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ABSTRACT

This report describes the history, program, sample population, assessment methods, participant reactions, and final evaluation of a 7-year study which investigated the long-term effects of a 2-year traditional nursery school intervention program. A total of 30 disadvantaged children with below-normal initial IQs began the full-day program at age 3 and continued the program for 2 years. The children then entered a special kindergarten class for one year, were kept together for 2 subsequent years in a special school situation, and entered regular third grade classes. Followup information was obtained during the third, fourth, and fifth grades. The assessment criteria used were restricted to objective measures of intelligence and school achievement, such as language use and understanding, perceptual discrimination, concept formation, sensorimotor coordination, memory, and number skills. Final results indicate that the improvements evidenced by children in the treatment group after the preschool program gave them little or no advantage by the end of the fourth grade over their peers who did not receive treatment. Sex, initial IQ, and sociometric status showed systematic relations to patterns of later IQ scores and school achievement measures. Methods of assessment used and final results are discussed in detail. (ED)

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PRESCHOOL AND POSTSCRIPT

An Evaluation of an Inner-City Program

Elizabeth Herzog, Carol Newcomb, and Ira H. Cisin

The Social Research Group
The George Washington University
2401 Virginia Avenue, N. W.
Washington, D. C., 20037

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Introduction

This is the story of an effort to give to children of impoverished families a preschool experience that would lay the foundation for satisfactory and satisfying school performance. The premise of the study was that, if a traditional nursery school program would enable disadvantaged children to meet national norms in school achievement, it would be possible to mount large scale preschool programs relatively quickly, without the need to develop elaborate, costly, and time-consuming special training for the teaching staffs.

Like many analogous projects, this one gave glowing early promise that soon appeared to fade. At the end of the kindergarten year, the mean IQ scores of the special treatment group were significantly above those of a comparison group that had not experienced such a preschool program. However, from the time they entered the first grade, their performance on standardized tests declined, and by the end of the fourth grade year they showed little if any advantage over the comparison group. A slight and statistically nonsignificant advantage remained with regard to the proportion who were at grade level, but on school achievement tests they scored no better than, and in some respects worse than, the comparison group.

If present trends continue, it is possible that, as a group,

their school achievement will fall below that of the comparison group. If so, participation in the project may have been a disservice to the experimental group.

The conclusions drawn from this study must be viewed in the light of an important limitation. The criteria used were restricted to objective measures of intelligence and school achievement; there were no measures of success in socialization, personal integration, skill in interpersonal relations or other non-academic aspects of the whole child.

Their parents do not see it as a disservice. On the contrary, some of them still ask if there is not some similar program for the younger siblings of the experimental group. Nevertheless, the fact remains that so far the children have not been demonstrably helped academically.

There can be no blinking the fact that the project failed to achieve some of its purposes. The sundial technique is often applied to research findings: "I only mark the hours that shine." Investigators emphasize the hypotheses that are supported. Professional journals are believed to discourage or refuse publication of negative findings. This is a detriment to research and to practice, since it prevents us from drawing full benefit from the experience of others, and dooms us to repeat the mistakes of the past.

The sundial technique would ask, why report in full detail a project that fell short of its goal? It can be of value, however, to report the history of a failure, both for the warnings it may hold and for clues to greater success another time.

There are several respects in which we hope a report of this project can be useful: for its clues with regard to preschool programs, to elementary school programs, to the imperatives of program evaluation, and to understanding the lives and behavior of children in poverty.

It can be useful also for whatever light it throws on some of the questions it raises. In particular, overriding all others is the question: why the decline in IQ scores among both the experimental and the comparison group, and the decline in advantage of the experimental over the comparison group?

A number of explanations have been offered for the oft-noted decline in the IQ scores of children from very poor homes as they move through school. The chief ones (which are not necessarily mutually exclusive) include the following:

--Change in the nature of the tests as children grow older, as described by Cronbach;*

--"Innate incapacity" of the children, as argued by Jensen;**

--The inadequacies of our present public schools***

Teachers' low expectations concerning pupil performance****
Insufficient training and commitment, and overburdened schedules of the teachers
Deficiencies in plant, supplies, building maintenance and staff resources;

--Discontinuity between the home environment and the schools

Adverse home conditions, including family disorganization, poverty, and paucity of intellectual stimulation
Adverse community influences and models.

In the case of children who move from a preschool enrichment program to the "regular" public schools, another possible explanation is "culture shock" or "expectation shock," resulting from discontinuity

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* Cronbach, 1960.
** Jensen, 1969.
*** Clark, 1970.
**** Clark, 1965; Rosenthal and Jacobson, 1968.

between their earlier and later school experiences.

Some arguments can be raised for and against each explanation, and these will be considered in relation to our findings, after the relevant data have been presented.

The organization of the report represents our effort to cope with a seven year accumulation of data and at the same time respect the reader's right to clear differentation between data and interpretation. Detailed figures are presented in a series of tables. Summary statements of the outstanding points are given in the first sections, some of which are followed by a brief commentary. Further discussion, interpretation, and conclusions are offered in the concluding sections.

The report is dedicated to the children who elicited so large a share of our effort, concern, and affection, and who benefitted from it all far less than had been hoped. We hope that a full accounting may contribute to benefits for other children.

Purpose and History

In our society, on the whole, academic adequacy is a prerequisite to economic adequacy, and economic adequacy is a necessary though not sufficient prerequisite to a satisfying way of life. Despite exceptions, the strong correlations between education, occupation, income, and self-esteem put a high premium on educational competence.

Recognition of these inter-relations reached a new high in the early sixties, along with recognition that children in poverty are likely to do less well in school than their more prosperous peers, and tend to fall further behind as they move through the successive school grades.* This recognition, and the concern it evoked, resulted in numerous efforts to devise ways of improving the school performance of children in poverty. Since the early years of childhood are generally viewed as crucial, many of these efforts focused on preschool enrichment programs of various types.

One such program was initiated at Howard University, shortly before Head Start was launched. At the time this program was being planned, late in 1963, there was much discussion of various methods for giving to preschool children an experience that would

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* Clark, op. cit.; Kennedy et al., 1963; Osborne, 1960; St. John, 1969.

lay the groundwork for solid and satisfying school achievement. Some of the methods attempted or proposed were costly and elaborate, requiring special training and facilities, and intensive, sustained supervision. The project initiated at Howard University was addressed to discovering whether a solid foundation for satisfying school performance would be provided if children in poverty were given a traditional nursery school program of the kind offered to most middle-class children by nursery schools and also by the "hidden curriculum" of the middle-class home.*

Implicit in the question were three assumptions: (1) that a traditional nursery school program aims to give to children the elements of attention, warmth, individual response, and intellectual stimulation often described as generally present in middle-class homes and generally absent from poverty homes; (2) that, since well-trained nursery school teachers are alert to the special needs of each child as an individual, the teachers would perceive and respond to the special needs of children who come from difficult environments; (3) that the traditional nursery school approach includes working closely with the children's parents.

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* Strodtbeck, 1964.

Overview of the Project

The program and the attendant research went through a number of phases from the planning period, in early 1964, to the end of the fourth grade year, in June of 1971. Accordingly, it will be useful to begin with a thumbnail sketch of its history during those years, by way of providing reference points for the more detailed descriptions that follow. A "time-table" on the following page summarizes these points in tabular form. (Table 1)

The program began in 1964, when the children were three years old.* For two years, the experimental group attended a full day nursery school. They then entered a special kindergarten class for one year. During the following two years they were kept together in a special school situation, described more fully in a later section. At the end of the second grade year, the program terminated and the children entered regular third grade classes in the public schools serving their respective neighborhoods.

During the two nursery school years, the project was located in the Department of Home Economics at Howard University, under the direction of Dr. Flemmie P. Kittrell, Director of the Department.

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* The project was financed in part by the Children's Bureau's Child Welfare Research and Demonstration Grants Program (D-185).

Table 1

TIME-TABLE FOR CHILDREN IN NURSERY SCHOOL AND FOLLOW-UP PROGRAM, 1964 - 1969

Year	Location and School Level	Number of Children
1964 - 1965	Nursery school, Howard University	38
1965 - 1966	Nursery school, Howard University	38
1966 - 1967	Kindergarten, Public School Number 1	30
1967 - 1968	First Grade, Public School Number 2	30*
1968 - 1969	Second Grade, Public School Number 3	30*
1969 -	Program terminated - children attending neighborhood schools	

* Experimental group divided in half and paired with an equal number of children in regular school classes.

Evaluation was conducted by The Research Division of the U. S. Children's Bureau. During the continuation period, the project was under the general direction of Dr. Ira H. Cisin, of the Social Research Group, The George Washington University. Throughout its life, the project was guided by Miss Elizabeth Herzog, formerly of the Children's Bureau and now with the Social Research Group.

Recruiting Experimental and Comparison Groups*

Howard University, situated about two miles north of the Capitol in Washington, D. C., in 1964 was bordered on three sides by densely populated neighborhoods consisting almost entirely of very low-income Negro families. After examining census figures and visiting the neighborhoods, the research staff concluded that Census Tracts 46, 47, 48, and 49 should be the target area for recruiting an experimental group and a comparison group.

It was clear that, whatever sampling procedure was used in these tracts, the children selected from them were bound to come from Negro families below or near the poverty level. Therefore it was not necessary to screen for income, which was fortunate--for the project if not for the families--because of the difficulty of obtaining accurate information about income during one brief interview.

After considering, trying and discarding alternative strategies of sample recruitment, it was decided that the most practical and direct method would be a house-to-house canvass

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* Full details concerning sample selection, the original sample, and the nursery school program are given in the published report of the first two years (Kraft et al., 1968). Much of the material concerning sample selection and the nursery school program, in the present report, is excerpted or condensed from the earlier one.

which would produce a list of eligible children in the designated tracts.

The criteria of eligibility were: that in October, 1964, the child was not less than three and not more than three years and seven months old; that he was in generally good health, without gross visual, auditory, or orthopedic problems; that there was no obvious evidence of organically based mental retardation or severe mental disturbance. It was also required that the parents speak English, that the child had never been in formal group care, that the parents agree to bring the child to the University for psychological testing (referred to as "play sessions"), and that, if their child were chosen for the nursery school program, they agree to have him ready when the school bus appeared in the morning.

The canvass was conducted, for the most part, by Howard University students, trained and supervised by a member of the Children's Bureau research staff.

According to the records of the D. C. Health Department, 517 children were born between April 1, 1961 and October 31, 1961, in the tracts covered by the canvass. The children identified in the canvass--approximately 200--probably represented about one-third of the three-year-olds in the canvass area of about one and a half square miles.

Since the tracts canvassed were very similar in demographic characteristics, it was decided to select all of the experimental group from one of the tracts, for convenience in "bussing" the children and in order to avoid possible disappointments for

comparison group parents who might see their neighbors' children being transported to nursery school every morning. A random selection designated Tract 49 as the locus of recruitment for the program and Tract 48 for as many as possible of the comparison group, with the remainder coming chiefly from Tract 46. Both lists were drawn by random numbers.

Almost without exception, parents expressed willingness to participate in the program. However, since some families moved away during the selection process and others either enrolled their children in other programs, failed to keep appointments, moved away, or dropped out for other reasons, the families in the program cannot be regarded as a strictly random selection. Nevertheless, the samples were by no means self-selected. No family was permitted to volunteer participation, without being invited, and none was free to choose between participating in the experimental or the comparison group. The nature and extent of selectivity can only be surmised, but presumably it affected the experimental group and the comparison group in similar ways.

Thirty-eight children were selected for the experimental group, since this was the maximum capacity of the nursery school facility. The hope was that it would be possible to retain 30 children in the experimental group (hereafter referred to as EG) for the two-year program. Almost twice as many--69 children--were selected for the comparison group (hereafter CG), since it seemed likely that their attrition would be higher. The hope was that as many as 30 might be retained.

Actually, attrition was surprisingly low in both groups. In

1966, at the end of the two-year nursery school program, only one child from EG and two from CG had been lost to the study. Five years later, in 1971, contact had been maintained with 36 of the 38 children in EG and 65 of the 69 in CG. Of the six children with whom contact was lost, three are known to have moved out of the Washington area. Perhaps the one clearcut success of the project has been the battle against attrition, a battle that could not have been won without massive infusions of energy, industry, determination, initiative, ingenuity, and time on the part of a few staff members.

The Comparison Group

In order to demonstrate that observed effects of a "treatment" would not have occurred without it, research investigators traditionally employ a control group. In the present instance (as in many others), the name seems overpretentious. We did try to select two groups as similar as possible in the variables presumed to be significant. We did expose one group and not the other to two years of nursery school and three additional years of a special school situation. In that sense, the experiment could be called "controlled."

However, from the outset we realized that true experimental control is beyond the power of investigators dealing with human beings over a period of years. It seemed more realistic, therefore, to call the "non-treatment" group a "comparison group," and this term has been used throughout the project.

Strictly speaking, the comparison group (CG) has not been entirely "untreated." When they were invited to participate, they were asked to join the Howard University Growth Study. They were told that the purpose of the study was to learn as much as possible about the experiences of "normal" children, so that we might find out what helps children to do well in school and what makes it harder for them. The pediatric and psychological examinations ("play sessions") were also explained on this basis. The main

message of the invitation was that the families would be making a contribution to other parents and children by participating in the study.

Not only were the CG families encouraged to think of themselves as participating in a university-based study of some significance, in addition they were visited in their homes periodically by interviewers who made friendly inquiries about their backgrounds and life experiences, and the way their children were getting along at school. They and their children received small incentive gifts from time to time, and at the end of the two-year nursery school program they were given a framed certificate of participation in the Howard University Growth Study.

Perhaps merely being part of the study, and being told that one is making a helpful contribution, has some effect on some parents. Perhaps it influenced them in minor ways to take more interest in their children and their job as parents. Perhaps the children also came to think of themselves as "special" in some way. Several of the CG parents said that they welcomed the opportunity to visit Howard University and thought the experience was good for their children. If there were favorable effects of participating in the project, they might well tend to diminish differences between EG and CG in project tests and school achievement measures.

It was assumed from the outset that such effects might exist, but that they would probably be very slight. If the program were really successful, any differences should outweigh

possible placebo or experimental effects on CG. And if differences were too slight to outweigh placebo effects, they would not be great enough to have much practical significance. In view of this, and of the possibility for later comparisons with local and national school norms, the risks of placebo effects could be recognized without discomfort or anxiety.

The Children and Their Families

All of the children in the experimental group (EG) and the comparison group (CG) were about three years old, all were apparently in good health, and all came from Negro families living in an area of the city where poverty prevailed. None had previously participated in nursery school or other group care programs. Nevertheless, as has been observed, neither EG nor CG represented a strictly random sample of children living in the designated areas.

It is necessary, therefore, to consider further the extent to which the two groups were comparable. And, aside from questions of bias, it is necessary to know in some detail the characteristics of the children and families who were involved in the program.

Detailed information about the families in EG and CG was obtained by project staff members and graduate students at Howard University. We asked only for information that seemed clearly useful and necessary, and the interviewers were instructed to tell family members that questions were asked only because the answers could help us to understand the home life of the children in the project. Parents were also told that we had no formal connection with other agencies in the community and would not give agencies, such as police and welfare departments, any information about them.

The only item on which there was independent verification was the birth date of the child. With regard to other information, the family members (usually the mother) on the whole seemed forthright

in answering questions, and further acquaintance indicated that the information they gave was reasonably reliable. Since we have worked more closely with EG than with CG, data for EG are more complete, and probably more accurate, than for CG.

Since EG included two twin sets, it numbered 38 children but only 36 families. CG included one twin set. Because of this, the percentages and comparisons that refer to children and those that refer to families are not identical.

Initial and reduced EG

The original samples are described in the published report of the first two years.* EG and CG were generally comparable groups, although EG had a statistically significant advantage over CG in three variables (rating of housekeeping, fathers' reported years of education, and reported presence of father or father substitute), and CG families were "better off" than EG families in four variables (regularity of income, person-to-room ratio, sharing of kitchen and/or bath, and condition of housing).

The initial sampling could have been improved by stratification. The sampling supervisor in the pursuit of "purity" and "rigor" failed to separate boys and girls before applying random numbers. The result was a much larger number of girls than boys in the experimental group: 23 girls and 15 boys. Two sets of twins were included in the small experimental group, and one set of twins in the comparison group.

When the children entered the kindergarten year it became necessary

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* Kraft, et al., op. cit.

to reduce the size of EG to 30. This was done by regretfully excluding the six girls who showed least need of such a program and one boy who needed and wanted it very much but whose mother found it more convenient to have him attend school with the neighborhood children. The effect of this reduction was to improve the sex balance, reduce the initial disparity in the proportion of father-absent homes, and lower somewhat the initial mean IQ score of EG. In addition, the decision to remove from the experimental group the girls who showed least need of such a program added to the imbalance between EG and CG with regard to the size of various subgroups--since the "removed" girls were among those with relatively high initial IQ scores, and came from some of the less deprived families, with regard to income and life style. However, although the change in numbers increased somewhat the initial advantage of CG, no changes occurred with regard to statistical significance of differences.

Although the diminished size of EG decreased some over-all differences between the two groups, it increased some subgroup differences. The toll taken by these various imbalances has been minimized through regular use of subgroup analysis. And, despite avoidable error, it must be recognized that any two samples randomly chosen on the basis of census tract information are likely to display considerable variation in numbers falling within different important subgroupings. Experience with this project has underlined for us both the need to achieve comparability where possible, and the fact that achievement of the greatest possible comparability does not eliminate the necessity for careful and consistent subgroup analysis.

The effects of subgroup differences between EG and CG will become evident in later sections of the report. It could be argued that subgroup discrepancies could have been reduced, and intergroup comparability enhanced, by excluding girls from the subgroups that were overrepresented in EG. However, the purpose of the project was to test out ways of serving children who were more rather than less deprived, and the effects of imbalance could be detected through subgroup analysis. In any case, since this was a demonstration project, commitment to the children who seemed most in need of the presumed benefits of the program, undoubtedly contributed to the selection decision.

In the interest of comparability, the figures presented in this report will be based throughout on the thirty children who comprised the final experimental group. Accordingly, means and numbers for the nursery school years will differ from those given in the published report of those years. These differences, however, do not affect the gist of the findings and conclusions reached in that report.

The Children

Age

According to the selection criteria, the children were to be from thirty-six to forty-three months old when they entered the project. To the best of our knowledge, these age limits were adhered to when the children were selected, but subsequent checking of birth records showed that three children in CG were four to twelve months older, and one was three months younger, while one in the nursery school group was two months younger.

The proportion of children under thirty-nine months old when the program started was a little higher in CG than in EG, 42 percent as compared with 30 percent. This is not a statistically significant difference and no attempt was made to take account of it in assessing program results.*

Sex

EG as revised included 14 boys and 16 girls. CG included 31 boys and 35 girls. That is, boys made up 47 percent of both EG and CG.

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* The .05 level of significance has been selected as our criterion, and any difference designated as statistically significant will meet or exceed this level. For convenience, the word significant will be used only in relation to statistical significance. Differences falling short of the .05 level will be regarded as nonsignificant. (By this criterion, the .10 level, reported in a few tables, is regarded as approaching but not reaching statistical significance.) Chi square was used to test differences in proportions of children within various classifications, and the significance of differences in mean scores was measured by two-tailed t tests. Values for p and t, not included in the text, may be found in the relevant tables.

Birth order

Birth order is a factor that might be regarded as important for the children's development, especially the development of speech by the time chey were three years old. The differences between EG and CG in this respect were relatively slight, and not statistically significant. Twenty-three percent of EG were first-born, as compared with 15 percent in CG. Another 23 percent of EG and 15 percent of CG were second in birth order. At the other end of the scale, 43 percent of EG and 50 percent of CG were fourth or later in birth order.

IQ scores

Since analysis of program effects in this report draws heavily on patterns of change in scores on the Stanford-Binet test, the relative standing of EG and CG at the beginning of the project is of considerable importance. Table 2 gives the figures for the Stanford-Binet Intelligence Scale (1960 revision).

The average or normal range on this test is usually assumed to lie between 90 and 110. In both EG and CG, less than a third of the children received scores of 90 or above. However, it is clear from both the distribution of scores and the mean scores that the children in EG were more likely than those in CG to score below normal and were likely to be further below. In EG the proportion of children with scores in the 80's was lower, and the proportion with scores under 80 was higher, than in CG. The difference between the two groups was greatest under 80: 47 percent of EG and 36 percent of CG were below 80.

Table 2

STANFORD-BINET SCORES FOR EXPERIMENTAL AND COMPARISON GROUP CHILDREN, 1964

Stanford-Binet Scores	Experimental Group		Comparison Group	
	N	%	N	%
110 and over	0	0	2	3
100 - 109	1	3	4	6
90 - 99	6	20	14	21
80 - 89	6	20	22	34
70 - 79	12	40	20	30
60 - 69	4	14	4	6
Under 60	1	3	0	0
Total	30	100	66	100
Mean	80.7		84.3	

The difference between EG and CG in initial mean IQ scores is not statistically significant--that is, it cannot be interpreted to mean that EG and CG came from essentially different populations. However, further analysis indicates that the difference does reflect important subgroup variations that must be taken into account in evaluating program effects. These will be discussed in later sections of the report.

The Families

In the published report of the nursery school years, "family" was defined as the effective nuclear family at the outset of the project. "Father" was defined as the effective "father figure" in the household: that is, the male adult that the child would be expected to regard as a father or father substitute. If no father figure was present at the start of the project, an effort was made to secure information about the biological father. This information was recognized as far from precise, since a number of women were uncertain about the education or current occupation of a former husband, and some may have been unwilling to divulge the existence or identity of a resident male.

In the present report, on the basis of longer acquaintance with the project families, an effort has been made to differentiate between a child's own father and a father substitute--constant or temporary. Although the information as of any given time is probably rather accurate, changes in the presence or absence of a father or father substitute are frequent enough that it is difficult to give a "true" picture over a period of time.

Family composition

At the outset of the project, approximately three-fifths (61%) of the EG mothers reported themselves as married and living with their husbands, as compared with about half (49%) of CG. A larger proportion of EG (18%) than of CG (2%) reported the presence of a "substitute" husband. Later

acquaintance supported the initial speculation that the presence of adult males was probably under-reported in CG. In any case, in 1964 a significantly larger proportion of EG than of CG reported the presence of either a father or a father substitute.

Although family composition is of the utmost importance in understanding the family background of the project children, questions about the accuracy of early reports from CG do not pose problems for program evaluation. Early and later analysis revealed no statistically significant relations between father absence and test results among the children for whom we had accurate information--with the slight differences that appeared favoring the father-absent children. The lack of significant interrelations between school or test performance and father absence is in line with prevailing results in adequately controlled studies relating school performance to family composition.*

The most recent year for which we have adequate information about the EG and CG families is 1969, at the end of the program. At this time, half of the EG children and not quite two-fifths of the CG children were living in father-present families. (See Table 3.) About equal proportions of EG and CG children (13% and 14%), were living in families with a substitute father. No adult male was reported in the families of almost half of the CG and not quite two-fifths of the EG children.

Perhaps more relevant is the amount of change in family composition during the years 1964-1969. In EG, half of the children (50%)

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* Herzog and Sudia, 1970.

Table 3

PRESENCE OR ABSENCE OF FATHER FOR EXPERIMENTAL AND COMPARISON GROUP CHILDREN, 1964 AND 1969

	Experimental Group				Comparison Group			
	1964		1969		1964		1969	
	N	%	N	%	N	%	N	%
Father present	22	73	16	53	37	56	26	39
Substitute father present	2	7	3	10	*		9	14
No male present	6	20	11	37	29	44	31	47

* Early interviews did not provide sufficient knowledge of CG families to make the differentiation between "biological father" and "father substitute" that was made for EG families.

had lived with their own father in the home during those years. Figures for CG are less dependable but, according to the information obtained by our interviewers, the comparable proportion in CG is somewhat smaller (34%).

Smaller proportions in each group (EG, 17%; CG, 29%) had lived throughout the five-year period in a household classified as "no male present." It must be assumed that we do not have accurate information for all of these families, especially if the mother is receiving public assistance. Nor can it be assumed that absence of a resident adult male necessarily implies absence of a non-resident male.

About one-third of the children in both EG and CG (33% and 37%) experienced change in the presence or identity of a father or father substitute: the departure of a father, the return of an absent father, the replacing of a father by a father substitute, or the departure of a substitute, sometimes replaced later by another substitute.

These changes in the presence or identity of a father or father substitute by no means imply a pattern of sexual promiscuity. On the contrary, throughout the project years, the families that experienced a change in father or father substitute consistently displayed the pattern which Walter Miller has characterized as "serial monogamy."* That is, a sexual union would be monogamous for its duration, and it might last over a considerable number of years. Mrs. Sargent,** for example, during the time we knew her, maintained a monogamous (although stormy) union with her "husband" for a period of eight years. Not all were that enduring but such a union was by no means unusual among the project families.

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* Miller, 1959.

** All names used in this report are fictitious.

The very difficulty of establishing a "true" picture of family composition in EG and CG over a period of seven years points to some family characteristics even more important than the number of parents in the home--namely, the degree of stress, crisis, and conflict with which many of these children have lived. The more solid and carefully controlled studies of the effects of family composition on children consistently bring out the greater importance for a child's development of family climate and harmony (or disharmony) as compared with father presence or absence per se.* The removal of a father from a home is often preceded by periods of stress and conflict; but the presence of a father in the home is no insurance against these.

Ten of the fourteen father-present children in EG were known to live in the presence of severe marital discord or acute alcoholism, or--in a few cases--both. The family climate in CG homes cannot be reported as accurately, but enough is known to support the speculation that the proportions would not differ substantially.

Perhaps the lack of significant differences between father-present and father-absent children in this and other studies can be attributed to the fact that mere presence or absence of a father or father figure is not, in itself, the decisive variable.

A number of EG and CG homes were stable and harmonious. These included both two-parent and mother-only homes. A few of the one-parent mothers showed remarkable enterprise and determination in running well organized and well disciplined homes.

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* Herzog and Sudia, op. cit.

Number of children

The median number of children per family, in both EG and CG, was four. However, the range was greater in CG. Seven of the 65 CG families had from eight to ten children in the home, while no EG family had more than seven. Thus, CG families averaged somewhat larger than those in EG, although the difference was not statistically significant. A number of studies have reported significant relations between family size and school performance. However, the present data do not permit meaningful exploration of this variable.

Age of parents

Parental age in the two groups was quite similar, with a wide range in each group. The median was 27 and 28 respectively for mothers in EG and CG, and 32 and 31 for fathers. Several mothers in both groups were in their forties. The oldest "mother" was actually a grandmother serving as the functional mother of a CG child, and her husband (age 67) was the oldest "father."

Parents' education

The EG fathers, on the whole, were somewhat better educated than the CG fathers. Thirty-five percent of them, as compared with 17 percent of the CG fathers, were reported as having graduated from high school, a statistically significant difference.

Whether the difference in reported education means a real difference in functional intelligence or ability is a moot point. A high school diploma from an inner-city school is not necessarily synonymous with literacy. Among the EG mothers there were some who claimed eight

to ten years of schooling but could barely read or write.

The EG and CG mothers were much alike in reported educational level. Over one-fourth (29%) of each group had graduated from high school, and in both, the median highest grade completed was the tenth.

Occupation

About half of the fathers in both EG and CG were reported as the sole source of income for the family. In each group, about one-third of the mothers worked, although the father--if present--was likely to be the primary wage earner. The majority of the fathers were engaged in unskilled labor. However, a few were classified as semi-professional and a few more as skilled workers.

Most of the mothers who worked were in domestic service or in some form of restaurant service, with a few exceptions engaged in more skilled occupations.

Housing and living conditions

According to the somewhat impressionistic ratings of the interviewers, the CG homes tended to "look better", at least on the outside, than those of EG. Nearly one-fourth of the CG homes were rated in good or excellent condition as compared with one of the EG homes. Half of the EG homes and one-third of the CG homes were rated poor.

On the other hand, housekeeping was somewhat less likely to be rated poor for EG than for CG, as the following percentages indicate:

Housekeeping Rating	% of EG	% of CG
Good	11	22
Fair	57	36
Poor	32	42

A more impressionistic picture is given by the "adult activities worker" in summing up her visits to EG: "In describing the homes from which the children came, they range from comfortable with fairly adequate household furnishings to cold, dreary, bleak, and over-crowded with a bare minimum of household furnishings. Some are very well kept, others are surprisingly orderly and clean under the circumstances, while others are just plain dirty, dirty, dirty."*

As indicated by the person-to-room ratios, EG families lived in more crowded conditions than CG families. In the average EG family there were three persons per room, as compared with an average of two persons per room for CG families. Similarly, significantly more EG than CG families had to share a kitchen and/or bath with another family: 54 percent, as compared with 25 percent of CG families.

The indications that CG families had somewhat less crowded living conditions than EG were puzzling, in view of the income similarities reported below. Moreover, CG families did not pay higher rents than EG. Rents ranged from $45 to $125 per month for EG and from $35 to $150 per month for CG. The median rent for both groups was $75 per month.

Review of the 1960 census data for the tracts involved revealed that Tract 49, in which EG lived, had a somewhat higher person-per-room

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* Kraft et al., op. cit.

ratio than did 46 and 48, where most of CG lived. Also, some of the CG families came from areas in which urban renewal work had taken place after the 1960 census. This may have eliminated some of the less desirable housing in the CG tracts, accentuating the one modest difference revealed in the 1960 census data.

Apparently, then, despite the demographic similarities in the inner-city tracts designated for sample recruitment, there were differences. Housing was more crowded in Tract 49 (even though rents were no lower), and some differences between EG and CG reflect this fact.

Family income

The median income reported for EG and CG was $3,360 and $3,380 respectively--figures similar to each other and also to those for the tracts from which the samples were drawn.

In both groups the lowest family income reported was about $1,000. The highest family income for EG was $5,770, while eight CG families reported an annual income of $6,000 or more, with two of these more than $10,000.

Although there is a noticeable difference in the number of families at the top of the income range, the figures for EG and CG are similar when annual income is computed on a per capita basis: the mean for EG is $500 per person and for CG it is $520.

The similarity between the income levels of the two groups is also evident when their reported dollar incomes are related to the poverty-income criteria used by the Social Security Administration in the first

years of the project.* These criteria take into account residence (farm or nonfarm), number of family members, and sex of family head. For each type of family a weighted average of income was calaulated at each of two levels: the "economy level," at which families were officially regarded as living in poverty, and the "low-cost level," officially regarded as meeting subsistence needs, although probably perceived as poverty by those classified within it. In 1965, the "economy level" for an urban, male-headed family with two children was $3,130, and the "low-cost level" for such a family was $4,010.

In applying the SSA standards to EG and CG, those families with incomes below the economy level were classified as living in poverty; those with incomes between the economy and the low-cost level were classified as "borderline," and those above the low-cost level were classified as "adequate." The distribution is as follows:

	EG		CG	
Income Level	N	%	N	%
Poverty	18	64	39	60
Borderline	5	18	9	14
Adequate	4	14	14	21
Don't know	1	4	3	5

The figures indicate that over half of the families in both groups were living in poverty and that less than one-fourth reported incomes sufficient to meet the family's basic needs. A slightly smaller proportion of CG than of EG are classified as living within poverty and a larger proportion are classified as having "adequate" income.

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* Orshansky, 1965.

It should be added that only four families (14 percent) in EG and 16 (25 percent) in CG reported receiving financial assistance from the District of Columbia Department of Welfare. All but three of these twenty families were headed by a mother.

"Real" income and reported income

It is likely that in both EG and CG the higher incomes are reported more reliably than the lower ones--partly because the lower incomes are less regular and therefore harder to calculate. Probably many families in poverty do not know exactly what their annual incomes are. In addition, as our experience confirmed, there may be less readiness to report accurately among the very poor, either because of concern about welfare regulations or because of unwillingness to reveal how little they are able to earn.

Regularity of income

Fifty-nine (94%) of CG families reported a regular income, as compared with twenty-six (64%) of EG families. This is a statistically significant difference, and in the opposite direction from what might have been expected, since CG families reported significantly fewer fathers present than did EG. It might be supposed that homes with fathers present would be more apt to have regular incomes. However, among EG families with a father present, only 69 percent reported a regular income, as compared with 89 percent of the CG families who reported a father present.

Residence

Although less than half of either EG or CG parents were born and raised in the District of Columbia, over three-fourths of both groups had been living in the District for ten years or more. The actual range runs from 79 percent for EG mothers to 86 percent for CG mothers with the fathers of both groups falling in between these rather similar proportions.

At least 90 percent of the parents grew up in the District of Columbia or in southern states (including Virginia, North and South Carolina, Arkansas, Florida, and Georgia). The others came from "the North" (Maryland, New Jersey, and Pennsylvania).

Summary of differences, EG and CG

The two groups did not differ significantly from each other with regard to the number of children in the home, mothers' education, receipt of welfare assistance, or annual income--whether income is calculated as annual family total, proportions falling within SSA income classification, or income per family member. CG families were "better off" on four variables: regularity of income, person-to-room ratio, sharing of kitchen and/or bath, and condition of housing. EG families were "better off" on three variables: rating of housekeeping, fathers' reported years of education, and reported presence of father or father substitute.

Later analysis indicated that none of the variables on which EG and CG differed significantly at the outset of the project was related to 1971 S-B scores.

The Nursery School Program (1964 - 1966)

Among the many preschool demonstrations being conducted in the United States during the sixties, no two were exactly alike, although many shared similar features. As already indicated, the two-year program at Howard University followed the general pattern of a well run middle-class nursery school, with no specific "enrichment" features added. Some of its main characteristics were:

1. It was conducted in a long-established nursery school run by a university for research and training purposes.
2. The children were enrolled at the age of three.
3. The nursery day was about seven hours long (eight hours including the bus trip to and from school) and included lunch, breakfast if needed, morning and afternoon snacks, and an afternoon rest period.
4. The children attended the preschool for a ten-month school year and a two-year time span.
5. Transportation was provided for all the children.
6. No fees were charged.
7. The teachers, under the general guidance of the project director and the head teacher, were allowed to modify the usual nursery school activities to fit the special needs of these children.
8. Special efforts were made to involve the children's parents. A full-time "adult worker" (parent educator) on the staff served the families of the children.

9. Evaluation of the program was conducted by a team that was independent of the service staff.

10. Provision was made for a continuation of special schooling beyond the preschool phase of the demonstration.

Since full details of the nursery school program are given in the published report of the first two years, only a cursory account will be given here. As necessary background, however, a brief account of some outstanding characteristics is required.* For present purposes, it is sufficient to say that it was a traditional, well-equipped nursery school, and had been conducted under the direction of Dr. Kittrell for some twenty years.

