for performance on Arithmetic Subtest.
10. Stanford Achievement Test (for sex and class). Defined as variables 8 and 9, but for the total score on the Stanford.
11. Popular in class.
12. Crowded home.
13. Reading (within grade). A high score on this variable indicates that the pupil was in the upper half of the combined experimental and control group for *his grade* on the Reading Subtest. It therefore measures relative reading performance for grade level in the combined sample.
14. Arithmetic (within grade). Defined as for variable 13, but for performance on the Arithmetic Subtest.
15. Stanford Achievement Test (within grade). Defined as for variables 13 and 14, but for total performance on the Stanford Achievement Test.
16. Low A/R Ratio.
17. Negative Family Atmosphere.
18. Reading acceleration. Beginning and end of term scores on the Stanford and its subtests were available for the experimental group. Each child was scored as to number of months' improvement (or decline) on each of these measures. A high score for variable 18 indicates that the child was in the upper half of the class in improvement in Reading Subtest score.
19. Arithmetic acceleration. Defined as for variable 18, but based on change in Arithmetic Subtest scores.
20. Stanford Total Test acceleration. Defined as for variables 18 and 19, but based on change in total Stanford score.

21. Born in North—born in South. Variable assessed only for experimental group.

The first seventeen variables were used in the first analysis, and the correlations computed from this are organized as Matrix A (see Figure 1).

Four clusters, designated A, B, C, and D, and one nonclustered variable emerge from this analysis.

Cluster A includes variables 1, 2, and 3, and supports some of the more important findings reported earlier. It indicates that coming from a broken home and having a negative self-image is a syndrome associated

with being Negro. The high correlations among all three characteristics make it possible to view them as a *syndrome*, and to consider them functionally related to one another. Figure 2 shows the correlation profile of each of these variables.

*For dichotomous variables, a positive correlation indicates association with the first-named category.

^bFor continuous variables a positive correlation indicates association with a high score on the variable, e.g., for variable 3 a positive correlation would mean association with a high negative self-image score.

Figure 1

MATRIX A: (decimals omitted)
TETRACHORIC CORRELATIONS BASED ON COMBINED SAMPLE OF NEGRO AND WHITE CHILDREN

| VARIABLE | 1 | 2 | 3 | A | 4 | 5 | B | 6 | 7 | C | 8 | 9 | 10 | 11 | 12 | D | 13 | 14 | 15 | 16 | E | 17 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1. NEGRO | | .76 | .43 | .60 | -.11 | .21 | .05 | -.06 | -.23 | -.15 | .02 | .01 | .02 | -.04 | .03 | .02 | -.61 | -.67 | -.68 | -.28 | -.64 | .19 |
| 2. BROKEN HOME | .76 | | .62 | .64 | -.09 | .06 | -.02 | -.09 | -.15 | -.12 | -.12 | .09 | .05 | .15 | .12 | .08 | -.40 | -.43 | -.43 | -.44 | -.42 | .17 |
| 3. NEGATIVE SELF-IMAGE | .43 | .52 | | .48 | -.03 | .17 | .07 | -.02 | -.10 | -.06 | .04 | -.04 | .01 | -.15 | -.10 | -.04 | -.30 | -.24 | -.25 | -.22 | -.25 | .14 |
| CLUSTER A: MEDIANS | .60 | .64 | .48 | | -.09 | .17 | | -.06 | -.15 | | .01 | .01 | .02 | -.04 | .03 | | .40 | .43 | .43 | .28 | | .17 |
| 4. MALE | -.11 | -.09 | -.03 | -.09 | | .33 | .33 | -.10 | -.07 | -.09 | .03 | -.06 | .04 | -.18 | -.11 | -.06 | -.17 | .03 | -.14 | .21 | -.16 | .09 |
| 5. HIGH FIG DRAWING SCORE | .21 | .06 | .17 | .17 | .33 | | .33 | -.28 | -.21 | -.25 | -.18 | -.08 | -.04 | -.25 | -.02 | -.08 | -.20 | -.23 | -.23 | -.11 | -.22 | .08 |
| CLUSTER B: MEDIANS | .05 | -.02 | .07 | | .33 | .33 | | -.19 | -.14 | | -.08 | -.07 | .00 | .22 | -.07 | | .19 | .10 | .19 | .16 | | .09 |
| 6. DIGIT SPAN: FORWARD | -.06 | -.09 | -.02 | -.06 | -.10 | -.28 | -.19 | | .40 | .40 | .17 | .25 | .18 | .09 | -.15 | .17 | .21 | .13 | .31 | .03 | .17 | .13 |
| 7. DIGIT SPAN: BACKWARD | -.23 | -.15 | -.10 | -.15 | -.07 | -.21 | -.14 | .40 | | .40 | .19 | .40 | .27 | -.02 | .10 | .19 | .37 | .42 | .46 | .12 | .40 | .03 |
| CLUSTER C: MEDIANS | -.15 | -.12 | -.08 | | -.09 | .25 | | .40 | .40 | | .18 | .33 | .23 | .04 | .03 | | .29 | .28 | .39 | .08 | | .08 |
| 8. READING (FOR SEX AND CLASS) | .02 | -.12 | .01 | .01 | .03 | -.18 | -.08 | .17 | .19 | .18 | | .52 | .86 | .29 | .30 | .41 | .61 | .25 | .45 | .55 | .50 | -.04 |
| 9. ARITHMETIC (FOR SEX AND CLASS) | .01 | .08 | -.04 | .01 | -.06 | -.08 | -.07 | .25 | .40 | .33 | .52 | | .78 | .31 | .22 | .42 | .31 | .66 | .43 | -.22 | .37 | .06 |
| 10. S.A.T. (FOR SEX AND CLASS) | .02 | .05 | .01 | .02 | .04 | -.04 | .00 | .18 | .27 | .23 | .86 | .78 | | .26 | .16 | .52 | .58 | .44 | .54 | .28 | .49 | -.07 |
| 11. POPULAR IN CLASS | -.04 | .15 | -.15 | -.04 | -.18 | -.25 | -.22 | .09 | -.02 | .04 | .29 | .31 | .26 | | .10 | .28 | .15 | .23 | .16 | .00 | .16 | -.04 |
| 12. UNCROWDED HOME | .03 | .12 | -.10 | .03 | -.11 | -.02 | -.07 | -.15 | .10 | -.03 | .30 | .22 | .16 | .10 | | .19 | .12 | .11 | .16 | .18 | .14 | .08 |
| CLUSTER D: MEDIANS | .02 | .08 | .04 | | -.06 | .08 | | .17 | .19 | | .41 | .42 | .52 | .28 | .19 | | .31 | .25 | .43 | .18 | | .04 |
| 13. READING (WITHIN GRADE) | -.61 | -.40 | -.30 | -.40 | -.17 | -.20 | -.19 | .21 | .37 | .29 | .61 | .81 | .58 | .15 | .12 | .31 | | .42 | .95 | .76 | .76 | -.18 |
| 14. ARITHMETIC (WITHIN GRADE) | -.67 | -.43 | -.24 | -.43 | .03 | -.23 | -.10 | .13 | .42 | .28 | .25 | .66 | .44 | .23 | .11 | .25 | .42 | | .90 | .17 | .42 | -.23 |
| 15. S.A.T. (WITHIN GRADE) | -.68 | -.43 | -.25 | -.43 | -.14 | -.23 | -.19 | .31 | .46 | .39 | .45 | .43 | .59 | .16 | .16 | .43 | .95 | .90 | | .56 | .90 | -.18 |
| 16. LOW A/R RATIO | -.28 | -.41 | -.22 | -.28 | -.21 | -.11 | -.16 | .03 | .12 | .08 | .55 | -.22 | .28 | .00 | .16 | .18 | .76 | .17 | .58 | | .56 | -.11 |
| CLUSTER E: MEDIANS | -.64 | -.42 | -.25 | | -.16 | -.22 | | .17 | .40 | | .50 | .37 | .19 | .16 | .14 | | .76 | .42 | .90 | .56 | | .18 |
| 17. NEGATIVE FAMILY ATMOSPHERE | .19 | .17 | .14 | .17 | .09 | .08 | .09 | .13 | .03 | .08 | -.01 | .05 | -.07 | -.09 | .08 | -.01 | -.18 | -.23 | -.18 | -.11 | -.18 | |

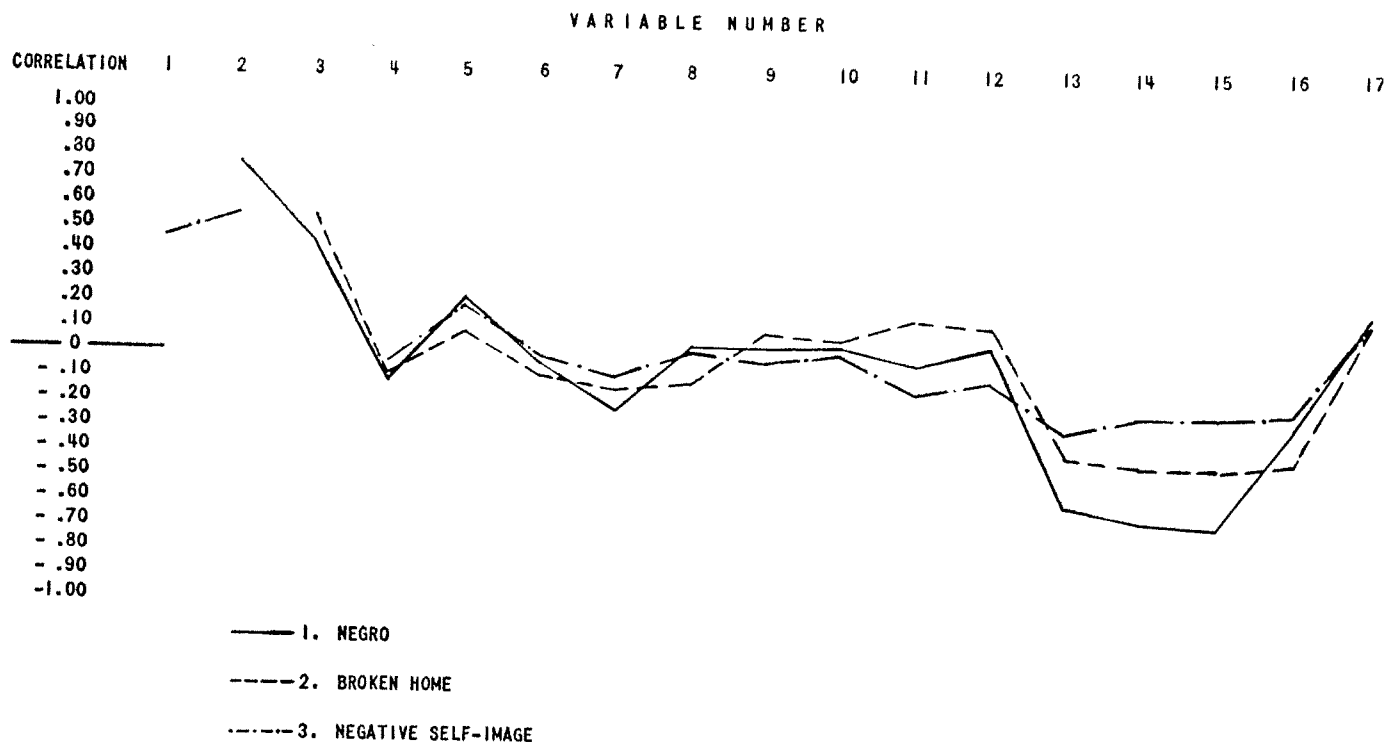
Inspection of the median correlations between the components of Cluster A and the other variables reveals that the syndrome is *not* related to digit-span ability or crowding in the home, and is only slightly correlated with negative family atmosphere. However, there is a strong

negative correlation between Cluster A and scholastic performance within grade (Cluster E), which will be further discussed later.

Cluster B includes variables 4 and 5, and indicates a close relationship between maleness and a high figure

Figure 2

Specific Profiles of the Variables Composing Cluster "A" in Matrix A (combined samples)



drawing score. The patterns of correlation of these two variables are so similar that apparently what was being differentiated by the judges was boys from girls rather than better from poorer adjustment. Although adjustment criteria were used, the differences in figure drawings between boys and girls, in both the experimental and control groups, are so great that they obscure differences in individual adjustment, as measured by the criteria.⁷ For example, this so-called maladjustment score has only a slight correlation with negative self-image. Apart from maleness, its highest correlations are with poor digit span forward, lack of popularity, and poor scholastic performance within grade level. However, these factors are also related to maleness, so that a reasonable supposition from the data is that figure drawing score is basically related to sex rather than to the other variables. Thus the figure drawing is not considered a valid measure to be used in interpretation of the data, and it has been excluded from the comparisons discussed earlier in this report. Apart from the figure drawing score, the highest correlation of maleness is with a high A/R ratio, which has been previ-

7. The drawings were rated by three competent clinicians, experienced in the clinical use of drawings. A specific rating scale was used, relating to the adequacy of the drawing and its import for personal adjustment. There was high reliability among the judges.

ously discussed.

The two digit-span variables (numbers 6 and 7) comprise Cluster C. This is an expected finding, and it is also not surprising that digit span ability is correlated with arithmetic performance within class and sex group. It also tends to correlate highly with good academic performance within grade, but not with the A/R ratio.

Cluster D consists of the three academic achievement measures (apart from class and sex differences), popularity within the class, and coming from a relatively uncrowded home (variables 8 through 12). The three performance measures tend to occur together as a syndrome, while the other two variables in the cluster are related to the syndrome, but have low correlations with each other. It is significant that coming from an uncrowded home is related to better reading and arithmetic relative to other children of the same sex in the same class. It might be that this comparatively good performance is a factor making for popularity.

A syndrome of performance variables composes Cluster E: good total score on the Stanford for grade level, high scores on reading and arithmetic subtests for grade, and a low A/R ratio (variables 13 through 16). Inspection of the median correlations of this cluster shows that it is related to good performance on digits backwards

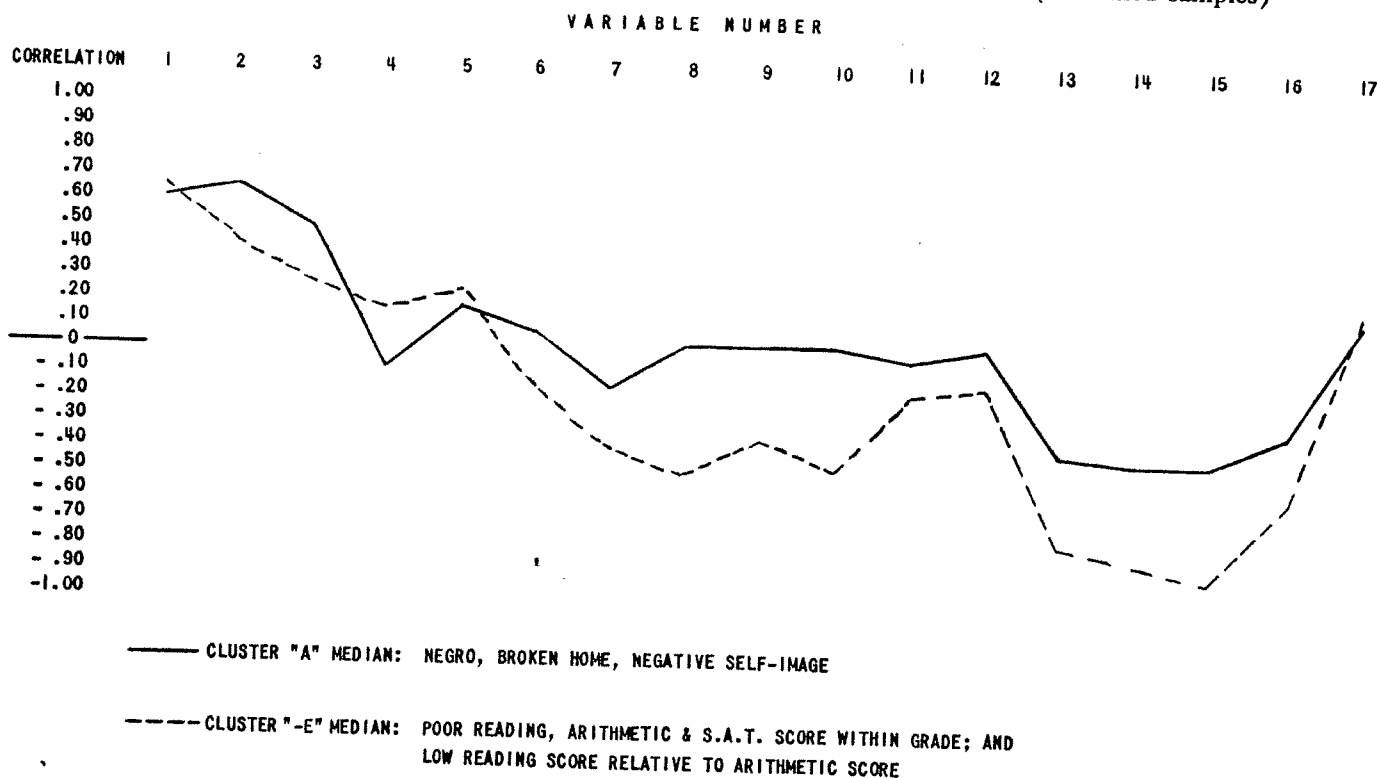
and, as expected, to good academic performance for sex group within class. The matrix also shows that the component variables of Cluster A have high negative correlations with Cluster E, indicating that there is a general syndrome of being Negro, coming from a broken home, having a negative self-image, doing poorly for grade in academic achievement, and performing at a lower level in reading than arithmetic, Figure 3 shows these results graphically, using Cluster A and the inverse correlations for Cluster E (referred to as "-E" to indicate inversion).

firmed some of the major findings based on the earlier analysis.

Graphically, it can be seen that the cluster comprising being Negro, coming from a broken home, and having a negative self-image is related to poor achievement when measured *within grade*. Now, the within-grade measure refers to performance measured across experimental and control groups. Thus this analysis confirms also that the experimental group does more poorly on achievement measures than the control group. However,

Figure 3

Median Correlation Profiles of Cluster "A" and Cluster "-E" in Matrix A (combined samples)



The combined effect of the Cluster A variables is probably a major contributor to the differences found between the performance levels of lower-class white and Negro pupils.

Although variable 17, Negative Family Atmosphere, does not fall in any cluster, and its correlations with other individual variables are not sufficiently high to permit definite interpretation, nevertheless the fact that its correlation with Cluster A is a positive one (.17) and with Cluster E a negative one of about the same magnitude (-.18) should be noted. Its highest positive correlation with a single variable is .19 with being Negro, and its greatest negative one is -.23 with arithmetic score within grade.