The curriculum was much what would be expected in an average middle-class school, although for the project children somewhat stronger emphasis was given to occasional trips and excursions, to nourishing snacks, lunch, and breakfast for those who needed it, and to working with the parents. The rest period was also somewhat longer than is usually found in a middle-class nursery school, since some of the children showed obvious need of sleep.

According to the published report, "The overall atmosphere of the nursery was permissive and warm. Although the children were handled with firmness when behavior was markedly aggressive and clearly unacceptable to the general welfare of the group, we noted few occasions when emphatically firm handling on the part of the teachers (such as in coping with tantrums or in physically restraining a child from striking

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* Kraft, et al., 1968.

another) was needed or used. On no occasion did we see a child managed in a punitive or harsh manner. We observed no outbursts of anger or otherwise undisciplined behavior on the part of teachers or aides. The Howard University Nursery School was clearly a benign and pleasant setting for young children."

The teaching staff included the director, a head teacher, a "floating" teacher who gave help where needed, three other professionally trained teachers, a parents' worker, and six teachers' aides, drawn from home economics students majoring in child development. In addition, faculty members from other university departments provided services as needed--a pediatrician from the School of Medicine, a nurse from the School of Nursing, a psychologist from the Department of Psychology.

The aides gave less help and support to the teaching staff than had been hoped, because of their numbers, the limitations of their time, and the lack of opportunity for adequate training in their tasks. They were seldom on duty for more than two consecutive hours, since they had to adjust their work in the nursery to their class schedules. Accordingly, there was a considerable turnover in personnel during the course of a day, and the number of aides present and available for direct work with the children varied considerably from hour to hour. Over a hundred student aides worked with the children in the course of the two years.

Consequently, the teacher-child ratio shifted throughout the day, from an estimated high of one teacher or aide to two children to an estimated low of one to seven. The average ratio was one teacher or aide to three or four children. According to the published report, "It was our impression that the aides gave only slight assistance to the teachers,

partly because they were there for such short periods of consecutive time and partly because many of them did not seem to be at ease with the children or to be able to take initiative in helping the teachers. Thus, the effective ratio was often closer to one to eight or more."

The head teacher thought the multiplicity of staff was compensated for by the fact that each child was assigned to one of the senior teachers, for continuing support and guidance. "They knew five teachers but were responsible to one." The chief problems with the aides were that "they have to go (to class) just when you need them, and maybe for a while there won't be anyone to help"; and that "they had no training except course work."

Nevertheless, some of the student aides did become interested in the children. As reported by Dr. Kittrell, "In addition to fulfilling their assignments, many students volunteered their services for special tasks such as babysitting for a parent after school or on weekends or taking a lonely child for a walk or to the zoo or reading to him on his front steps."*

The atmosphere of the nursery school was also permissive, and efforts were made to provide scope for exercising and developing curiosity. The head teacher believed in giving children an opportunity for "Planned Discovery," by making available a selection of toys and materials designed to stimulate constructive exploration and play. At the same time, the children were free to get preferred toys or materials from the shelves, alone or with the help of a teacher.

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* Kittrell, 1968.

"Planned Discovery is a great goal, but it requires very careful planning."

Some parents, and some of the teachers as well, thought the schoolroom was too "open," the climate too permissive, and that the children would have benefitted by firmer structure and discipline. Parents repeatedly expressed concern that the children were being "spoiled." The head teacher, a skilled, highly trained, gifted, and experienced nursery school practitioner, held firm to an approach that characterizes many highly rated middle-class nursery schools.

Whether the approach was well- or ill-advised for these particular children, there can be no doubt that it set up a discontinuity between the nursery school and their homes, many of which followed very different child-rearing practices, generally viewed as harsh and authoritarian. This was the first of many discontinuites experienced by the children in EG--a subject that will appear as a recurrent theme throughout the account of their early school years.

At the close of the nursery school phase, the teachers were asked what surprises the program had held for them. The one most often cited was the strenuous and exhausting nature of the work. They had not realized, they said, that working with children from very low-income families would be so much more demanding than work with middle-class children. This comment was the more striking since a few of the teachers had had previous experience in working with inner-city children from families in poverty. Those experiences, however, had not involved full day programs with a group recruited entirely from the very poor and near-poor.

Recommended changes

The teachers, director, and senior research staff also considered what changes they would make in the program if they were to do it over again, taking into account what had been learned in the past two years. Strong consensus emerged on a number of points. Some of the recommendations had, in fact, been attempted, but they agreed that in another effort they would try even harder to have:

--More effective development of verbal skills, with more individual interchange of conversation between teachers and children.

--Fewer, more consistently present, and better trained nursery school aides. Two teachers suggested that the ideal teacher-pupil ratio for work with children from low-income homes would be one teacher and one full-time aide for every five or six children.

--Either a shorter school day or more brief rest periods for the teachers during the day. (Although the children had a long rest period, the teachers had to be with them during this time, and there was hardly a moment during the day when they could relax. With more adequate help from the aides, the schedule might have been less strenuous.)

--More meetings for the teachers and the adult activities worker, with opportunity to discuss the program and the individual children's progress.

--More floor space, to provide greater opportunity for water play and easel painting, and more freedom of movement in general.

--A more heterogenous group of children. Some of those who were the most verbal at the beginning of the program might have benefitted more if they had had the stimulus of talkative, inquisitive middle-class children.

Parent involvement

Two assumptions which this project shared with many others are (1) that close cooperation with parents is important, if not essential, to successful work with their children, and (2) that parent involvement is likely to be more effective when it is organized around activity programs rather than discussion groups or lectures. A third assumption, less common then than now, was that parents should be involved as active partners rather than as beneficiaries or recipients of shed light.

The terms "parent education" or "parent educator" were avoided in planning or discussing the parent-involvement program. The parents' worker was referred to as the "adult activities worker," as part of the effort to avoid a didactic approach. The parents were invited to join with the staff in trying to improve their children's prospects for a successful school experience and later experience. The appeal was not, "You need our help to become better parents," but rather,"We need your help to do a good job with your children."

The professional style of the adult activities worker was warm and pleasant, and her appearance and manner were decidely upper-middle class. There can be little doubt that she was accepted and respected by most families in the project. The records of her contacts with the families demonstrate their freedom in communicating with her and their sometimes surprising readiness to confide in her. Two or three years after the children had completed nursery school, the mothers still spoke of her with warm admiration and enthusiasm. She was assisted by the "floating teacher," who rode the bus with the children and in many ways served as liaison between the homes and the nursery school.

During the first year of the project, most of the parent activities were carried on in meetings--at first in the nursery school but later in the homes of mothers who volunteered to serve as hostesses. The parents worked together to make articles for the nursery school, or to plan special events such as Christmas, Easter, and Family Night parties. The parent activities worker was part of these meetings and used the many opportunities they offered to bring in relevant and useful information.

During the second year the celebrating of special events continued, but fewer group meetings were held and more parents visited the school individually, to help with the children or to observe them through the one-way mirror. The change from group to individual contacts was instigated by the parents, and the preference was documented by the increase in individual contacts from 322 the first year to 583 the second.

Another interesting shift in the pattern of individual contacts during the second year was the increased number of instances in which the parents offered to assist the school in some way.

As usual, more mothers than fathers participated in project activities. However, some fathers visited the school on their day off from work, some helped repair toys and paint the playground equipment, one or two supervised the children's play or led the singing at parties. During the two-year period, 18 of the 28 fathers or father-substitutes came to group activities or visited the school.

The two most interesting parents' projects were entirely initiated by them. One grew out of a desire expressed by some of the parents to have children's books to take home over the weekend.

This resulted in visits to the public library by parents and children and finally led to a library service in the nursery school. The public library supplied the books through the adult activities worker, and each family was allowed to sign out as many as four books for the weekend.

The other outstanding activity was the Family Exchange, a clothing, book, and toy pool operated by the parents themselves. This exchange served a real and present need for many of the families and also gave some of the parents a chance to share with others.

Many of the individual contacts during both years involved help with obtaining social or health services--for example, arranging for appointments, giving transportation to a clinic, and on occasion waiting with the mother until her turn came. Many involved discussion of family crises or problems. But, especially during the second year, a large number were accounted for by visits of various mothers to the school. Although such visits were often unannounced, a staff member always managed to accompany the mother to the observation booth where she could observe her child through the one-way mirror, and discuss what was happening. The staff considered these visits their most fruitful contacts with the parents. For example, when one child became restless his mother asked, "Why doesn't the teacher hit him?" When the teacher calmed the child down by taking him on her lap, the mother seemed deeply impressed. Another remarked during a similar episode, "Why, maybe you can get a child to behave without yelling at him."

At the end of the nursery school phase, the teachers felt that the parent involvement program had made a substantial impact, especially in fostering parental support of curiosity and initiative

and in discouraging authoritarian methods of child-rearing. In summarizing her report of the last group meeting, the head teacher commented, "From a teacher's point of view, the acceptance and apparent enjoyment of their children was a far cry from the harsh authoritarian attitude of these parents during the initial play sessions in 1964." Another reported that a mother had proudly illustrated her child's progress in intellectual curiosity by telling how he asked her what they were going to have for supper. "Greens," she replied; and he countered with, "But what kind of greens?"

The impressions of the research staff, although less optimistic than those of the teaching staff, were that the program was reasonably successful in attaining cooperation of the parents. Relations between staff and parents were excellent, and the parents demonstrated by word and by deed that they were pleased to have their children in the school. Despite good relations, however, participation in the adult activities was, on the whole, limited to relatively few parents. Attendance at group meetings varied from one to eight, with an average of four, and the same parents were likely to attend. For these few, the group meetings clearly had a good deal of significance, as did their helping in the school and on project excursions. To judge from their comments, the individual contacts also meant a good deal to many of them.

Whether the adult activities contributed to the second goal, reinforcing the nursery experience in the home, is an unanswered question. It is true that books and games were borrowed and taken home, but we do not know the extent to which they were used. It is true that the teachers observed marked changes in the child-rearing practices of some parents, as evident during school visits, excursions, and parties. However, we do not know whether these changes were in

evidence at home or, if so, how long they persisted.

The research plan intentionally omitted systematic evaluation of the adult activities program, because of the difficulties and ambiguities involved. Our impression is that it succeeded better than most and less well than some. It should be added that the extent of parent involvement in the program was associated with SES level, as rated in the study, the Hi-SES tending to participate more actively than the Lo-SES parents.* However, parent participation per se showed no clear relation with score changes in the project tests.

We continue to believe that parental involvement in a child's school experience is important. However, the nursery school years did not document the belief, nor did they furnish evidence that absence of parental participation necessarily prevents a child from profiting by a school experience. In the light of the project's subsequent history, it can be speculated that this parent involvement program was not effective enough to make the total project a success and probably was effective enough to merit no share of the blame for the project's later lack of success.

One further comment is that in practice the adult activities program was more didactic and less a collaboration of "partners" than had been intended. To a large extent the parents, and also the project staff, regarded the teachers as experts whose role called for the imparting of knowledge. The staff was creative in using spur-of-the-moment situations to "slide in" certain child-rearing precepts while talking with parents, and this approach may have been the most feasible and most desirable.

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*It should be noted that Hi-SES can be considered "high" only within this sample of low-income families. The Hi- and Lo-SES classifications are described on pages 80-83.

The Follow-up Program, 1966-1969

The three years from kindergarten through second grade constitute a bridge between a nursery school program especially designed to provide for these particular children the most enriching experience the experimentors could evolve, and entry into "regular" public school classes of the District of Columbia.

From the beginning of kindergarten, the children were within the regular public school system, and in large measure subject to its imperatives. At the same time, they were also in a specially designed and sustained experimental situation. It must be assumed that they were affected to some degree by this mixed status, both during the three years when they occupied it and during the transition from it to regular enrollment in the regular public schools that served their various neighborhoods.

It must be assumed further that they were affected in some degree by the fact that, due to logistic exigencies, the group was housed in a different school during each of the three interim years.

Although the location and the teaching staff differed in each year, certain components of the program remained constant. In order to keep the group together, despite a number of moves by a number of families, it was necessary to provide transportation, a difficult and costly requirement. Exploration with local bus companies demonstrated that the cost of bus transportation would be prohibitive. For some time local taxicab companies seemed equally prohibitive in cost. Finally, however,

indefatigible transportation scout discovered a local organization, the Capitol Cab Company, that took pride in combining profitable enterprise with service to the community, such as giving special help to the handicapped and making special rates for philanthropic undertakings. Not only did this company work out rates that were within financial reach of the project, but, in addition, the official responsible for arrangements undertook to find drivers who really wanted to help and were willing to accept responsibility for regularly and punctually coping with complex daily routes and active, small children.

In each of the three years, three drivers regularly called for and delivered five loads of children. The one with the longest route took only one load each way. Each of the others took two loads to and from school each day.

One of the cab drivers was with the project for all three years, missing less than five days during this time and always supplying a substitute when his cab broke down or for some other reason he was unable to drive. He came to take a fatherly interest in the children, keeping firm order in the cab, occasionally buying treats for his passengers, and sometimes giving one of the mothers a lift along the way.

Some drivers regularly asked to see the children's report cards, giving praise or blame when marks were especially good or bad. One driver took a boy to his own home and gave him haircuts when he thought they were needed.

Since a number of the homes lacked a resident male, the steady presence of a strong, responsible man may have meant more to some of these children than a means of transportation. The fatherly role of the

driver was a continuation of the children's earlier experience, since the driver of the school bus during the two nursery school years was also a responsible, firm and warm man who took active interest in his little passengers.

Another program constant was the noonday meal. During kindergarten, first and second grades, each child received lunch, through the free lunch program of the District. Arrangements for the free lunches were protracted and complex, since some of the children came from families with incomes slightly above the prescribed maximum for free lunch recipients. However, dispensation was finally granted, so that the children could continue to eat together and to eat the same kind of food. Breakfast was also provided for the children who needed it--although sometimes at the expense of the research staff rather than the free lunch program.

The food was nutritious and the diet was well balanced. Each meal was served as attractively as possible for a large-scale lunch program but there were many items which were unfamiliar to the children and, consequently, were rejected wholesale.

Also constant throughout the three year follow-up program, was the plan for carefully scheduled trips. Each year the teachers coordinated several special excursions with lessons in social studies and science. Other outings were planned for recreational purposes or to coincide with holiday festivities. The parents were encouraged to accompany the children whenever possible to assist with supervision. Chartered busses or taxis were used for the outings, which numbered thirty-three during the course of the follow-up program.

Physical facilities during the kindergarten year were near the lower edge of the range in the District of Columbia. Space was inadequate,

supplies were difficult to obtain, and the premises were dirty and ill-kept. The first grade school, although one hundred years old and in the heart of the business district, was well maintained, with large cheery rooms painted in light colors. The second grade classes were assigned to adjacent rooms in a new addition in a large school, and although the neighborhood was more affluent than those of the two preceding years, school windows were broken and boarded up and school and grounds were not tended as carefully as in the first grade school. The arrangements for the three follow-up years are summarized in Table 4.

Kindergarten

Title 1 funds, combined with Model School funds, provided a master teacher, a co-teacher, an adult aide and a teenage aide from the National Youth Corps during the kindergarten year. All of these except the co-teacher were black, and the three adults provided a balanced team, combining the experience, maturity and warmth of the master teacher with the youth and enthusiasm of the co-teacher, and the strict conventionality of the adult aide. The contribution of the National Youth Corps turned out to be more of a liability than an asset. A number of these teen-age aides came and went during the year, at irregular hours. They had little patience with and little interest in the children, lacked training, discipline, and supervision from their central office, and resented requests to do the work for which they were being paid.

After some difficulty with regard to space, two classrooms were assigned to the project, one for classroom work and meals and the other for the rest hour. Light-weight stacking cots were bought and quilts were obtained. During the rest hour, which was supervised by the adult

Table 4

SUMMARY OF THREE YEAR FOLLOW-UP PROGRAM, 1966 - 1969

Year and School	Kindergarten 1966-67 School 1	First Grade 1967-68 School 2	Second Grade 1968-69 School 3
School Facilities	Two rooms (one for naps) Playground and bathroom inaccessible Broken windows Fair maintenance	Two rooms, one above the other (third room needed desperately for small group teaching) Playground and lunchroom too small Old but cheerful and immaculate school	Two adjacent rooms-third room downstairs for small group teaching Playground, lunchroom and bathrooms adequate Fair maintenance
Class	30 experimental group	Fifteen experimental group and 15 local children upstairs Fifteen experimental group and fifteen local children downstairs	Fifteen experimental group and twelve local children in one room Fifteen experimental group and eleven local children in other room
Staff	Kindergarten teacher Co-teacher Adult aide Teen-age Youth Corps aides	Two first grade teachers Third teacher part-time to work with two slow groups Adult aide	Two second grade teachers Additional full time teacher for slower groups Two part-time adult aides (one was a local parent)
Enriched Program	Double session with rest period in afternoon Free lunch for all Free breakfast available Extra supplies, equipment and kindergarten toys Twelve special trips	Team teaching for science and social science (sixty children together twice a week) Curriculum advisor readily available Ten special trips Free lunch for all Free breakfast available	Free lunch and breakfast available for experimental group Ten special trips Joint planning but no team teaching
School Contact with Parents	Head teacher visited each home Two conferences at school (transportation provided) Christmas party Year-end picnic (transportation provided)	Two conferences at school (transportation provided for experimental group parents but not for local children's parents) Christmas party Year-end beach trip (transportation provided)	One conference at the end of school year (transportation provided)
Social Services	Part-time social worker visited all homes and provided professional support for approximately half the families	Part-time social worker visited all homes (experimental and local children) and provided professional support for approximately half of experimental and about one-fourth of local families Social worker coordinated home and school information re problems	Part-time social worker visited experimental group homes first half of school year Provided home information for teachers during that time

aide, shades were pulled and, although the cots were close together, a number of the children regularly slept for the entire period. For some of them this must have been the most restful time of day or night.

Throughout the year, and especially at the beginning, school supplies and equipment posed serious problems. Expected funds and supplies did not materialize, and it was necessary for research staff members to drive to several other schools, assembling materials they could spare. Eventually, however, the research team was able to fill in the gaps in the normal teaching equipment for District public kindergartens and to produce some items not usually provided. An old piano was brought to the classroom and used a great deal during the year. And a "housekeeping center" furnished with toys became a constructive play area.

First grade

By the time the children completed kindergarten, they had spent three years in a protected and insulated situation. To bridge the gap between this and the usual public school, and also to provide school contact with other children, EG was divided into two groups, each of which was paired with half of a "regular" first grade class in a different school. The need to change schools in this and the following year was regretted but necessary because of space requirements.

The two regular teachers were assisted by a third teacher and an aide. Verbal and number skills were taught in four separate groups. Each regular teacher worked with most of the children in her classroom but was assisted for several hours each day by the third teacher who gave small group instruction in reading readiness and number skills

to those children who were not ready for first grade work.

The classroom teachers functioned as a team for the teaching of science and social studies, alternating the classes and bringing the sixty children together for a full period two days a week.

The lunch hour was also planned as a time for the sixty children to be together. Thus the augmented group experienced a certain amount of continuity and cohesiveness despite the separation into two classes and the addition of the thirty neighborhood children.

The head kindergarten teacher moved with the children to the first grade school, providing some continuity from the prior year for all the children. Although her daily contact with some of them was brief, she was available to the entire experimental group.

Second grade

At the close of first grade, the experimental children were moved to a large sch[illegible] in a somewhat more affluent area of the city. There the group was again assigned to two classrooms with an equal number of neighborhood children. The second grade year did not provide the same sheltered environment the children had experienced before. Although the two second grade teachers were assisted by a third teacher for small group instruction and by a parent-aide, the staff was wholly new to the children and, in addition, was committed to the principle of integrating them into a more usual public school situation. A minimum amount of continuity was provided during the year by the ongoing transportation arrangements and the continued assignment of the part-time social worker and research staff aide. But the atmosphere was less benign than during the previous four years and the change was reflected in the behavior

patterns of a number of the children.

That the children recognized the changed atmosphere early was demonstrated by the fact that two experimental boys, having decided on a September morning that they didn't like second grade, left school to walk home, a distance of about four miles. They followed their taxi route and had travelled more than a mile before they were found and returned to the classroom.

The third teacher again provided small group instruction for the slower learners from each of the two classrooms. Some of these children were not yet ready to read and were at a distinct disadvantage during that part of the day spent in the regular second grade classroom.

Home contacts

During the years between nursery school and third grade, home contacts were maintained by the research staff, which included a social worker. The home visits served a number of functions. Although--and perhaps because--the social worker was perceived by the families as a member of the research staff, she was able to make needed referrals, and occasionally to give transportation to the appropriate clinic or agency, see that appointments were kept, and in various ways help the project families. The project director was also active in this kind of home contact.

Often the need was for help with the mechanics of living and with obtaining the necessities of life. When possible, this was done through appropriate social agencies. When this kind of service was not available,

the project staff found other resources, including their own pockets.

Frequent involvement with the families in their homes contributed to the store of information required by the research component of the program. Systematic interviews were held at the end of each year, but in addition, the social worker and project director obtained the kind of intimate and detailed acquaintance with these families that can hardly be gained through formal research procedures.

An important function of the social worker was to serve as liaison between home and school, helping the teachers to understand the kind of home experiences the children were having and helping the parents to make direct contacts with the teachers, as well as pointing out the importance of regular school attendance.

Frequency of visits varied greatly. Some families needed more contacts than others, especially during times of family crisis. For some of the families, in times of great stress, the staff might be in touch daily, or several times in a day, in person or by telephone. At other times, several weeks might pass without a home visit. At the homes of a few relatively stable families the social worker might visit two or three times a year.

The research team

As the preceding section suggests, the research team functioned as collectors and analysts of formal data and also as a source of referral for social and health services. The families of the children in both groups were quite clear about the role of the team. With one or two exceptions, they welcomed participation in a research project, not

only for the tangible help that many of them received, but also because they understood that the purpose of the project was to learn how to improve the education and opportunities of children generally. During the nursery school years, the comparison group families sometimes expressed pleasure that their children periodically visited Howard University and met some of the people there. They were, for t' t part, proud to be part of a University Growth Study, as their part of the project was called. For the most part, also, they welcomed the interest evidenced in the periodic interviews. Involvement with the families in the comparison group was limited to research requirements, so that acquaintance with them was less intimate than with the families in the experimental group.

Obviously the role of the research team was unconventional, since it combined the obtaining of relatively objective data with the role of participant observer and, on occasion, of friend and helper. Since the tests were administered and scored by an independent testing team, we view this combination of roles as a great asset and no liability. This is fortunate, since it would have been humanly impossible to maintain close contact with these families and not try to help them. The evidences of need were too overpowering to resist, even at the expense of research rigor. However, it is our belief that the research aspects as well as the human aspects were served by frank, unresisted involvement with the families of the experimental group.

A simple example may suggest the basis of this feeling. In the second year after the end of the nursery school program (the fourth year of the project) the father in one of the families confided that he had been misrepresenting his income, reporting a good deal more

than he actually made. He could not bear to admit that he was unable to earn enough to support his family. The admission cleared up a mystery for the research team, who had found it hard to reconcile his reported income with the obvious physical deprivation of the family in the apparent absence of such proverbial drains as alcohol, drug use, or gambling. Since socioeconomic ratings were an important factor in the data analysis, the admission helped by producing a rating that was reliable and also consistent with the patterns emerging in the analysis.

In a more general way, the father's admission helped to reinforce skepticism about relying too heavily on a respondent's report of his dollar income, and to increase confidence in the decision already made to find other indicators of socioeconomic status.

Third, fourth, and fifth grades

When the children began the third grade year, they entered into regular classes in the schools that served their respective neighborhoods. Since many families had moved during the course of the project, the EG children were scattered through 22 schools. Of these, 21 were part of the District of Columbia public school system, while one child was enrolled in a neighboring suburban school.

The end of the second grade year marked the end of the project program. Nevertheless, follow-up information was obtained during the third, fourth, and fifth grades, so that some contact was maintained with the families. The research staff continued to show active interest in the welfare and problems of the families, and to offer various kinds of help, such as obtaining clothing for the children and their siblings, and occasionally helping with referrals for social and health services.

Methods of Assessment

The question to be answered was whether a "classic" nursery school program would protect the children who participated in it from "cumulative academic retardation" in grade school. An affirmative answer would require that EG should do substantially better than CG in school. To make such a comparison with confidence, it is necessary to allow time for changes relating to the adjustment of EG after transition from the special program, and the kinds of changes that have become familiar in reports of analogous projects. Initial gains from early enrichment programs have often dwindled with time. On the other hand, some studies have shown increased differences between experimental and comparison groups as the children reach the higher grades.*

Before the children entered regular public school classes, however, and during the transition period, it was possible to get some indication whether or not the program did improve skills generally agreed to contribute to school performance: language use and understanding, perceptual discrimination, concept formation, sensorimotor coordination, memory and number skills.

A variety of tests have been designed to measure these and related skills. They can be used as predictors before the children enter school, and continued in order to check their actual

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* Weikart, 1967; Deutsch & Brown, 1964.

relation to school performance.

Many questions are raised about what such standardized cognitive tests "really mean," especially about their meaning and fairness when administered to very young children, and more especially when administered to very young children who come from very poor families. We share these questions and doubts, and experience with this project has tended to strengthen them. Nevertheless, standardized cognitive tests seemed to offer the best available way of estimating improvement in skills related to school achievement. We have regarded them as putative predictors, to be checked against the school performance of EG and CG.

Doubt pangs about standardized tests are eased a little by the belief that their defects probably operate impartially for EG and CG. If the earlier school experience gave EG an advantage in a test situation--well, that is how school performance is measured. If an apparent advantage in scores on standardized tests proves to be unreal or temporary, this is bound to become evident through the school records. If later school records show earlier test results to have been misleading, then it will be clear that--for whatever reason--the tests have failed as predictors, and we shall have gained useful information about them.

Several standardized cognitive tests have been administered during the life of the project, and these will be referred to collectively as "project tests." A variety of information, including achievement test scores, has been available from the schools since the end of the second grade year (May 1969) and this information will be referred to collectively as "school measures."

To reduce two interrelated sets of data for two groups over a period of seven years into a digestable dose requires stringent condensation, along with constant vigilance against inadvertant (or advertant) distortion. In an effort to promote condensation, and prevent distortion, much of the material will be presented in graphic and tabular form. This will permit checking of statements against the data, while reducing (though, alas, not eliminating) the need for verbal presentation of a large mass of details.

It will be expedient to discuss the project tests first, since they came first in time. School measures will be presented next, followed by discussion of the interrelations between project tests and school measures.

Project Tests

Project tests have been administered to EG and CG every year, from 1964 through 1969, and again in 1971, two years after the end of the program. The Stanford-Binet Intelligence Scale (1960 revision) was included in each test round, and the Peabody Picture Vocabulary Test was included in each test round for EG and in all except one round for CG. During the nursery school phase (1964-1966) two additional tests were included: the Illinois Test of Psycholinguistic Abilities (ITPA) and thirteen subtests of the Merrill-Palmer Scale of Mental Tests (M-P). After the children entered kindergarten these two tests were discontinued, and the Goodenough Draw-A-Person Test was substituted in the years 1967-1969. One verbal subtest of the Stanford Achievement Test (SAT) was also administered in 1969 and 1971. This evolving test schedule is summarized in Table 5.

Thus, for almost all of the 96 EG and CG children remaining in the study, there are available the results of two tests administered seven times (S-B and PPVT), of two others administered in the early test rounds (M-P and ITPA), of one other (DAP) in three later rounds, and yet another (SAT) in 1969 and 1971.

Of all these tests, the two that have proved most useful in the long run have been the Stanford-Binet and the Stanford Achievement Test. The S-B was chosen because it is one of the best constructed, best standardized, and most widely used tests of intelligence available. The Word Reading subtest of the SAT was added in 1969, to give an additional measure of verbal skills, which are so crucial an element in school achievement.

The Illinois Test (ITPA) and Merrill-Palmer test (M-P) gave meaningful results in the nursery school years and have been discussed in the

Table 5

SCHEDULE FOR PROJECT AND SCHOOL TESTS, 1964 - 1971

	Project Tests	School Tests
Nursery School Years		
September 1964	SB PPVT MP ITPA	
July 1965	SB PPVT MP ITPA	
July 1966	SB PPVT* MP ITPA	
Kindergarten Year		
June 1967	SB PPVT DAP	
First Grade Year		
June 1968	SB PPVT DAP	
Second Grade Year		
May 1969		MAT
June 1969	SB PPVT DAP SAT	
Third Grade Year		
November 1969		CTBS
Fourth Grade Year		
September 1970		CTBS
May 1971		CTBS
June 1971	SB PPVT SAT	

SB - Stanford-Binet
PPVT - Peabody Picture Vocabulary Test
MP - Merrill-Palmer
ITPA - Illinois Test Psycholinguistic Abilities
DAP - Draw-A-Person
SAT - Stanford Achievement Test (First Subtest)
MAT - Metropolitan Achievement Test
CTBS - Comprehensive Tests of Basic Skills

* Administered to EG but not to CG in 1966

report of that phase.* The Goodenough, for this particular group, contributed too little information to be continued or included in the report. The PPVT gave results so consistently at odds with other measures of vocabulary that in the end its findings were disregarded. For example, its correlations with the Vocabulary subtest of the Stanford-Binet and the verbal portions of the school achievement tests described below were consistently lower than the other correlations obtained. Inspection of mean scores for subgroups and of scores for individual children confirmed the impression that the PPVT was "out of step" with other verbal measures (and also with observations of the children). Item analysis reinforced the impression that, at least for these children, the PPVT was not a useful indicator. The reason for retaining it in the battery was a desire to check our own impressions, which coincide with the experience of some investigators but conflict with the experience of others.** Actually, in the most recent test round (1971) the PPVT was more in accord with other verbal measures than in the earlier rounds, suggesting that for older children it may be more useful than for younger ones. However, since it added little to what was obtained by other measures, and since its results for earlier years were so contradictory, parsimony dictated confining our analysis of project tests to the Stanford-Binet and the Stanford Achievement Test.***

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* Kraft et al., op. cit.

** Gray and Klaus, 1969; Kennedy, 1969.

*** The published report of the nursery school years presents the results for all the project tests administered between summer of 1964 and fall of 1966.

Test administration

Dr. Norman Milgram (Department of Psychology, Catholic University), on the basis of previous experience with children of this age and socioeconomic level, selected the tests and supervised their administration, from the outset of the project through 1969. Graduate students, numbering from four to eight in the various years, administered the tests. All of the students had participated in a training practicum during which they used the tests with disadvantaged children of appropriate ages. In each round, some of the testers were Negroes and some were white. The majority were women.

By 1971, Dr. Milgram had left the Washington area, and the seventh round of testing was directed by Dr. Malcolm Meltzer of the Department of Psychology, The George Washington University. In this year also, the testers were graduate students, in this instance trained and supervised by Dr. Meltzer. Of the six testers, five were women, two of whom were black. The other four testers were white.

During the two nursery school years, all testing sessions were held at Howard University. During the first round, before the children had been assigned to EG and CG, the testing was blind. At the next two sessions, however, the EG children were brought from the nursery school by one of the staff, while the others came in from outside, so that the testers must have realized which children belonged to each group. Whether this knowledge would constitute an advantage or a disadvantage cannot be ascertained. The director of testing believes it had no effect. Some disadvantage for EG may have been involved in the occasional need to interrupt a child's lunch, or even his nap, in order to meet the testing schedule.

During the next four rounds, testing sessions were held at The George Washington University, and every effort was made to avoid identifying the children as belonging to EG or CG. Analysis has not revealed any changes in relative scores that seem related to the difference in the testers' awareness of EG and CG identity. This does not indicate the absence of such an influence, but merely that its direction and magnitude remain unknown. In any case, it is reassuring that the later findings, beginning with 1967, are not subject to concern on this score.

Analysis revealed some variations in the mean score levels obtained by different testers. Our only defense against such individual variations in tester means was the practice of arranging that no child should be tested by the same individual in successive years, and that each tester would test about the same number of children from EG and CG. Thus, though bias was not eliminated, we had reasonable assurance that systematic bias was avoided. On the whole, over the seven-year period the score profiles of the individual children were consistent enough to convince us that this source of variation did not substantially affect group and subgroup means, which were the chief basis of analysis. This does not imply that the scores remained constant, but rather that for the most part patterns of increase and decrease were not erratic.

Despite variations in the means of test results elicited by different testers, one finding with regard to the only identical twin set in EG was striking and reassuring. After beginning with a divergence of 25 points in 1964, the scores of the Sargent twins remained within four points of each other for the rest of the study period; and in three of the six subsequent testing sessions their scores were identical.

The figures are as follows:

	1964	1965	1966	1967	1968	1969	1971
Clara Sargent:	94	98	101	97	107	98	92
Sarah Sargent:	69	94	101	97	107	94	91

After 1966, the twins were tested by different testers in each year, and no child was tested by the same tester in two succeeding years. While this accidental footnote to the lore of identical twin IQ's has no bearing on test validity, it is reassuring with regard to reliability.

The identical twin set in CG showed less widely divergent scores in the first test session, but somewhat more difference in succeeding years, the largest being seven points.

	1964	1965	1966	1967	1968	1969	1971
Dorothy Chalmers:	73	70	85	78	79	84	82
Frances Chalmers:	70	63	--	81	77	82	75

It is interesting that in 1965, a year of greatest score difference, Dorothy and Frances were tested by the same test administrator.

The test results are, of course, subject to other kinds of concern, the major one being the nature of the tests themselves. They were used because, in the judgment of the testing consultant, they were the best available. This does not obviate questions about the extent to which test findings reflect the school-related abilities of these particular children. No effort will be made here to enter into this complex and much-discussed problem, but its existence cannot be ignored.

Concern about the "real meaning" of the test results has been reinforced by analysis of testers' systematic ratings and comments, of individual test protocols, and of group means. That mutual language problems existed is abundantly clear, especially in the first round of testing, when the children were only three years old. That some language problems continued is also clear, not only from the records but also from interviews with testers. One example occurred when the children were in the first grade. During the test, a child was asked to give a word that rhymes with "red." He gave no sign of understanding what was wanted. Finally his fact lit up and he exclaimed, "Oh, you mean raid"! The tester nodded and the child said, "Why, 'haid,' of course"!