In general, then, this first cluster analysis has con-

Matrix A includes another set of achievement measures: variables 8, 9, and 10, which refer to achievement within sex and class. These are part of Cluster D. While, as would be expected, these achievement measures correlate with the within-grade achievement measures, they *do not* correlate with Cluster A: being Negro, coming from a broken home, and having a negative self-image. Since the "within sex and class" achievement measures eliminate experimental-control group differences, they may be seen as more individually determined, as opposed to group-determined. Thus the lack of relationship between these achievement measures and variables 2 and 3 would indicate that factors of coming from a broken home and having a negative self-image are negatively operative on achievement *only* when achievement measures are used

which include experimental-control group differences. This finding is of particular importance as it indicates that broken home and negative self-image are not related to *individual* achievement levels, or, if they are, that these individual differences are small enough to be completely obscured by the magnitude of group differences. This suggests again the singular importance for school achievement of being Negro and being subject to all the environmental disabilities associated with lower-class minority group life.

It is important to note here too that variable 17, negative family atmosphere, has a low correlation with Cluster A (the syndrome associated with being Negro), so that it is not possible from these data to blame the

negative self-image and poor school achievement on a negative atmosphere in the family. It is also interesting to note that negative family atmosphere and broken-home status are not highly correlated. (This is not too surprising, since the broken home may reflect the removal of a source of friction.) Thus one must again conclude that it is the objective social conditions which are associated with poor school achievement, rather than the more specific individual and familial factors, although these last, in turn, are of course influenced by the objective life conditions.

Further to explore the associations *within* the experimental group, another cluster analysis was done, using data *only* from this group. The results of this second

Figure 4

(decimals omitted)

MATRIX B:
TETRACHRIC CORRELATIONS BASED ON NEGRO SAMPLE ONLY

| VARIABLE | 8 | 9 | 10 | A | 13 | 19 | 20 | B | -17 | 11 | 2 | C | 6 | 7 | D | -5 | -4 | 16 | E | 12 | 21 | -3 |
|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 8. READING (FOR SEX AND CLASS) | | 54 | 90 | 75 | 23 | 03 | 15 | 15 | 06 | 26 | 00 | 06 | 25 | 34 | 30 | 26 | -06 | 63 | 26 | 40 | 29 | -09 |
| 9. ARITHMETIC (FOR SEX AND CLASS) | 59 | | 76 | 68 | -04 | -07 | -11 | -07 | 33 | 37 | 07 | 33 | 26 | 36 | 31 | 23 | 08 | 11 | 11 | 36 | 43 | -01 |
| 10. S.A.T. (FOR SEX AND CLASS) | 40 | 76 | | 83 | 31 | 11 | 29 | 29 | 17 | 42 | 12 | 17 | 26 | 37 | 32 | 12 | -08 | 47 | 12 | 23 | 18 | -09 |
| CLUSTER A: MEDIANS | 75 | 68 | 83 | | 23 | 03 | 15 | | 17 | 37 | 07 | | 26 | 36 | | 23 | -06 | 47 | | 36 | 29 | -09 |
| 18. READING ACCELERATION | 23 | -04 | 31 | 23 | | 26 | 84 | 55 | -32 | -15 | -08 | -15 | -35 | -13 | 24 | -14 | -17 | 00 | -14 | 46 | 06 | -04 |
| 19. ARITHMETIC ACCELERATION | 03 | -07 | 11 | 03 | 26 | | 68 | 47 | 17 | 02 | -48 | 02 | 20 | 04 | 12 | 03 | -05 | -03 | -03 | -20 | 32 | 21 |
| 20. S.A.T. ACCELERATION | 15 | -11 | 29 | 15 | 84 | 68 | | 76 | -22 | -04 | -30 | -22 | -14 | -12 | -13 | -08 | -19 | 04 | -08 | 07 | 24 | -11 |
| CLUSTER B: MEDIANS | 15 | -07 | 29 | | 55 | 47 | 76 | | -22 | -04 | -30 | | 14 | 12 | | -08 | -17 | 00 | | 07 | 24 | -04 |
| -17. POSITIVE FAMILY ATMOSPHERE | 06 | 33 | 17 | 17 | -32 | 17 | -22 | -22 | | 25 | 01 | 13 | -08 | 04 | -02 | 14 | 24 | 18 | 18 | -02 | 32 | 09 |
| 11. POPULAR IN CLASS | 26 | 37 | 42 | 37 | -15 | 02 | -04 | -04 | 25 | | 23 | 24 | -04 | -31 | -18 | 26 | 35 | -10 | 26 | 04 | 10 | -04 |
| 2. BROKEN HOME | 00 | 07 | 12 | 07 | -08 | -48 | -30 | 30 | 01 | 23 | | 12 | -22 | -05 | -14 | 02 | 01 | 01 | 01 | 28 | 05 | -20 |
| CLUSTER C: MEDIANS | 06 | 33 | 17 | | -15 | 02 | -22 | | 13 | 24 | 12 | | -04 | -05 | | 14 | 24 | 01 | | 04 | 10 | -04 |
| 6. DIGIT SPAN: FORWARD | 25 | 26 | 26 | 26 | -35 | 20 | -14 | -14 | -08 | -04 | -22 | -04 | | 60 | 60 | 48 | 34 | 23 | 34 | 02 | 32 | -01 |
| 7. DIGIT SPAN: BACKWARD | 34 | 36 | 37 | 36 | -13 | 04 | -12 | -12 | 04 | -31 | -05 | -05 | 60 | | 60 | 24 | 16 | 33 | 24 | 14 | 23 | 13 |
| CLUSTER D: MEDIANS | 30 | 31 | 32 | | -24 | 12 | 13 | | -02 | -18 | -14 | | 60 | 60 | | 36 | 25 | 28 | | 08 | 28 | 06 |
| -5. LOW FIG. DRAWING SCORE | 26 | 23 | 12 | 23 | -14 | 03 | -08 | -08 | 14 | 26 | 02 | 14 | 18 | 24 | 36 | | 42 | 17 | 30 | 07 | 10 | 18 |
| -4. FEMALE | -06 | 08 | -08 | -06 | -11 | -05 | -19 | -17 | 24 | 35 | 01 | 24 | 34 | 16 | 25 | 42 | | 40 | 41 | 17 | -19 | 08 |
| 16. LOW A/R RATIO | 63 | 11 | 47 | 47 | 00 | -03 | 04 | 00 | 18 | -10 | 01 | 01 | 23 | 33 | 28 | 17 | 40 | | 29 | 28 | -06 | 07 |
| CLUSTER E: MEDIANS | 26 | 11 | 12 | | -14 | -03 | 08 | | -18 | 26 | 01 | | 34 | 24 | | 30 | 41 | 29 | | 17 | -10 | 08 |
| 12. UNCROWDED HOME | 40 | 36 | 23 | 36 | 46 | -20 | 07 | 07 | -02 | 04 | 28 | 04 | 02 | 14 | 08 | 09 | 17 | 28 | 17 | | 05 | 33 |
| 21. BORN IN NORTH | 24 | 43 | 18 | 29 | 06 | 32 | 24 | 24 | 32 | 10 | 05 | 10 | 32 | 23 | 28 | -10 | -19 | -06 | -10 | 05 | | 12 |
| -3. POSITIVE SELF-IMAGE | -04 | -01 | -07 | -09 | -04 | 21 | -11 | -04 | 07 | -04 | -20 | -04 | -01 | 13 | 06 | 18 | 08 | 07 | 08 | 33 | 12 | |

analysis, Matrix B, are presented in Figure 4.⁸

This analysis yielded five clusters and three residual variables.

Cluster A includes variables 8, 9, and 10 and indicates that, within sex group and class, the three achievement measures are highly correlated with each other. A child who does well on one will tend to do well on the others, and if he does poorly on one he will tend to do poorly on the other two measures.⁹ Median correlations of this cluster show it to be associated with both digit-span measures, living in a relatively uncrowded home, having been born in the North, and popularity in the class. Apparently scholastic achievement is related to relatively better social and economic conditions in the home, but is largely unrelated to family atmosphere. This supports the earlier discussion about the tendency for individual family factors to be submerged in the magnitude of economic, cultural, and social deprivation.

Variables 18, 19, and 20 compose Cluster B in this analysis, indicating a relationship among the three acceleration measures. Inspection of the median correlations of Cluster B indicates that acceleration is somewhat related to coming from an intact home, but otherwise the patterns of relationship are not very clear: acceleration does not seem to be related to self-image, family atmosphere, crowding in the home, or to attentivity as measured by digit span. There is some relationship between acceleration and total Stanford score measured at the end of the term. However, this correlation represents the relationship between acceleration and a subsequent measure; relationships with potential determinants of acceleration are not seen in the present data, and it is possible that they have to do with conditions and factors not included in the present study.

Cluster C includes variables -17, 11, and 2, involving positive family atmosphere, coming from a broken home, and popularity in class. All three of these variables, however, do not tend to occur together, but, instead, both positive family atmosphere and coming from a broken home correlate with popularity but do not correlate with each other, being apparently two independent factors associated with popularity. The relationship between being popular and seeing one's family atmosphere as positive is a reasonable one psychologically (although there

is no correlation between popularity and positive self-image), but relating a broken family background to popularity is more obscure. It might be that children from broken homes have more freedom from supervision, spend more time in the company of their classmates outside school, and that this greater familiarity makes for closer relationships and more popularity.

Variables 6 and 7 make up Cluster D. This cluster—the digit-span measures—was found also in Matrix A, where it had a similar pattern. However, in the present analysis it is positively related to a low A/R ratio, and there is some suggestion that digit span is better among girls than boys and among northern-born rather than southern-born pupils.

Cluster E includes variables -5, -4, and 16, and is a sex-difference cluster indicating that girls tend to get more favorable figure drawing ratings (this finding was previously discussed) and to have lower A/R ratios. This group of variables is correlated with digit-span ability and is somewhat related to popularity and to reading achievement.

Three variables (12, 21, and -3) do not fit into any of the clusters. Coming from a less crowded home correlates with academic achievement and with reading acceleration, and also with a positive self-image. However, a relatively better self-image does not correlate highly with any of the other variables.

Evidently differences in self-image *within* the Negro group are not related to a differential performance. As was seen earlier, however, the group as a whole has a very negative self-image when compared with white children, and this attitude toward the self may act as a depressing factor on scholastic achievement. In other words, the Negro group as a whole is affected by lowered self-esteem. However, differences in self-esteem among the Negro children do not seem to be related to variations in performance within the Negro group. This, then, confirms the related finding in Matrix A, which was discussed earlier.

There are some interesting contrasts between Negro children who were born in the North, and those who were born in the South. Those from the North report a more favorable family atmosphere, although there is no difference between the two groups in crowding in the home or intactness of the family. The northerners have a better span of attention and do better in academic performance (for sex and class) than the southerners. Those from the North tend also to improve more in general performance over the term. These differences might be accounted for by the fact that, although living as a Negro in the North or the South might be harsh and isolating, these negative factors are considerably reduced in the North and it may be this reduction which is reflected in these data. This would be consistent with what Klineberg reported in his early studies (19).

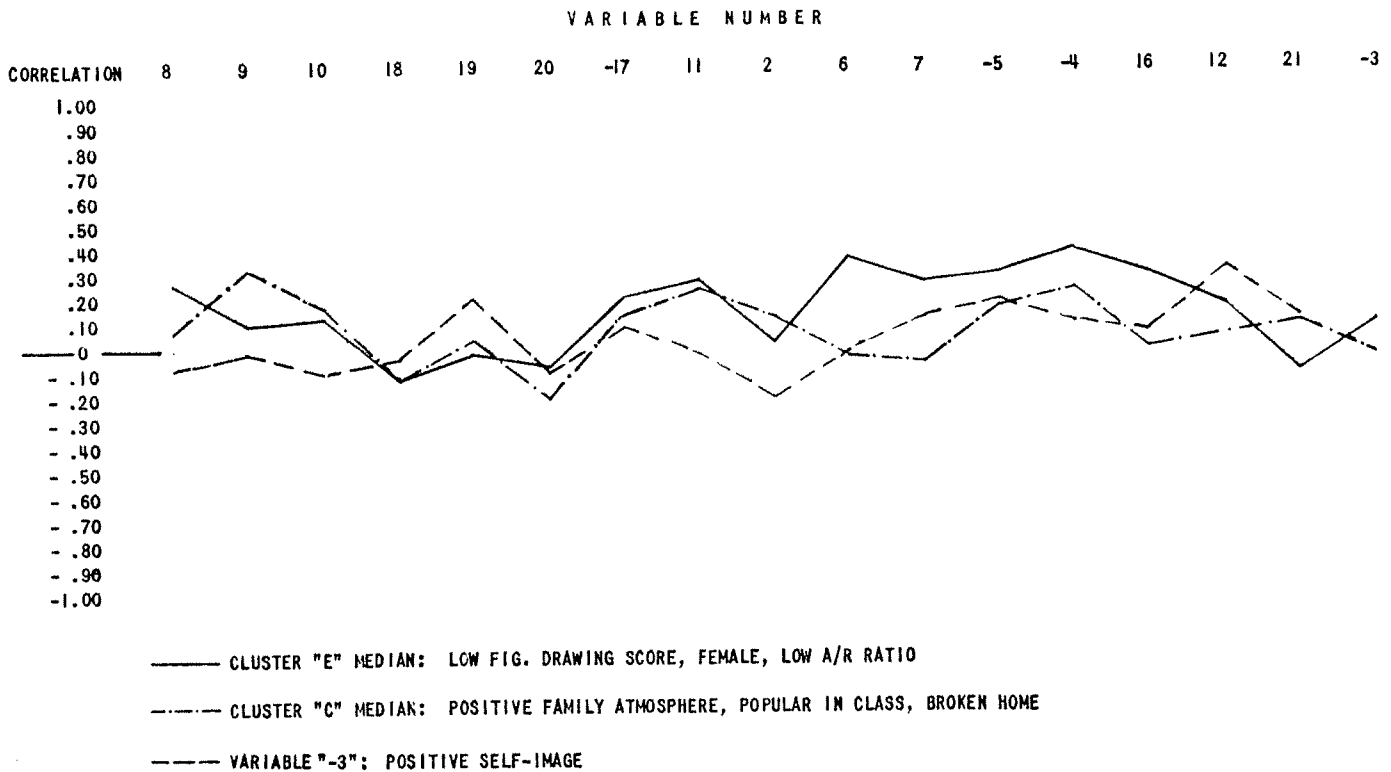
If the profiles of median correlations of the clusters are drawn, two clusters (C and E) have very similarly shaped profiles, and both of them are similar to the pattern of correlations of variable -3 (Positive Self-image). Figure 5 illustrates this "clustering of clusters."

8. Although the procedure for constructing Matrix B was essentially the same as for Matrix A, there are some changes to be noted: a) Each variable was re-dichotomized to relate to results from the experimental group only. b) Some variables have been reversed for convenience of analysis, and these are indicated by a negative sign in front of the variable number. Where this has been done, the title of the variable has also been reversed to aid in scanning and interpretation of the matrix. For example, "variable 4, Male" has been reversed to read "variable -4: Female." Positive correlations indicate association with females in contrast to males in the experimental group. c) Variables 13 through 15 are not appropriate to this analysis, while variables 18 through 21 are appropriate only to this analysis. These are the only changes in the variables included for analysis; the change in numerical order down the left side of the table reflects the change in cluster groupings of the variables.

9. Of course, Reading and S.A.T., and Arithmetic and S.A.T. are not independent measures, since each is a component in the total S.A.T. score. Thus this cluster is to some degree simply a confirmation of the obvious.

Figure 5

Median Correlation Profiles of Cluster "E," Cluster "C," and Variable "-3" in Matrix B (Negro sample only)



The variables having this general correlational pattern are: -4, Female; 2, Broken home; -17, Positive family atmosphere; -3, Positive self-image; 11, Popular in class; -5, Low figure drawing score; and 16, Low A/R ratio.

Inspection of this list suggests that the factors involved have to do with sex differences in personal and social adjustment among Negro pupils. The pattern of girls' superior functioning was discussed earlier. However, this clustering further suggests that the boy may be in a particularly handicapped position if he comes from a broken home: a corroboration of the earlier discussion relating the boys' performance to the absence of a strong male figure with whom to identify, inasmuch as the majority of the broken homes have an absent father. On the other hand, it would seem that girls are favored in popularity, self-image, and reading score if they come from a broken home where they perceive a favorable family atmosphere. Although this differential effect of coming from a broken home is not really clear, this pattern corroborates the previous conclusion that Negro girls have a better personal, social, and scholastic adjustment than boys, and that this difference is at least somewhat related to their different positions in the home situation. This analysis might dictate some modification of the previous discussion on the lack of influence of the broken home on school achievement: apparently its differential influence on the sexes was obscured when the

data from the control and experimental groups were combined for analysis.

The final cluster analysis is based on data collected from the control group only.¹⁰ The intercorrelations comprise Matrix C, which is presented in Figure 6.

With a few exceptions, these correlations are quite low, and for comprehensive evaluation of intragroup relationships here, additional variables would have to be included, and measures would have to be more sensitive. However, four clusters can be delineated from this analysis, leaving one residual variable.

Cluster A is composed of variables 8, 9, and 10: the three Stanford achievement measures. It is identical in composition to Cluster A of the experimental sample (see Matrix B), and as in that sample, is somewhat related to popularity and to a low A/R ratio. However, in the control group the relationship between Cluster A and digit span is much more tenuous, although arithmetic achievement is similarly well related to digits backward in both groups, probably arguing for the importance to

10. The procedure for constructing Matrix C was essentially the same as for those labelled A and B. The following points should be noted: a) The acceleration measures—variables 18, 19, and 20—could not be included because the necessary data were not available; b) almost all the control group children came from intact homes and were born in the North, so these variables—numbers 2 and 21—were not included. c) the data were re-dichotomized and thus high and low scores relate to the control group only.