Such an incident, and others like it, give grounds for serious thought. Questions about the "real meaning" of standardized tests are stimulated also by the frequent reports of testers that black, inner-city children typically seem to think it is better to give no answer at all than to risk giving an incorrect answer. "They are fast to say 'I can't,'" remarked a second grade teacher. A psychologist who is experienced in testing children in New York City schools insists that these children expect to be punished for being wrong but to suffer no penalty for being passive; whereas white, middle-class children expect to win approval by trying, even if they don't always succeed. Another comments that white, middle-class children tend to regard intelligence tests as a rather enjoyable and challenging game, and that this approach is seldom found among black children in poverty. Granted that the art of test administration includes ability to encourage children to try, the testimony of several public school teachers suggests that many inner-city children probably

fail to do themselves justice in a test situation, and also in daily school work, because they would rather play safe with silence than risk a wrong answer.

By the end of 1971, in addition to the school measures discussed later, a considerable amount of information had been assembled concerning EG and CG. Two project tests had been administered seven times, and another in 1969 and 1971. Home information was obtained through periodic interviews with the parents (usually the mother) of the children in both groups, and by frequent additional contacts of project staff with the EG homes. Close contact with the EG homes was maintained until the end of the program, in 1969. After this time, contacts were primarily limited to interviews at the times when it was necessary to secure permission for testing the children. Obviously, a great deal more is known about EG than about CG. Nevertheless, periodic interviews with the CG families yielded a good deal of acquaintance with them.

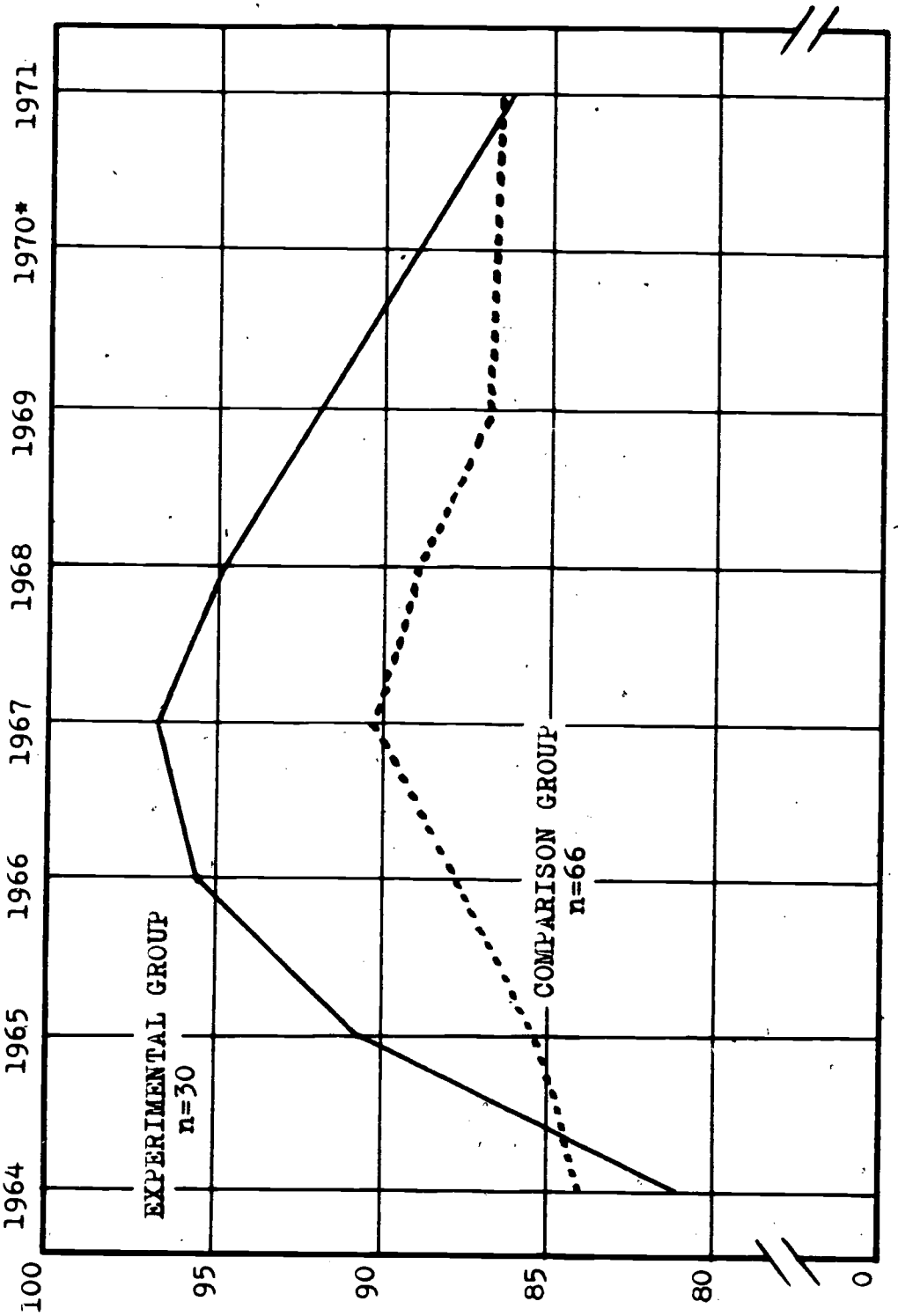
Stanford-Binet: EG and CG

A major lesson brought home during the course of this study is the importance of subgroup analysis, even within two groups selected with the intention of achieving comparability. Nevertheless, although total group comparisons are not the whole story, they do tell an important part of it. Accordingly, although most of the analysis will deal with subgroups, the total group comparisons should be summarized briefly.

At the beginning of the nursery school program, the mean IQ score of EG on the Stanford-Binet Intelligence Scale (1960 revision) was nonsignificantly below that of CG (Figure 1 and table 6) At the end of the two-year nursery school program, in 1966, the mean score of EG (96.5) was significantly above that of CG, and this level was maintained through kindergarten. Both EG and CG declined from that point, but the mean score of EG declined a great deal more. Between 1969 and 1971, the CG mean remained relatively stable, losing only 0.2 points, while the mean for EG declined 5.1. Despite the substantial subgroup variations to be reported later, the pattern of initial gain and later loss prevails almost (though not quite) without exceptions.

An interesting feature of these profiles is the increase in scores for CG as well as for EG during the first three years. To some extent it seems probable that some of the 1964 scores in both groups were spuriously low, a point discussed in a later section of this report. To some extent, the gain for both groups may reflect experience in test-taking. Since school achievement depends in some measure on the ability to take tests, and since presumably the effects of experience would operate similarly for both groups, this probability can be recognized without dismay--but nevertheless it must be recognized.

Figure 1 - MEAN STANFORD-BINET SCORES, 1964-1971.



*No test administered in 1970.

Table 6

STANFORD-BINET MEAN SCORES FOR EXPERIMENTAL AND COMPARISON GROUP CHILDREN, 1964 - 1971

	N°	1964	1965	1966	1967	1968	1969	1971
EXPERIMENTAL GROUP								
Standard Deviation		10.6	10.7	10.0	13.9	14.7	13.4	12.4
Mean Scores	30	80.7	90.8	96.5*	96.5	95.4	91.8	86.7
COMPARISON GROUP								
Mean Scores	66	84.3	85.2	88.4	90.1	88.9	87.0	86.8
Standard Deviation		11.2	13.2	12.7	13.2	13.2	11.5	10.6

° One EG child not tested in 1966; one to four CG children not tested in 1964, 1965, 1966, 1968 and 1971.

t value of difference between EG and CG, statistically significant: $t = 3.26$, $p < .01$.

For the sake of clarity, t values are considered only for the years 1964, 1966, 1969, and 1971.

It is possible also that CG may have experienced a mild "Hawthorne effect"--an improvement in performance as a result of the attention and friendly interest shown by project staff. However, the net mean gain in scores between 1965 and 1966 was almost twice as large for EG as for CG, and little of this had been lost by the end of the first grade year (1968). CG on the other hand, gained less than EG and also lost less, so that in 1971 the mean CG score was 1.6 points above the 1965 mean, while the mean for EG was 4.1 points below that of 1965, and 9.8 points below that of the kindergarten year (1967).

The effects of preschool enrichment programs are often reported in terms of IQ point gains or losses. Both groups showed early gains in mean IQ scores, followed by subsequent losses. The mean net gain of EG for the years 1964-1969, was significantly larger than that of CG, despite EG losses after 1967. However, by 1971, the difference between mean IQ gains for EG and CG had diminished to a nonsignificant four points.

Since EG began almost four points below CG, and since it later appeared that some initial scores in both groups were spuriously low, comparison of mean points gained seems far less illuminating than comparison of later score levels and change patterns. Accordingly, although mean gains in IQ points will be noted from time to time, more emphasis will be placed on score levels and patterns, and especially on changes occuring after the first testing sessions--when spuriously low initial scores are no longer a factor.

Since the purpose of preschool enrichment programs is to promote school performance commensurate with national norms, a more meaningful

measure of apparent program effects is found in the proportions of EG and CG who fall within or above the "normal" range, generally assumed to lie between 90 and 110 on the Stanford-Binet scale. The percentages scoring 90 or above in the four crucial test rounds are as follows:*

	1964	1966	1969	1971
EG	23	86	60	40
CG	30	42	37	42

At the outset of the program a larger proportion of CG than of EG scored 90 or above, although the difference was not statistically significant. At the end of the nursery school phase, the proportion in EG was much higher than in CG: 86% as compared with 42%, a difference significant at the .001 level. By the end of the second grade year (1969), the difference in favor of EG was still significant, but only at the .05 level. Two years later, however, near the end of the fourth grade year, only 40% of EG scored 90 or above, as compared with 42% of CG. Not only did the proportion of CG change less than the proportion of EG, but for the latest test round, it was slightly larger--an insignificant difference, except that it cancelled a statistically significant difference in the opposite direction.

Means can mean so many things that it is of interest to consider the score changes for individual children during those two years. Only five in EG, or 17% showed any gain at all between 1969 and 1971, and none gained more than three points. Twenty-seven children (42%) in CG

* A more detailed picture, giving numbers and percentages at ten point intervals, is found in Table 2.

gained during the same two years, nine of them gaining between ten and 16 points. The losses or gains in the two years following the end of the program are summarized as follows:

Change in S-B Scores, 1969-1971	Number		Percent	
	EG	CG	EG	CG
Gain	5	27	17	42
Loss	23	34	77	52
No change	2	4	6	6

The difference between the proportions showing gain is not statistically significant.

The decline in mean IQ scores for EG after 1967 is a phenomenon that has come to be familiar in many studies of low-income children.* It strongly suggests that the preschool program did not protect EG from the loss in mean IQ score that has been reported so often. What it did, apparently was to provide a higher level from which to descend. If the present pattern continues, the mean score of EG might drop substantially below that of CG.

A number of explanations have been offered for the all-too-familiar dropping of IQ scores as inner-city children, and especially black children, move through the successive grades in school. Some investigators attribute it to the fact that verbal skills and abstract reasoning play an increasingly important part in successive levels of

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* Gray and Klaus, 1969; Larson and Olson, 1968; Weikert, op. cit.

the Stanford-Binet test,* and that verbal facility and abstract reasoning pose major problems for these children.

Some attribute the progressive decline in scores to deficiencies in the tests, and some to the nature of the school experience. Some point to the lack of intellectual stimulation and the amount of stress and "disorganization" in inner-city homes. Some see the causes as lying in social and economic inequities, and the growing alienation of children who learn at home and on the street that education is irrelevant and will not open for them the gates to gratifying achievements and rewards.

All of these elements may play their part. Our own comments on their respective roles in the dwindling hopes held out by the test findings will be given in a later section, along with supporting evidence from the subgroup analysis.

A companion question (already noted) is more specific to this particular project, and more painful to the investigators. That question is, did we do the children a disservice in habituating them so early to a relatively sheltered school situation and then exposing them to "regular" public school classes? This, too, can be considered more profitably after reporting on the subgroup analyses and the school achievement tests.

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* Cronbach, op. cit.

Stanford-Binet: Subgroup Variations

Three key variables

The further our analysis proceeded, the more evident it became that the total group means masked a number of striking variations, within and between EG and CG. These subgroup differences, in themselves, do not tell how the program should be modified in order to give more benefit to the children who responded least to the program they experienced, or how to enhance and solidify the benefits for those who, over several years, seemed to have gained most. They do, however, indicate which kinds of children responded more and which less to the program. And, as an experienced investigator remarked about a very different program, "In that 'which' the 'how' may be concealed."*

Throughout the seven-year analysis, three variables show strong and systematic relations to patterns of later IQ scores and school achievement measures: sex, initial IQ (IIQ), and socioeconomic status (SES). These three variables differ basically. Classification by sex involves a natural, unequivocal dichotomy. IIQ is a first application of a measure used in assessing the effects of the program. Both IIQ and SES represent crude estimates, subject to varying and disputed definitions and measurements.

Very early in the analysis it became evident that, although EG and CG were generally comparable, the proportions of EG and CG falling within the classifications based on the three prime variables differed in ways that were important even though they were not statistically significant.

Sex. Both EG and CG have about the same proportions of boys and

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* Witmer, 1960.

girls, with two more girls than boys in EG and four more in CG. However, as will be seen below, the numbers of each sex falling within the different SES and IIQ classifications vary considerably.

Initial IQ (IIQ). The median of the 1964 IQ scores was slightly above 80 for CG and slightly below 80 for EG. In order to use the same cutting point for both groups, the mean of the medians was accepted. Initial scores of 80 or over were classified as "higher IIQ" and initial scores under 80 were classified as "lower IIQ." For convenience, the children in each classification will be referred to as "Hi-IIQ's" and "Lo-IIQ's."

This classification results in almost identical means for the high and low classifications in EG and CG in 1964. However, the proportions of "Hi-IIQ's" and "Lo-IIQ's" are quite different, the majority of CG (42 or 66%) being classified as Hi-IIQ and the majority of EG (17 or 57%) being classified as Lo-IIQ--a difference obviously to be reckoned with, since it reflects a difference between the groups in score dispersion and range.

	EG	CG*
Hi-IIQ	13	42
Lo-IIQ	17	24

As would be expected, the initial mean score differences between subgroups were considerably smaller than the difference between total EG and CG. At the outset of the project, in 1964, the Hi-IIQ means were

* Two CG girls were not tested in 1964. On the basis of their later Stanford-Binet IQ scores, and the prevailing pattern of change in scores for the Lo-IIQ girls in CG between 1964 and 1965, both were assigned initial scores of 73, and were incorporated into the IIQ group for 1964, in order to permit later subgroup assignment.

90.8 for EG and 90.5 for CG. The Lo-IIQ means were 72.9 for EG and 73.4 for CG.

SES. Since classification by socioeconomic status (SES) within a low-income group is less familiar than classification by sex or IQ, and since SES measures are more variegated, it requires somewhat extended comment.

Increasing acquaintance with the families in the study brought home with increasing force the existence and importance of SES variations within this predominantly deprived group, and the need to relate them to outcome measures.

The report of the nursery school years employed three SES levels.* Since the size of EG was now even smaller than at the outset, it seemed advisable to use only two SES levels that could be applied with equal reliability to the well known families in EG and the less well known families in CG.

In the present report, the method used to divide EG and CG into higher and lower SES levels combines the number of years of education of the child's mother with the person-to-room ratio. Mother's education rather than father's was used for two reasons: (1) both theory and observation indicate that, during a child's earliest years, the mother's influence is likely to be more direct and more perceptible than the father's; (2) the number of absent fathers was large at the outset of the program and increased as time went on.

The SES classifications employ the person-to-room ratio as of 1967,

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* Kraft et al., op. cit.

since this was the first year in which the Social Research Group of The George Washington University was responsible for conducting the study. Person-to-room ratio was computed according to standard Census Bureau usage, counting each room used by the family, except the bathroom.

It was fortunate that the rating year was no later than 1967, since some families moved into public housing soon after the date for which the SES rating was computed. It is doubtful whether person-to-room ratio will continue to be as satisfactory an indicator as it has proved for this study, since the number of low-income families in public housing will probably continue to increase, and the ratio is far less sensitive a reflection of socioeconomic status for families in public housing than for others.

To obtain the SES rating for a family, person-to-room ratio was converted into a single number, dividing the numerator (number of people) by the denominator (number of rooms). Years of education for the mother were used in reverse order, to correspond with person-to-room ratio, in which low number represents high desirability. Accordingly, 0 represents "more than high school education," 1 stands for completion of high school, 2 for eleventh grade, and so on. This number was added to the number representing person-to-room ratio, carried to two decimal places and then rounded to one decimal place. The resulting figure represents the SES rating of the family.

Again, the medians of EG and CG differed slightly in favor of CG: 5.0 for EG and 4.0 for CG. As with IIQ, the mean of the two medians (4.5) was accepted as the cutting point for the two groups. This cutting point resulted in means for the higher SES level of 2.9 for EG and 3.0 for CG. For the lower SES level, the means were 7.0 for EG and 6.9 for CG.

Thus, the slightly more favorable over-all mean for CG conceals the fact that the Hi-SES subgroup in EG is slightly "higher" and the Lo-SES slightly "lower" than the corresponding subgroups in CG.

The method used combines the advantage of relatively objective and easily obtained indicators with a classification that coincides with subjective judgments about the families we have come to know over a period of years. Because the range of one component is much wider than that of the other, the mother's education contributes about twice as much weight to the SES rating as does the person-to-room ratio. This seems to us a reasonable weighting, and the opinion is supported by the fact that it produces SES classifications which coincide with subjective ratings of the families we know best. If the two components were equalized by weighting, several families in both EG and CG would be transferred to the "wrong" SES level.

When EG and CG are divided by SES level, a majority (60%) of EG fall within the lower SES classification and a majority (61%) of CG are classified as higher SES, a difference in proportion that is substantial, although it falls short of the .05 level of statistical significance. For convenience, the two levels will be referred to as "Hi-SES" and "Lo-SES," although the families called "Hi-SES" are high only in relation to the families called "Lo-SES." In a broad, three-way classification of this country's population, most of them would fall below the "Middle SES."

	EG	CG
Hi-SES	12	40
Lo-SES	18	26

Analysis of census tract information and recent economic and demographic developments in the tracts involved fails to explain the subgroup

differences between EG and CG. They demonstrate, once again, the general point that a broad control for income does not control effectively for socioeconomic differences, especially within a low-income population, where relatively small dollar differences can substantially affect level of living. This is a point given more acceptance in word than in deed, although a few recent studies and review have attempted to underline it.*

Subgroup profiles

Figure 2 and Table 7 show the IQ scores of EG and CG as related to the three prime variables. A number of similarities and differences appear, between groups, within groups, and among the three variables. It will be expedient at this point to mention only the main ones, with emphasis on patterns rather than on precise numbers.

To a considerable degree, each of the six subgroups exhibits the pattern of IQ gains followed by losses that characterizes the means for total EG and CG. With one exception, the scores for every subgroup are lower at the end of the second grade year (1969) than in at least two preceding years. The exception is Lo-IIQ in CG. The loss in IQ scores during the first two years in public schools, already noted, will be seen to characterize also most of the smaller subgroups.

In general, also, the EG subgroups gain and lose more than the corresponding subgroups in CG. For example, the subgroup means of CG vary less than a point between 1969 and 1971, while those of EG decline by amounts ranging from three to seven points.

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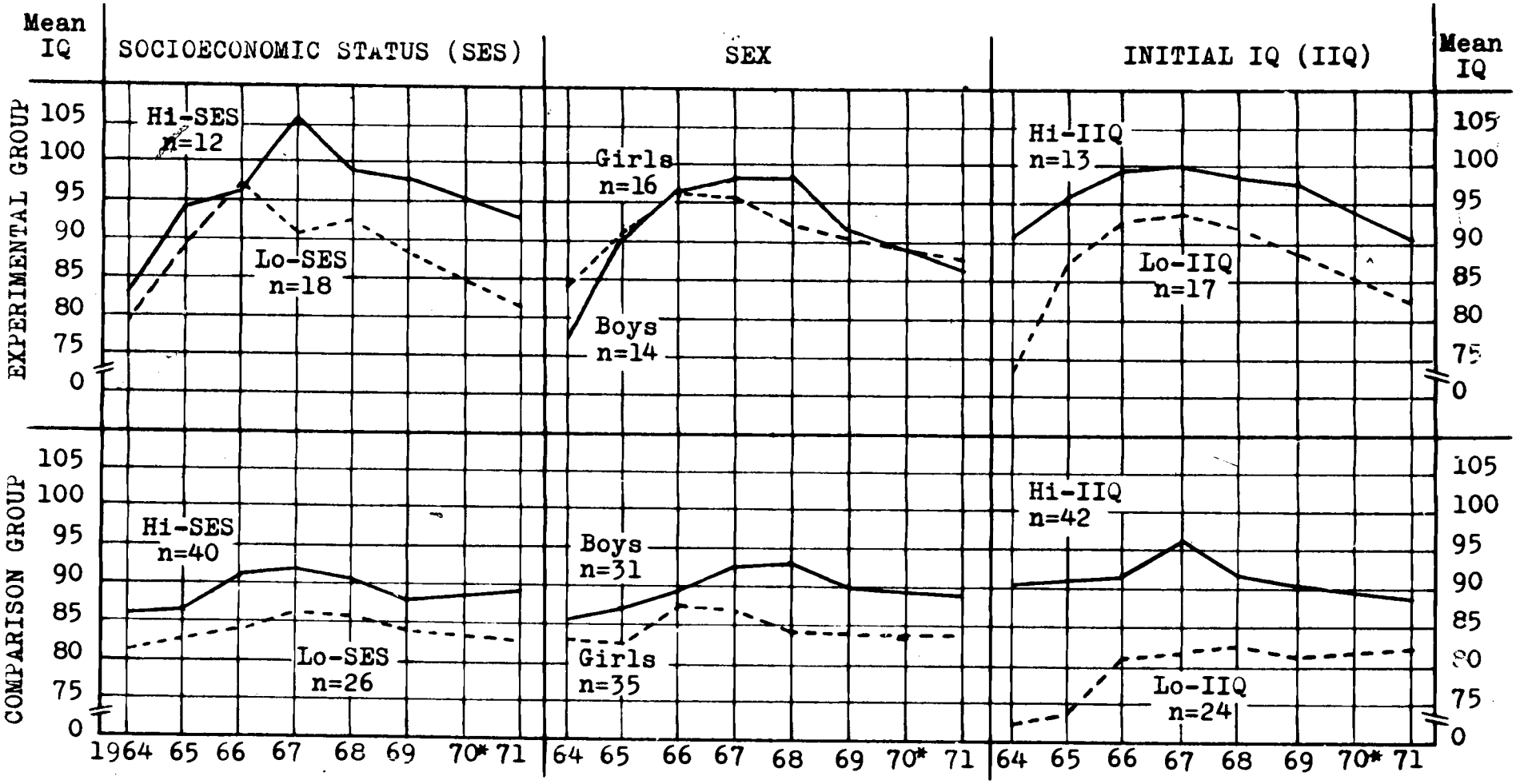
* Smith and Bissell, 1970; Lewis, 1967; Herzog and Sudia, op. cit.

Figure 2 - MEAN STANFORD-BINET SCORES, 1964-1971. as related to the three prime variables



*No test administered in 1970.

Table 7

STANFORD-BINET MEAN SCORES FOR THREE PRIME VARIABLES, 1964 - 1971

	EXPERIMENTAL GROUP								COMPARISON GROUP							
	N°	1964	1965	1966	1967	1968	1969	1971	1964	1965	1966	1967	1968	1969	1971	N°
Boys	14	76.4	90.1	96.9*	98.0	97.9	92.9	86.3	85.5*	87.4	89.2	93.4	93.7	90.0+	89.4	31
Girls	16	84.4+	91.3	96.1*	95.2	93.2	90.8	87.1	83.2	83.0	87.7	87.2	84.9	84.4	84.5	35
Hi-SES	12	82.5	94.1	96.4	105.3	98.8	96.7*	93.5+	85.9	86.5	91.1	92.7	91.1	88.9	89.1+	40
Lo-SES	18	79.4	88.6	96.5*	90.7	93.2	88.6	82.2	81.8	83.2	84.2	86.1	85.4	84.2	83.4	26
Hi-IIQ	13	90.8+	95.6	99.7*	99.5	98.0	95.6	90.6	90.5+	91.5	92.7	95.1	92.6	90.2+	89.4+	42
Lo-IIQ	17	72.9	87.1	93.9*	94.3	93.4	88.9	83.8	73.4	74.6	81.1	81.4	82.7	81.5	82.2	24

° One EG child not tested in 1966; one to four CG children not tested in 1964, 1965, 1966, 1968 and 1971.

* See next page for t values of differences between EG and CG that are statistically significant.

\+ See next page for t values of differences within EG and within CG that are statistically significant.

For the sake of clarity, t values of differences between EG and CG are considered only for the years, 1964, 1966, 1969, and 1971; differences within EG and within CG are considered only for years 1964, 1969, and 1971.

Mean Stanford-Binet Scores, 1964, 1966, 1969, and 1971: t values of differences between EG and CG that are statistically significant at or beyond the .05 level:

Year	Favoring	Subgroups	t Values
1964	CG	Boys	2.84
1966	EG	Boys	2.12
	EG	Girls	2.43
	EG	Lo-SES	3.47*
	EG	Hi-IIQ	2.79*
	EG	Lo-IIQ	3.45*
1969	EG	Hi-SES	2.02

Mean Stanford-Binet Scores, 1964, 1969, and 1971: t values of differences within EG and within CG that are statistically significant at or beyond the .05 level:

	Year	Subgroups	t Values
Within EG	1964	Girls - Boys	2.25
		Hi-IIQ - Lo-IIQ	8.22*
	1971	Hi-SES - Lo-SES	2.67
Within CG	1964	Hi-IIQ - Lo-IIQ	10.52*
	1969	Boys - Girls	2.02
		Hi-IIQ - Lo-IIQ	3.18*
	1971	Hi-SES - Lo-SES	2.25
		Hi-IIQ - Lo-IIQ	2.81*

* Significant at the .01 level

Not only is the advantage of the EG subgroups over their CG counterparts substantially diminished after the close of the program, but the 1971 means of two EG subgroups (boys and Lo-SES) fall slightly below those in CG--for the first time since 1964. Also for the first time since 1964, the Hi- and Lo-IIQ subgroups in EG now fall within two points of their CG counterparts. The fading out of advantage for EG, and the reversal for two subgroups, obviously reflect the decline in EG scores observed in the total group means.

Sex

For the most part, the boys in each group had higher mean scores than the girls. In 1964, however, the EG boys scored significantly lower (76.4) than the EG girls and the boys and girls in CG. The means for the other three sex subgroups were very similar: 84.4 for the EG girls, 85.5 for the CG boys, and 83.2 for the CG girls.

Inspection of the individual scores shows that in the initial test round (1964), only one boy in EG scored above 90. Three were between 80 and 85, and the ten remaining boys were all below 80. In CG, on the other hand, 11 boys were above 90 and three of these were 100 or more. (The distribution of scores for boys and girls in the initial test round is given in Table 8.)

The gains of the EG boys in the nursery school years are as striking as their low initial scores. Not only did they gain more than the other three sex subgroups, but from 1966 through 1969 they outscored the other three. This is only one of several respects in which subgroup analysis reveals a contrast between the EG boys and the other three sex subgroups,

Table 8

STANFORD-BINET SCORES FOR BOYS AND GIRLS, 1964

	Experimental Group				Comparison Group			
	Boys		Girls		Boys		Girls	
	N	%	N	%	N	%	N	%
110 and above	0	0	0	0	2	7	0	0
100 - 109	0	0	1	6	1	3	3	9
90 - 99	1	7	5	31	8	25	6	17
80 - 89	3	22	3	19	9	29	13	37
70 - 79	7	50	5	31	9	29	11	31
60 - 69	2	14	2	13	2	7	2	6
Below 60	1	7	0	0	0	0	0	0
Total	14	100	16	100	31	100	35	100
Mean	76.4*		84.4		85.5		84.3	

* t values of differences that are statistically significant between EG boys and:

CG boys, t = 2.84 p .01

EG girls, t = 2.25 p .05

CG girls, t = 2.39 p .05

a point that will call for recurrent attention throughout this report.

Although the initial mean scores of the boys and girls in EG differed significantly, they tended to move closer together, and in the last two test rounds they were very similar. In CG, on the other hand, the two means tended to diverge, and in 1969 the difference between those of the boys and girls in CG was statistically significant, although in 1971 it fell just short of significance.

That the boys in both EG and CG should outscore the girls during most of the project years is a finding contrary to expectation. A frequent assumption, based largely on testing of middle-class and working-class white children, is that in the primary grades little girls are likely to do better than little boys in most aspects of verbal performance (even though the tests are standardized for sex equality).*

Two earlier studies of Negro children in low-income families found the boys doing better than the girls in tests of IQ and language development.** On the whole, however, findings on this point are not solid or consistent. A difference in favor of the boys has appeared often enough not to be dismissed as an idiosyncracy of the sample and seldom enough to indicate a need for further exploration.

That boys and girls are different--even in test scores--is hardly news. However, some unanticipated differences emerge when test scores of the boys and girls in this project are separated, and even more when they are related to the two other prime variables.

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* Maccoby, 1966, Neyman, 1970.

** Anastasi, 1952; Brown, 1944.

IIQ and SES

In the remaining four comparisons, by SES and by IIQ, the starting points for lower and higher SES and IIQ in EG are relatively close to the starting points for the corresponding categories in CG. In all except one of the comparisons, the "Hi-" group remains consistently above the "Lo-." In each comparison also, from 1965 through 1969, the mean score of each EG subgroup is higher than the mean score of the corresponding CG subgroup. In 1966, at the end of the nursery school program, these differences are statistically significant for all the subgroups except the Hi-SES, presumably reflecting an advantage for the Hi-SES children in CG, even without a program. In 1969, at the end of the second grade year, the difference is significant only for the Hi-SES subgroups, presumably reflecting a greater response to the program on the part of the Hi-SES children.

IIQ. The differences between Hi-IIQ and Lo-IIQ scores within EG and CG are expectable, on the assumption that the initial tests had some validity. The unexpected, as will be seen, enters into the IIQ picture chiefly in relation to the two other prime variables.

Part of the convergence of Hi- and Lo-IIQ within EG and CG could be accounted for by regression to the mean. After the kindergarten year (1967), the Hi- and Lo-IIQ means in EG remain roughly parallel, while those in CG continue to converge slightly. Nevertheless, in 1969 and again in 1971, the difference between Hi- and Lo-IIQ means is statistically significant within CG but not within EG. This may relate to the smaller numbers in EG, although similar numbers did not preclude a significant difference between Hi- and Lo-SES in 1971.

SES. While the mean Stanford-Binet IQ scores of the SES subgroups in CG maintain a roughly parallel course throughout the seven year period, with moderate changes in score level, those in EG show the most extreme patterns of gain and loss and also vary more in relation to each other. In 1964, the Hi-SES subgroups in both EG and CG are slightly above the Lo-SES in each group, with each SES in EG slightly below its CG counterpart. At the end of nursery school (1966), the two SES levels in EG scored about the same, after making substantial gains. However, the timing of their gains differed. The Hi-SES children made most of their nursery school gains during the first year, while the gains of the Lo-SES were rather evenly divided between the two years. At the end of the second year, the investigators wondered whether the Hi-SES children would have benefitted as much by a one-year as by a two-year program.*

Their continued gain during the kindergarten year argues against such a speculation. For during that year they continued to gain, while the Lo-SES children were losing. Thus, although the mean score of the Hi-SES declined sharply during the next two years, it showed no net loss between 1966 and 1969, while the Lo-SES lost significantly more than their CG counterparts.

As a group, the Hi-SES children in EG scored higher than any other primary subgroup in 1969. As individuals, over the five-year period between the beginning and the end of the enrichment program (1964-1969), eight of the 12 Hi-SES children in EG (67%) showed a net gain of 15

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* Kraft, et al., op. cit.

or more points, while of the 18 Lo-SES children, only five (28%) showed that much net gain--a difference approaching statistical significance.

That the Hi-SES children, starting at nearly the same point, should gain substantially more than the Lo-SES, and retain their gains longer, was an unexpected difference in response to the program. That both Hi-SES and Lo-SES subgroups in CG had about the same mean scores in 1969 as in 1966 underlines the role of the program in emphasizing SES differences within EG.

In 1971, two years after the special program ended, the picture is very different. The Hi-SES (like every other EG subgroup) shows some loss in mean IQ score, although less than the others. No differences between EG and CG reach statistical significance. And the Lo-SES subgroup in CG now, for the first time since 1964, has a mean score a little higher than the corresponding subgroup in EG.

Although the special program seemed to augment the influence of SES within EG, withdrawal of the program by no means negated its salience. On the contrary, although within-group SES differences in 1969 were not statistically significant, both EG and CG show significant differences between Hi and Lo-SES in 1971. In CG, but not in EG (as noted above), the difference between Hi- and Lo-IIQ means is also statistically significant in 1971. The differing patterns of the three key variables contribute to an impression that the influence of SES differences within a poverty group may be stronger than the influence of sex or IIQ. This impression is strengthened by some features of the interrelations reported in the following section.

Interrelations among the three key variables

When the three key variables are related to each other, the patterns that emerge indicate that each of the three is important in its own right and also that their importance varies: (1) in different combinations; (2) between EG and CG; (3) at different points in time.

The small numbers discourage efforts at simultaneous control of the three variables.* It is feasible, however, to view them in pairs. When this is done, twelve subgrouplets result. As would be expected with such small numbers, few differences between or within EG and CG reach statistical significance. However, the regularities are too consistent to be dismissed. Moreover, some patterns seen in the mean scores of the project tests are conspicuous also in those of the school measures, to be discussed later.

Full presentation of all the comparisons would exceed the limits of reader tolerance. It will be more practicable to indicate a few outstanding features and to state a few conclusions derived from detailed analysis, with some supporting evidence for each. Statements and evidence can be checked against Figure 3 and Table 9, which present scores for the subgrouplets in each of the test rounds. For convenience, these sub-subgroups will be referred to merely as subgroups, except where clarity requires differentiation.

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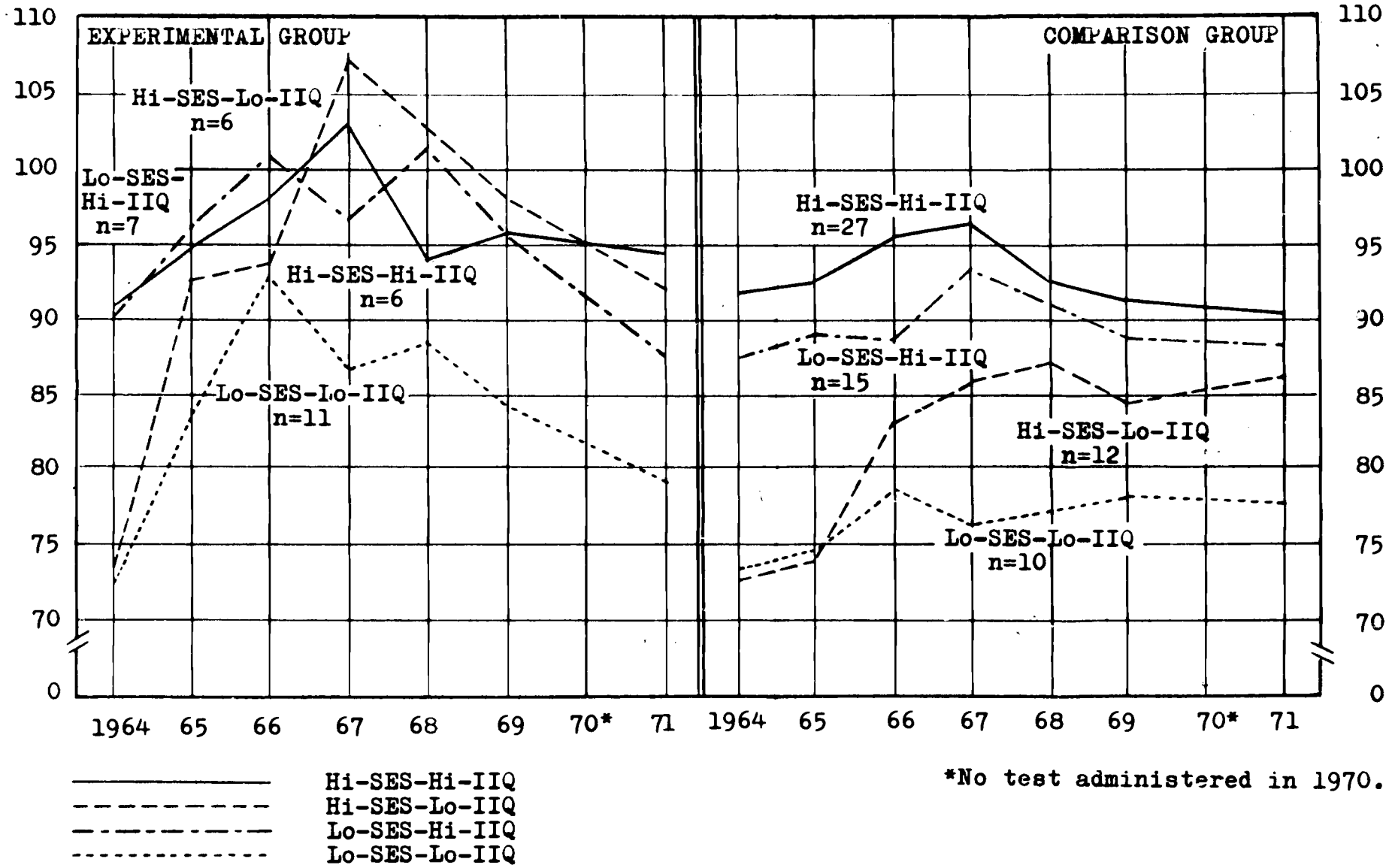
* The possibility of using analysis of variance was considered and discarded because: (1) the n's in the subgroups are very small and it is subgroup means that are being compared; (2) the subgroup n's are not only small but also disproportionate, which diminishes the power of analysis of variance; (3) since repeating measures increases degrees of freedom only to the extent that the repeated measures are uncorrelated, analysis of variance offers no gain in this respect.

Figure 3-MEAN STANFORD-BINET SCORES, 1964-1971. as related to Socioeconomic Status and Initial IQ



*No test administered in 1970.

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Table 9

STANFORD-BINET MEAN SCORES FOR SUBGROUPS, 1964 - 1971

	EXPERIMENTAL GROUP								COMPARISON GROUP							
	N°	1964	1965	1966	1967	1968	1969	1971	1964	1965	1966	1967	1968	1969	1971	N°
Hi-SES																
Boys	7	76.6	92.9	94.3	105.7	101.6	94.7	90.9	84.7*	87.1	91.2	95.3	96.5	91.1	90.4	19
Girls	5	90.8	95.8	99.4	104.8	94.8	99.4*	97.2	87.0	85.9	90.9	90.4	86.2	86.9	87.9	21
Lo-SES																
Boys	7	76.1	87.4	99.4*	90.3	94.3	91.1	81.7	86.8	87.8	86.0	90.3	88.7	88.4	87.8	12
Girls	11	81.5	89.3	94.5*	90.9	92.5	86.9	82.5	77.6	79.0	82.8	82.5	82.9	80.6	79.6	14
Hi-SES-																
Hi-IIQ	6	91.2	94.8	98.5	102.7	94.2	95.8	94.3	92.1	93.0	95.2	96.1	93.1	91.1	90.4	27
Lo-IIQ	6	73.8	93.3	94.3*	108.0	103.3	97.5*	92.7	73.0	74.5	83.0	85.8	86.9	84.3	86.2	12
Lo-SES-																
Hi-IIQ	7	90.4	96.3	100.7*	96.7	101.3	95.4	87.4	87.7	88.9	88.3	93.3	91.6	88.7	87.4	15
Lo-IIQ	11	72.5	83.6	93.6*	86.8	88.0	84.2	78.9	73.8	74.7	78.6	76.3	77.6	78.1	77.9	12
Hi-IIQ																
Boys	4	86.8	93.5	99.0	95.0	97.2	92.5	85.2	92.0	93.0	93.2	97.4	97.6	92.5	92.2	20
Girls	9	92.6	96.6	100.0*	101.4	98.3	97.0	93.0	89.2	89.9	92.3	93.0	88.3	88.2	86.8	22
Lo-IIQ																
Boys	10	72.2	88.8	96.0*	99.2	98.2	93.1	86.7	73.7	77.3	82.7	86.0	86.9	85.5	84.5	11
Girls	7	74.0	84.6	90.3	87.3	86.6	82.9	79.6	73.1	72.1	79.6	77.5	79.1	78.0	80.2	13

° One EG child not tested in 1966; one to four CG children not tested in 1964, 1965, 1966, 1968 and 1971.

* See next page for t values of differences between EG and CG that are statistically significant.

For the sake of clarity, t values of differences between EG and CG are considered only for the years 1964, 1966, 1969, and 1971.

Mean Stanford-Binet Scores, 1964, 1966, 1969 and 1971: t values of differences between EG and CG that are statistically significant at or beyond the .05 level:

Year	Favoring	Subgroups	t Value
1964	CG	Hi-SES Boys	2.07
1966	EG	Lo-SES Boys	2.30
	EG	Lo-SES Girls	2.59
	EG	Hi-SES-Lo-IIQ	2.60
	EG	Lo-SES-Hi-IIQ	4.30*
	EG	Lo-SES-Lo-IIQ	2.65
	EG	Hi-IIQ Girls	2.39
	EG	Lo-IIQ Boys	2.97*
1969	EG	Hi-SES Girls	2.23
	EG	Hi-SES-Lo-IIQ	2.72

* Significant at the .01 level

Composition of sub-subgroups

The numbers in the sub-subgroups are no more symmetrical than those falling within the primary subgroups. For example, in EG, equal numbers of boys are Hi- and Lo-SES but twice as many girls are Lo-SES as are Hi-SES. In CG, on the other hand, more boys and girls are Hi- than Lo-SES.*

	EG	CG
Hi-SES Boys	7	19
Hi-SES Girls	5	21
Lo-SES Boys	7	12
Lo-SES Girls	11	14

In EG twice as many girls as boys are Hi-IIQ and more boys than girls are Lo-IIQ, while in CG the two IIQ levels divide rather evenly between boys and girls.

	EG	CG**
Hi-IIQ Boys	4	20
Hi-IIQ Girls	9	22
Lo-IIQ Boys	10	11
Lo-IIQ Girls	7	13

* Numbers for all subgroups and sub-subgroups are summarized in Table 10.

** Two CG girls were not tested in 1964. On the basis of their later Stanford-Binet scores, and the prevailing pattern of change in scores for the Lo-IIQ girls in CG between 1964 and 1965, both were assigned initial scores of 73, and were incorporated into the Lo-IIQ group for 1964, in order to permit later subgroup assignment. In 1971 the number for CG is reduced by one girl, who in 1970, moved away from the Washington area. She is included in all analyses except those for 1971 and those reflecting changes from other years to 1971.

Table 10

NUMBER OF CHILDREN IN SUBGROUPS AND SUB-SUBGROUPS

	BOYS			GIRLS			TOTAL		
	Hi-SES-Lo		All	Hi-SES-Lo		All	Hi-SES-Lo		All
Experimental Group									
Hi-IIQ	2	2	4	4	5	9	6	7	13
Lo-IIQ	5	5	10	1	6	7	6	11	17
All	7	7	14	5	11	16	12	18	30
Comparison Group									
Hi-IIQ	10	10	20	17	5	22	27	15	42
Lo-IIQ	9	2	11	4	9	13	13	11	24
All	19	12	31	21	14	35	40	26	66

Finally, in EG, the Hi-SES's divide evenly between Hi- and Lo-IIQ, while in CG more than twice as many of the Hi-SES's are Hi- as Lo-IIQ. In EG, more Lo-SES are Lo- than Hi-IIQ, while in CG the preponderance is reversed.

	EG	CG
Hi-SES-Hi-IIQ	6	27
Hi-SES-Lo-IIQ	6	13
Lo-SES-Hi-IIQ	7	15
Lo-SES-Lo-IIQ	11	11

It is further evident that in EG the largest SES-IIQ classification is Lo-SES-Lo-IIQ, while in CG the largest is Hi-SES-Hi-IIQ.

In considering the mean score comparisons it must be recognized that the same children appear in each. This, of course, would be true in any subgroup comparison, even for a nationwide sample. However, with such small numbers, the fact that two different subgroups contain much the same children becomes uncomfortably salient. For example, in both EG and CG the Hi-SES girls are likely also to be Hi-IIQ, although the same association does not hold for the Hi-SES boys.

Providing these overlaps in classification are recognized, the liability they represent is balanced by some degree of asset. On the one hand, the extent of repetition and variation in the individuals falling within various sub-subgroups gives clues to the influence and interaction of the three variables involved--as will be evident in the following sections. On the other hand, these repetitions and variations underline the importance of subgroup analysis in comparing roughly similar total groups.

Sub-subgroup comparisons

The comparisons summarized in Figure 3 and Table 8, include three sets of paired variables for EG and three for CG, with four means in each set.

In EG, all of the sub-subgroup means show the pattern of early gains followed by losses that characterizes the means for total EG and CG, and the primary subgroups. However, the patterns of gain and loss vary substantially for the different sub-subgroups, and the variations suggest the relative importance of the three key variables in different combinations.

The "normal" range

At the end of the program, in 1969, in each of the EG sets three of the four means were above 90 and one below. In each of the CG sets, three of the four were below 90 and one was above 90.

Two years after the end of the program, in 1971, each of the CG comparisons still shows three means below 90 and one above. In EG, however, the balance between those within or below the "normal" range has shifted. In all the EG frames, at least two subgroup means now fall below 90 and, in one of them, three fall below.

Three propositions

From detailed analysis of the Stanford-Binet scores over a period of seven years, with back-up analysis of the other project tests, three propositions emerge. These should be stated, with some supporting evidence, before moving on to consider the school measures and their relations to the project tests.

1. SES variations within a poverty group strongly influence response to a preschool enrichment program.

2. Preschool IQ scores of little girls may be more predictive of future test performance than those of little boys.

3. A "Hi-" rating in either IIQ or SES appears to outweigh a "Lo-" rating in either.

1. SES influences

In the EG frames where two subgroup means fall within the "normal" range in 1971, it is Hi-SES children who tend to score above 90. In one instance, it is both sexes of the Hi-SES; in the other, it is both IIQ levels of the Hi-SES. When SES is omitted from the comparison, three of the four IIQ-sex subgroups in EG have means below 90. In two of the three CG comparisons it is also Hi-SES children who have a mean score at or above 90.

The SES factor in program response is conspicuous in the convergence of the means for the Hi-SES boys and girls in EG. The Hi-SES boys, beginning within a point of the lowest mean score for 1964, rise to a mean of over 100 in 1967. And in 1971, despite substantial losses, their mean is closer to that of the Hi-SES girls than to that of the Lo-SES children.* In CG, on the other hand, the mean for the Lo-SES

* The "real" mean for the Hi-SES girls in EG probably lies above that of the Hi-SES EG boys, except in the kindergarten year. The sharp dip in the mean score of these girls in 1968 resulted from the mis-testing of one girl in that year. Failure to take her to her ceiling produced a score more than twenty-five points lower than her score for the preceding and following years. Her scores throughout the seven test rounds were: 93, 103, 101, 111, 84, 113, 116. In this very small sub-subgroup, correcting for the error by adding a conservative 20 points to her 1968 score would place the 1968 mean at 101.8, just above that of the Hi-SES boys. Such a correction would place the Hi-SES girls above the Hi-SES boys in EG in all years except 1967, and would be more consistent with their general score patterns. The effect of one such error is part of the penalty of small n's in the sub-subgroups, and adds to the regret that it was caught too late for a re-test.

boys differs little from that of the Hi-SES boys and girls. These three cluster near 90 for the most part, while the Lo-SES girls remain considerably below.

The most dramatic mean score ups-and-downs are those of the Hi-SES-Lo-IIQ children in EG. From within two points of the lowest mean score in 1964, they rise to the highest mean (108) for any subgroup in any year; and in 1969--despite the substantial decline shared with most of the others--they score slightly above all the others except Hi-SES girls.

The scores of the individual children underline the association between SES and response to the program. All but one of the six Hi-SES-Lo-IIQ children in EG scored above 90 in 1969, and that one scored 89. Of the 11 Lo-SES-Lo-IIQ's only three scored above 90 in 1969, while five scored 80 or below. The "Hi-Lo's" not only gained more than the "Lo-Lo's" but (like the other Hi-SES children) held on to more of their gains. Whereas the "Hi-Lo's" in EG gained more than any other subgroup and were actually three points higher in 1969 than in 1966, the "Lo-Lo's" lost nine points during those years. While the Hi-Lo's soared to the top and stayed there, the Lo-Lo's remained substantially below the other three SES-IIQ subgroups and significantly below the Hi-Lo's in 1969. Accordingly, it is hard to doubt that the SES factor is related to the achievement pattern of this subgroup, throughout the program.

As indication that the Hi-SES-Lo-IIQ profile is not merely a vagary of the EG composition, in CG the Hi-SES-Lo-IIQ's also were among the high gainers between 1964 and 1969--although their gains were less than those of their EG counterparts. (Despite the small numbers and roughly similar initial scores, the difference between the 1969 scores of the

Hi-SES-Lo-IIQ's in EG and CG is statistically significant, as is the difference in net gains, 1964-1969. In CG, however, the rank order of the subgroup scores remains constant from 1966 through 1971, the two Hi-IIQ's above the two Lo-IIQ's and--in each of these pairs--Hi-SES above Lo-SES. Thus, in CG the Hi-SES-Lo-IIQ's are next to the lowest subgroup in the comparison and not, as in EG, the topmost one during three test rounds--a difference presumably relating to the program. In both EG and CG, the Lo-SES-Lo-IIQ's remain substantially below the other three SES-IIQ subgroups, from 1966 through 1971.

The influence of SES, regardless of program, is most strongly evident in the fact that, both in EG and in CG, the Hi-SES-Lo-IIQ children gained more than the other SES-IIQ subgroups, while the Lo-SES-Lo-IIQ's remained substantially below the others. The relation of SES to program response is suggested by the fact that the Hi-SES-Lo-IIQ's in EG rose to the top and stayed there until the end of the program, while those in CG--despite substantial gains--remained below the two Hi-IIQ subgroups. Apparently, without a preschool enrichment program, the Hi-SES-Lo-IIQ children are able to gain and retain more than the others; and with a program they not only do this but outdistance the others in mean IQ scores, at least while the program continues.

Two years after the end of the program, in 1971, the advantage of the Hi-SES-Lo-IIQ children in EG has declined, along with their mean IQ score. Although they are still definitely (6.5 points) above their counterparts in CG and the Lo-SES-Lo-IIQ children in EG (about 14 points), the between group differences are no longer statistically significant. Moreover, their mean now falls slightly below that of the Hi-SES-Hi-IIQ's

in EG.

That the SES influence is more salient in some subgroups than in others is suggested by the mean scores of the two SES levels for the Hi- and Lo-IIQ's. In both EG and CG, throughout the program years, the means of the Hi-IIQ's show far less SES difference than do the means of the Lo-IIQ's.

It has been remarked that the influence of SES is apparent in within-group differences and the influence of the program in between-group differences. The decline of SES influence as an enhancer of program effects is evident in the diminishing differences between the Hi-SES subgroups in EG and CG. The question remains, what influences have caused the decline? This question will be considered in the final section of the report.

2. IQ score patterns of boys and girls

When the means of all the boys as a group are compared with the means of all the girls as a group in EG and in CG, the differences are only moderate, with the boys tending to outscore the girls. Therefore, it is illuminating to find that, when sex is related to the other two key variables, the score patterns of the two sexes show some conspicuous differences over the seven-year period. The Hi-SES girls and boys in EG, after 1966, show only modest differences, but for the most part the mean for the girls is above that for the boys. And when sex is related to IIQ, the Hi-IIQ girls slightly but consistently outscore the boys--effectively dispelling any suspicion of female inferiority among the EG children. The mean score of the Lo-IIQ girls in both EG and CG, on

the other hand, remains consistently below the other three IIQ-sex subgroups.

The composition of the Hi-SES-Lo-IIQ subgroups in both EC and CG throws further light on sex differences in score patterns over a period of years. The quick increase in the mean scores of both Hi-SES-Lo-IIQ subgroups suggests that their initial scores were spuriously low. A further point of similarity between the two subgroups is that both consist mainly of boys: five out of six in EG and nine out of thirteen in CG. At first it seemed an unfortunate accident that analysis of relations between SES and patterns of IQ change should be so confounded by the predominance of boys in these two subgroups. A further apparent accident was the somewhat less marked predominance of girls among the Hi-SES-Hi-IIQ's: four out of six in EG and 17 out of 27 in CG. However analysis of the relations between IIQ and sex indicated that the imbalance might not be accidental.

A number of findings support the impression that initial IQ tests of the boys were more likely than those of the girls to be spuriously low. Inspection of individual scores shows that the Lo-IIQ girls in EG and CG, on the whole, tended to remain below the group mean, but the Lo-IIQ boys, over a period of years, were as likely to move above the mean as to stay below it. Consequently, at the end of the program in 1969, the means for the higher and lower IIQ boys in EG were almost identical, while the Hi-IIQ girls in both EG and CG scored significantly above the Lo-IIQ girls. Two years later, in 1971, mean scores for EG Hi- and Lo-IIQ boys and girls had decreased but were in the same relationship to each other, with the difference between the scores for Hi- and

Lo-IIQ girls still significant. In CG, however, the relationship changed and the Hi-IIQ boys scored significantly better than the Lo-IIQ boys while the difference between Hi- and Lo-IIQ girls decreased to a non-significant eight points.

The greater dependability of initial IQ scores for girls than for boys could reflect the greater docility and readiness to cooperate that seem typical of little girls, or perhaps a greater maturity at age three. The ratings and comments of the testers in the initial (1964) testing give repeated evidence that the boys in EG and CG often (more often than the girls) failed either to understand or to cooperate. Whatever the explanation, this is a finding to be reckoned with in any comparison of gains or before-and-after scores, especially when the subjects are very young children.

A number of clues suggest that, on the whole, motivation and cooperation in the testing sessions increased during the project years--perhaps partly as a result of familiarity with the situation, the kinds of procedures, and a few of the project staff. Repeated testing may render both the experimental and the comparison subjects "test wise," but it also may tend in the long run to diminish the eccentricities that render a single test suspect. Since test experience is equal for EG and CG, and since the forms of a test change each year, increasing experience with the project tests is likely to be less distorting than the vagaries of the initial session. Yet the very eccentricities of the initial scores, analyzed in conjunction with later score profiles, offer important leads for the analysis of subgroup score patterns.

3. The "Hi's" and the "Lo's"

Repeated examples have led to the generalization that a "Hi-" rating in either SES or IIQ appears to be "dominant" and a "Lo-" rating recessive, in the sense that a Hi- classification tends to win out over a Lo- one. In most of the comparisons, the subgroups classified as Hi-, either in SES or IIQ, are likely to resemble those rated Hi- in both more than they resemble those rated Lo- in both.

The subgroup means have already demonstrated the dramatic gains in mean IQ scores of the Hi-SES-Lo-IIQ children; and about half of the Lo-SES-Lo-IIQ boys also gained substantially. Inspection of individual scores in 1971 shows further that, among the 13 Hi-IIQ children in EG, only one dropped lower than the initial cut-off point (80) score for total EG and CG, while among the 17 Lo-IIQ's in EG, 12 rose above it. That is, Hi-IIQ's on the whole remained above the initial group mean and Lo-IIQ's were more likely than not to rise above it. Whether they did rise above it was related, in turn, to sex and SES classification. (Table 11).

This observation cannot be dismissed as involving merely regression to the mean, since it suggests which children are more and which are less likely to gain substantially.

Children classified as "Lo-" in both SES and IIQ, on the other hand, were likely to remain below those classified Hi- in either SES or IIQ. The Lo-SES-Lo-IIQ children who were not exposed to an enrichment program (that is, those in CG) had a mean below 80 throughout the seven year period. Their counterparts in EG gained during the nursery school years, but lost their advantage after entering public school and in 1971 had a mean barely above that of CG.

Table 11

PERCENTAGE OF HI- AND LO-IIQ CHILDREN SCORING ABOVE OR BELOW 80 ON 1971 STANFORD-BINET

	Experimental Group			Comparison Group		
		80 or above	Below 80		80 or above	Below 80
	N	%	%	N	%	%
Hi-IIQ	13	92	8	42	86	14
Lo-IIQ	17	71	29	23	61	39
Hi-IIQ-						
Hi-SES	6	83	17	27	85	15
Lo-SES	7	100	0	15	87	13
Lo-IIQ-						
Hi-SES	6	100	0	12	83	17
Lo-SES	11	55	45	11	45	55

The Lo-SES girls and Lo-IIQ girls in CG, and the Lo-IIQ girls in EG also remained substantially below the subgroups in the respective sets. This is in line with the tendency already noted for initial scores of girls to be more reliably predictive than those of the boys. It also relates to the fact that, in both EG and CG, the Lo-IIQ girls were predominantly Lo-SES: 6 out of 7 in EG and 9 out of 13 in CG. The Lo-IIQ boys, on the other hand, were at least as likely to be Hi-SES as Lo-SES: 5 out of 10 in EG and 9 out of 11 in CG. Thus, in EG the Lo-SES-Lo-IIQ children divide about evenly between boys and girls: 5 boys and 6 girls. In CG, however, the children who are both Lo-SES and Lo-IIQ are more likely to be girls than boys: 9 out of 11.

Clearly, the three key variables interact differently in different combinations. The score patterns of the Hi-IIQ's seem to be less influenced by SES than do those of the Lo-IIQ's. The patterns of the Hi-SES's appear to be less influenced by IIQ than do those of the Lo-SES's. Children classified as Lo- both in IIQ and SES tend to remain below the group mean--especially if they are girls.

Thus, with or without a preschool intervention program, children classified as Hi-, either in SES or IIQ, are likely to produce more favorable score patterns than children classified as Lo- in both; but Lo-Lo boys have a somewhat better chance than Lo-Lo girls to show gains in test scores over a period of years.

The small numbers and the possible idiosyncracies of the present sample require that these generalizations remain tentative. However, since similar patterns reappear in measures of school performance, they merit further exploration. And if present indications are confirmed,

these patterns require recognition in efforts to evaluate school-related programs.

Stanford Achievement Test (SAT)

In 1969 and 1971, the project testing sessions included the first subtest of the Stanford Achievement Test (SAT), which is called "Word Reading" at the second grade level and "Word Meaning" at the fourth grade level. This brief subtest was administered to groups of four or five children after they had completed the individual tests (Stanford-Binet and PPVT). It differed from the other project tests also in requiring written rather than mainly oral answers.

In 1969, EG as a group scored significantly above CG as a group. (Table 12) Moreover, the means of all the primary subgroups and all the sub-subgroups in EG were higher than those of their CG counterparts. Eight of these differences were statistically significant, three at the .01 level (Hi-SES, Lo-IIQ, and Hi-SES-Lo-IIQ) and five at the .05 level (Hi-IIQ, Lo-SES, Lo-IIQ boys, Hi-SES girls, and Hi-SES boys). Obviously, Hi-SES children (including some Lo-IIQ boys) were involved in most of the significant differences. However, when the SES levels were separated, the Lo-SES boys in EG scored well above the Lo-SES boys in CG. Within-group comparisons show that the "Hi's" outscored the "Lo's" in both EG and CG, except that in EG the Hi-SES-Hi-IIQ's and the Hi-SES-Lo-IIQ's were almost identical. In both EG and CG, the girls, for the most part, as a group and in subgroups, scored slightly above the boys.

At the close of the fourth grade year, two years after the project ended, no differences between EG and CG reached statistical significance,

Table 12

STANFORD ACHIEVEMENT TEST[o] MEAN SCORES FOR SUBGROUPS, 1969 AND 1971

	1969		1971	
	Experimental Group	Comparison Group	Experimental Group	Comparison Group
Boys	21.1	15.7	17.4	17.8
Girls	23.3	19.3	20.1	18.8
Hi-SES	26.4*	20.0	21.4	19.4
Lo-SES	19.5*	13.9	17.1	16.8
Hi-IIQ	24.7*	20.0	20.1	19.9
Lo-IIQ	20.4*	13.3	17.9	15.6
Hi-SES				
Boys	25.7*	18.0	20.4	19.4
Girls	27.4*	21.9	22.8	19.4
Lo-SES				
Boys	16.4	11.8	14.4	15.2
Girls	21.5	15.5	18.8	18.0
Hi-SES-				
Hi-IIQ	26.3	22.6	20.5	20.6
Lo-IIQ	26.5*	14.8	22.3	16.6
Lo-SES-				
Hi-IIQ	23.3	15.6	19.7	18.5
Lo-IIQ	17.1	11.3	15.4	14.5
Hi-IIQ				
Boys	22.0	17.6	14.0	19.2
Girls	25.9	22.4	22.8	20.5
Lo-IIQ				
Boys	20.7*	12.1	18.8	15.5
Girls	20.0	14.2	16.6	15.7
Total	22.3*	17.6	18.8	18.3

o Test 1 raw scores (2nd grade, Word Reading - 4th grade, Word Meaning)

* t values of differences between EG and CG that are statistically significant at or beyond the .05 level are:

Hi-SES	3.03+	Hi-SES Girls	2.37
Lo-SES	2.19	Hi-SES-Lo-IIQ	3.25+
Hi-IIQ	2.05	Lo-IIQ Boys	2.42
Lo-IIQ	2.73+	Total Group	2.49
Hi-SES boys	2.32		

\+ Significant at .01 level

and several CG subgroups outscored their EG counterparts--although none of these were the subgroups that had a statistically significant advantage in 1969. For total EG and CG, scores were almost identical.

When the 1971 SAT raw scores were converted to grade equivalent scores, again there were no differences, between EG and CG, that were statistically significant. Grade equivalent scores (1971) for subgroups and sub-subgroups are shown below:

	EG	CG
Boys	2.5	2.6
Girls	2.8	2.8
Hi-SES	3.2	2.9
Lo-SES	2.4	2.4
Hi-IIQ	2.9	2.9
Lo-IIQ	2.5	2.4
Hi-SES Boys	3.0	2.9
Hi-SES Girls	3.3	2.9
Lo-SES Boys	2.0	2.2
Lo-SES Girls	2.6	2.5
Hi-SES-Hi-IIQ	3.1	3.1
Hi-SES-Lo-IIQ	3.2	2.4
Lo-SES-Hi-IIQ	2.8	2.5
Lo-SES-Lo-IIQ	2.1	2.3
Hi-IIQ Boys	2.4	2.9
Hi-IIQ Girls	3.2	2.9
Lo-IIQ Boys	2.6	2.2
Lo-IIQ Girls	2.4	2.5
Total	2.7	2.7

School Measures

A research project conducted within a public school system leads a hazardous and problem-ridden life, constantly threatened with distortion or extinction. As has been indicated, the present project was no exception to this general rule. In one respect, however, the research path was made clear and smooth, thanks to the unfailing cooperation and support of the responsible school officials: access to test information was unfailingly granted, as was permission to consult records in the individual schools (subject to appropriate precautions concerning confidentiality). Moreover, the supervisors of testing procedures were always available for consultation, and generous in sharing their information and experience with the project research team. Any investigator who has struggled with a less positive approach on the part of school authorities is bound to appreciate this substantial service received by this project from the Department of Pupil Personnel Services of the District of Columbia public school system.

Information obtained from school records, by permission of the school authorities, includes: (1) scores of the school achievement tests, administered several times; (2) the various types of information entered on the school report cards, as described below; (3) the number of schools attended by each child.

Periodic interviews and frequent conversations were held with

teachers during the first five years of the study period, but after the children entered regular school classes in the third grade year, direct contact with the teachers was no longer feasible--partly because of the many schools involved and partly because the teachers' crowded schedules left them little time or inclination for such extra-curricular involvement.

School achievement tests

Like the project tests, the school achievement tests pose a number of questions and problems. Unlike the main project tests, they were administered in groups rather than in a one-to-one situation. Moreover, in 1969 the two city-wide tests were administered only to the children in a given grade, so that those who were below grade level were not included. In addition, a number of children in both groups failed to be tested because they were attending parochial schools or suburban public schools outside the District of Columbia. Other children were often absent on the day of the tests, and since different children were missing in different years, comparability suffers. The effects of sporadic absences in different years are aggravated by the smallness of EG, and the small numbers also discourage efforts to compare only the scores of those who were present at successive test administrations. The numbers tested are summarized in Table 13.

For both EG and CG, the children who failed to take the school achievement tests in the various years included some who habitually scored high and some who tended to score low on the project tests. Inspection of the project test profiles of the absent children, and

Table 13

NUMBER OF CHILDREN TESTED - MAT AND CTBS, 1969 AND 1971

	EXPERIMENTAL GROUP				COMPARISON GROUP			
		Number Tested				Number Tested		
	Sub-Group N	MAT 1969	CTBS 1969	CTBS 1971	Sub-Group N*	MAT 1969	CTBS 1969	CTBS 1971
Boys	14	12	11	12	31	16	14	23
Girls	16	16	12	13	35	25	23	28
Hi-SES	12	11	11	11	40	28	25	32
Lo-SES	18	17	12	14	26	13	12	19
Hi-IIQ	13	13	11	11	42	30	26	36
Lo-IIQ	17	15	12	14	24	11	11	15
Total	30	28	23	25	66	41	37	51

* One child moved away from area in 1971

of other school information about them, suggests that, over-all, the effects of their absence from the school achievement tests probably favored CG slightly in the earlier test results and EG in the later ones, although this would not hold for some of the subgroup means. A number of subgroup means were computed, eliminating children who were absent in a subsequent year. Since results did not differ materially from those obtained when all children tested in a given year were included, and since subgroup numbers were already painfully small, it was decided to include all the children tested in each year--despite the resulting slight diminution in comparability.

The school achievement tests are scored in terms of grade equivalence. All comparisons will be between or within EG and CG, and not with national norms. In general, both EG and CG--like other children in the inner-city schools of Washington, D. C.--scored below national norms for large cities and also below the over-all norms for the District of Columbia.*

In reporting on subgroup variations in the school measures it will be useful to consider both the six subgroups based on the three main variables and the twelve sub-subgroups derived by interrelating these three, two at a time, making a total of eighteen each, for EG and CG. As has been remarked, this procedure involves a somewhat disconcerting grouping and regrouping of the same children in different combinations. Yet the emergence of strong and varied patterns, despite the small numbers involved, throws

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* Neyman, 1970.

light on the importance and relative influence of the three key variables.

The Metropolitan Achievement Test (MAT)

Near the end of the second grade year (1968-1969), the Metropolitan Achievement Test* was administered by classroom teachers to all second grade children in the D. C. public schools who were in school at the time of testing. MAT includes one subtest in arithmetic and four in skills related to verbal ability. Scores are available for 28 EG children and 39 CG children. (Table 14) Eighteen CG children were omitted because they had not been promoted from first to second grade, and the others were absent from school or attended schools which did not administer the test. Since the EG children were arbitrarily kept together through the second grade year, the absence of children judged to be less proficient in school performance may have raised the level of CG somewhat.

Despite this slight probable advantage for CG, the mean scores of EG as a group were somewhat higher than those of total CG on the four verbal subtests of MAT, and in one of these the difference reached statistical significance. However, EG was non-significantly below CG in arithmetic.

Table 14 compares the scores of the EG and CG total groups, subgroups, and sub-subgroups for the MAT. Except in arithmetic, comparison of mean scores for subgroups (as for the total groups)

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* Harcourt, Brace & World, Inc., 1959.

Table 14

MAT SUBTEST MEAN SCORES FOR SUBGROUPS, 1969

	Word Knowledge		Word Discrimination		Reading		Spelling		Arithmetic	
	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG
Boys	40.3	37.9	42.6	39.1	38.0	38.5	43.3	38.4	34.5	40.0
Girls	41.4*	34.9	43.4	38.9	40.3	37.4	46.1	42.3	33.6	36.2
Hi-SES	45.0*	37.3	47.5*	40.4	45.3	39.2	50.6*	42.8	37.6	38.5
Lo-SES	38.3	33.5	40.1	36.1	35.5	34.8	41.2	37.1	31.6	35.9
Hi-IIQ	42.7	37.7	45.1	41.1	41.5	38.8	48.4	41.8	35.9	38.7
Lo-IIQ	39.4*	31.5	41.3*	32.7	37.5	35.2	41.9	38.2	33.2	34.7
Hi-SES Boys	44.0	39.7	48.0	41.6	45.0	41.4	49.3	43.3	37.5	41.1
Hi-SES Girls	46.2*	35.8	47.0*	39.6	45.6	37.6	52.2*	42.5	37.8	36.5
Lo-SES Boys	36.7	33.5	37.2	32.8	31.0	29.8	37.3	26.0	31.5	36.8
Lo-SES Girls	39.2	33.5	41.7	37.6	37.9	37.0	43.4	42.0	31.7	35.6
Hi-SES-Hi-IIQ	44.5	38.6	46.2	42.6	42.7	39.9	50.2	44.1	36.7	38.8
Hi-SES-Lo-IIQ	45.6	33.0	49.2*	33.0	48.4*	37.3	51.2*	38.5	38.8	37.6
Lo-SES-Hi-IIQ	41.1	35.6	44.1	37.8	40.4	36.2	46.9	36.8	33.4	38.7
Lo-SES-Lo-IIQ	36.3	29.8	37.3	32.2	32.0	31.5	37.3	37.8	30.4	29.8
Hi-IIQ Boys	39.0	39.2	41.8	41.3	35.8	39.1	41.8	39.1	29.0	41.0*
Hi-IIQ Girls	44.3*	36.7	46.6	41.0	44.0	38.6	51.3*	43.5	37.6	37.2
Lo-IIQ Boys	41.0	33.3	43.0	31.0	39.1	36.8	44.1	35.7	37.2	37.0
Lo-IIQ Girls	37.6	30.9	39.3	33.4	35.6	34.3	39.4	39.3	28.6	33.4
Total	40.9*	36.0	43.0	38.9	39.3	37.8	44.9	40.9	34.0	37.7

* See next page for t values of differences between EG and CG that are statistically significant.