MATRIX C:
TETRACHORIC CORRELATIONS BASED ON WHITE SAMPLE ONLY

(decimals omitted)

| VARIABLE | 8 | 9 | 10 | A | 6 | 7 | B | -5 | -4 | -17 | C | 12 | 16 | -3 | D | 11 |
|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 8. READING (FOR SEX AND CLASS) | | 46 | 83 | 65 | 12 | 12 | 12 | 16 | -01 | -09 | -01 | 25 | 52 | -08 | 25 | 31 |
| 9. ARITHMETIC (FOR SEX AND CLASS) | 46 | | 79 | 63 | 24 | 44 | 34 | -06 | 04 | -15 | -06 | 14 | -26 | -05 | -05 | 27 |
| 10 S A T. (FOR SEX AND CLASS) | 83 | 79 | | 81 | 13 | 23 | 18 | -07 | -01 | -02 | -02 | 12 | 28 | -06 | 12 | 12 |
| CLUSTER A MEDIANS | 65 | 63 | 81 | | 13 | 23 | | -06 | -01 | -09 | | 14 | 28 | -06 | | 27 |
| 6 DIGIT SPAN: FORWARD | 12 | 24 | 13 | 13 | | 25 | 25 | 19 | -06 | -18 | -06 | -24 | -09 | 03 | -09 | 18 |
| 7 DIGIT SPAN: BACKWARD | 12 | 44 | 23 | 23 | 25 | | 25 | 26 | 03 | -11 | 05 | 07 | 03 | -13 | 03 | 17 |
| CLUSTER B MEDIANS | 12 | 34 | 18 | | 25 | 25 | | 23 | 00 | -15 | | -08 | -03 | -06 | | 18 |
| -5. LOW FIG. DRAWING SCORE | 16 | -06 | -07 | -06 | 19 | 26 | 23 | | 43 | 09 | 26 | -13 | 09 | 09 | 09 | 26 |
| -4. FEMALE | -01 | 04 | -01 | -01 | -06 | 05 | 00 | 43 | | 05 | 24 | 06 | 23 | 07 | 07 | 04 |
| -17. POSITIVE FAMILY ATMOSPHERE | -09 | -15 | -02 | -09 | -18 | -11 | -15 | 09 | 05 | | 07 | -14 | 01 | 04 | 01 | 07 |
| CLUSTER C: MEDIANS | -01 | -06 | -02 | | -06 | 05 | | 26 | 24 | 07 | | -13 | 09 | 07 | | 07 |
| 12. UNCROWDED HOME | 25 | 14 | 12 | 14 | -24 | 09 | -08 | -13 | 06 | 14 | -13 | | 26 | 12 | 19 | 15 |
| 16. LOW A/R RATIO | 52 | -26 | 28 | 28 | -09 | 03 | -03 | 09 | 23 | 01 | 09 | 26 | | 23 | 25 | 08 |
| -3. POSITIVE SELF-IMAGE | -08 | -05 | -06 | -06 | 03 | -15 | -06 | 09 | 09 | 04 | 07 | 12 | 23 | | 18 | 12 |
| CLUSTER D: MEDIANS | 25 | -08 | 12 | | -09 | 03 | | 09 | 07 | 01 | | 19 | 25 | 18 | | 12 |
| 11 POPULAR IN CLASS | 31 | 27 | 12 | 27 | 18 | 17 | 18 | 26 | 04 | 07 | 07 | 15 | 08 | 12 | 12 | |

both scores of the ability to attend to and remember numbers.

Cluster B (variables 6 and 7) is the familiar digit-span cluster, although the correlations are considerably lower in this matrix.

Variables -5, -4, and -17 comprise Cluster C: female, low figure drawing score, and positive family atmosphere have similar patterns of correlation (although the third-named variable is not related to the other two). As with the "female" variable in the experimental group matrix, this factor is associated with a low A/R ratio. None of the correlations of this cluster with the other variables is of sufficient magnitude to permit further analysis.

Cluster D includes variables 12, 16, and -3, and shows a relationship among coming from a less crowded home, having a low A/R ratio, and a positive self-image, although the last is only very tentatively related to the less crowded home. Here, as in the other two matrices, there is a positive relationship between a less crowded home and the reading achievement measure.

Although it does not fit into any of the four clusters, popularity (variable 11) is correlated with relatively high

reading and arithmetic achievement. This variable was similarly related to achievement in the Negro group, indicating that better scholastic performance may be positively valued in both ethnic groups.

Inspection of Matrices B and C shows that, with the exception of the specific school achievement variables, the relationships among variables are quite different in the two groups. Further, the correlations among variables for the control group are considerably lower than those found in the experimental group. This raises the possibility that the variables associated with school achievement are somewhat different for the two groups: that those salient for the Negro group are much less important or not important at all for the white group. Thus it may be that the present study did not tap the important factors associated with school achievement in the majority group. One is here led to the speculation that, in the absence of the massive social impoverishment which exists for the Negro group, it is the more individual and psychological factors which are pertinent to school achievement. These latter are, of course, the more frequently identified ones. In other words, the familial, individual, psychological factors probably emerge most

clearly in more "normative" environments. It might be that the school psychologist is more appropriate for schools in majority group neighborhoods, but that a social psychologist or a cultural anthropologist would be more useful in minority group lower-class school settings where the problems cut across cultural, class, and racial experience.

Chapter 7

Observational Data

In this section will be reported data obtained from various methods and techniques which did not lend to quantitative analysis, and information gathered more informally, bearing on these questions.

The major particular methods and techniques were:

1) Student observers came to the classrooms at random intervals and remained for periods of from 45 to 90 minutes. Generally, the same observers returned to the same classrooms. They sat in a position to observe the class activity without themselves being too conspicuous. The teachers were told that the observers would be in the classroom from time to time, but were never informed as to the exact day or hour that they would appear. Generally, two observations were made each week in each classroom over a period of two years.

Observers were trained to take process records of the classroom activity. Sometimes these would focus on the teacher, and at other times on the children. Guidelines for the selection of various foci of observation were developed in weekly student (observer) seminars, and these shifted, partly as a consequence of the teachers' seminars and partly because of the accumulation of experience in classroom observations. For these reasons, quantification of the observations was not formally attempted, and many of the records consist of rich narrative reports of classroom activities and interactions. At a later stage in the program, several forms were developed to obtain salient behavior indices. These included for the most part two types of variables: motor activity and verbal teacher-related behavior. Classifications for the former ranged from "active-constructive" to "passive-destructive" with intermediate points also represented. For instance, one child rising from his seat, walking over, and striking another child is obviously showing "active-destructive" behavior. On the other hand, a child who, when asked to erase the blackboard, rises from his seat, performs the task, and returns to his seat without disruptive activity, is showing "passive-constructive" behavior. In other words, the words "active" and "passive" refer to more self-organized activity, as opposed to more other-organized activity, while "constructive" and "destructive" refer to the relationship of the behavior to the group purposes and context at the time. For the verbal behavior, categories included length of remarks, relevance

to subject, continuity, and whether it involved initiative on the part of the pupil. While observations were made in the control classes as well, these could not be as extensive.

2) The other main pathway into the social and educational structure of the school was through a specially organized seminar led by the writer and composed of teachers whose classrooms were visited by the observers. The children in half these classes were subjects in the experimental group. The seminar was established with the explicit understanding that its proceedings were private, and that none of the information revealed would be transmitted to the then principal or other educational authorities. This arrangement required real understanding on the part of some of the authorities, inasmuch as the teachers received in-service credit for attendance at the seminar. About one-third of the participating teachers belonged to a special all-day school program in which children of working parents could participate in organized activity after regular school hours. An extremely competent student observer maintained a running narrative record of all teachers' seminars. The confidential nature of these sessions was later recognized as crucial to their success.

Unfortunately, it was not possible to arrange a similar teachers' seminar in the control school because of limitations of time and staff.

3) There were occasional meetings with small groups of children. These ranged from after school discussions about attitudes toward school and classes, to neighborhood and drugstore ice-cream-soda conversations, with a wider range of topics.

4) In addition to these methods, there were some rather randomly used techniques. These included time samples used to determine teaching/play ratios in the classroom; teacher attitude questionnaires administered to the children (a generally unsuccessful device, as the children tended to be much more positive than their other behavior would indicate); nutritional surveys consisting of repeated questioning of children as to what their last meal consisted of; and a series of repeated questions about a limited area of family experiences, such as, "Who gave you your supper last night?" "Who helps you with your homework?" "Does anyone kiss you good-night?" "What did you do last Sunday" and the like.

The data and impressions gathered from these techniques and methods will be reported in a descriptive, largely anecdotal manner, within defined categories. The intention here is to convey an impression of the actual learning situation and of the quality of the children's experience in it. For this reason, information gathered from the four technique and method categories will be combined and related.

Classroom Observations

Nine classes were visited consistently over a two-year period, and five additional classes were observed on an intermittent basis. These five had teachers who were not participating in the teachers' seminar, but who had

individually agreed to cooperate in the research and to have their classes observed. Our understanding of the nature of the actual process and activity in the classrooms comes from these observations and from statements, interviews, and written reports of the teachers in the seminar.

In conveying a feeling of the situation that existed, perhaps it is most appropriate to quote from a written statement by one of the teachers, a Negro woman who was one of the most experienced and effective in the school:

At the present time I don't feel that we are giving the children what they need. Most of them are not being educated. About 95 percent of them are working at least one year below their grade level. There are very few children who are working up to their capacity. In my fifth-year class of children of normal intelligence not one child achieved 5-10 in both mathematics and reading on the Stanford Achievement test. My class is the norm rather than the exception in this school. The children are clearly not learning what they should. What brings such a situation about? I don't feel that I have all of the answers. I shall merely state my opinion.