Metropolitan Achievement Test, 1969: t values of differences between EG and CG that are statistically significant at or beyond the .05 level:

Favoring	Subgroup	Test	t Value
EG	Girls	Word Knowledge	2.20
	Hi-SES	Word Knowledge	2.37
		Word Discrimination	2.49
		Spelling	3.03*
	Lo-IIQ	Word Knowledge	2.46
		Word Discrimination	2.33
	Hi-SES Girls	Word Knowledge	3.71*
		Word Discrimination	2.17
		Spelling	3.44*
	Hi-SES-Lo-IIQ	Word Discrimination	3.57*
		Reading	2.66
		Spelling	3.20*
	Hi-IIQ Girls	Word Knowledge	2.55
		Spelling	2.20
	Total Group	Word Knowledge	2.08
CG	Hi-IIQ Boys	Arithmetic	2.63

* Significant at the .01 level

consistently favors EG. On the arithmetic subtest, however, the majority of the comparisons favor CG, and one of these (Hi-IIQ boys), reaches statistical significance.

In the verbal subtests of the MAT, EG subgroups for the most part scored higher than the corresponding CG subgroups, and in fourteen of the comparisons their advantage reaches statistical significance--five of them at the .01 level despite the small numbers.

The Comprehensive Test of Basic Skills (CTBS)

Early in the third grade year (November 1969) a new test, the Comprehensive Test of Basic Skills (CTBS),* was administered to all third graders in the D. C. public schools. As with the MAT, some children were absent from school, some were not tested because they were not attending public schools in the District of Columbia, and some were not included because they had not been promoted to the third grade. (See Table 12 for numbers tested.) By this time, however, the project had ended, and some EG children also had been retained in the second grade for an additional year. Accordingly, any advantage to CG in having the less proficient children removed was diminished, although CG had been subject to retention several times and EG only once.

The reduction of score level advantage to CG, by eliminating from EG also the children likely to receive the lowest scores, may have been counterbalanced by the fact that the EG children were

* CTB-McGraw-Hill, 1970.

still in process of transition from the relatively sheltered project situation to new schools, new teachers, new classmates, and new conditions.

The CTBS includes three arithmetic subtests, and "Arithmetic Total," two reading subtests, and a "Reading Total." Although the total means of EG and CG were very similar, on the whole they favored EG. A number of differences appeared in the mean scores for various subgroups, some favoring CG but more favoring EG. (Table 15)

As in the MAT, EG performed less well in the arithmetic sections of the CTBS than in those involving verbal skills. The comparisons of subgroup means in arithmetic favored EG more often than CG, but three of the comparisons favoring CG reached statistical significance. All three of these were in the one arithmetic subtest that involved only number skills ("Computation"), where EG fared far worse than in the two ("Arithmetic Concepts" and "Arithmetic Applications") that required ability to read and understand.

In the two "Reading" subtests and the "Reading Total," the great majority of subgroup comparisons favored EG, six of these reaching statistical significance, and three approaching it.

It is not surprising to find that the Hi-SES-Lo-IIQ's in EG scored above CG in all the subtests except Arithmetic Computation, with one difference reaching statistical significance and one approaching it. Less expected is the relatively poor showing of the Hi-IIQ's in EG as compared with the Hi-IIQ's in CG.

While the Hi-IIQ subgroups and sub-subgroups in CG scored

Table 15

CTBS SUBTEST AND TOTAL MEAN SCORES FOR SUBGROUPS, 1969

	READING						ARITHMETIC							
	Vocabulary		Comprehension		Total		Computation		Concepts		Applications		Total	
	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG
Boys	2.5	2.5	2.3	2.2	2.3	2.3	2.5	2.7	2.4	2.5	2.3	1.8	2.6	2.4
Girls	2.6	2.3	2.3	2.3	2.5	2.2	2.4	2.5	2.3	2.2	2.5	2.1	2.3	2.3
Hi-SES	2.6	2.4	2.5	2.4	2.5	2.4	2.7	2.5	2.6	2.4	2.5	2.0	2.6	2.3
Lo-SES	2.6	2.2	2.1	2.1	2.3	2.1	2.3	2.8*	2.1	2.2	2.3	2.0	2.3	2.4
Hi-IIQ	2.5	2.5	2.0	2.5	2.2	2.5	2.6	2.5	2.2	2.4	2.4	1.9	2.4	2.4
Lo-IIQ	2.7*	2.0	2.5*	1.8	2.6*	1.8	2.4	2.6	2.5	2.2	2.4	2.1	2.4	2.4
Hi-SES Boys	2.7	2.7	2.5	2.4	2.5	2.5	2.7	2.5	2.7	2.6	2.2	1.9	2.6	2.4
Hi-SES Girls	2.6	2.3	2.5	2.4	2.5	2.3	2.7	2.4	2.6	2.2	3.0	2.1	2.5	2.3
Lo-SES Boys	2.4	2.0	2.1	1.8	2.2	1.8	2.4	2.9	2.1	1.8	2.5	1.6	2.5	2.4
Lo-SES Girls	2.7	2.2	2.1	2.2	2.5	2.2	2.2	2.7*	2.2	2.2	2.2	2.1	2.2	2.4
Hi-SES-Hi-IIQ	2.6	2.6	2.1	2.6	2.2	2.5	2.8	2.4	2.5	2.4	2.4	1.9	2.6	2.3
Hi-SES-Lo-IIQ	2.7	1.9	2.9	1.8	2.8*	1.8	2.5	2.6	2.8	2.3	2.5	2.2	2.6	2.4
Lo-SES-Hi-IIQ	2.4	2.3	1.8	2.3	2.1	2.3	2.3	2.8	2.0	2.3	2.3	2.0	2.2	2.5
Lo-SES-Lo-IIQ	2.7	2.0	2.3	1.8	2.5	1.8	2.3	2.7	2.3	2.0	2.4	2.0	2.3	2.3
Hi-IIQ Boys	2.1	2.5	1.7	2.3	1.7	2.4	2.5	2.7	2.1	2.5	1.7	1.7	2.3	2.4
Hi-IIQ Girls	2.7	2.5	2.1	2.6	2.4	2.5	2.6	2.5	2.3	2.3	2.8	2.1	2.4	2.3
Lo-IIQ Boys	2.7	2.5	2.6*	1.9	2.6*	2.0	2.6	2.6*	2.6	2.5	2.6	2.4	2.7	2.5
Lo-IIQ Girls	2.6	1.8	2.5*	1.8	2.6*	1.7	2.1	2.6*	2.4	2.1	2.2	2.1	2.0	2.4
Total	2.6	2.3	2.3	2.3	2.4	2.3	2.5	2.6	2.4	2.3	2.4	2.0	2.4	2.4

* See next page for t values of differences between EG and CG that are statistically significant.

Comprehensive Tests of Basic Skills, 1969: t values of differences between EG and CG that are statistically significant at or beyond the .05 level:

Favoring	Subgroup	Test	t Value
EG	Lo-IIQ	Reading Vocabulary	2.38
		Reading Comprehension	2.24
		Reading Total	3.17*
	Hi-SES-Lo-IIQ	Reading Total	2.58
	Lo-IIQ Girls	Reading Comprehension	3.18*
		Reading Total	4.30*
CG	Lo-SES	Arithmetic Computation	2.09
	Lo-SES Girls	Arithmetic Computation	2.25
	Lo-IIQ Girls	Arithmetic Computation	3.02

* Significant at .01 level

above the corresponding Hi-IIQ's in EG, the Lo-IIQ's in EG compared favorably with their counterparts in CG. The Lo-IIQ's and the Lo-IIQ girls account for three of the four statistically significant differences favoring EG. As the program ended, it appeared that the emphasis on verbal skills had been of benefit for the children who seemed most in need of preschool enrichment.

MAT and CTBS

A number of points emerge from subgroup analysis of the two school achievement tests that were administered within half a year of the program's termination.

--As compared with CG (though certainly not as compared with national norms) EG subgroups did relatively well in the tests of verbal skills and comprehension, but less well in the tests of number skills. Of the fifteen statistically significant differences favoring EG, not one occurred in an arithmetic section of MAT or CTBS; and of the four statistically significant differences favoring CG, not one occurred in a verbal section.

--The failure of EG to compare well on arithmetic tests may relate to the emphasis on verbal skills throughout the program, apparently at the expense of proficiency in arithmetic.

--Among the primary subgroups, the mean scores of the Hi-SES's in EG for the most part were substantially higher than the Lo-SES's in EG, and higher than their counterparts

in CG. The Lo-SES's somewhat less often outscored, and occasionally averaged lower than, their CG counterparts.

--The EG Hi-IIQ's scored above the EG Lo-IIQ's, and also (with one exception) above the Hi-IIQ's in CG, on the MAT. However, on the CTBS, they were mainly equalled or outscored by the Hi-IIQ's in CG. The EG Lo-IIQ's, on the other hand, for the most part equalled or outscored the Hi-IIQ's in EG. In addition, they equalled or outscored for the most part the Lo-IIQ's in CG, showing a substantial advantage in three subtests, with one difference statistically significant.

--The Hi-SES-Lo-IIQ's in EG outshone all others in the school achievement tests as well as in the project tests. Their mean scores were either the highest or near to the highest in all verbal and arithmetic subgroup comparisons, except for "Arithmetic Computation." They were involved in four of the statistically significant differences favoring EG, and two more that approached significance.

--The EG girls, on the other hand, provide the main example of contrast between patterns in the project and achievement tests. Their scores on the school achievement tests compared more favorably with those of the EG boys than might have been expected from project test results. The higher mean scores of the girls are in line with the general expectation that little girls will do better in school than little boys. However, the contrast between the school

achievement tests and the project tests in this respect invites speculation about the differing response of little girls and little boys to the school situation. Possibly the boys, more than the girls, missed the individualized response they had received both in the earlier program and in the project test situation.

--The CG girls were less likely than the EG girls to compare favorably with the boys on mean scores in the school achievement tests--a difference not in line with the general expectation just mentioned.

--The Hi-SES and Hi-IIQ boys in EG on the whole compared less favorably with their CG counterparts than did the EG girls in the corresponding subgroups.

CTBS, two years later

Two years after the termination of the program, when the children were in their fourth grade year, the CTBS was administered to all third through sixth grade children who were present in the D. C. public schools during the second week of May 1971. Accordingly, a larger number of both groups was tested: 25 of EG and 51 of CG. As indicated earlier, inspection of individual records suggests that, on the whole, the absences would tend to favor EG rather than CG, although the probable effect would be slight.

Despite any advantage to EG, the CTBS scores for 1971 show that CG, over-all, did better. (Table 16) On the reading subtests,

Table 16

CTBS SUBTEST AND TOTAL MEAN SCORES FOR SUBGROUPS, 1971

	READING						ARITHMETIC							
	Vocabulary		Comprehension		Total		Computation		Concepts		Applications		Total	
	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG
Boys	3.1	3.5	2.8	3.6	2.9	3.6	3.1	4.1*	3.4	3.8	3.6	3.7	3.8	4.0
Girls	4.2	3.8	3.8	3.9	4.0	3.8	3.9	4.3	3.8	3.7	3.3	3.8	3.8	4.1
Hi-SES	3.9	4.2	4.0	4.5	3.9	4.3	4.2	4.4	4.0	4.2	3.7	4.3	4.0	4.3
Lo-SES	3.5	2.8	2.8	2.7	3.2	2.7	3.1	3.9*	3.3	3.0	3.2	2.9	3.5	3.6
Hi-IIQ	4.2	3.8	3.9	4.0	4.0	3.9	4.2	4.3	3.9	3.9	3.6	4.0	4.0	4.1
Lo-IIQ	3.3	3.3	2.9	3.3	3.1	3.3	3.0	4.0*	3.4	3.4	3.2	3.3	3.5	3.9
Hi-SES Boys	3.1	4.3	3.2	4.4	3.0	4.3	3.6	4.4	3.8	4.3	3.1	4.4	3.6	4.5
Hi-SES Girls	4.9	4.0	5.0	4.5	5.1	4.3	4.7	4.3	4.1	4.0	4.2	4.2	4.5	4.2
Lo-SES Boys	3.1	2.1	2.3	2.2	2.8	2.3	2.6	3.6	2.9	2.6	4.9*	2.5	4.2	3.2
Lo-SES Girls	3.7	3.3	3.1	3.0	3.4	3.1	3.4	4.2	3.6	3.3	2.7	3.2	3.3	3.9
Hi-SES-Hi-IIQ	4.4	4.3	4.4	4.6	4.4	4.4	4.4	4.4	3.9	4.2	3.8	4.4	4.2	4.3
Hi-SES-Lo-IIQ	3.4	3.8	3.6	4.0	3.3	3.8	3.8	4.2	4.1	3.9	3.5	4.0	3.8	4.4
Lo-SES-Hi-IIQ	3.9	2.7	3.3	2.7	3.4	2.7	3.9	4.1	4.0	3.1	3.4	3.0	3.8	3.7
Lo-SES-Lo-IIQ	3.2	2.8	2.5	2.7	3.0	2.8	2.7	3.7*	3.0	2.9	3.5	2.7	3.3	3.4
Hi-IIQ Boys	3.5	3.7	3.8	3.6	3.6	3.7	3.8	4.3	3.0	4.0	3.4	4.0	3.5	4.1
Hi-IIQ Girls	4.4	3.9	3.9	4.3	4.1	4.1	4.3	4.4	4.1	3.8	3.7	3.9	4.1	4.1
Lo-IIQ Boys	2.9	3.0	2.4	3.6	2.7	3.2	2.9	3.8	3.4	3.1	3.7	2.9	3.9	3.8
Lo-IIQ Girls	3.8	3.5	3.7	3.1	3.8	3.3	3.2	4.1	3.2	3.6	2.7	3.6	3.2	3.9
Total	3.7	3.7	3.3	3.8	3.5	3.7	3.5	4.2*	3.6	3.7	3.4	3.8	3.8	4.1

* See next page for t values of differences between EG and CG that are statistically significant

Comprehensive Tests of Basic Skills, 1971: t values of differences between EG and CG that are statistically significant at or beyond the .05 level:

Favoring	Subgroup	Test	t Value
EG	Lo-SES Boys	Arithmetic Applications	2.95
CG	Lo-SES-Lo-IIQ	Arithmetic Computation	2.15
	Lo-SES	Arithmetic Computation	2.32
	Lo-IIQ	Arithmetic Computation	2.32
	Boys	Arithmetic Computation	2.54
	Total Group	Arithmetic Computation	2.36

the various subgroups of EG outscored CG about as often as the CG subgroups outscored those of EG. However, the one subgroup difference that approached statistical significance favored CG (Hi-SES boys). Total CG outscored EG on one of the two reading subtests and on the Reading Total.

In the arithmetic subtests, the CG subgroups outscored their EG counterparts far more often than the EG subgroups outscored their CG counterparts. Moreover, of the four statistically significant subgroup differences, three (all in Computation) favored CG, while only one (in Applications) favored EG. Total CG also scored significantly above EG in Computation and nonsignificantly above EG in the other two subtests and the Arithmetic Total. In line with previous performance, CG subgroups outscored EG subgroups most often in the Computation subtest, where only one EG subgroup scored definitely higher than its CG counterpart. In the other subtests, and the subtest totals, the balance was less consistently in favor of CG but nevertheless definitely favored CG. And, on the whole, the differences in favor of CG tended to be somewhat larger than those favoring EG.

The need to consider the means of the sub-subgroups, despite their small numbers, is brought out with especial force by these CTBS scores. When the means of the primary subgroups are reviewed, the differences between boys and girls are masked in the comparison between Hi- and Lo-SES and IIQ; and the differences between Hi- and Lo-SES and IIQ are masked in the means for all the boys and all the girls.

The one EG subgroup that maintained an advantage over its CG counterpart was the Hi-SES girls. With one exception, they outscored the Hi-SES girls in CG on every subtest and total--usually by substantial amounts. The exception was Arithmetic Applications, where their score was identical with that of the Hi-SES girls in CG. Moreover, this was the only subgroup in either EG or CG to achieve a mean at the fifth grade level, which they did on Reading Comprehension and Reading Total, barely missing the fifth grade level on the Vocabulary subtest.

The Hi-SES boys in EG, on the other hand, had mean scores below those of the Hi-SES boys in CG in every subtest and total, both in the verbal and arithmetic sections. These differences, too, were substantial, and one approached statistical significance although none was significant at the .05 level.

The means for the Lo-SES boys in EG compared rather favorably with those of the Lo-SES boys in CG, and on one subtest (Arithmetic Applications) they scored significantly above their CG counterparts. For the most part, however, the EG boys in various subgroup combinations fared badly in comparison with the CG boys. Even the Hi-SES-Lo-IIQ subgroup, which was predominantly male, reversed its earlier lead over its CG counterpart on all except one subtest (Arithmetic Concepts).

If the school achievement tests are true reflectors of school achievement, it would seem that by the time they were in their fourth grade year, the EG children had lost any scholastic advantage they had over CG--except for the Hi-SES girls.

The MAT was administered toward the end of the second grade year. The CTBS was first given near the beginning of the third grade year (November 1969).

The scores, both total group and subgroup, were considerably more favorable to EG in the MAT than in the CTBS. It could be speculated that the less favorable scores for EG were influenced by differences in the tests or by the stress of transition for all the EG children, or by both, possibly combined with other causes. Certainly, the transition was difficult for many if not for all the EG children. From nursery school through second grade they had been kept together in one group, so that they were well acquainted with their classmates. They had been given transportation to and from school, and in the classroom had experienced more individual attention than is usually considered feasible in today's public schools. Reports from the children and their mothers make it clear that some of them found it difficult to accept the new situation.

The research staff had urged teachers and parents to prepare the children for this transition. However, there is little evidence that much effort in this direction was made, and it is doubtful how effectively third graders could be prepared for such a stressful change.

The fact remains that EG did less well in the first CTBS than in the MAT. Moreover, in the following administrations of the CTBS, they performed less and less well. Accordingly, it must be concluded that if the stress of transition was responsible for their relatively poorer showing, increasing familiarity did not

diminish adjustment difficulties for many of them. This is a point that will call for further discussion.

Additional light on the relative status of EG and CG with regard to school performance, and clues to some possible explanations, can be found in analysis of other school measures.

Children At or Below Grade Level

If, at the end of the school year, a child is promoted to the next higher grade, the implication is that the teacher thinks he is ready to move a step higher. There are exceptions, of course--and, judging from the comments on some EG and CG report cards, the exceptions are more frequent than one would like to assume. A child may be promoted because he is considered too old to spend another year in the same grade, or because of parental insistence, or implicit school regulations, or there may be some other reason for a "courtesy" promotion. On the other hand, if he is retained for a second year at the same grade level, there is little doubt that the teacher thinks he is not ready for the next one.

Ordinarily, promotion or retention would seem to be the acid test. If the proportion of EG children at or above grade level is substantially larger than that of CG, it should be relatively convincing evidence that the program had been helpful. In the present case, however, the children in CG were subject to retention after their kindergarten year, while those in EG could not be retained until the end of the second grade. Although the EG schildren had been subject to retention three times by the end of the fourth grade year, the CG children had been subject to retention five times. Nevertheless, although figures on grade placement

may not tell the whole story, they do tell an important part of it.

When the children began the fourth grade year (1970), 67% of EG were at the expected grade level, as compared with 53% of CG. That is, one-third of EG and over one-half of CG were below grade level at the beginning of the fourth grade year.

Subgroup differences between EG and CG in the proportions of children at or below grade level one year after the end of the program (1970), are more striking than differences for the total groups, although none of the primary subgroup comparisons reaches statistical significance. (Table 17) In all except one, the proportion of children at the expected grade level was higher for EG than for CG. The exception is that the proportion of CG girls is very slightly higher than the proportion of EG girls. Recurrent subgroup patterns suggest that the advantage of CG in this instance relates to the fact that in EG there are twice as many Lo-SES as Hi-SES girls, while in CG the Hi-SES girls outnumber the Lo-SES girls by three to two.

One of the most striking grade placement differences is the much larger proportion of EG than of CG boys who are at grade level, a proportion much like that of the EG girls -- which is contrary to usual expectations. The significant difference between the CG boys and girls is more typical of inner-city schools.* One would like to believe that it shows the effects of the program, and that the program counteracted somewhat the

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* Neyman , 1971.

Table 17

PERCENTAGE OF SUBGROUPS AT GRADE LEVEL AT BEGINNING OF FOURTH AND FIFTH GRADE YEARS

	For the fourth grade year				For the fifth grade year			
	EG		CG		EG		CG	
	Sub-group N	% at grade level	Sub-group N	% at grade level	Sub-group N	% at grade level	Sub-group N*	% at grade level
Boys	14	64	31	32	14	50	31	29
Girls	16	69	35	71	16	69	34	65
Hi-SES	12	92	40	65	12	75	39	59
Lo-SES	18	50	26	35	18	50	26	31
Hi-IIQ	13	85	42	60	13	69	42	55
Lo-IIQ	17	53	24	42	17	53	23	35
Hi-SES								
Boys	7	86	19	47	7	57	19	42
Girls	5	100	21	81	5	100	20	75
Lo-SES								
Boys	7	43	12	8	7	43	12	8
Girls	11	55	14	57	11	55	14	50
Hi-SES-								
Hi-IIQ	6	100	27	74	6	67	27	67
Lo-IIQ	6	83	12	42	6	83	12	42
Lo-SES								
Hi-IIQ	7	71	15	33	7	71	15	33
Lo-IIQ	11	36	12	42	11	36	11	27
Hi-IIQ								
Boys	4	50	20	40	4	0	20	35
Girls	9	100	22	77	9	100	22	73
Lo-IIQ								
Boys	10	70	11	18	10	70	11	18
Girls	7	29	13	62	7	29	12	50
Total	30	67	66	53	30	60	65	48

* One CG girl moved away from the area during the fourth grade year.

tendency of little boys to regard school and learning as "sissy" affairs. However, as later figures indicate, this result -- if it existed at all -- was short-lived.

In line with differences in scores on the project and school achievement tests, only one Hi-SES child (a boy) in EG and only two Hi-IIQ children (both boys) in EG are below grade level, while 92% of the Hi-SES and 85% of the Hi-IIQ children are at grade level. Although the percentages in CG are lower, a significantly larger proportion of Hi-SES's are at grade level, in both EG and CG.

The advantage of being either Hi-SES or Hi-IIQ is underlined when the children rated Hi- in either are compared with the children rated Lo- in both. When this comparison is made, the EG children classified "Hi-SES-and/or-Hi-IIQ" show a significantly larger proportion at grade level, as compared with the "Lo-Lo's" and also as compared with their counterparts in CG -- again suggesting that, as observed earlier, a "Hi-" rating appears to be "dominant" and a "Lo-" rating "recessive." (Table 17)

On the whole, the non-promoted children in both EG and CG were likely to score below the group means on the project and school achievement tests. However, four of the five non-promoted boys in EG scored substantially above the group means on the Stanford-Binet, and also above the means for the promoted boys, suggesting that the school performance of this small group was definitely below their capacity. This "straw-in-the-wind" gave early indication of developments to be discussed later.

In 1971, after two years in regular school classes, and three

exposures to possible retention, a higher proportion of EG than of CG was at grade level, but the total group and subgroup differences had diminished. Sixty percent of EG and 48% of CG were scheduled to begin the fifth grade year at grade level. That is, two-fifths of EG and a little over half of CG were below grade level at the beginning of the fifth grade year. These proportions are not out of line with those for the inner-city schools of Washington, D. C.

That such proportions are common does little to mitigate their impact, especially when they involve children who, over a period of years, have impressed the staff as often responsive, predominantly "normal," and in some instances unusually bright.

The proportions in different subgroups who were at or below grade level as they entered the fifth grade year varied considerably, as would be expected -- although not all the variations were in line with expectations. (Table 17) Among the primary subgroups, the Hi-SES's, the Hi-IIQ's, and the girls have the highest proportions at grade level, in both EG and CG, with somewhat higher proportions in EG than in CG. Among the sub-subgroups in EG, all of the Hi-SES and Hi-IIQ girls are at grade level, while none of the four Hi-IIQ boys are. Despite the reduced advantage of the Hi-SES-Lo-IIQ boys in the school achievement tests for 1971, four of the five were at grade level as they entered the fifth grade year -- a proportion significantly higher than for the corresponding group in CG.

In both EG and CG, a higher proportion of Hi-IIQ girls than of Hi-IIQ boys is at grade level. In EG, but not in CG, a higher

proportion of Lo-IIQ boys than of Lo-IIQ girls is at grade level. Both the Lo-IIQ girls and the Hi-IIQ boys in EG make a poor showing as compared with their counterparts in CG.

Once again, the children classified as "Hi-" in either SES or IIQ are much more likely to be at grade level than those classified as "Lo-" in both. In EG, the proportion of "Hi-SES-and/or-IIQ's" at grade level is twice as large as the proportion of "Lo-Lo's," in EG, a difference that is statistically significant. Once again, the proportions at grade level in EG are larger than those in CG, although the differences fall short of statistical significance.

School achievement tests and grade level

According to the school authorities, the achievement tests constitute only one of several elements to be considered by a teacher in deciding whether a child should be promoted or retained. The statement is confirmed by the correlations between CTBS and grade level, using a three-point scale (at grade level, one year below, and two years below). The correlation coefficients for all the EG and CG children, on the subtests and total of the CTBS in 1971, range from .40 to .53. (Table 18)

As usual, the over-all means cover a wide range of variation. The correlation coefficients for the girls in EG and CG are quite similar, ranging from .31 to .56 for the CG girls and from .33 to .62 for the EG girls. Those for the CG boys run higher, from .53 to .71. Those for the EG boys, in contrast with the other three subgroups, with one exception fall below .40, the lowest being .04. The one exception to these low r's is for Arithmetic Concepts, at .62.

School report cards

The school authorities of the District of Columbia and adjacent jurisdictions very generously made it possible for the research team to obtain information from the school report cards. Since the children in EG and CG, by the fourth grade year were scattered in 57 public or parochial schools in the District, Virginia, and Maryland, assembling the information was an arduous undertaking. Its demands were psychological as well as physical, for a good deal of cajoling and detective work was required in order to obtain the available records and track down those that had been misdirected or mislaid when children changed schools -- as they did with disconcerting frequency.

Before the fourth grade year, the report cards varied in form and content to a degree that precluded systematic comparison. However, in that year a standard report card came into use by the public schools of the District of Columbia, as a result of an agreement reached after protracted discussions between the school officials and the teachers' union. Since the form had been accepted by the union, its acceptance and use by the teachers was more consistent than in the past. Nevertheless, entries were by no means complete or consistent. In addition, the somewhat different forms employed by the parochial and suburban schools had to be equated with the usage of the District public schools.

The numbers and types of schools attended during the fourth grade year were as follows:

Number of Children

School System	EG	CG
D. C. public schools	27	54
D. C. parochial schools	0	2
Suburban public schools (Maryland and Virginia)	3	9

The types of information entered on the report cards included the child's grade placement, the teacher's rating of the level at which he performed in reading and arithmetic, the school mark he received in each subject for each quarter, his attendance record, and quarterly grades for "Citizenship Habits," "Social Habits," and "Work Habits." Spaces were provided for teachers' comments and for requests to confer with parents, but generally these remained empty.

Report Card Summary

Despite inconsistencies, it was possible to make a number of rough ratings based on the report cards. One was a six-point rating designed to reflect somewhat more sensitively the interrelations between grade placement and CTBS scores, school or project test scores, and also to offer some clues to the significance of grade placement. The ratings, based on school marks and teachers' comments indicated both the grade in which the child was placed and whether he was functioning adequately at this level. Ratings were made independently by two senior research staff members, and the few differences then resolved in a conference judgment. Initial agreement was very high (91%).

Correlations between the six-point scale and the CTBS scores

ran somewhat higher than with the three-point actual grade placement. Again, the r's for the EG and CG girls were similar, this time ranging from .36 to .66 for the EG girls and from .30 to .65 for the CG girls. Those for the CG boys ranged from .68 to .86, all but one being .78 or higher. And once again, those of the EG boys were lower than for the other three groups, ranging from .21 to .65, with all but one below .54. (Table 18)

Behavior rating

As background to interpreting the various measures, a rating was also made on school behavior, as judged by the teachers' comments on the report cards, in conjunction with marks on "Citizenship Habits," "Social Habits," and "Work Habits." A three-point scale was used, the highest level representing a definitely positive rating by the teacher, the lowest representing a definitely negative rating, and the middle level including those that were neither definitely positive nor definitely negative. As with the Report Card Summary, two senior staff members independently coded each child's report and disagreements were resolved in a conference judgment. On this scale, also, initial agreement was high (94%).

As indicated by the following figures, the ratings for CG represent a relatively "normal" curve, with the largest number falling between the two extremes. EG, on the other hand, is somewhat under-represented in the middle level, with relatively larger proportions classified as definitely positive or definitely negative in their school behavior.

Table 18

CORRELATION COEFFICIENTS BETWEEN SCHOOL MEASURES, 1971

	Grade Level*				Report Card Summary**			
	Experimental Group		Comparison Group		Experimental Group		Comparison Group	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
CTBS:								
Vocabulary	.04	.45	.71	.53	.26	.59	.86	.59
Comprehension	.26	.35	.53	.53	.38	.36	.68	.64
Reading Total	.12	.34	.66	.56	.33	.42	.82	.65
Computation	.39	.62	.56	.44	.53	.72	.79	.47
Concepts	.62	.52	.66	.41	.65	.64	.79	.49
Applications	.10	.33	.62	.31	.43	.37	.80	.30
Arithmetic Total	.38	.57	.57	.44	.21	.66	.78	.49
Behavior Rating***	-.24	.63	.30	.39	-.13	.66	.43	.27
Number of School Moves	.55	.03	.11	-.11	.57	.07	.08	.06

* Based on three point grade level rating
** Based on six point scale
*** Based on three point scale

	Behavior Rating		
	Positive #3	Mixed #2	Negative #1
EG	12	8	10
CG	18	33	12

When boys and girls are separated, those in EG show strong differences in behavior ratings, while the CG boys and girls are rather similar. In both EG and CG, the girls are much more likely to be classified under "good" than "bad" behavior, but the CG girls are more likely than the EG girls to fall in between. The boys in both EG and CG divide rather evenly between "good" and "bad," but the CG boys, like the CG girls, are more likely to fall in the middle category. In fact, once again, the rating profiles of the EG boys differ from those of the other three sex groups more than those three differ from each other. Small as the numbers are, the difference between the classifications of the EG and CG boys are statistically significant.

	Behavior Rating		
	Positive #3	Mixed #2	Negative #1
EG Boys	5	2	7
EG Girls	7	6	3
CG Boys	6	17	8
CG Girls	12	16	4

The recurrent contrast between the EG boys and the other three groups is reflected in the correlations between grade level

and behavior rating. The r's for the CG boys and girls were .30 and .39, respectively. For the EG boys and girls they were -.24 and .63. With the small numbers and limited scale involved, it is difficult to take any single correlation too seriously. However, the repeated instances of contrast between the EG boys and the other boys and girls form a consistent pattern that is reinforced by indications which, in themselves, would not command attention.

When the behavior ratings are related to SES, the familiar advantage of the "Hi's" appears, although the differences between boys and girls are somewhat more pronounced.

	Behavior Rating		
	Positive #3	Mixed #2	Negative #1
EG Hi-SES	6	2	4
EG Lo-SES	6	6	6
CG Hi-SES	14	18	6
CG Lo-SES	4	15	6

It has seemed worth going into this much detail with regard to the behavior ratings because they offer hints that will be useful in considering the interrelations between project tests and school achievement.

Attendance

As a number of teachers have remarked, in varying tones of exasperation and despair, if a child is not in school he can't learn -- although unfortunately his presence in school will not guarantee that he learns much. Moreover, regularity or irregularity can reflect attitudes toward school on the part of the child or his parents, or both. Accordingly, attendance

records are an important adjunct to interpretation of school performance and even of the relations between school measures and project tests.

Although the report cards included spaces for attendance records, these were so often either blank or at odds with the teachers' comments that they provided basis only for a rough estimate of the proportion of a child's time spent in school. For example, a report card with few or no indications of absence might bear the teacher's comment: "He can't do his work if he is never in school" or "Not in school enough to grade."

The information that could be gleaned from the report cards about attendance in the fourth grade year nevertheless gave a basis for a rough three-way classification indicating excessive absences (more than 15), few or no absences (five or fewer), and something in between (six to 15). (Table 19)

The attendance record was better for CG than for EG, as total groups, and also better for CG when the primary subgroups were compared. In both EG and CG, the girls attended school more regularly than the boys, and the Hi-SES more regularly than the Lo-SES children.

Since there is no reason to assume systematic differences in the accuracy of reporting for EG and CG, even this rough tally seems sufficient to demonstrate that, after the program ended, the EG children attended school less regularly than the CG children. The total group and subgroup patterns are consistent and two differences approach but do not reach significance.