Most of the teachers would, I think, agree with me that we spend about 75 percent of our time disciplining the children and about 25 percent of our time teaching. Even the time spent in teaching is only about 10 percent effective because of having to stop several times during a lesson to speak to certain children. The attention span of most of the children is very short. They become bored easily. I feel that one of the reasons for this is that the curriculum is not of sufficient interest to the children. Units of study should be integrated with some aspects of the children's lives. Teachers should attempt to make the curriculum as vital as possible and involve the children emotionally in what they are studying.

I feel that an important aspect of such a program would be the extension of the interests of the children. I have found that the real interests of the children are often so limited that they would have to be increased in order to provide a full program.

One of the reasons that we have such a terrific discipline problem is that the children just don't care. School is just a place where they are sent. Even children who are eleven and twelve years old have no ideas of their own as to what they want to get from school. The older children don't respect teachers or school property.

A number of points raised in the foregoing quotation continually emerge, both in the observational data and in reports by other teachers.

Although there is considerable inter-teacher variation in classroom atmosphere and in the amount of time devoted to actual subject-teaching, our time samples indicated that as much as 80 percent of the school day was channeled into disciplining, and, secondarily, into or-

ganizational details such as collecting milk money, cookie funds, special principal reports and the like. In the control school, this figure never rose above 50 percent while even with the best teachers it never fell below 50 percent in the experimental school.

The implications of this are extremely important. They suggest that the lower-class Negro child receives one-half to one-third the exposure to learning that a child from the control environment receives. In addition, it is possible that the control children are likely to receive assistance at home, while it is very rare that a child in the experimental population receives any help with his homework. These discrepancies by themselves can account for a substantial portion of the differences in achievement between the experimental and control groups. Further, the more exposure to school-type learning problems which a child has, the more "test-wise" he is likely to become, responding better and with less anxiety to all types of tests, including those measuring IQ.

In addition, if these findings are consistent, and the school is really capturing the attention of these children for so limited a period of time, it is necessary to scrutinize this primary failure in the teaching function of the school. For it is this failure that transforms the role and self-concept of the teacher from that of an instructor to that of a monitor. It might very well be that the lack of permanence of the teaching staff in lower-class schools is traceable to a 25 percent difference in how the teaching day is spent.

Within the general picture of classroom disorganization, there are large differences between teachers, which suggests that emulation of the techniques used by the most successful could lead to more time spent in actual teaching. Excerpts from observational reports might best illustrate these inter-teacher differences.

First, some excerpts from observational records in Mrs. A's fifth-grade class. It should be pointed out that Mrs. A is an average to better-than-average teacher.

October 3—The class was noisy, and at least three large groups were doing their assigned tasks. One was working with A on arithmetic, another was copying a composition from the board, and the third was doing arithmetic examples. There were also about six or seven children walking from group to group, fighting, yelling, and in general, disrupting order. . .

November 5—Mrs. A was yelling at different children and the children were yelling at each other. Santiago was sawing wood at the back of the room, which did not add to the peace and quiet. Although Mrs. A yelled, I could not hear a word she said. The general volume of noise in the room was so great that you couldn't hear a person speaking if he were more than a foot away. Mrs. A said: "I can't force you to work, but don't think you can leave your seat and disrupt all of us," to Albert. He was crying. A took him in her arms and tried soothing him. He broke away, stamped his foot, and turned

around. I couldn't make out what he was saying, but the tone of his voice, and both A's and Albert's actions revealed that he wanted to do something that she wouldn't permit. He ran out of the class and she ran after him and came back, with Albert trailing behind. Two minutes later, he ran out again but came back quickly. A looked at him and said nothing until he tried to lock Barbara out of the room.

December 3—For the first time, the class was relatively quiet. Mrs. A was having the children put their heads on the desk in a resting position. One boy raised his hand and called to A. She replied: "Don't Mrs. A me, I know whose head is down and whose isn't." She gave out the report cards. Most of the children did not even bother looking at theirs.

April 14—I came at a bad time again. The lunch money boxes had to be given out. As usual the boxes and envelopes and pieces of paper which go into them are in a very confused state. Today, the condition seems to be at its worst. And all the while that A is trying to straighten the situation out, the class is doing nothing.

A few additional quotes from records will illustrate how Mrs. A deals with the question of remedial work, and how she attempts to motivate the children.

November 5—Barbara and Yvonne were talking. A yelled at them. Barbara said she was helping Yvonne with her spelling. A misunderstood and ridiculed: "How can Yvonne help *you* with spelling?"

December 5—A said to a child that his work was wonderful. Another child said: "but Teacher, he copied it from the board." She replied; "I know, but at least he was doing some work, which is more than most of you were doing."

April 2—Mrs. A was passing around pictures for the new unit. Edith stopped to read a caption and A yelled: "Don't hold us up by starting to read now."

These illustrations are of the modal class pattern. There are exceptions: for example, Miss B:

October 7—Miss B is able to integrate passing events with what the children are supposed to be learning. One of the children in the class was run over by a car. B asked why children weren't allowed to go to the hospital for a visit, and the children had a discussion of hospitals. They decided to buy flowers for the child and B asked how much money they could collect if 36 children gave 10 cents apiece. Then they discussed the kinds of flowers you could buy in a store.

February 23—B only has to tap her pencil on the desk when the class is noisy and the children quiet down.

February 26—B went around the classroom and looked over everyone's notebooks to make sure

that the corrections on the spelling papers were made.

March 9—There are four reading groups, and B helps them one at a time. She compliments the children who read with good expression (Edward and Mareline) and tells those who are improving how pleased she is. The speed of reading in general is very slow. Most of the children stumble over two-syllable words and frequently have a hard time reading one-syllable words. B helps them to pronounce the words, but she usually gives the children time to sound them out.

That these different teacher approaches beget different reactions from the children can be seen in analysis of the children's behavior toward the teacher in each of the two classes. For instance, the observer in B's class notes that the children have internalized her expectations to the point of anticipating her disapproval by looking to see where she directs her attention, while no such instance was recorded in A's class. The "active-constructive" category on the activity record sheet is much more frequently and consistently marked in observations of B's class, while the highest frequency of defiance by a child is found in A's class. B's orientation might be described as definitive but supportive in making demands on the children. She shows a high degree of consistency, which makes it possible for the children to learn to anticipate consequences of their behavior. On the other hand, A undermines her own authority by making punitive and often impossible threats on which she has no intention of following through. B in her teaching continually brings in examples from the children's own experiences and develops figures with whom they can identify. A, on the other hand, sticks much more closely to the formal materials, and her expressed feelings are that the children just don't want to learn, and will not, no matter what she does. B, in her discussion of the situation, says that motivating these children is very difficult but that it is not an impossible task, and expresses the wish that she might have the same class for more than one year. It is not surprising, either, from the excerpted observational records, that A reports she is always "worn out" at the end of the day, while fatigue does not seem to be an important factor for B.

Given the undoubted sincerity and basic competence of both these teachers, and given the fact that they both are Negro women from approximately the same social milieu and that neither is psychologically disturbed, it would seem that the most salient difference between them which is reflected in their contrasting classroom methods is that, although both see and are concerned about the problems of educating these children, B sees means of solution which she can apply, while A does not. Both state that they feel the school and the whole educational apparatus offer little concrete help with these problems and do not constitute sources to which the individual teacher can turn for assistance.

While the achievement scores for A's and B's classes do not differ significantly, there is a slight difference in

favor of B, and the question arises as to the possible differences which might accrue from cumulative experience over several years in a class like B's. Certainly the fact that these children can be motivated and disciplined in a class is of significance, and the practical principles by which this can be accomplished warrant further study.

Here another illustration of methods of disciplining and motivating can be drawn from the class of a young, athletic, male Negro teacher. As was indicated in the earlier discussion of sex differences, boys tended to contribute disproportionately to classroom chaos, but they could be adequately controlled by this autocratic but warm teacher who was the only male teacher in the school. It must be remembered that a good proportion of the boys do not have stable father figures in the home with whom to identify, and Mr. J undoubtedly supplied this for many; it might be that more male teachers are indicated for this reason. The children referred to him as "tough," said, "he means business" and, in general, responded well to him and to the explicit limits he always set on their behavior and learning. He was continually establishing limited goals and offering rewards only when they had been attained. This man, Mr. J, was continually creative in his use of educational techniques, and, like Miss B, made great use of the children's own life experiences for teaching materials. For example, for an arithmetic lesson he used the children's own cost of living as a problem; he achieved thereby the almost unprecedented complete attention and involvement of the class.

It should be noted, though, that whenever a teacher—including Mr. J or Miss B—turned around or left the room, there was always a higher degree of disorganization and misbehavior than occurred in the control school under similar circumstances.

The majority of teachers found the experience of teaching in this kind of situation frustrating and unrewarding, and the rate of turnover in schools such as the one studied has been shown to be significantly higher than the average. (35)

Teacher Orientation

It was through the combination of the teachers' seminar and the classroom observations that a fairly comprehensive picture was developed of the teacher's role and attitudes. The teachers were interested in communicating with each other and in working out solutions to the problems they recognized. However, they saw no ready path of communication, either with each other or with the educational hierarchy. The teachers universally felt that they were excluded from a curriculum-planning and school organization role, that they lacked the respect of those higher in authority, and that their problems as teachers were not objectively viewed or seriously considered. In general, they felt under-utilized because they saw no way to enrich the school curriculum through the consideration or introduction of their own ideas and experiences.