Table 19

School Absences for Subgroups during
Fourth Grade Year, 1970 - 1971

(3 Point Scale*)

	Experimental					Comparison				
	1	2	3	n	Mean	1	2	3	n	Mean
Boys	5	4	3	12	1.83	8	14	8	30	2.00
Girls	5	6	4	15	1.93	9	10	12	31	2.09
Hi-SES	4	7	5	11	2.09	6	16	14	36	2.22
Lo-SES	6	8	2	16	1.75	11	8	6	25	1.80
Hi-IIQ	4	3	5	12	2.08	11	16	12	39	2.03
Lo-IIQ	6	7	2	15	1.73	6	8	8	22	2.09
Total	10	10	7	27	1.89	17	24	20	61	2.05

* 1 Absent more than 15 days
2 Absent more than 5 days but not more than 15 days
3 Absent five days or less

Changes in Residence

The families in both EG and CG moved to a new address with striking frequency, and in both groups the boys' families moved more often than the girls'. Since changes in home address are closely linked with changes of school, and since the focus of this study is on school performance, it will be expedient to concentrate on school changes rather than on changes of home address. Nevertheless, a few points about home moves should be noted.

During the course of the program, eight children in EG and 18 in CG moved three or more times, while five in EG and five in CG moved five or more times. Of those who moved five or more times, only one in EG and one in CG was at grade level in 1971. However, so many other factors were associated with frequent changes of address that it would be fantastic to attribute a causal relation to this one factor.

The reasons for moving varied widely. Some families moved to a more desirable neighborhood, with superior schools, in an effort to improve their situation. More families moved to less desirable neighborhoods, or were evicted, sometimes placing children with relatives for varying lengths of time. In some of these the moving was related to marital conflict and the departure of a father or father substitute (or escape from him). A few of the Lo-SES families (5 in EG and 3 in CG) had to move -- mainly to better quarters -- because of urban renewal.

The variety of reasons for moving is reflected in the lack of contrast between the Hi-SES and Lo-SES subgroups in the number of moves made -- although the Lo-SES tended to move more often than the Hi-SES. It was chiefly the Hi-SES families who moved for the sake of improving their situation, while the Lo-SES families were more likely to move

because of exigencies than because they chose to do so.

Changes in schools attended

For the children in EG and CG, a change of schools usually was linked with a change in home address, although a change in home address did not invariably involve a change of schools. In a few instances, a change of schools resulted from changes in the school district lines, and two EG children during the fourth grade year were bussed to a school in a different neighborhood.

It seems reasonable to assume that a change of school is likely to have some effect on a child's school performance. Whether the effect is predominantly favorable or unfavorable depends on a number of factors, including the characteristics of the child and of the school. If the new school is superior to the previous one, and if the child is well able to adapt to a new setting and new associates, the move may be of benefit even if the transition is temporarily difficult. On the other hand, if the new school is inferior in important ways, or if the child is unusually shy or withdrawn, the change may impose a net disadvantage. Whether and how much the reason for a change of schools influences the effects on a child would be difficult to determine.

Transfer from one school to another is common occurence for many inner-city pupils. Conceivably, frequent transitions could increase their ability to make such moves with minor dislocation problems. Such an effect is claimed by some foreign service officials, who say their children learn to adjust to new schools and settings with ease. It seems likely, however, that an excessive number of school transfers could seriously impair the potential for satisfactory and satisfying school achievement, and it seems evident that a good many inner-city

children do experience an excessive number of transfers.

There is some evidence also that the attitudes of school personnel are adversely influenced by the frequency of transfers. Instability of the classroom population would be almost bound to dampen teachers' optimism about what they can accomplish. Administrative and clerical staff clearly react with discouragement to the problems (not always successfully solved) of keeping records up to date.

The research aide responsible for obtaining information from school records notes that "many principals and school secretaries complimented the project staff on their ability to keep up with 'these nomad children.' Some say their schools have as much as 50% mobility-- I believe it! ...and many times these 'nomad children' take a 'vacation' of several weeks between transferring out and registering in the new school." She adds that, at one school she visited, they were registering in the second grade a little boy (not in EG or CG) who had already been in ten schools. This is doubtless an extreme example of a common problem.

As would be expected from the frequency of home moves, the children in both EG and CG experienced a considerable number of school changes. (Table 20) In both groups, changes of school -- like changes of family residence -- were more frequent for boys than for girls. Although we have no explanation of this difference, within EG it was statistically significant.

In calculating the number of school changes for EG and CG, "change" was defined as moving to a new school individually, without the rest of the class. Accordingly, the first two school changes for EG are not included in the count, since in each instance EG was moved as a

Table 20

NUMBER OF CHANGES IN SCHOOLS ATTENDED FOR BOYS AND GIRLS, 1966 - 1971

Number of Changes	EG		CG	
	Boys (n=14)	Girls (n=16)	Boys (n=31)	Girls (n=34)
0	–	–	14	13
1	6	12	4	10
2	3	4	7	8
3	3	–	2	3
4	1	–	1	–
5 or more	1	–	3	–

*The figures for EG and CG not strictly comparable since number of changes for EG was computed for the period from the end of the program, June 1969 until June 1971, while CG figures represent the entire period from the beginning of kindergarten year, September 1966 until June 1971.

group. Nevertheless, the group move did involve a change of setting for the EG children.

The beginning of the third grade year involved a change of school for all of EG. Moreover, it marked their first experience in a "regular" school situation, and for many of them the difference was very hard to accept. They missed the daily transportation to and from school, and the presence of the firm but kindly cab driver. Some of them protested and felt aggrieved. The special lunches and breakfasts were no longer provided as if by magic. There was less special instruction for those who needed help.

Sixteen boys and 13 girls in CG changed schools more than once after kindergarten, and 13 CG children (7 boys and 6 girls) changed more than once after the second grade year. That is, from first grade through fourth grade year, almost half (45%) of CG had experienced more than one change of schools, and over half of CG had at least one change. However, 18 CG children had no change of school between kindergarten and the fifth grade year.

After the automatic and traumatic move of EG at the end of the second grade year, 17 EG children (11 girls and 6 boys) experienced no further change of schools during the next two years. The others had at least one additional move, and five of them changed schools more than once.

It is virtually impossible to compare the amount and kinds of change in the schools attended by EG and by CG. EG was artificially held together as a group, from nursery school through the second grade. The children in CG, during these years, experienced 62 moves, involving 35 children. That is, over half of CG had at least one school move

during the time that EG experienced no need to adjust to unknown school mates. On the other hand, EG as a group moved every year from kindergarten through second grade. Although their classmates remained the same, and their kindergarten teacher remained with them through the first grade, they had to adjust each year to a new setting and new schoolmates, since in first and second grade the class was split into halves and paired with the children regularly attending the new school.

Although it is not feasible to compare the amount of change in schools for EG and CG, it might be possible to inquire into the interrelations between number of school changes and school achievement. Again, these relations are confounded by the different contexts in which the move is made. This may account for the prevailingly low correlations between number of school changes and some other school measures. For CG, the correlations between number of school moves and grade level run low, none exceeding .24 for total CG or for the various subgroups. Some stronger relations appear for EG: .45 for total EG, and the same for the Lo-SES subgroup; .55 for the EG boys, .56 for the Hi-SES, and .81 for the Hi-IIQ's.

Considering the small size of the subgroups, little weight can be put on these variaticns, except to conclude that apparently change of school has a somewhat stronger relation to school performance for EG than for CG. This interpretation would be consistent with the traumatic nature of the initial change that was shared by all the EG children, and also with a number of other indications that will be discussed at more length in the following section.

Interrelations of Assessment Measures

The project tests were employed at the outset as measures, presumably predictive of later school achievement, that could be obtained before the children were actually in school. Later they were employed in order to assess their relations with school measures, to explore divergencies between project and school measures, and to derive clues to the reasons for such discrepancies as emerged.

The obvious way to explore relations between the project tests and the school measures is through examining correlations. Although the small numbers involved forbid placing much weight on a single correlation, consistent patterns are at least suggestive.

It is possible to compare the means and the rankings of different subgroups on the various measures. Another basis of comparison is to compare the proportions of children in different subgroups who score within the "normal" range on the various measures. Each of these methods has been utilized.

Since the Stanford-Binet Intelligence Scale is so frequently used to assess or predict the success of preschool enrichment programs, it is of special interest to consider the extent to which, in the present study, early IQ scores produced by this test are predictive of later school achievement. The crucial question, of course, concerns the relations between early IQ scores and later grade placement and school achievement test scores. However,

this cannot be wholly separated from questions about the extent to which early IQ scores predict later IQ scores, a question that has already received some attention in relation to comparisons between the IQ profiles of boys and girls.

For all the children in both groups, the correlation between 1964 and 1969 scores on the Stanford-Binet is .41. (Table 21) When this over-all figure is broken down into its components, the correlation coefficients run substantially higher for the girls in both EG and CG: .55 for the EG girls, as compared with .23 for the boys, and .58 for the CG girls, as compared with .47 for the CG boys. The low correlation for the EG boys clearly relates to their very low scores in 1964, followed by substantial gains for some of them.

Assuming the 1966 scores for all the children to be more representative than those for 1964, it is not surprising to find a higher correlation for the EG boys between the Stanford-Binet scores for 1966 and 1969: .68. However, between 1966 and 1971, it is reduced to .47 -- presumably because of the marked decline in scores for some EG boys during the two years after the end of the program.

For the other three sex subgroups (girls in EG, boys and girls in CG), the analogous correlations are higher and more similar to each other. (.62, .56, and .82 for 1966 and 1969; and .57, .63, and .76 for 1966 and 1971.)

In CG these correlations run higher for the girls than for the boys. In EG, however, the comparison between 1966 and 1969 scores is one of the few instances in which the correlation is as high

Table 21

CORRELATION COEFFICIENTS BETWEEN STANFORD-BINET SCORES FOR BOYS AND GIRLS FOR THE YEARS 1964, 1966, 1969 AND 1971

	Experimental Group		Comparison Group		
	Boys	Girls	Boys	Girls	Total Group
Between:					
1964 and - 1966	.39	.64	.76	.56	.51
- 1969	.23	.55	.47	.58	.41
- 1971	.26	.58	.59	.59	.52
1966 and - 1969	.68	.62	.56	.82	.69
- 1971	.47	.57	.63	.76	.61
1969 and - 1971	.87	.93	.75	.78	.81

for the boys as for the girls. By 1971, the more typical divergence of the EG boys has been reestablished.

The correlations suggest a number of points:

The initial IQ scores of the EG boys are poor predictors of their later scores. For the other three sex subgroups, the initial scores are fair but not excellent predictors of later scores.

For all the sex subgroups, the 1966 scores are more closely related to the scores in 1969 and 1971 than are the 1964 scores, very possibly a reflection of the increasing reliability of Stanford-Binet IQ scores as children reach school age.

The correlations between IQ scores for the other subgroups in different years are so influenced by the differences between boys and girls that it is not fruitful to review them here.

Project tests as related to grade level

It has already become apparent that to a considerable extent, the subgroups who scored best on the project tests were the ones most likely to be at grade level: the children classified as Hi- in either SES or IIQ, especially the girls. However, the relations between grade placement and the project tests do not encourage heavy reliance on early Stanford-Binet IQ scores as predictors of later school achievement.

Relations between the Stanford-Binet scores and grade placement in 1971 emerge most clearly in relation to the various subgroups. Some of these have already been reviewed. It should be added here that, in both EG and CG, the 1971 mean Stanford-Binet score of those below grade level was lower than the mean of those

who were at grade level; and the mean of those two years below grade level was lower than the mean of those who were one year below grade level. However, when boys and girls are separated, the mean score of the EG boys one year below grade level was only 1.3 below the mean of those at grade level, while that of the EG girls was 14.4 below that of girls at grade level. In CG, the corresponding differences were 11.7 and 7.3.

These differences apparently relate to differences in the correlations for the four sex subgroups, between 1971 Stanford-Binet scores and grade placement. They are moderately substantial for the EG girls and the CG boys: (.66 and .64) but lower for the CG girls (.47) and the EG boys (.38). (Table 22)

In EG, all the girls who were below grade level in 1971 were both Lo-SES and Lo-IIQ, while the boys below grade level were as likely to be Hi- or Lo- in both SES and IIQ. In CG, both the girls and the boys below grade level were rather equally divided between Hi- and Lo-SES and IIQ. Because of the different numbers in the CG subgroups, those below grade level represented smaller proportions of the Hi's than of the Lo's (See Table 17).

Project and school tests, EG and CG

A number of comparisons contribute to the impression that, on the whole, EG children in 1971 performed better on the project tests than on the school tests, and that this generalization does not hold for CG. On the whole, according to our estimate, CG seemed to perform at a roughly equivalert level on both project and school tests.

Table 22

CORRELATION COEFFICIENTS BETWEEN STANFORD-BINET SCORES FOR BOYS AND GIRLS AND GRADE LEVEL* DURING FIFTH GRADE YEAR, 1971-1972

	Experimental Group		Comparison Group	
Stanford-Binet:	Boys	Girls	Boys	Girls
1964	-.18	.66	.43	.48
1966	-.22	.68	.50	.33
1969	.24	.69	.48	.37
1971	.38	.66	.64	.47

* Based on three point rating.

The comparisons are weakened by the fact that virtually all the children were included in the project tests, while a number were not included in the CTBS. However, as noted earlier, it seems unlikely that the pattern would be substantially altered if all were included.

The following points are among those on which the generalization is based:

--The EG sub-subgroup means were more likely to fall within the "average" range on the project tests, and the CG means were more likely to meet or exceed the average for inner-city children on the school tests (although few subgroups in either EG or CG exceeded that average). In the following figures, "average" is defined as 4.0 for the CTBS math and verbal subtests, 90 or above for the Stanford-Binet, 10 or above on the Stanford-Binet vocabulary raw scores, and a grade equivalent of 3 or above (see page 112) on the SAT.

Number of sub-subgroup means within "average" range on 1971 tests

	EG	CG
Stanford-Binet (90 or above)	5	3
Stanford-Binet Vocabulary (raw score of 10 or above)	6	1
SAT (grade equivalent of 3 or above)	5	1
CTBS: (grade equivalent of 4 or above)		
Two verbal subtests	5	7
Three arithmetic subtests	8	15

It should be added that, on the Stanford-Binet, none of the CG means exceeded 92.2, while four of the EG means did. The

differences are negligible, except as part of the pattern.

In CG, only one sub-subgroup (Hi-SES-Hi-IIQ) was at or above the third grade level on the 1971 SAT. In EG, five were at or above that level (Hi-SES boys, Hi-SES girls, Hi-IIQ girls, Hi-SES-Hi-IIQ, Hi-SES-Lo-IIQ). (It is relevant to points made elsewhere that all those with means at or above the third grade level were Hi-SES, except for the Hi-IIQ girls in EG, of whom a little over half were Lo-SES; and also that the 1971 project tests were administered at the end of the fourth grade year.)

A comparison of subgroup and sub-subgroup rankings in the school and project tests is in line with the impression that EG performs better on project than on school tests. When all 36 of the subgroups and sub-subgroups in both EG and CG are ranked from high to low, according to their means in each of the 1971 tests, a subgroup in EG ranks among the top four in eight of the Stanford-Binet or SAT comparisons, while none of the CG subgroups ranks among the top four on these. The honors divide more evenly for the CTBS. In the arithmetic subtests, 8 of the EG means and 9 of the CG means were among the top four; in the verbal subtests, the count was 7 for EG and 5 for CG.

Project and school tests, boys and girls

Subgroup comparisons for 1971 indicate further that the contrast between performance on school and project tests is much more pronounced for the EG boys than for the EG girls, and probably sharper for the Hi-SES than for the Lo-SES boys--even though twelve of the fourteen EG boys did more poorly on the

project tests in 1971 than in preceding years. Among the points contributing to this generalization are the following:

--The Hi-SES boys in EG, with almost the same Stanford-Binet mean as their counterparts in CG (90.9 for EG, 90.4 for CG), score about a year below those in CG on the CTBS. They score definitely above their counterparts on the SAT and the vocabulary subtest of the Stanford-Binet. On the other hand, the Hi-SES boys in CG rank among the top five on all scores of the CTBS, but below fifth place on the project tests.

--The means for the Hi-SES EG girls, on the other hand, were consistently higher than those of the Hi-SES girls in CG, for both project and school tests. For the other feminine subgroups, the picture was more mixed. The Lo-SES girls in EG, for example, averaged better than their CG counterparts on the project tests and the verbal part of the CTBS, but not on the arithmetic subtests.

--The 1971 correlations between Stanford-Binet IQ scores and CTBS scores are relatively high for the CG boys (.52 to .75) and low for the EG boys: -.48 to .23, with one exception. The exception is Arithmetic Computation, for which a number of correlations run surprisingly high--in this instance, the correlation coefficient is .74. For the girls in EG and CG, the correlations between Stanford-Binet and CTBS on the whole resemble those of the CG boys in order of magnitude. (Table 23)

Table 23

CORRELATION COEFFICIENTS BETWEEN STANFORD-BINET SCORES FOR BOYS AND GIRLS AND CTBS SCORES - 1971

	Experimental Group		Comparison Group	
	Boys	Girls	Boys	Girls
Vocabulary	-.16	.57	.75	.58
Comprehension	.23	.58	.63	.66
Reading Total	-.12	.52	.74	.66
Computation	.74	.60	.66	.60
Concepts	-.01	.74	.53	.44
Applications	-.48	.61	.52	.02
Arithmetic Total	-.05	.72	.58	.51

Among the Hi-SES-Lo-IIQ's, who are mostly boys in both EG and CG, those in EG rank among the top four on the project test means, and at midpoint or below on all the CTBS subtests except Arithmetic Concepts. The corresponding subgroup in CG ranks 9 or above on the CTBS, but 15 and 17 on the Stanford-Binet and SAT.

When CTBS means in 1971 for children scoring 90 or above are compared with those for children scoring below 90 on the Stanford-Binet test, the EG girls and the CG girls and boys scoring 90 or above have CTBS means substantially higher than those of the children scoring below 90. However, the few EG boys who scored 90 or above have CTBS means far below the other groups and also below most of the means for the under-90's. The following figures compare the Stanford-Binet scores with the means on the Vocabulary subtest and the Reading Total of the CTBS.

1971 CTBS Mean Scores for Vocabulary Subtest and Reading Total

1971 S-B score:	EG			CG		
	N	Vocab.	R. Total	N	Vocab.	R. Total
90 or above-Boys	4	2.90	2.95	12	4.38	4.32
-Girls	7	4.57	4.37	10	4.57	4.83
Below 90 -Boys	7	3.19	2.91	11	2.59	2.73
-Girls	6	3.77	3.58	18	3.33	3.28

The Verbal Component

A frequent explanation for the familiar decline in scores on the Stanford-Binet Intelligence Scale, among children who have experienced a preschool enrichment program, is the increasing emphasis on verbal content and abstract reasoning in the successive forms of the test. Children in poverty, it is argued, are at a disadvantage with regard to these skills, as compared with children in more prosperous families.

Presumably this emphasis would affect both EG and CG. However, if earlier, less verbal, forms of the test rated the EG children above their "true" IQ level, it would be reasonable to expect that in later years their scores would decline more than those of CG. That this did, in fact, occur has already been reported.

In order to seek some light on the role of the verbal and abstract reasoning components of the Stanford-Binet, a modest item analysis was made, using the 1971 scores. Also, the raw scores of the Stanford-Binet Vocabulary subtest for 1969 and 1971 were analyzed in relation to the other measures for those years, with special attention to the verbal subtests of the CTBS and the verbal subtest of the SAT, which was the only part of SAT that was used in the project testing.

Stanford-Binet Vocabulary subtest

When the 1969 subgroup means of EG and CG for the raw scores on the Vocabulary subtest of the Stanford-Binet are compared, those of EG are higher than--or, in a few cases, equal to--those of CG, with one difference (Hi-SES-Lo-IIQ) reaching statistical significance. (Table 24)

Table 24

STANFORD-BINET VOCABULARY SUBTEST MEAN SCORES* FOR SUBGROUPS, 1969 and 1971

	1969		1971	
	Experimental Group	Comparison Group	Experimental Group	Comparison Group
Boys	7.8	7.4	9.6	9.6
Girls	7.2	6.6	9.5	8.7
Hi-SES	8.2	7.2	11.0	9.5
Lo-SES	6.9	6.5	8.6	8.5
Hi-IIQ	7.8	7.4	10.5	9.8
Lo-IIQ	7.2	6.1	8.8	7.9
Hi-SES				
Boys	8.3	7.6	10.9	9.6
Girls	8.2	6.9	11.2	9.4
Lo-SES				
Boys	7.3	7.1	8.3	9.5
Girls	6.7	6.0	8.7	7.7
Hi-SES-				
Hi-IIQ	8.2	7.6	11.3	9.9
Lo-IIQ	8.3	6.4	10.7	8.7
Lo-SES-				
Hi-IIQ	7.4	7.0	9.9	9.6
Lo-IIQ	6.6	5.8	7.7	7.1
Hi-IIQ				
Boys	7.8	7.8	10.2	10.3
Girls	7.8	7.0	10.7	9.4
Lo-IIQ				
Boys	7.8	6.6	9.3	8.3
Girls	6.4	5.8	8.	7.6
Total	7.5	7.0	9.5	9.1

* Raw scores

Two years later the picture shows less change than do most of the other 1971 comparisons between EG and CG. Most of the subgroup means favor EG, although four are about the same, and one definitely favors CG. The mean of the Hi-SES's in EG is significantly higher than that of its counterpart, and this is the only statistically significant difference between EG and CG in the project tests for 1971.

Typically, there is a high correlation between the raw scores in the Vocabulary subtest and the total score for the Stanford-Binet, and the present study is no exception. For all the children in EG and CG, the 1971 correlation coefficient is .80. Most of the subgroup correlations are about the same general size, ranging between .71 and .88, except for the Lo-SES's in CG (.67) and the EG girls (.96).

Correlation Coefficients between Stanford-Binet Scores and Vocabulary Subtest of Stanford-Binet - 1971

	EG	CG
Boys	.76	.77
Girls	.96	.76
Hi-SES	.79	.82
Lo-SES	.87	.67
Hi-IIQ	.82	.71
Lo-IIQ	.88	.81

In view of these rather high correlations, it is interesting that the 1969-1971 changes in subgroup means for the total Stanford-Binet run counter to changes in the raw scores for the Vocabulary subtest--at least for most of the EG subgroups. Most of the EG subgroups had lower Stanford-Binet means in 1971 than in 1969, while the CG subgroup means remained relatively stable. On the Vocabulary subtest, however, the

subgroups in both EG and CG had slightly higher raw scores in 1971 than in 1969; and (as noted above) for the most part the subgroups in EG outscored those in CG. Since the ages of the children in EG and CG are so similar, it seems unlikely that the advantage of EG in the vocabulary raw scores would evaporate under standardization.

In the verbal subtest of the SAT, also, and the verbal subtests of the CTBS, EG subgroup means tend to run slightly or substantially above those of CG, although only one of the differences reaches statistical significance. At the same time, the EG subgroups perform less well, relatively, on the verbal subtests of the CTBS than on those in the project tests.

It is interesting, in this connection, that the correlations between the Stanford-Binet vocabulary subtest and the verbal segments, of the CTBS are, on the whole, substantially lower than those between the Vocabulary subtest of the Stanford-Binet and the Arithmetic Computation subtest of the CTBS.

It would seem, then:

-- That EG subgroup means declined for the total Stanford-Binet but increased on the Vocabulary subtest.

-- That subgroup means of EG compared with those of CG more favorably on the verbal than on the nonverbal parts of the CTBS, and more favorably on the verbal parts of the Stanford-Binet than on the verbal parts of the CTBS.

-- That the Stanford-Binet means of the CG subgroups remained relatively stable between 1969 and 1971, while those of the EG subgroups declined.

These indications could be interpreted to indicate that the increasingly verbal content of the Stanford-Binet is not responsible for the drop in the scores of the EG children. Despite changes in the nature of the tests, significantly more children in CG than in EG gained during the two-year period, and a significantly larger proportion of EG than of CG lost during that period, while about the same proportions showed no change in test scores. One wonders whether changes in the nature of the tests would affect EG so much more than CG; and if they did, how EG would still fare somewhat better than CG on the various verbal subtests.

Even if accepted, this reasoning would not dispose of questions concerning the increasing abstract reasoning component of the Stanford-Binet. Nor would it prove that the EG children had not reached a ceiling or a temporary plateau in the kinds of capacities measured by the Stanford-Binet. On the other hand, the score profiles, combined with other evidence, do not appear to us to demonstrate that they had.

The modest item analysis indicated that EG's loss on the Stanford-Binet was not entirely due to the increasing verbal and abstract reasoning content of the test. A higher percentage of EG than CG children passed these items while the reverse situation held for the non-verbal items. The differences were more pronounced for the EG Hi-SES group; they did conspicuously better than their CG counterparts on the verbal and abstract reasoning items.

Group Tests and Individual Tests

The tendency of the EG boys to perform better on project tests than on school achievement tests, to a degree greater than that shown by the EG girls, and in contrast to the CG boys and girls, invites speculation about differences between the two types of tests. The school achievement tests are group tests, administered in the classroom, and requiring the child to write down the answers. The project tests, except for the SAT, are administered individually and mainly call for oral answers, and the tester typically makes a strong effort to achieve good rapport with the child and to encourage good performance.

Moreover, the CTBS is entirely of the multiple choice variety, with the child checking the answer he thinks is correct. The project tests (except for the SAT) tend to require a less passive response.

The hunch that differences in tests and test situation may play some part in the poorer performance of the EG boys on the school tests is supported by differences in the correlations between school measures and the various project tests. Those for the SAT run consistently higher than those for the Stanford-Binet on all verbal and most arithmetic segments of the CTBS, and also on grade level.

The consistently higher correlations shown by the SAT were somewhat puzzling, since it is so brief and was administered to small groups rather than to an individual child. Conceivably this resemblance to the CTBS may be an important part of the explanation. Whatever the reasons, both in 1969 and in 1971 the one brief subtest of the SAT for the most part showed substantially higher correlations with school measures than did the Stanford-Binet.

The higher correlation did not necessarily mean that the EG boys scored as low, relatively, on the SAT as on the CTBS. The Hi-SES and Lo-IIQ boys in EG, who on the whole compared unfavorably with their CG counterparts on the CTBS, had a substantially higher mean on the SAT. The other male subgroups in EG, for the most part, failed to outscore their CG counterparts on the SAT.

It seems possible that the similarity in the "groupness" helps to explain the consistently higher correlations between the SAT and the various school measures, as compared with those of the Stanford-Binet. It might or might not help to account for the relatively poorer performance of the EG boys on the school measures, as compared with the project tests, even in 1971 when their performance on the project tests had deteriorated substantially -- a possibility considered in the following section.

Under-achievement by EG boys?

A number of points already reported are consistent with the impression that the EG boys are under-achieving in their school performance. Among these are:

--They seem to perform better on the project tests than on the school achievement tests, as evidenced by comparisons with the corresponding CG subgroups and with norms on the tests involved.

--The 1971 means on the Stanford-Binet for the EG boys one year below grade level are barely below those of the EG boys at grade level, while the means of the other three sex subgroups are substantially lower for those one year below grade level than for those at grade level. Actually, only one of the EG boys who is

one year below grade level scored less than 88 on the 1971 Stanford-Binet. (His score was 75.) The other ranged between 88 and 95.

--The typically low correlations between project and school test scores for the EG boys would not necessarily support a belief that they are under-achieving. However, they do indicate some lack of regularity in the relations between school and project tests.

--The EG boys received a larger proportion of "poor" ratings in school behavior than did any of the other three sex subgroups. Half of them were rated poor, as compared with about one-fourth of the CG boys and smaller proportions of the girls in both EG and CG (approximately one-fifth in EG and one-ninth in CG).

--The 1971 mean for the Hi-SES boys in EG equalled or exceeded that of the Hi-SES boys in CG on all project tests, but on the CTBS the Hi-SES boys in EG scored substantially below those in CG, suggesting that their school performance was below their capacity.

--The Hi-SES-Lo-IIQ's in EG, all but one of whom are boys, scored above those in CG on all project tests in 1971, and below them on the CTBS.

Although the points just reviewed seem consistent with an impression that the EG boys are under-achieving at school, they do not preclude an impression that these boys are also under-achieving in the project tests. That the number of EG boys scoring 90 or above diminished from ten to five between 1969 and 1971 could reflect either under-achievement or a number of other factors. Available information does

not provide a basis for documenting impressions about reasons involved in the changing and contrasting subgroup score profiles, but they do furnish some fragmentary supports for further speculation.

Excluded Children

The children excluded from the program after 1966 provide an unpremeditated basis of comparison, since they resemble EG in having experienced the nursery school program and resemble CG in having had no special treatment after that. All except one are Hi-SES girls, and all except one of these are also Hi-IIQ. The boy, whom we would have preferred to retain in the program, is Lo-SES and Hi-IIQ--one of the brightest boys in EG and also one of the most deprived, economically and in other respects.

For purposes of comparison, it will be expedient to consider only the girls, who may be compared with the Hi-SES girls in EG and CG. As Table 25 indicates, their mean Stanford-Binet score was 100 or more in every year from 1965 through 1968, and was 99.6 in both 1969 and 1971. To a considerable extent their means resembled those of the Hi-SES girls in EG, but were higher, for the most part. However, their scores began declining after the end of the nursery school program, while those of their EG counterparts did not begin to decline until after the kindergarten year. Another difference is that their mean score was the same in 1971 as in 1969 while that of the Hi-SES girls in EG dropped very slightly, from 99.4 to 97.2. The changes are almost too small to merit notice, except that the decline in the scores of most subgroups was so consistent a pattern.

On school measures also their scores and ratings resembled those of the Hi-SES girls in EG, with all 1971 CTBS subtest means above the

Table 25

PROJECT TEST SCORES (1964-1971) AND SCHOOL MEASURES (1971) FOR EXCLUDED CHILDREN

Project Tests, 1964-1971

	Girls (n=5)	Boys (n=1)
Stanford-Binet		
1964	93.0	90
1965	106.6	84
1966	105.0	–
1967	102.2	86
1968	100.2	90
1969	99.6	76
1971	99.6	85
Stanford Achievement (raw score)		
1969	25.0	7
1971	26.0	6

School Measures, 1970-1971

	Girls (n=4)	Boys (n=1)
CTBS		
Vocabulary	4.1	1.7
Comprehension	5.3	1.6
Reading Total	4.6	1.6
Computation	4.4	2.2
Concepts	4.9	2.8
Applications	4.7	2.8
Arithmetic Total	4.5	2.4
Behavior Rating		
3	2	–
2	2	1
1	–	–
Grade Level	(n=5)	
At grade level	4	–
Below grade level	1	1

* Based on three point rating

4.0 mark. The EG Hi-SES girls scored above the excluded girls on the Vocabulary subtest and the Reading Total. However, on two of the arithmetic subtests (Concepts and Applications), the scores of the excluded girls exceeded those of the EG Hi-SES girls.

Like the Hi-SES girls in EG, in 1971, the excluded girls scored above the Hi-SES girls in CG on all project tests and subtests and totals of the CTBS.

Their high scores and ratings, as compared with both EG and CG, raise a question whether the Hi-SES girls in EG would have fared as well with only the nursery school program as with the three-year follow-up enrichment program. Our data do not permit a clear answer to this question. It may be speculated, however, that the additional three years of special treatment probably represented no disadvantage to the Hi-SES girls in EG, and that the other children may have benefitted by their presence in the school situation. A good deal of research evidence suggests that children who come from socioeconomically deprived homes tend to do better in schools that include children from more advantaged homes than in schools that include only the socio-economically deprived.*

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* St. John, op. cit.

"The more a child has seen and heard, the more he wants to see and hear."
Piaget, 1936

"You mean I'm to work with only thirty children? And to have them for a full day? Why that would be Heaven!"
Kindergarten teacher

Preliminary interviews

Before the program was under way, in June of 1964, a few interviews were held with second grade teachers in the District of Columbia public schools. The interviews were arranged with the help of the Assistant Superintendent for Elementary Education and the principals of the various schools, and the teachers interviewed obviously represented a rare degree of experience, competence, insight, and commitment. In this instance, the selectivity was all to the good, since the purpose of the interview was to inquire how the school problems of children like those in EG and CG manifest themselves at the second grade level. It was also heartening to find, within the public school system, teachers whose attitudes and reported practices resembled those of the model progressive school far more than they resembled current stereotypes of "the" public school teacher. All were located in their respective schools by choice and not by involuntary assignment.

Of the five teachers interviewed, all were teaching lowest-passing-level second graders, grouped in accordance with the current track system. Each teacher challenged the basis for

including some of these children in that group and took pride in moving many out of it. Each one also apparently felt free to use her own methods as she saw fit, and each emphasized the need for a teacher to devise ingenious ways of coping with the learning problems of her pupils. "You need to be cute in this work."

Much that they had to say about these learning problems resembled the current academic literature, and much may have stemmed from the literature. However, the many specifics and examples were persuasive. Moreover, many of the points they made re-emerged in later project experience and in discussions with the project teachers. Some of these will be included below, but three were made so strongly and repeatedly that they call for special mention here.

1. Expectation of failure, linked in a chicken-and-egg relationship with lack of persistence and unreadiness to try (a complex often merged and beclouded by the phrase "lack of motivation").

"They are fast to say 'I can't.' This is true wholesale." Then, sometimes, a teacher may tell them, "Look, we studied this before, you know how to do it." And "then they say, 'shucks, I do know how.'"

The expectation and fear of failure are sometimes interpreted as fear of losing face, and sometimes as a result of child-rearing patterns that reward passivity and punish for making mistakes--a point also emphasized by some test administrators, as noted earlier.

Both fear of failure and reluctance to embark on verbal explanations appear to be involved in a frequently reported

preference for arithmetic over social studies and English classes. According to the second grade teachers, "Most do better at arithmetic than at other studies. They seem to like arithmetic because they know they can do it..." "...They hate to miss an arithmetic class. But if they are asked to go to the board and explain how they did the problem, their hands come right down. They don't want to try it..." "...On the whole, they do better in arithmetic than in other subjects--until they are given a problem. If the problem is in writing, or is read to them only once, they have trouble understanding it. If it is made very clear orally, then they can do it all right."

2. Looking at assignments as jumbled wholes, and getting confused. "They take one over-all look and see a hodge-podge. If they took it in bits, they could recognize that they knew it, but they don't know how to do that."

"They hear the first sentence you say and then they don't listen any more."

3. Mis-classification by early tests.

"They reflect the child's shyness and lack of experience much more than his potential capacity." Then he gets labeled as dull, and the vicious cycle sets in--unless some ingenious and determined teacher breaks through it.

Project discussions

During the nursery school and kindergarten years, the research staff held frequent consultations and discussions with the project teachers about individual children and general problems. After EG was divided and paired with regular public school classes, such conferences became less frequent, and after

the second grade year they had to be discontinued. Accordingly, the points reported below represent mainly the opinions of the project teachers concerning some school problems of the children in EG, as they were observed from nursery school through the second grade year, with occasional corroboration from the preliminary interviews. Some of these problems are reported for many other children, but some appear to stem from the special school history of EG. They are given here, not as additions to, or divergences from, the current literature, but rather to indicate which familiar points their experience prompted them to emphasize and how these points were illustrated in their classrooms.