All the teachers participating in the seminar felt that to some extent they had been set adrift. They were particularly vehement in regard to curriculum advisers,

district coordinators and similar personnel, feeling that these people especially had no appreciation of the special problems existing in the education of the lower-class and, most specifically, Negro and Puerto Rican, child. Without exception, they charged that school authorities were always imposing an educational orientation which was exclusively developed for a middle-class population who have very different preparations for learning. The vehemence of their feelings on these matters occupied many hours of the teachers' seminar after the initial months of establishing basic rapport. The core of affect expressed cut across the continuum of good and poor teachers, although the better teachers were more likely to come up with some suggestion or innovation.

Some of them described the seminar as a cathartic experience, and all felt some gratification in learning that the others were as totally frustrated. It is interesting here, and it was discussed many months later, that the teachers in their daily contact tended to restrict their communications with each other on these matters to expressions of annoyance. It was not until the end of the first year of the seminar, after the teachers had established confidence in each other and in the writer, that it was possible to bring in detailed observers' descriptions of their classes for interpretation and evaluation by the other seminar members.

As the seminar progressed, the teachers discussed the motivation and self-image of the children in their classes, and this led to an evaluation of the role of the teacher in the development of these attitudes. Thus, as the teachers felt free to complain and to criticize the educational hierarchy, they also felt free to criticize themselves and each other and were able to evaluate their own roles more objectively.

From studies conducted in Detroit and in Texas, Wattenberg *et al.* conclude that,

The social origin of teachers does influence considerably their attitudes toward their administrators, their colleagues, the parents, and children. [38]

This finding was certainly borne out in the analysis of the present data. The participating teachers were middle class and the majority were Negroes; the children they taught were lower-class Negroes. For the most part, the teachers felt alien to the community within which they worked, and with one or two exceptions, they themselves lived in other neighborhoods: Yet the shared minority racial status created more identification and also more conflict for the Negro teachers than is usually the case for the white teacher in a lower-class white school. This conflict resulted in their emphasis of the minority group identification of the child by, for example, reminding him on museum trips that, since he was Negro, he must be especially well-behaved: better behaved in his line than the white children in the next line. It is interesting to note that observers of such trips reported that, among these usually so undisciplined and so unruly children, there was then an unusual amount of discipline and control—more than that of the comparable mixed and white

groups. In the seminar it was pointed out to the teachers that the children acted as if they were in a foreign country, and that normal childhood spontaneity was absent. Two of the teachers especially took the position that, even if this was harmful for the child, *they* would not feel comfortable with everybody observing them if the children acted any differently. The teachers were able to verbalize the dynamics of this: that their identification was middle class, and if these children in any way lost their "decorum," the lower-class label would be attached to the teacher too. Here it would be interesting to know if the racial factor was subordinated to the class factor, and what would be the attitude of the middle-class white teacher toward lower-class white children under similar circumstances. Throughout the seminars and the classroom observations there was constant and frank interplay of class and racial factors, and the conscious discussion of this interplay made a real contribution toward putting both factors into perspective for the teachers. Here again, a cultural anthropologist or social psychologist whose role was properly defined could play an important part in the educational functions of the school.

It was observed in the classroom process records that the teacher often directed derogatory remarks toward individual children. The most frequent such remark was to call a child "stupid," and as a result, the teacher and, through the teacher, the school played a role in reinforcing the negative self-image of the child, and contributed a negative reason for learning. From the fact that higher achievers did not have more positive self-attitudes, it was pointed out in the discussion of quantitative results that school achievement had little influence on self-attitudes. Perhaps such classroom reinforcement combined with negative motivation for learning is one explanation for this finding.

After discussion of these derogatory comments and the negative motivation sequence, future process records indicated that the majority of the teachers substantially decreased or eliminated such comments, and much seminar discussion was devoted to finding positive methods of approaching the children.

The conclusions to be drawn from the foregoing rather anecdotal discussion are that the teacher is an essential part of the learning process, and when she is made—or feels she has been made—a supernumerary in matters of policy and curriculum and in evaluation and discussion of teaching problems, she also loses her initiative and interest in evaluating her own role. This must be true in any school context, but is particularly valid when the actual frustrations are so enormous, the problems so great, and the guidance so minimal as in these special problem schools. Further, when a valid opportunity is offered, and they feel sufficiently protected, teachers are anxious to deal with these problems. They are much more comfortable when they feel that the school recognizes the special educational problems they confront. All of them emphasized the importance of assigning to these schools experienced teachers and of making a special effort to eliminate the succession of

substitutes to which many classes are subjected. (One class in the experimental group had six different teachers in one academic year.)

Another important composite observation is that the teachers, with the social scientists, feel that the children's learning process can be facilitated by the school's recognition of the deficiencies in the backgrounds of these children and a constant and comprehensive effort to compensate for them.

Perhaps if schools were to establish such seminars, using for leaders behavioral scientists unconnected with the school system, it would help teachers better to evaluate and understand their roles, and help to orient educational materials in a more meaningful context for the lower-class child. Further, the communication now felt by teachers to be so lacking could be at least partially supplied, and eventually channels could be opened between such seminar groups and the administrative hierarchy of the school system. Such a program should substantially help in making "difficult" teaching situations "challenging," thereby reducing the turnover rate and giving both children and teachers more consistency in their roles.

Chapter 8

Discussion

It can be assumed that the social context of a child's life is crucial to his particular growth of consciousness and the unique role he perceives himself playing in the world. In an affluent society whose goal is success and whose measurement is consumption, the lower-class child starts the race to the goal with an assortment of disadvantages. Economic uncertainty, slum living, crowded homes, and small value given to intellectual activity are not an adequate foundation for achievement. It is another problem that the struggle against poverty sometimes leads to deepened understanding and maturity: scores of unique individuals are only exceptions to the rule and do not alter the effects of these conditions on the aggregate. The majority of Negroes is found in the lower socio-economic groups and consequently is subjected to the whole array of deleterious factors associated with such social status.

To avoid confounding social with racial status, a number of studies attempted to equate middle-class Negroes with similar white groups. It is doubtful if such an equation can be validly made. The results of the present study, and of other studies, delineate some of the negative psychological attributes associated with self-awareness of Negro status, or any racial status deviating from the valued white norm. But even if this could be controlled for, middle-class identification is more than simply socio-economic position. The great majority of Negro middle-class members is at most one or two generations removed from lower-class status, and in order to achieve truly comparable populations for social psychological research, comparable class stability is essential.

In planning the present study, it had been considered also desirable to have a population of both Negro and white middle-class children, as it was felt that it would then be possible to measure more accurately some of the effects of being Negro in a white society. The criterion of class stability, though, makes it extremely difficult to find in a small area a sufficient Negro population.

As a result, in the present study, the Negro children are differentiated from the white majority by the cumulative effects of having inferior status as members of a racial minority, as well as social class handicaps, while the white children in the study have only the class handicap. In the classroom process records, there are frequent remarks by the teachers to the effect that if the Negro child is to achieve he must be twice as good and capable as his white counterpart. It was noticed on field trips that the Negro children were admonished continually to be on their best behavior so they would not bring disgrace (*sic*) on themselves or their race. This and the anxiety it produced in the children became one of the basic discussions in the teachers' seminar. The groups of children with whom the writer met often insisted he must be Negro, and when this was explored they said that someone who was nice to them and did not criticize them must be Negro. Their expectations, reinforced by the anxiety of their middle-class teachers, were that the larger white world would fundamentally be rejecting and critical. It must be remembered that this is a world with which they had practically no personal contact (with the exception of the principal and a few teachers). It is undoubtedly this experience of a segregated life with the consequent anxieties reinforced by the school that plays a vital role in the development of the negative self-image of these children.

It is for these reasons that a study such as the present one is a study of the effects of chronic social stress on personality development, motivation, and subsequent school achievement. This chronic stress is what is probably seen in the increasing divergence between the experimental-group boys and control-group girls over successive school years. In addition, in median tests of longitudinal achievement data between the high and low achievers in the experimental group, the low achievers showed no progress, and, in fact, had a slight decline (not statistically significant), while the high achievers show a flattening in progress curves. Unfortunately, there are no comparable longitudinal data for the control group. The important fact here is that even the more advanced experimental children do not show significant progress; while the national norm expectation is one year's progress in one school year, it would be expected that the advanced children would even exceed this norm. Seemingly, the weight of the whole complex of negative factors which have been delineated here is depressing the scholastic functioning of these children, as well as distorting personality growth. While the data as collected here do not give specific causal information, the internal relationships in them make this a compelling conclusion.

In this flattening of progress there must be some nullifying of the expected effect of the school. Further,

if there is some nullification of the school's academic influence, it is likely that its socializing effects are also partially vitiated. A partial parallel to this situation may be found in Gordon's study of canal-boat and gypsy children (16), in which he discovered that the IQ's of these children declined as they got older. He related this to the infrequent school attendance of the children, and to the fact that a poor environment is more stimulating for a younger than for an older child, inasmuch as there is proportionately less prior knowledge or experience. This may relate rather closely to the present data, as the canal-boat children attended approximately 5 percent of the normal school time, the gypsy children approximately 35 percent while the process records in the present study indicate that a good percentage of time in the experimental school classes was given over to non-academic and often disorganized activity. It might be that for children from non-intellectually stimulating environments the school must offer proportionately more stimulation. This would be particularly true for children who came from a broken home or one in which parents work such long hours that little time is left at home. However, the poor cultural environment which increases the child's need for stimulation in school does little to prepare the child to accept his school experience. So the children who most need the socialization influence of the school may well be those who are the least amenable to it because of their previous narrow range of experience. It would seem, therefore, that it should properly become society's responsibility, through the school, to provide not only schooling but also the preparation for it.