"They just don't know enough things"

Even teachers who have worked with children similar to EG and CG continue to be amazed at the poverty of their experience and the toll it takes from their school achievement. "Some of these children have never been beyond the block they live in." Of one child, whose timid mother offered no stimulation or activity at home and feared to allow him to play outside on the street, a teacher remarked, "He was like a child taken out of a dungeon."

In nursery school, the children loved the song about the ten little Indians and often asked for it. But when asked what they thought happened to the little Indians when the boat tipped over, they thought the little Indians probably "fell on the floor." What a boat was, and its relation to water, apparently was beyond their ken--an information gap that bears an interesting relation to some items in familiar tests for very little children.

"They have to be shown how to play with toys. They don't realize, for instance, that blocks are to build with. But after they are shown, they will build things."

"They don't know what a beach is, or a zoo, or a farm. These children will call a cow a dog. They never heard about a cow."

"They seem more destructive than middle-class children, but that may be because they just don't know about toys. When a teacher explains what to do with the toys and materials they mostly follow her suggestions. After that, most of them continue to use things appropriately."

One child greatly enjoyed using crayons but didn't seem to understand at first that they were supposed to be used on paper. "He would run the crayon right off the paper onto the table, until the idea of drawing a picture on a piece of paper was explained to him." Another kept rolling a toy truck up and down the wall, and was delighted when he learned that he could roll it on the floor.

Many of them were also unfamiliar with some of the foods served in the nursery school, such as celery and raw carrots, but later learned to like them.

They were obviously unfamiliar with books, and not prepared to listen to stories. At first the teachers merely showed them pictures in various books, and "made up things to say about them," tying the pictures in with things the children did know, "like the sand in our own playground." Gradually they became familiar with books, and began to like hearing stories or finding familiar pictures in the book.

In the preliminary interviews, one of the teachers reported that her pupils enjoyed hearing stories, but that it was necessary

to rewrite the text and explain the background before they could understand even the stories designed for second grade use. "Even though we keep reading about it, until you come up against it yourself you just can't believe what these children don't know!"

"The secret is to listen very hard"

Predictably, language problems ranked high on the list of impediments to school achievement. The teachers, like the literature, agree that reading ability is crucial to school achievement and that problems related to the spoken language interfere with the acquisition of reading skills. However, the teachers' opinions--again like those found in the literature--divide concerning the basis of those problems and ways of solving them.

Some see a language deficit. At first the middle-class nursery school teachers (all but one of whom were black) "couldn't understand what the children said, when they did talk." According to the preliminary interviews, "They don't hear much conversation at home"; "when they get to first grade some of them don't really talk in sentences," etc. Others hold that the children are fluent and articulate in "their own way of talking," but fall silent in a situation that requires standard English. One of the project teachers became interested in two very silent and timid little girls and invited them to her home a number of times. To her amazement, she discovered that when they felt at home outside of the school environment they chattered gaily and easily. A non-project teacher, observing that the children communicated fluently with their peers, decided that "partly it's fear of

pronouncing the words wrong and partly that they use words the teacher might not like." For example, in talking about body waste one child was speechless until the teacher said, "Say it as you would to a friend." Then he told her the baby was "peeing all over," and the other children cried out, "he means urinating." Someone, she concluded, had taught them not to say the "wrong" words but they didn't always know the "right" on

Nevertheless, she said that they don't talk much at home. Once she gave them an assignment to ask their mothers about the food the mothers were cooking. Only four children did it and the others said the mother wouldn't talk. One mother responded to the question by saying, "get out of the kitchen or I'll beat your tail." (The nursery school teachers prided themselves on persuading mothers to encourage and respond to their children's questions.)

Differences between the spoken language they know and the language they are trying to read, according to these teachers, make them "read the wrong sounds into familiar words," so that they "mismatch the written letter and the spoken sounds." Repeated frustration, they explain, builds into a block against reading and, since "reading is the key," against learning and against school. The best remedy, one of them suggests, is to encourage them to "put things into their own words" and "to listen to them very hard and show real interest in what they're saying."

"Reality factors"

The relation of physical deprivation to poor school achievement is so widely recognized--in word if not in deed--that it hardly calls for further verbal emphasis. Nevertheless, the

perennial disparity between words and deeds with regard to so-called "reality factors" forbids omission of them.

Most of the project teachers knew, and the others soon learned, that--as one of them put it--"You can't teach hungry children." Breakfast for those who needed it was soon added to the nursery school snacks and hot lunch, and some of the children quickly responded with increased interest and energy. A second grade teacher in the preliminary interviews told about a boy who always had his head down on his desk, was interested only in morning milk time, and was absent a great deal. She began bringing lunch for him, after which his interest in work increased. After she succeeded in getting him on the free lunch list he "never missed a day," and his work "improved a lot."

During nursery school and follow-up years, breakfast, snacks, and lunch were part of the project program. At the beginning of the kindergarten year, participation in the free lunch program was finally arranged, after a good deal of difficulty. Early in the year it was discovered that one of the EG families was really "out of money and without any food in the house." For a while the project staff dug into their own pockets to supply some staples. Presently it became clear that, because of absences or failure of the children to eat all of their bag lunches, some food was left untouched each day. Accordingly, whenever possible, the left-over food was delivered to the hungriest family. "The custodians were really quite horrified. They thought it should be thrown away."

Children in families eligible for the District of Columbia free lunch program were also eligible for a free breakfast, but

administration of the breakfast service was considerably less effective than that for the lunches. Milk was a constant, but during the three public school years the supply of cereal and orange juice was unreliable and it was necessary for the research staff to purchase a reserve supply of cereal so that the children who depended on the school breakfast would not be without food throughout the morning.

Lack of sleep is a frequently reported problem, and its prevalence was demonstrated by the long naps many of the EG children needed and wanted during the project years. The link between lack of clothing and absence was frequently commented on in the preliminary interviews and was a focus of continued effort by the project staff.

Health problems were a continuing concern to the teachers as well as to the research staff. As a project teacher put it, "There's no 'well baby clinic' for children over six. They only get medical care if they're sick."

Color and class

The public school teachers interviewed in 1964 and the nursery school teachers in 1966 were almost unanimous on one point: that whether a teacher is white or black does not significantly affect her ability to teach children like those in EG and CG. "If the teacher accepts the child, that's all that matters." "Children should know all types of people, it helps to prepare them for later life."

One of the nursery school teachers commented that class may be as much a problem as color. None of the others made the same

observation explicitly, but repeated observations of the nursery school impressed the research staff with its relevance. And another nursery school teacher re-enforced it with the comment that at first she was so unused to the lower-class children that she felt "lost and helpless and didn't know what to do with them."

However, the one white nursery school teacher thought that the children related to the other teachers differently than to her, and that the reason was her whiteness. Since she was also the least experienced of the teachers, the reasons for the difference she noted remain open to question.

"We don't teach them to think"

In the preliminary interviews with second grade teachers, a number of familiar generalizations were made about the school difficulties of low-income inner-city children: "They have a short attention span"; "They are easily distracted"; "They have not learned to generalize, or compare one thing with another"; "Their powers of observation are limited." These limitations were ascribed to lack of experience and lack of parental stimulation, rather than to innate incapacity--an explanation rejected by all the teachers interviewed.

Such generalizations were seldom offered by the project teachers, perhaps because discussions with them were differently focused. At the end of the project, the second grade project teachers concluded that the learning problems of EG were "no different from any other children's learning problems--just accentuated because so high a proportion of the group had additional problems."

One of the earlier project teachers, however, speaking about the public schools generally, discussed learning problems in terms of defects in the way children are taught rather than as defects in their cognitive skills. "The trouble with their learning is our teaching. We don't teach them to think." They are trained, she says, to believe that what is required of them in school is to give the right answers--not to understand or to puzzle problems through, or think about why an answer is right or wrong. "We don't help them learn how to learn." She sees the pattern of the school achievement tests repeated throughout the school experience: a passive receiving of right answers and learning to produce them on demand. The idea that solving problems could be interesting or that learning could be enjoyable she sees as equally foreign to teachers and to students. According to this view, the serious discipline problems that plague the schools are augmented by, and in turn augment, the failure to make learning alive and zestful rather than passive, dull, and rote.

She sees failure to engage the children in active learning as responsible for pervasive boredom, especially on the part of the brighter children. "Julian Nolan, for instance is a very bright boy--so bright that he could stay out of school several days at a time and still keep up with the class." He was "doing fine and then--he just lost interest." Soon he was missing more and more school days. In 1969, at the end of the third grade year, when he was being retained for a second year in the same grade, his Stanford-Binet was 104, and had been 100 or more every year since 1966.

By 1971, however, his Stanford-Binet score was 84, and he had failed to be promoted. One of the girls who had scored consistently well on the project tests was "just plain bored" and was "running the halls" instead of staying with her class and her lessons.

Nevertheless, this same teacher thinks--as do some others--that children today seem less motivated to learn than in former years. "First grade children always want to learn, and are fascinated by it. But as they get older they are less interested and less ready to work than before. They seem to be turned off."

It should be added that this teacher did make strenuous efforts to practice what she preached. The staff social worker (who had a background in education) said of her, "What impressed me...was her insistence on developing good learning habits, her tirelessness in going back and going over and over and over work habits, areas of learning, all kinds of things in their school experience..." Apparently the effects of such efforts, to the extent that they were successful, did not persist beyond the end of the program.

The habit of rote learning, whether school-induced or imported by the children, relates to the preference for arithmetic noted in the preliminary interviews with second grade teachers. The approach reported in those interviews was mentioned also by one of the project aides during the 1971 testing session.

"It was interesting to see the children do math at the board. They do not know tables at all and write down the whole table

that they need, then write in the string of answers rotely, then choose the correct answer from the table. The favorite tables to write on the board are the 2's, the 10's, and the 11's. None of the children seemed to have the concepts behind multiplication. So many of the children seemed to do the same thing that it must be related to the way that they are taught." *

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* A recent article describing a substitute teacher's experience in a third grade classroom brings out the same point.

"'I want some work,'(a student)' said. 'I'm tired of doin' nothin.'

"I pointed to the math problems on the board, but that wasn't what she had in mind. She had found a teacher's edition to the 3rd grade math book, and she wanted to do work in that book. She showed me the page she wanted to work on. It was full of math problems complete with answers. She wanted to copy the whole page."

"'Can I do this work?' she asked.

"'Sure,' I said.

"She returned to her seat and worked for a long time copying each problem. After she finished, she brought her paper to me. I took it and thanked her.

"'Is it right?' she asked. She wanted me to correct it. I scanned the paper, putting check marks on each of the problems. She had copied each problem correctly.

"'Put a grade on it,' she said.

"I wrote '100--Excellent' on the top of the page and handed it back to her. It made her very happy. She asked if she could do some more. I told her she could."

Ellis, Grover. "Notes of a Substitute Teacher," The Washington Post, pp. B1 & B4 (Sunday, March 19, 1972).

Home contacts

During the nursery school years, close contact was maintained with the families of EG, through home visits by the adult activities worker, the Director, and the head teacher, through the school visits of many parents, and through numerous telephone contacts. The kindergarten teacher visited each home at least once and had two conferences at school with a parent of each child. When necessary, transportation was provided to help the parent come to the school. In addition, the staff social worker maintained close contact with the homes and with the head teacher. Since the kindergarten teacher continued with the children through the first grade year, some degree of contact was maintained, and she was successful in scheduling school conferences for all but one of the EG parents.

When EG entered second grade, however, the situation was very different. The teachers were not accustomed to visiting the children's homes, nor to making strong efforts to bring the parents to school for conferences. Conferences were requested when they seemed necessary, but such requests were not always met, and the teachers had become accustomed to accept this situation as inevitable. Nevertheless, the project staff was able to get almost all the parents to the school for a conference with the teacher once during the year. However, the second grade teachers did not view the home life of their pupils as relevant to their teaching responsibilities.

The early efforts of the project staff, especially the social worker, to interest the "new" teachers in the home background and

problems of the children, and to discuss their school problems, met with rejection. Extra-curricular meetings were viewed as excessively burdensome additions to a heavy teaching schedule. What happened outside of the classroom was not seen as their responsibility.

Union regulations provided additional reason or excuse for rejecting extra-curricular involvement (even though the project offered remuneration for any extra time requested). There was some nervousness about continuing school-related activities after school hours. On the part of one teacher, there was also strong resentment at any intrusion of an outsider into her classroom.

The social worker persisted in her efforts to interest the teachers in the outside lives and problems of the children. Finally, toward the end of the school year, they began to listen and to understand what she was trying to tell them. Then they turned to her reproachfully and exclaimed, "Why didn't you tell us all this before?" From then on, communication was more frequent and more effective.

The most receptive of these teachers later spoke of the help she had received from such communications: "Any time any different behavior would show in a child, I could usually tell (the social worker) about it and she would be going right into the home and talk to the parents and find out what had happened here. Then...she would come back and we would discuss it. Then I could better understand the child--why he was behaving like this because thus and so is happening in the home. She was really quite helpful."

As the school year wore on, and the teachers became better acquainted with the EG children, some initial negative reactions changed to interest and, in some cases, affection. One of the most difficult boys became so attached to his second grade teacher that he reacted with grief and anger when she was temporarily absent from school. The two shy little girls who visited in the home of another teacher became closely attached to her. As the social worker put it, "I think once they were able to get through the shock and see these youngsters as human beings and even perhaps their families as human beings and not lump them all together as one thing, they became very effective. Because the truth of the matter was these were very good teachers as far as teaching is concerned. I think from this experience they probably gained a lot."

The degree of shock they experienced initially, however, was startling to a staff familiar with the inner city. "One of the things that came through to me very loud and clear was the shock and horror as we told (the teachers) about the backgrounds of some of the families. It shocked me, really. I was shocked by this because I felt how can you live in a big city where these problems are always being talked about and written about and not be aware of them--and yet this happens."

Although by the end of their project experience all the teachers involved in it were agreed on the value of contact between home and school, opinions differed about whether the teachers should be the ones to visit the homes. Those who taught during the first years did think so, and suited their

actions to this conviction. The "new" teachers, however, thought there was need for "a messenger" between school and home, in addition to school visits by parents.

To some extent, this view was dictated by time pressures. The heavy schedule of public school teachers is a keenly felt and much-discussed reality, and they thought that few would be able to add to it a program of home visiting. In addition, some doubted whether the parents would welcome home visits by teachers. "Sometimes a parent sort of resents the teacher finding out about their personal business. Maybe someone else who has a different view--an individual could come in and work with the parents and I think it is better. Because sometimes they won't let you in--I've done this...I've gone to homes. They just won't answer. I've taken children home but you never know whether you are going to get in or not. And some of them actually say that they prefer you not coming. 'Why didn't you tell me you were going to come?' But generally they don't have a telephone and you have no way of contacting them. You send a note with the child, the child might tear the note up or something, so you take them home. They almost tell you in so many words, nicely, you know, 'Well, you should have told me you were coming here--you just don't come to my house without letting me know.' But (the social worker) had this good rapport with the parents--she knew them, they trusted her, they believed in her, they knew that they could call her whenever there was a message from school. Especially when you had so many different teachers involved. They didn't know me, therefore, they had a better type of relationship with her."

Another added that many parents prefer school conferences to home visits, partly because they are not eager to have teachers "inspect" their homes, and partly because "there's so little privacy there."

Regardless of their views on teachers' visits to the homes, and some early skepticism about the social worker's role, by the end of the project all the teachers involved agreed that "a messenger" between home and school was desirable and probably indispensable. "When I think about it I'm not sure that this always has to be professional people--but people with a sense of feel towards disadvantaged groups who will go in and work through the schools, work with the family, know the family, have the kind of contact, be able to explain situations that exist to the youngster's individual teachers, work with them on a pretty concentrated level. I'm not talking here about Pupil Personnel Workers--these were professionally trained people who went out and came back and did this to a lesser degree. There were too few of them and frequently they handled several schools and this is not what I consider meaningful in terms of getting anything done. I'm thinking about a whole group of people within each school who would be messengers for the school and messengers for the family..."

Teacher attitudes and expectations

During first and second grade, EG was taught by teachers already in the designated schools, rather than--as before--by those selected especially for the project. The one exception was the head kindergarten teacher, who accompanied them and became one of the teaching team during first grade.

The teachers in the designated schools were given an option about teaching in the project or in regular classes. Apparently, however, they did not fully understand the nature of the project, and had never taught a whole class of children from such low-income homes, although a few such children were in their regular classes. It soon became clear that they had assumed that, because EG was a special group, the children would be brighter and more responsive than the mainly middle-class children they were accustomed to teaching--expectations by no means fulfilled. Looking back on the experience, the second grade teachers said they had expected the children to be [illegible] or above grade level. "We couldn't believe that after four years of special treatment they would be so far behind." Before the year ended, attitudes changed considerably, but in the early months the teachers experienced a phase of disillusionment that could hardly fail to affect the children.

In addition, one teacher elected to teach EG expressly because she had been teaching first grade for twenty-seven years and would have had to move to second grade if she did not join the project. Since she could not face such a change, she chose the project--and found herself faced with far more change. After some weeks, she was transferred out of the project. However, the initial period was difficult both for her and for the children; and the change of teachers early in a new year, in a new school, was unsettling both to the children and to the new teacher.

Antipathy to change was not specific to the twenty-seven-year veteran. Again and again throughout the course of the

project, we heard the complaint from a few teachers about their colleagues: "They don't want to change, they won't change, they're afraid of change"--whether change of teaching materials or of teaching methods. That resistance to change is human and common makes it no less a problem for innovative arrangements and approaches.

The attitudes and expectations of the teachers, inevitably, were conditioned by the way in which the project was introduced and explained. When the children entered kindergarten, in an unfamiliar school, briefing of Principal and teachers was left to the school authorities. Through a series of exigencies and communication failures, virtually no preliminary introduction and explanation was received. The advent of the project was announced as an administrative decree, without preparation or orientation. Accordingly, the project landed on the school doorstep as an academic foundling. For the early months, and to some extent throughout the year, it evoked from most of the school personnel the mixture of aloofness, suspicion, and resentment that is often the lot of the foundling. Here was a new group of children to be coped with and accommodated in limited space, a group that had received and was receiving special treatment and some degree of privilege. Such an intrusion was not welcome, and the status of tolerated alien was obvious to all concerned.

As the project social worker put it, "It wasn't only in kindergarten that we felt resistance on the part of the school staffs to this program. Outwardly, everyone seemed to want to have a project in their school--this, of course, is a feather-in-

the-cap sort of thing. But in actual practice, this became a business of referring to the children when they spoke to us as 'your children,' and generally the impression came through that this project was more of a nuisance than anything else. This was the general feeling that came across. I really don't see how teachers can operate in that kind of atmosphere to their fullest potential."

Later in the year, the social worker added, "Other teachers became more interested in what was happening with 'our' children and 'our' project. The staff became far more sympathetic than they were in the beginning when they believed that we were just coddling the children and giving them all kinds of special favors, and before the year was over the whole atmosphere was one of security and real concern for the children. In the process, of course, we did have our struggles."

One early struggle concerned the lunch room. "After a short while we were told that we would have to keep the children in the classroom for the lunch hour and this was not a good thing." Another concerned toileting facilities. Use of the teachers' facility, across the hall, was denied even after the central office had recommended that it be made available--on the grounds that teachers should not have to use the same bathroom as children. Accordingly, it was necessary to take the children to a distant room, down a long hall and down a flight of stairs.

The later changes of school were more carefully planned, and efforts were made to explain more clearly the nature of the

project. Nevertheless, either the explanations were not sufficiently clear, or they were not communicated clearly to the school personnel. For each new shift brought a new exposure to thinly veiled resistance and resentment on the part of the teaching staff generally. In each instance, attitudes modified somewhat by the end of the school year, but the initial stages were chilly and repetitive. The school principals, after the kindergarten year, were fully briefed and wished to be cooperative. But heavy schedules and multiple "fires to put out" hampered their efforts to smooth the path of the project. "The children were rejected, and they knew it--even though later on in the year things would be better."

"Pampered and spoiled"

Not only were the children in EG less advanced in their school work than the first and second grade teachers had expected, they were also more rambunctious than is typical of inner-city children from the most deprived families. The kindergarten teacher spoke in retrospect of her amazement on the first day they entered her classroom.

"The children came in that very first morning. We had prepared the room--the new co-teacher, the new teacher's aide, and I--laid out games and a choice selection of books, prepared the environment to appeal to a child, gotten everything ready and our minds nicely set, and were anxiously waiting for them. The door opened and they burst in with such a BANG! We really didn't know what to do and the funniest thing about it was that that whole day we really didn't know what it was about until three

o'clock. Then we sat down and said 'What came in and what went out!' We laughed because it was so funny that no one was in awe of us. It was just as if we had not been there at all. They came right in as if they knew exactly what do do. They went to the games, to the books, and in about five seconds they had everything in shambles. Books all over the place and everybody was after everybody else. There was fighting, biting, kicking, whining, crying, tantrums--the whole place was just confusion. All we could say was, 'Can you imagine three grown-ups with such little people, way down just about knee-high, not even knowing we were around!"

This firm, experienced teacher could afford to laugh at the spectacle and enjoy the children's freedom from first-day anxiety, confidently foreseeing the well-ordered, warm, adventurous place her kindergarten would soon become. Yet it was clear that two years in a "benign" and permissive nursery school had not produced a restrained or well-disciplined group of children.

That they were ready to accept a more structured and disciplined classroom was evident from their responses during the year and their dismay when they discovered that only half of EG would be in the head kindergarten teacher's class the following year. "It threw them into a panic. All the parents wanted their children to be in her class and all the children wanted to be with her."

Nevertheless, the level of discipline and interest maintained throughout the kindergarten year appeared to have evaporated by

the time EG entered second grade. As the staff social worker described the teachers' reactions, "They thought the roof was going to come off the school." And one of the second grade teachers signed, "The children were extremely hard to handle those first weeks."

The most frequent diagnosis offered by the teachers in first and second grade was that the children had been "spoiled" and "coddled," had been given an undue degree of freedom, and an amount of individual attention impossible to maintain in regular public school classes.

"They were over-protected and had too many things done for them--they weren't made to conform to school rules. They should have learned earlier that school can't cater to individual whims."

"You know, you can't always give them this freedom, all the special aides helping them, all this attention--and then, all of a sudden they are thrown into a classroom where there are thirty of them and just the teacher, or maybe a teacher with one aide--it was harder for them to adjust."

"They had a harder time getting along in school as a result of feeling special and expecting special attention."

At the same time, even while deploring the need for individual attention that had been built up, some of the same teachers perceived a real need for such attention.

"Because they had more problems, they really needed great attention, more so than the children who regularly go to our school."

"There were children like Vance. If you didn't give him this

attention--you could tell he wasn't getting it at home. So someone had to give it to him and he relied on the school to give it. All of these children, without the attention they got from the project people and the teachers, I just don't know how they would have made it because they had so many things against them."

"After getting to know a child and what his particular abilities and needs are, maybe you would have to have a lot of individualized instruction."

"If they just came to school and went home, and no one cared anything, no kind of relationship, I really don't see how they could make it."

"Perhaps children like that couldn't really get enough extra attention and care to counteract all those home problems."

That any substantial amount of individual attention is impossible under current teaching conditions in the public schools was unanimously agreed. The crowded schedules of the teachers and the need for lower teacher-child ratio were frequently pointed out and never disputed. "If you keep thirty children in one room then I would say you would almost need four teachers. And I might add, they would have to be 'non-union' in their thinking, because they are going to need to spend time not only planning for these youngsters but actually meeting with the parents, having conferences with them, more than just once a year. I know that this sounds unrealistic..."

As the first and second grade teachers became better acquainted with the children, and learned more about their families, one or two softened the earlier estimate of academic

deficiency. "I thought they had done very well compared to the home life they had and all the disadvantages they had been given and everything. I thought they were not that far behind the child who did not have all these disadvantages."

"If only..."

The two teachers most identified with the project expressed a number of regrets, heartily shared by the project staff. One concerned difficulties in obtaining school supplies and equipment, which dogged the project from kindergarten through second grade. One of the first grade teachers urged that the Bank Street Reader be used because "the children were sick of that same old Dick and Jane type." However, "We didn't get those books until almost January--that should have been taken care of over the summer. The same old thing." When the books finally arrived, "The children were so interested in what was going to happen in the story. They wanted to learn all the new words and do the whole story all in one day. You don't know where those children could have gone if they had had those books in September."

The major regret, shared by teachers and project staff, concerned the inadequate preplanning and orientation of school personnel before each of the three shifts in school, already noted. There may be some question whether adequate planning and arrangements for such a project could be fitted into the exigencies of a large public school system. Strenuous efforts were made, before the first and second grade years, to avoid the slippage in communication and planning that occurred between nursery school and kindergarten. Yet these efforts did not

suffice to avert the hostility and resentment evoked by the incursion of a group of children who were seen as both more privileged and less deserving than the familiar school population.

At the end of the first grade year, the project teachers felt a sense of satisfaction and accomplishment. The great regret was losing contact with the children. "I really wished that I could have worked with them another year. As far as instruction was concerned, they seemingly were just ready to really get going. And then to be cut off like that, to stop right there..."

The frustration of being interrupted at what seemed a take-off point was probably increased by hearing that the children had gone on to face a third breaking-in phase, another unknown school, where once again they were viewed as pampered intruders.

The second grade teachers did not express the same wish to continue with the children. They did, however, make it clear that they no longer had doubts about: (1) the desirability of parent-teacher conferences arranged very early in the school year; (2) the need for a social worker to be closely involved in such a project, to augment school-home communication and assist families with their problems; (3) the need to have provision for individualized instruction of children with special problems ("they need a one-to-one relationship"). They also deplored the inability of the project to keep the children in one school for the duration of the program ("the dislocation effects from three schools in as many years were disturbing factors for them").

At the end of their period with the project, some of the teachers were clearly relieved to return to classes that were socioeconomically mixed, with a preponderance of middle-class children. The one who had most experience with children from families below the "poverty line" was ready and eager to continue working with them. And a few who had less previous experience with such children decided that they would like to work with them more, and to solve some of the school problems now seen as lodged in both teachers and children. "It's been a learning and growing experience," one of them said, "and if I had a chance I would do it over again."

What the Parents Said

"Her hours of work are 6:00 p.m. to 12:00 p.m. 'I worked for one week during the day while we were getting settled...It's just too hard to get someone to look after your children when you work during the day. That week I worked, I was getting different relatives to come by to sit with the baby...The only thing is I get so tired because I work so hard here in the house during the day and then I am on the go every minute on the job.' The house and hall had clothing drying which she had probably washed during the day." Project field notes.

"We understand the middle-class but they don't understand us..." EG mother.

"Our families live from one crisis to another. This is really the only way I can think of them." Staff social worker.

"As always, Mrs. Blake asked several times if the project could not be started again. In her opinion, Boris was doing much better in everything when he was involved with the program." Staff aide.

Most of the discussions with parents were held with mothers, either because there was no father in the home, because he was away from home when the interview occurred, or because he left child-rearing affairs to the mother. However, a number of fathers were much concerned about their children's school progress and interested in discussing it with project staff.

In two homes the mother died during the program years; another mother, with a terminal illness, has been confined to a nursing home since 1968.

Although the children were the focus of staff contacts with parents, it is impossible to think or talk about them outside the context of the home situations that condition their lives.

Physical setting

The external appearance of the buildings in which EG families lived varied from disreputable to good. The internal condition of the homes was as varied as the following excerpts from project field notes suggest.

"The furniture is sparse and shabby and there had been no special effort to make the apartment attractive or to keep it clean. Mrs. Barrows was still in bed when I arrived, at a little after eleven in the morning and seven children--quite unkempt really--were playing around the apartment."

"Mrs. Daniel's apartment was very dirty, cold, bleak...A small child was asleep on the sofa, covered with a black, unclean coverlet, no sheets..."

That people who live in dirty and dilapidated neighborhoods often have dirty and dilapidated homes is hardly news. More noteworthy is the energy and success with which some EG mothers, within their own walls, manage to transcend the surrounding decay.

"Mrs. Rich's apartment was well organized, as usual. Despite her serious illness, she has been able to keep her home clean with everything in place--such an oasis in a dismal, filthy housing project."

"The basement apartment is dark and dingy, without light. Mrs. Sargent does her best to make the living area attractive and neat. The baby had been given a bath and was neatly dressed. An improvised bassinet made from a pasteboard box was lined with a clean sheet. The bedroom was orderly and clean. The other three children were in their bare feet with old ragged and soiled clothing."

"Mrs. Yancey's apartment is beautifully neat and clean, in the

midst of a rough neighborhood--windows broken, dusty play areas, etc."

"As usual, Mrs. Blake's apartment was spotless--even at that early morning hour. The breakfast dishes were washed and put away, all the beds made--nothing out of place..."

"The neighborhood is rundown and dirty. The stench when you walk into the apartment house is awful but somehow Mrs. Glenn has kept it out of her apartment...Even though she had just moved in, everything was neat, orderly, and clean...I never cease to marvel at the way she manages, no matter what the conditions under which she has to labor. She is still working at a restaurant...but thinks that she will have to stop work because she now has no one to look after the children since she moved."

"The Andrews' new home is spacious and comfortable, more 'middle-class' in atmosphere than any of the other experimental homes."

Of the six "good housekeeping" families just mentioned, two are classified as Hi-SES and the other four (all public assistance recipients) as Lo-SES. It is interesting that, so far, none of the EG children from these homes has been retained for a second year in the same grade. Although only one has outstanding scores on project and school tests, only one has relatively low marks.*

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* At the outset of the project, more families in CG than in EG were supported mainly by public assistance: 16, or 25%, as compared with four or 14%. At the end of the third grade year the balance tilted (nonsignificantly) in the other direction: 10 (36%) of the EG families were receiving public assistance, as compared with 18 (28%) of those in CG. During this period one EG and seven CG families had moved out of recipient status, but seven EG and nine CG families had become recipients.

Although the shift in balance was probably due to the relatively

Health Problems

That a group largely below the poverty line would be plagued with health problems would be assumed by anyone familiar with national statistics, and EG conforms with such an expectation. Among the ailments for which the adults sought medical help (often through the intervention of project staff) were hypertension, heart problems, asthma, diabetes, and cancer. Mental health problems were at least as prevalent, but less often treated.

As happens at any income level, health problems were exacerbated by emotional strains and external pressures, and the incidence of these in EG families was extremely high.

"Mrs. Sargent was really in sad shape. Her asthma was bad and she obviously was very much upset. She informed me that she knew her asthmatic condition was caused by 'nerves' but she was unable to calm down. Her oldest boy was in the District jail. He had stolen a car and was caught...Her next oldest boy was at the receiving home and I never could quite get it clear what he had done. The oldest girl keeps running away from her daddy's house...Mrs. Sargent and

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more deprived status of EG, in at least one instance the project social worker was instrumental in helping an EG family to attain recipient status. One mother had been trying to obtain public assistance, but was unable to cope with a series of administrative hurdles. "...It was simply because something had gotten fouled up in the Welfare Department. I was grateful then that I had worked there because I was able to figure out what could be done without too much more struggle and delay."

her present husband had been getting along fine until two months ago when she brought the next-to-the-oldest boy home and then they started fighting. She says Mr. Sargent is quite ill and suffers from hypertension as well as a leaking heart valve plus something else that she couldn't remember is wrong with his heart...She wasn't particularly happy about having her son with her, as things are crowded enough, but she kept repeating that they are all her children and you can't shut the door on 'your own kids.'"

Alcoholism must be viewed both as an individual health problem and as a family problem. At least six of the EG families suffered from the excessive drinking of one or both parents.

Family composition and climate

One-half of the EG children lived with their father in the home from the beginning of the project until 1969. (Table 26) A smaller proportion (17%) lived in homes classified as "no male present" during the five-year period. And one-third of the children experienced change in the presence or identity of a father or father substitute. Some problems relating to such classifications have been noted in a previous section of this report. Family composition did not seem to be related to SES level and there was no real difference in proportion of homes with "no male present" between high and low SES families.

Some of the homes in which two parents were present throughout the study period suffered from parental discord. On the other hand, some seemed to be stable and harmonious, although changes in home climate as well as family composition occurred during the

Table 26

STABILITY OF MALE PRESENCE IN EXPERIMENTAL GROUP HOMES, 1964 - 1969*

	N	Positive Stability %	Negative Stability %	Change %
Total	30	50	17	33
Hi-SES	12	59	8	33
Lo-SES	18	45	22	33

* Positive stability was defined as father present, 1964 - 1969, negative stability was defined as no male present during those years, and the change was computed by subtracting the sum of positive and negative from the total n.

project years. Some of the one-parent homes are not subject to this particular kind of strain, although some are, and a number of them experienced severe friction before the father left.

Obviously, the attitudes of mother and children toward an absent father greatly influence the effects on the children of his absence, and these vary greatly. Mrs. Sargent appears to maintain amicable relations with previously present fathers--perhaps more amicable than with the currently present one. According to a note during the fourth grade year, "Delores Sedgwick's father has recently shown more interest in his daughter and she seems to care for him. He gave Delores a record player and bicycle for Christmas and he has taken her for various outings. She also likes to spend time at his home with his wife and small children. Mrs. Sedgwick seemed pleased about this new development."

More frequent, however, are attitudes of hostility and recrimination. For example, two mothers described by the staff as outstandingly well organized and effectively concerned with their children speak of their absent husbands with intense bitterness. Mrs. Rich refers to hers as a "lazy, drunken, woman-crazy no-good." Mrs. Glenn's feelings are suggested in a field note that also points to the role of the extended family and the nature of some continued contacts with an absent father:

"Mrs. Glenn is still very upset about her mother's death...Her mother was a great moral support for her. In fact, she said very quietly and seriously that her mother had stopped her from killing Mr. G. several times and she wasn't so sure now that this wouldn't happen. He is not helping with the children and Mrs. G. is very angry that he spends his money on other women instead of his family. He did help her move but managed to get some of her money away from her, which naturally has infuriated her."

Some mothers perceive the father's absence as a blessed relief.

"Mrs. Nicholson said that Mr. N. was'quite ill," implying that the family was much better off without him."

"Mrs. Terman looks so much better than the last time I saw her. At that time she had just left the children's father and had been quite fearful and under quite a strain. Today she looked much calmer and was quite relaxed. There has been no trouble made by the father as she had feared, and she said the children seemed much calmer and happier away from him even though they did mention him once in a while."