Coming from an intact home is significantly correlated with achievement, and the achievement scores of the total experimental group were influenced by the large proportion of children from broken homes. Again, here it might be that the school should supply some of the support and stimulation that are absent in the broken home. In the classroom process records, it was observed that some of the teachers would be quite critical of the children when they answered incorrectly. This might not only affect motivation negatively, but it might also reinforce the negative self-image of the child. It is interesting that one of the most frequently used negatively-toned words with which the children described themselves was "stupid."

Special training in group processes and on the effects of social deprivation might be helpful for teachers in these schools. These children require considerably more reinforcement than do others, possibly because absent, missing, and excessively burdened parents cannot supply it. One student observer put it aptly in describing the classroom as a continual competitive battle among the children to gain the teacher's attention. In a sense, the children are trying to gain the attention of a parental substitute and are extremely responsive to any encouragement or warmth (although the responsiveness rarely includes any prolonged periods of self-control or orderliness). Although approval was important to the children, the teachers agreed in the seminars that attention was more important even if it was a severe reprimand. It is probably this factor which in good measure leads to classroom chaos

which is responsible for the limited percentage of time actually going into academic work. With middle-class children the problem is usually different, with parents tending to be over-indulgent, families more intact, and subsequent decrease in the need for the attention of the teacher.

A cross-racial class factor, the crowding variable, is a major one in both populations, and because of this its effects could not adequately be measured in this study. It is possible, though, that it is playing a major role in depressing the levels of performance of the total populations, and would be worth further investigation. Some relationship was found between crowding and reading achievement in this study, as reported earlier, and there are also some qualitative data to support this finding.

An anecdotal corroboration of this relationship might be interesting. In one of the experimental classes there was a boy who after school habitually went into a large closet and closed the door. With the prevalence of psychoanalytic assumptions about such behavior, he was put on the "urgent" waiting list for an evaluation by the school psychologist without further ado—and without further investigation. The process recorder in the class meanwhile discovered that the boy left the light on in the closet—surely a modification of intra-uterine conditions. When asked why he went into the closet and what he did there, the boy replied, after urging and quite hesitantly, that it was the only place he knew of to be alone, and that he usually read while he was there. In the course of the study, it was found that this child came from a home which consisted of a three-room apartment shared by 14 people. The anomaly both here and in other cases is that this child, obviously bright, was functioning on a relatively low scholastic level, and was quite embarrassed at acknowledging the fact that he read. Under questioning, he explained that at home there were always some people sleeping, so he could never leave a light on and would be laughed at anyway if caught reading.

In the popular literature in post-sputnik America there has been a torrential criticism of our school system and its apparent failure to fulfill its goals. Teachers, administrators, physical plant and equipment have all been held responsible. In the experimental school dealt with here, there were competence and sincerity in the vast majority of personnel, and the physical plant was adequate. But the orientation of our schools at present is almost entirely toward middle-class values and way of life, which sometimes have no concrete meaning for the lower-class child. In addition to the more general ones raised earlier, the problem here appeared to be one of a standard curriculum, tailored to our pervasive middle-class value system and to the over-all norms of child development. But norms after all are mathematical averages, and it is crucial here to keep in mind that we are dealing with children who come from among the poorest home environments; who have the poorest nutritional status; who have the least parental support and reward; and who are most subject to premature birth, para-natal complications and accidents, all of which may lead to a higher proportion of central nervous system damage. It is

unrealistic *a priori* to expect such children to perform at the norm. In other words, a proportion of the retardation here could be expected. Both the segregated nature of their lives and the encapsulation of the school in a minority group living area are serious handicaps, as the broad experiences reflected in modern curricula are not shared by these children.

As has been shown, these children from lower-class and culturally deprived environments are more limited in access to new knowledge and in opportunities for new experience, and this is even more true in a racially encapsulated community. The teachers in the seminar felt that the curriculum was unrealistic in terms of the experiences of the children in the school, and they had many concrete suggestions for changes in teaching method and content. Unfortunately, they did not feel free to channel these suggestions and felt that the special problems of their children were not understood by the educational hierarchy. For example, an early grade primer presents country situations, and yet the vast majority of these children have never been to the country. Similarly, the primers are not bi-racial, and often have meaningless story content, and fail to present situations with which these children can become involved, or to picture children with whom they can identify. This is a further extension of the alienating experiences these children have in a segregated community, in segregated schools, surrounded by the majority racial group. Instead of making school a more meaningful experience for these children who most need it, such instructional materials serve only to turn to them another of society's unsmiling faces.

The principle drawn from the foregoing is that when the home is a proportionately less effective socializing force, the school must become a proportionately more effective one; further, the deficiencies of the home and immediate environment create deficiencies in the children's experiences which make it more difficult for them to deal with a curriculum which presupposes a variety of experience which they cannot enjoy. The question to be dealt with in this context is how the school can become a more potent socializing force for these children.

The data of the current study could offer some suggestions. For example, the inferior performance of the Negro boy relative to the Negro girl and the not infrequent absence of the father from the home lead to a consideration of the potentially beneficial role which male teachers could play. Similarly the instability of the broken home might be somewhat compensated by children having the same teacher over a longer period of time. A set of rewards might be worked out to channel the attention needs into the scholastic areas, and somehow intellectual activity and the child's confidence in himself could be consciously reinforced. Also, the apparent greater facility with numbers rather than words might be put to more extensive use in the teaching situation, and perhaps an expanded remedial reading program around story content which has intrinsic interest and familiarity for the children would be helpful in overcoming a basic deficiency. In addition, the child can be offered broadening experiences which must include integrated schooling and after-school

activities: he must no longer feel that visiting another neighborhood is tantamount to a trip to a foreign country.

However, if the schools are to compensate meaningfully for the impoverished intellectual background of these children, it is necessary to know scientifically the specific effects of their impoverished environment on their cognitive and language development. When the parameters of these deficits have been delineated, then it will become possible for the school to offer an effective enrichment program in the early years to stimulate the intellectual maturation of these children, so that the gap between their actual functioning and average grade expectations can be closed. This is a major task for social scientists, and no effective enrichment can be possible until these more microscopic effects of environment have been understood and their implications systematically tested in the actual school situation. Also, if the school is to be the comprehensive socializing institution, the all-day school program should be expanded, as it is one of the most successful current attempts to increase the influence of the school and to develop constructive behavioral alternatives for the children.

This discussion has centered mainly on the role of the school in helping to compensate for the deficiencies of the home. The fact of these deficiencies, however, and their close relationship to overcrowded, encapsulated, and economically marginal living conditions cannot be ignored. Society must solve these social problems, but in the meantime there is an important role here for the social scientist and particularly the social psychologist and the cultural anthropologist, who could study extensively the dynamic relationships between environmental and social circumstances and personality and intellectual performance.

The lower-class child, and especially the lower-class minority group child, lives in a milieu which fosters self-doubt and social confusion, which in turn serves substantially to lower motivation and makes it difficult to structure experience into cognitively meaningful activity and aspirations. As Erich Fromm consistently points out, one of the social characteristics of modern man is his increasing alienation from both his work and his fellow man. The dynamics of this psychological process in a technological society might be best understood through the study of the progressive alienation of the Negro child in a white world.

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Comment

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When we express concern for our school system, we are expressing concern for an institution which is central to our society, an institution which is second only to the

family in its responsibility for the socialization of our children. Thus we are, in effect, showing a concern about our culture as a whole, and our well-being as a people. If we want to underline this point, we need look no further than the fact that the most widely recognized problem in our culture—the inequality of Negro and white Americans—is being raised most sharply in relation to our schools.

To accept the central importance of our schools need not cause us to see serious shortcomings in our educational system as necessarily leading to even greater difficulties in the future. Rather, we can view them as posing an important challenge to us, as forcing us to clarify ourselves in the search for better ways than we now have to enable the development of human potentials, both intellectual and emotional.

As anthropologists, we have a particular contribution to make in assessing the difficulties and possibilities educational problems pose, which is to clarify the role cultural factors play in growth and learning. We have repeatedly demonstrated the fact that people vary in patterned ways according to their cultural background. As a result, there is wide acceptance of the fact that human variations in thought and action are in no significant way determined by so-called racial factors, but that, in addition to idiosyncratic accidents of individual physiology and life history, the determinants of behavior are cultural. Our responsibility to the field of education, therefore, is to move faster toward an understanding of how these cultural determinants, with their class, ethnic, religious, rural-urban and other dimensions, affect the learning of children.

Deutsch's detailed study of educational experiences in an urban lower-class Negro school illustrates the adverse effects upon learning of what has been called "cultural deprivation." Deutsch analyzes the difficulties posed for these children by marginal living conditions and lack of cultural supports for academic learning. He discusses, for example, how essential broad experiences are for language development, and shows how limited are the experiences available in much lower-class life. His research makes clear the importance of planning an enriched curriculum for deprived children, and he indicates some of the directions such planning should take. Deutsch also touches on the discrepancy between teachers, speaking in terms of middle-class values and experiences, and lower-class children who share them only in part (and then all too often as unreachable goals).

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