That the children miss a father whose absence is welcomed by their mother is noted more than once: "Mrs. Owens seems very cheerful and quite content with her present situation. She said that she left her husband because he didn't want her going anywhere and since he was drinking a lot, he would fight with her and hurt her. He has said that she could return any time, and he stays in touch with her, but she didn't sound as though she wanted to go back. When I asked whether the children didn't miss him, she admitted that Priscilla and the twins miss him a great deal."

Leonard Jameson missed his father so severely that, as his first grade teacher put it, "his world fell apart":

"Before the family started disintegrating, he came to school clean and nicely dressed--none of the kind of thing we saw later on. He would respond to things, he was trying, he was alive...I never would have guessed that the following year we were going to see all those things that we did. Suddenly his world fell apart. He was a pathetic, sad little creature." Leonard suffered, not only from the separation, but also from the conflict that preceded it, and the "family disintegration" was clearly reflected in his performance at school and in the

project tests.

Garrett Judson was more fortunate, because his father--whose job situation had improved considerably--took Garrett and another son to live with him and his new wife and her small daughter. "Garrett has grown considerably taller and has gained confidence, but the most pleasing aspect of the change was his inescapably happy expression... They all seem to get along well together. Both parents work, and Garrett comes home from school each afternoon and takes charge of the apartment. The children are expected to do their homework before they go out to play and evidently this disciplined life is satisfactory for them."

Excessive drinking conditions the climate of many EG homes, both two-parent and one-parent, although the proportion of homes classified as "father present" throughout the study (83%) is larger than the proportion of "father absent" (17%) that are so affected. Regardless of family composition, the obviousness of excessive drinking and the toll taken by it, have increased during the project years.

"Mrs. Jameson opened the door and seemed to be in a 'rosy haze'... She was completely disoriented and could not remember what I had said to her the minute before."

"Mr. Hemingway didn't seem to learn from experience by watching his wife die of alcoholism. We have seen him through the years working only enough days a week to be able to go out and buy his liquor...I look at Kristine and her sister and I feel a sense of almost impending disaster for these girls..."

"I found Mrs. Small in an alcoholic haze. She recognized me and was somewhat clear in her thinking but she was almost totally unintelligible, slurring and garbling her words at a great rate... I left

telling her I would return in the morning. The next morning at ten-fifteen, two neighbors had been visiting but Mrs. Small was still in bed, dressed in yesterday's clothes. I was able to understand a few more words in each sentence and she didn't repeat herself quite so much, but the general state of affairs in the house was quite apparent. She must have been drinking pretty continuously for quite a while."

It must be recognized, of course, that the project staff had most contact with the most deprived and crisis-ridden families. The Andrews family, for example, described as "the most middle-class family in EG," had contact with the staff only during periodic interviews and when one or both parents came to participate in and help with project activities. Other families, also, are described chiefly in terms of their connection with and contributions to the project, and in periodic interviews, rather than in field notes referring to family crises and problems. Although these families comprise a distinct minority of EG, to ignore them would distort the picture of EG as a group.

"Mrs. Andrews was cheerful and busy and I had the good feeling that here was a comfortable and satisfactory home, not a disadvantaged one in any sense of the term."

It is only fair to follow this grim picture with a happier one, which also underlines some familiar concomitants. A year after the entry quoted above, when Cornelia Small was in fifth grade, the principal of her school reported that her behavior had "undergone a great change for the better." Several reasons were given for the improvement, including the fact that "her father is working steadily at the hospital and seems very happy with his job. As a result, he is not drinking and is paying much more attention to Cornelia. Cornelia

mentioned that her mother was still 'sick' and spent most of her time in bed."

The relation of a father's job to family composition and climate is illustrated in reverse by the "Hi-SES" Jameson family, which had appeared stable and harmonious in 1964. Presently the father lost his job and couldn't find another. Later the mother became the breadwinner, after a period in which she exclaimed to a staff member, "I really don't know how we're surviving." While she worked and he was unemployed, the father stayed at home and took care of the children, with apparent warmth and devotion. Still later, it was obvious that both parents were drinking heavily--whether as cause or as effect. Ultimately, the father left home--as has been mentioned--Leonard's world "fell apart."

Fear and violence

The fear and dislike of the "rough neighborhood" in which they live, expressed by some of the EG mothers, is realistic. Mrs. Coleman's unwillingness to allow her children to go out onto the street when they were very small was shared by others, and with reason. The uncle of one CG child was robbed and badly beaten, while passersby looked but gave no assistance. The father of the Scudder twins was knocked down and relieved of the large bag of groceries he was carrying home. The three-year-old sister of another EG child was raped and murdered. The two younger sisters of still another were sexually attacked. Such occurrences are by no means class-limited but their greater frequency in very low-income areas is well recognized and well documented.

Some of the EG families faced violence within their homes as well as outside, for parental quarrels occasionally reached the point of

physical attack. After one such episode, during the nursery school years, Mrs. Sargent explained to the adult activities worker, "I shot him but I didn't really mean to hit him." Her arms and legs are badly scarred from other episodes in which a gun did not figure. One particularly violent occasion brought the police and a brief jailing for the "husband." On another occasion, a policeman delivered to her a lecture about the harmful effects on her children of such behavior, and she told the adult activities worker that it was very impressive and did her "a lot of good."

Another father, in a fit of anger, chased his brother out of the apartment and seriously injured him with a knife, for which he was jailed. During a quarrel with his wife, he hurt her, but was deterred by advent of the police from inflicting serious injury.

The will to survive

The spirit that enables some of the mothers to wage a constant and winning battle against dirt and disorder also enables a few of them to maintain an unremitting struggle against untoward circumstances. Mrs. Davenport, the one Hi-SES mother, who by 1969 was receiving public assistance, reported with pride that Irene, the EG daughter, was on the school patrol, and seemed to like school and to enjoy bringing home good papers and reports.

"In this family, nearly everyone seems to be doing something. The oldest girl is making stuffed animals for children who are 'poor and will not be getting much for Christmas.' Most of them are involved in other church projects... "

"Even though there are many problems in this home, I always have the feeling that most of these children will have better lives as adults

than most of our other families. Mrs. Davenport is constantly encouraging them to reach out and take advantage of things available to them. She sets a great example for them inasmuch as she is constantly doing so herself. No matter how overwhelming the physical problems and other problems are, Mrs. Davenport keeps right on making plans and working on them... "

"Here is a situation that has been affected by alcohol and a lot else, but there were other factors working with them... Somehow or other, Mrs. Sargent is the kind of person who always seems able to pick herself up off the floor no matter how many times she is knocked down..."

"I'm hoping that Mrs. Sedgwick, when she gets over the shock of that awful murder (of the EG child's little sister) is going to be able to take advantage of her training program and go back to work. We have watched this woman, and every situation we have seen her in is better than the previous one. She has moved a long way and I think that there are going to be good things for her in the future. Any of these things that affect the parents individually of course is going to affect their youngsters... "

A few of the most effective mothers are, or have been, on public assistance, usually the Aid to Families of Dependent Children program. Perhaps the most impressive of these is Mrs. Rich, who in 1971 knew herself to be in the terminal phase of cancer. In speaking of her, the staff social worker said, "We have agreed many times that she should be running a class where she could teach other mothers how to manage. If ever I saw a family who lived on public assistance who is able to make it, it is this family. I have seen many on P.A. I still marvel at how she has done it. Of course, the terrible tragedy

is the cancer and what's going to happen now. Even in all this dire illness, she has gone about making arrangements for her children and I guess they will be all right in the long run."

"Unlike Mrs. Sargent, Mrs. Morgan concerned all of us a great deal, because she is such a completely dependent person. When her--well, for want of a better word, cohabitor--left her I didn't know what was going to happen to her without a tremendous amount of support from the outside. And though things were really very grim at one time in her family, they have begun to take a brighter look since she met and married Mr. Wilson. It's true that recent events when they were driven out of their home have not been happy ones and it is true that they are heavily indebted for many reasons. But it seems to me that she has something going for her that is going to be a good thing for her children."

One family (with a father first present, then absent for almost two years, then present again) was described by the staff social worker as a "turned-around success story." "Here was a woman with a man long enough to have six children. Mr. Yancy supported the family very well for a long period of time and then suddenly that was the end of it. Very tragic circumstances led to Mrs. Yancy's hospitalization as a result of that terrible auto accident. There was some question whether she would walk again and that has been part of the success story that I like to think about. The fact that she is now getting training as clerk-typist (with Opportunities Industrial Center) and she will be able to work at her real level instead of as a day cleaner--I think that this is a terrific thing for her. She has a good group of youngsters in her home and I believe she will soon be able to get along without financial assistance."

The families just referred to are, of course, exceptional. They are highlighted here less because of numbers than because they represent an often-ignored fraction of the poor. At least as many have given up the struggle, some during the course of the project.

"It seemed to me that Mrs. Scudder was gradually losing what little control she had had over the family and her home... She appears to realize that life is too complicated for her to be able to cope very effectively. And I believe that she is not making the same effort that she made two or three years ago."

In repeated contacts, project staff members have had an impression (undocumented and perhaps undocumentable) that the parents who seem unusually bright were the ones who seemed most frustrated and vulnerable to deprivation and stress. Similarly, some of the children who reached the highest IQ levels in project testing have been the ones to show the greatest IQ losses and the most negative behavior in school.

It is possible that initial psychological problems of the brightest parents were responsible for their being sunk in poverty despite their intelligence. It is also possible that, because they were unusually intelligent, they have reacted with unusual depression and ultimate apathy to repeated frustrations and defeats.

The project and the parents

Positive comments about the project, made to project staff by project parents, may well be suspected of "courtesy bias," and it is reasonable to make some discount for this. The same suspicion may suggest giving extra weight to negative comments. It is reassuring that parents often made both kinds, and that some which the project staff interpreted as positive or negative were clearly not so interpreted

by the parents who made them.

Among the latter was the clear desire of some EG mothers to keep in touch with members of the project staff. For example, "Mrs. Glenn asked me to please keep in touch with her by phone and to drop in to see her often." Or a note concerning Mrs. Sargent: "When I was going out the door, she asked me to please try to get back to see her soon. 'I feel so much better since I have talked to you. I really need someone to talk to who understands and will listen.' This happens quite often with the mothers who are really anxious about their children--they don't seem to have anyone to communicate with them."

Such comments obviously relate to the mothers' attitudes about their own gains from contact with the program. Some of these gains were tangible: help with food, with clothing, with heat, with health care and clinic visits, with intractable landlords, evictions, and other exigencies. Apparently some were psychological, and perhaps these were most succinctly summed up by the mother who said to the staff social worker, "You really care." In commenting on this, the social worker said, "So all right, maybe everything didn't get straightened out but I think she knew, somehow, that there were people around who did care even if they couldn't do everything for her and it gave her something to go on... Maybe that's what it really boiled down to in all our relationships with the parents."

That some of the parents felt they themselves had benefitted by the project is evident in their appreciation of help with tangible problems, the eagerness of some to maintain contact with project staff, and the expressed need for "a listener." A different kind of plus was implied by many but expressed by few. One of these was Mrs. Glenn:

"She said that when she would tell her friends Judith was at Howard University or going to a special school, she too would feel important for having been chosen to take part in such a project."

The project and the children

When, after the fourth grade year, they talked about the role of the project in their children's lives, the parents (usually the mothers) made a clear distinction between effects relating to school work and those relating to the children's attitudes and behavior. For the most part, their estimate of the effects on school achievement, as presented to project staff, were definitely positive. Even mothers whose children were doing poorly at school seemed to think that their enriched school experience had given them "a real head start" for school work. This belief was conveyed, not only in direct statements, but also in frequent and repeated regrets that the program had been discontinued, in statements that, because of the program, the EG child was doing better than his siblings, and in anxious inquiries whether there wasn't a similar program to which a younger brother or sister could be admitted.

"The mothers seem to agree that their children gained in the school work area during the project experience, and Mrs. Glenn indicated that Judith is ahead of her class in some things."

"Mrs. Woodburn thinks that the project gave Vance a real head start in his school work, something the two younger children didn't have." She also said, however, that Vance is doing barely adequate work, and tells her he has no homework when he really does. (He has not been retained for a second year, so far, but his CTBS scores are below what might be expected from his project test performance.)

"Mrs. Rich thinks that Virginia learned to do good school work as a result of the five years; she also believed that Virginia learned to work on her own, independently, and she saw this as a good thing."

In contrast with virtual unanimity concerning the program's helpful effect on school performance, opinions divided concerning the amount of individual attention the children received throughout the five years of the program. Some thought it set up unrealistic expectations that could not be fulfilled in a regular school situation, or even--according to a few--in the home. Such opinions were often explicitly related to belief that the children were "spoiled," "petted," insufficiently disciplined, at least during the nursery school years--an opinion shared with some teachers, and expressed by more mothers than deplored what they view as excessive individual attention.

Concern about lack of discipline was expressed chiefly in connection with the nursery school program, but its effects were not assumed to end at the beginning of kindergarten. Later comments by the parents tended to confirm the observation of the adult activities worker, made after the children had entered kindergarten, "Some of the parents were concerned at what seemed to them lack of discipline in the school, and remained concerned about it." With some encouragement, she indicated that she herself didn't wholly approve of the permissiveness that prevailed in the nursery school, and thought that some of the more experienced nursery school teachers, and perhaps even the director, shared her view. Despite carefully qualified statements, it seemed clear that some of the teaching staff--like most of the parents--thought the nursery school approach was definitely over-permissive, and that this was particularly unfortunate because of the strong contrast with the child-rearing practices of the EG families.

Since comments about discipline were made to staff members who had not been associated with the project during the nursery school years, they may have been less contaminated by courtest bias than those that applied to the subsequent project years. However, the subsequent years were spent within the public school system, and the approach was in fact far less permissive than that of the nursery school, partly because of the setting and partly because of the teachers' orientation.

Statements about the amount of individual attention the children received were not, like those about discipline, focused mainly on the nursery school years, but applied to the whole of the program. The parents who commented directly about the individual attention received by the children during the program divided about equally between outright approval and outright disapproval, with a few balancing between the pro's and con's. Reasons for approval included belief that "very little children need all the attention you can give them" and the feeling that the children had been given a head start with their school work, and--in one instance only--the antidote it offered to the usual lot of low-income Negroes. Among reasons for disapproval the main ones were the disturbing contrast between the attention received in the project classes and in "regular" public school, and the contrast between the project situation and the home situation.

"Mrs. Nicholson felt that there was a certain amount of spoiling going on (in the nursery school) but that it was probably good for the children. Yet she said that it made a real problem for her because Greta expected that same amount of attention at home and no one at home could provide that amount. She evidently believes that Greta was slow to adjust to the difference between home and project."

"Both Mr. and Mrs. Andrews are very grateful to the project, particularly for the individual attention given to Donald (i.e., sent

to reading class at upper grade level) and for the exceptional teachers he had. She could find nothing in the project experience to criticize except that it couldn't continue, since she feels that Donald is really missing the challenge of the project."

"Mrs. Baron just smiled and said, 'no,' when I asked whether she thought that the extra attention during Bertha's two years at the nursery school had made things harder for her."

"Mr. Judson said he thought there had been a serious disadvantage in the program. He believes that small classes and tutoring help children scholastically, but that Garrett became too dependent on the individualized instruction and as a result was unable to gain as much as he should from a regular classroom situation."

"Mrs. Jameson has definite opinions about the advantages and disadvantages. She said that Leonard didn't speak out in class, didn't relate to the teacher or other children, and that she blamed the project for this because there were always so many teachers, both in the nursery school and afterwards, to give him attention and help. She said that he must learn that he can't expect help from the teacher in the same way now, that he can't even expect any help from her. She believes that he learned a lot during the years of the project, that he has a great deal of information in his head and that this benefit compensates for the problems that resulted from the over-protective environment of the project. She said that she would send Leonard's little sister to a similar project were it available; thus she thinks that the advantages outweighed the disadvantages."

"Mrs. Blake thinks that the project did a great deal for Boris and she couldn't think of any problems resulting from it or ways she would have liked to see it changed. She did not feel that the children

were 'spoiled' at the nursery school because they were so young then that they needed all the attention anyone could give them." (Boris at this time, although promoted each year, was doing very unsatisfactory work at school, which his mother blames on the present school situation.)

"Mrs. Glenn said that the children were given a lot of special attention which helped them feel important. In fact, she told me that she thought the entire project was one of the best things that ever happened to Negroes because it had given them a sense of being special that usually happens only for Negroes or whites with lots of money."

"Mrs. Scudder believes that the children may have been given too much attention at Howard University, 'spoiling them so they thought they could get the same attention at home.' But she thinks the project helped them do better school work and she wished all the school teachers would work as hard and be as interested in the children as were the twins' teachers in those years."

"Mrs. Sargent believes that the twins had a difficult time in school this year because they missed the extra attention from project people. She isn't sure it will be any better next year, but part of the trouble, as she sees it, is that their present school is such a poor one."

"Mrs. Cowan believes that a good deal of Randy's problem during the third grade was his dislike of his teacher and his feeling of loss resulting from the ending of the project."

A few parents thought that the relatively sheltered project situation had diminished the children's "independence," and their ability to "hold their own" and "stand up for themselves" in the rougher environment of their home neighborhoods. These occasional comments were a little surprising in view of the kindergarten teacher's description

of their earlier behavior.

"Mrs. Baron, like a few of the other mothers, says that bertha has trouble defending herself and complains that the children pick on her on the way to and from school."

"Mrs. Nicholson thought that Greta played well with the project children, where even the roughest ones 'knew something else to do besides fight.' But the neighborhood children fight a great deal and this is one of the reasons she wants to move."

"Regular" public schools

The comments just quoted demonstrate that the parents ascribed some adverse effects of the project to its discontinuance and the unpreparedness of the children for a less sheltered school situation. Many of them, during the later project years, did not think their children were in "regular" public school--and to a considerable extent, this view was correct, even though the classes were held in "regular" public school buildings and the children were taught by "regular" public school teachers.

It is possible that the dissatisfaction of many EG parents with the schools their children entered after the second grade year was intensified by contrast with their perceptions of the project. Some of them were appalled by the large, overcrowded classes in certain schools, by the lack of school supplies, and most of all by what they described as the indifference of the teachers.

According to a note in November of 1969, "Mrs. Blake is obviously disgusted with Boris's current school situation. He sits in an 'auditorium' area with six classes divided by partitions. Mrs. Blake complains that the teachers can't teach because they have no blackboards;

and that Boris says it is so noisy he can't hear himself speak--he gets confused by the teacher and the class next to him." A later entry, after the close of the third grade year, notes that "Mrs. Blake visited the school a number of times during the year and finally was successful in getting Boris transferred from the crowded and confusing auditorium situation into a regular classroom. But even that change did not satisfy her since she thinks that the teachers at his present school do not care whether or not the children really learn. She compared them with the project teachers and told me she wasn't surprised that the children weren't learning much at this school. She believes that the majority of teachers just don't care what happens to children."

"Delores Sedgwick has had good reports from school this year (1970-1971), although her mother says that she doesn't like her teacher. Since she didn't like her teacher last year either, Mrs. Sedgwick believes that she was somewhat spoiled by having such good teachers during the project years."

"Mrs. Nolan said the only disadvantage she saw in the project was that Julian might have felt something good was going on in it that wasn't available to him now in the 'public school.'"

"Mrs. Rich said she could readily understand that a teacher with forty or forty-five children could not do as effective a job as a teacher in the kinds of situations arranged by the project, and she kept repeating her wish that the project could have continued longer."

The parents of four children (three girls and a boy) thought the project had been a great asset to their school work, but that the later lack of challenge left them bored with their present school: ahead of the others in their class and not receiving specially advanced work,

such as had been given to them in first and second grade. Such a problem, unfortunately, is rare in EG, for the children are more likely to be behind than advanced in their work. Three of the four are doing very well in school, despite boredom, but one of the girls was reported by her sister to be "out running the halls all day." Her mother says that her school work is good, despite her boredom, and she has been promoted each year. However, her school marks are not impressive, and her Stanford-Binet score dropped from the high nineties during the project years to 82 and 84 in 1969 and 1971.

A more optimistic report was given by Mrs. Andrews, who said at the end of the third grade year that Donald was doing well but was not as far above grade level as he was at the end of the second grade. "There is evidence that Donald's present teacher is unable to keep him sufficiently challenged. Although the class isn't unusually large, she doesn't seem to have the time to give him the extra work (reports, etc.) that kept him busy and happy in second grade."

Although a number of parents complained of teacher indifference, few mentioned outright unkindness on the part of "regular" public school teachers. The most poignant of these involved Virginia Rich, whose fourth grade teacher made several cutting remarks about Virginia's weight problem and her clothes, finally remarking that she would be glad when Virginia "got her fat self out of my classroom"-- a feeling heartily shared by Virginia, who blossomed onto the honor roll in fifth grade, and urged her mother to be sure to tell the project people about it. (Virginia, classified as Lo-SES-Hi-IQ, received excellent marks on both project and school tests, but between the third grade and fifth grade years her Stanford-Binet dropped from 109 to 92.)

Parents and school

Their response to the initial invitation to participate in the program, their reiterated wishes for its continuance, and their comments about the importance of education, left no doubt that the EG parents wanted their children to do well in school and believed that education was a necessary prerequisite to "doing well" in later years. Some of them, however, failed to recognize the extent to which their own attitudes and behavior could promote or impede their children's school achievement; or, if they did recognize it, failed to act upon it. The efforts of teachers and project staff to make clear the parent's role in a child's education did not suffice to change the assumption of some EG parents that education was entirely the province of schools and teachers, and entirely beyond the area of parental responsibility. This missing link between parental behavior and parental aspirations for their children is familiar in studies of the attitudes of low-income parents toward their children's education.* And the efforts of teachers and project staff to make clear the parent's role in a child's education did not succeed in forging the link for many of them.

It was the impression of the staff that at least some EG mothers took a more active interest in the EG child's school experience than they had done for older siblings, and were less hesitant about going to the school and talking to the teachers than they might have been without the program. This impression was not systematically documented, nor was information about parental school involvement on the part of CG parents reliable enough to permit adequate comparison. It was

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* Bloom, Davis and Hess, 1965.

impressive, however, that Mrs. Blake waged an ultimately successful battle to have Boris transferred from the "six-ring circus" in the auditorium to a class in a separate room, with no competing classes. The effort was quite an achievement for this Lo-SES mother, since we know that she had exhibited little interest in the school experiences of her older children.

Frequent absences from school of very young children are as much the product of their parents attitudes and behavior as of their own; and even among older children, school absences and parental attitudes are closely related. Except in the case of illness, this rather obvious generalization was abundantly illustrated in the EG families. Even after the children entered the third grade year, the relation between school absences and parental decisions was apparent. As has been reported in an earlier section, absence was more frequent among EG than among CG children.

Some mothers of frequently absent children did try to get them to school. Mrs. Blake, for example, worried about Boris's truancy and asked the project staff for advice about it. On the other hand, Mrs. Nolan showed no concern about the fact that Julian was as likely as not to skip school.

When it came time for the final round of testing, at the end of the fourth grade year, Leonard Jameson was not in school, so "we went to the home to get him...Leonard was dressed and was 'thinking about going to school'...He informed me that he usually gets to school by noon and some days, when he feels like it, he just stays home. None of the other children were in school. The principal told me that they see very little of Leonard and his sister. Leonard wanted us to take him home after the test session but I deposited him with his teacher--

much to her surprise and his chagrin!...Mrs. Jameson had assured me that 'things were going beautifully.' "

During this same test round, "Julian Nolan was not in school--as usual. We had gotten in touch with his grandmother, who said she would send someone to Julian's home to tell his mother we were coming. When I arrived, Mrs. Nolan, per routine, was lying on a couch, but Julian was ready. The other children were home too."

A few of the parents are more directly involved in school absences. For example, "Mrs. Owens admitted that Priscilla gets angry with her for not waking her early in the morning. Apparently this makes her miss the school bus and be absent." And Mrs. Morgan when asked about Renee missing a great deal of school, explained that Renee continued to help her with the younger children.

A few children missed school from time to time because they lacked proper clothing, especially in winter. During the project years, steps were taken to eliminate this cause of absence. But after the second grade, even though clothing could be obtained through the school principal or counsellor, parents did not always know of this resource, or at least did not always use it.

What the Children Said and Did

"One thing that was most interesting was to see the great variety in a group of children who were originally chosen for the same characteristics."
Project test administrator

Perhaps there are no typical children. In any event, there seem to be none in EG or CG. The various subgroupings bring together children who, on a few specific and defined variables, resemble each other more than they resemble the members of the other subgroups. Yet on a host of other variables (defined and undefined) the subgroups and sub-subgroups are highly heterogeneous.

In reporting the test score means of the various subgroups, it is difficult if not impossible to retain a sense of the unique individuality of each child's make-up, situation, and responses. Yet to ignore the individual variations would be to risk forgetting that, basically, we are dealing with real live children rather than with a set of data. The only solution appears to be to report in terms of subgroup regularities, but to remember (and occasionally state) that reporting means and norms, even for sub-subgroups, is a kind of shorthand method for describing what is elusive, if not indescribable.

The following thumbnail sketches, of a child classified as "Hi-SES-Hi-IIQ-F" and of one classified as "Lo-SES-Lo-IIQ-M," may serve merely to suggest the many shared traits and conditions that cluster in a unique configuration for each child in any sample.

Gordon Terman: Lo-SES-Lo-IIQ-M

	1964	1965	1966	1967	1968	1969	1971
IQ scores:	77	102	122	112	114	108	95

During the exit interview, at the end of the nursery school program, the teachers and program director were asked which child they would most regret losing. The one most often mentioned was Gordon Terman. He was "so needful, so naughty, so loving, and so responsive" -- once an adult managed to breach his barriers of anger and misery and self-defense. "Gordon is the top person in the school, as far as the staff is concerned."

One of the teachers attributed Gordon's difficult behavior to the stresses of a home with a fearful, dependent mother and a harsh and rejecting substitute father. Others, however, thought his chief problem was the mother's conspicuous preference for Gordon's older brother. "In her eyes, David can do no wrong." Two staff members at the mental health clinic, where Gordon was seen once or twice, also saw the sibling problem as Gordon's "real trouble." During the nursery school years, Mrs. Terman told the adult activities worker that Gordon proudly brought home the pictures he made at school, and loved to "show off his work"; but she had to "hide it all away where his brother wouldn't get at it."

Mrs. Terman realized that the three children who lived with her were upset by the chronic bickering and often acute strife between her and her common-law husband. She realized, also, that they missed and grieved for her three other children, who had been placed in Junior Village. However, her "husband" would not have them in the apartment because, aside from lack of space, they were too "mannish" and would make trouble.

Gordon was puzzled by the "soft ways" of the nursery school, and once asked a teacher why she didn't "take a strap to the kids when they're bad, like my daddy does."

Since Gordon was one of the two or three children who had unusual difficultly in settling down at nap time, he was usually taken into a separate room by the head teacher, for quiet play and conversation and gradual relaxing into sleep. One day as he sat on his cot, he took out an imaginary wallet and explored its contents. "Let's see," he murmured, "here's ten dollars. Now I have to give something to The Man for the rent, and I got to get some food for the kids, and put some away for David's shoes, and maybe a movie." Sleep came very slowly that day.

After Gordon had been classified as probably a "slow learner" in the initial test round, subsequent testers described him as "a very bright boy who is very comfortable during the testing situation and quite cooperative throughout" with "excellent muscle coordination, swift in movement" and "test scores that place him in the high average intelligence range."

Nursery school teachers referred to him as having very great need for attention, responding to praise, getting much involved and working very hard, having a "real flair for words," showing "sometimes a very high level of persistence, sometimes a very low level"; and also as having "underdeveloped super-ego and inner control." They commented also that "even at times of frustration, Gordon can be reasoned with" "...an active boy...a leader."

In kindergarten, the head teacher commented that "we are all pleased with Gordon's improvement...he gave us a hard time at first...He has

probably the best language facility of all the children, but is weak in number sense and hand muscles..."; and she added that "Mrs. Terman must find time to show Gordon that she loves him and wishes him well..."

Throughout all the project years, notes about Gordon make frequent reference to his great need for attention and his warm response "in a one-to-one relationship." His mother reported that he was "excited about school and eager to get there every morning"; and when asked what he seemed to like best about the last project school, she responded with the name of his second grade teacher. However, even this much-beloved teacher reported difficulty in persuading Gordon to do the written work that was obviously well within his grasp.

After the project ended, Mrs. Terman said that Gordon kept his thoughts to himself, but clearly missed it a great deal. He once met "his" cab driver on the street, and "talked about it for days." The main theme of his report card during the third grade year emerged in such comments as: "he can do much better work. Very stubborn--refused to complete assignments..." "His attitude must change in order to complete a successful school year..."

Gordon's attitude did not change. He refused to finish his work, told his mother he had no homework when he did, received a poor behavior rating, and a final third grade notation: "Doesn't try to do his work. Retaining him for another year will certainly reenforce his learning habits."

His marks during the second year in third grade gave little support to that certainty, although he was promoted to fourth grade at the end of it.

The difference between Gordon's initial IQ score (77) and his highest score (122) was larger than the maximum gain of any other child in pre-school. Like most of the EG children, he showed a loss of IQ scores during the post-kindergarten years, and especially after the end of the project in 1969. Yet even at the end of the fourth grade year, his score of 95 was above the EG average. His school marks that year were low, both relatively and absolutely--including his grades on classroom behavior.

His teachers and the project staff agree that Gordon is a very bright boy who could do good school work, if his will to do it could be mobilized. Perhaps more visits to the mental health clinic might have helped, but regular visits would have required a great deal of time and effort on Mrs. Terman's part.

By this time, Mrs. Terman was facing increased marital conflict and home responsibilities (seven children at home) and she was unable to arrange clinic visits for Gordon despite her genuine concern for his well-being.

Priscilla Owens: Hi-SES-Hi-IIQ-F

	1964	1965	1966	1967	1968	1969	1971
IQ scores:	104	103	110	100	104	104	99

During the kindergarten year, the project staff began referring to Priscilla as the "little old grandmother." She was so steady, so dependable, so serious--unlike many of her classmates.

The "little old grandmother" was also by way of being a miniature matriarch, described by the nursery school teachers as occasionally "bossy" with the other children. She "literally took charge of Andrew

Barrows who happens to be her cousin." His nickname was "Man," and Priscilla would say, "Man, tell them your name is Andrew Barrows; tell them where you live; put on your hat, Man, and get on the bus"--speaking "with a rather heavy voice."

Despite reports that she had a tendency to "show off" and be "bossy" -- especially with Andrew--Priscilla was capable of warm and supportive relationships. She and Andrew liked each other, played with each other, and at the end of the day he would gallantly help her on with her coat. When Rick Conner cried, during the early nursery school days, Priscilla " 'read' to him for about twenty minutes--that is she showed him pictures in a book and told him about them." Later, when she was in third grade, and the oldest of six, she spent "a lot of time at home helping the younger children with their school work."

At the end of the kindergarten year, the test administrator described Priscilla as "a very mature child, who uses extremely precise speech...quiet and apparently secure overall, although lacking in spontaneity...tried very hard to do her best work at all times, sustaining excellent attention and concentration...and attempting to solve problems in a systematic manner. All scores would place her in the average to high average intelligence range."

Halfway through the third grade year, Priscilla's mother said she had made a good adjustment to her new school. She was at the top of her class and had been chosen to visit the White House--an adventure that pleased and excited her, including "eating grapes right off the vine." She received top marks for behavior and attitude, as well as for school performance.

The nursery school notes for the project's second year describe Priscilla as "able to give sustained attention--but not when home situations are difficult." Hints of home dificulties were absent from early descriptions of Priscilla's parents, which included such phrases as: "clearly upwardly mobile," "strongly impresned with the need for education as a means toward upward mobility," "delighted with the prospect of Priscilla's inclusion in the program," "among the most helpful and cooperative parents in the group." Mr. Owens, for example, stayed at home to take care of the other children so that his wife could help with the trip on the school bus, to see Santa Claus at a large department store. As they were leaving the store, Priscilla announced, "I asked Santa to bring me a guitar for Christmas." Mrs. Owens said, "Isn't it strange that most children want dolls and things, and all she keeps asking for is a guitar!"

Mr. Owens suffered a period of unemployment, due to bad weather that prevented outdoor work, and during this time his wife took a job while he looked after the children. Later she reported with pride that he now had two jobs, one with the Police Department. Soon he received special police training, and from then on had no further employment problems. Still later he took a course in auto mechanics and his job situation improved further.

Other problems became acute, however, and in 1971 (during the fourth grade year) Mrs. Owens left her husband, taking the children with her. Presently they were living with Mrs. Barrows, who had also separated from her husband--two adults and eleven children in a cramped and disorderly apartment. Mrs. Owens said she left her husband because he didn't want her going anywhere and, since he was

drinking a lot, he would fight with her and hurt her. He said that she could return any time, and he stayed in touch with her, but she showed no interest in a reunion. Both she and Mrs. Barrows were now receiving public assistance. Andrew and Priscilla were once more in the same class at school.

Priscilla missed her father very much. She said she liked school, and continued to do adequate school work, although the teacher said she was by no means working up to her ability. Her school attendance suffered, both because her mother failed to waken her in time (which made her extremely angry) and because she was kept at home to help with the younger children, which Priscilla apparently accepted with more equanimity.

At the end of the fourth grade, the report card noted that Priscilla had "slipped in her work and general attitude," but was "a pleasure to have in class--lovely girl--pretty smile." Under "Social Habits--Self Control" the notation was: "overweight--no self-control in eating." Most of the school marks for the second half of the year were lower than during the first half. And, although a fifth grade placement was specified for the following year, the promotion was qualified by the statement: "Should repeat."

Although, on the whole, the EG girls classified as Hi-SES-Hi-IIQ had more stable IQ scores than the comparable sub-subgroups, the "little old grandmother's" IQ scores throughout the study period showed the most stability of all, from year to year. Nevertheless, her 1971 score was five points below her 1969 score. In fact, this final test year, two years after the end of the program, was the only one in which she scored below 100.

The research aide who was best acquainted with EG children was shocked at the difference in Priscilla, when she had occasion to visit the fourth grade classroom in the school attended by the Owens and Barrows children. "It was like a whole personality change. It was the first time I ever saw Priscilla look sullen--the first time I ever saw her sitting in class without any interest. It was the first time she ever failed to give me that sweet, wonderful smile. She was like a different child. She said, 'Yes, I remember you.' And she just sat there as if she was saying, 'Try and get to me.' "

Post-project reactions

Members of the project staff had a great deal of contact with the EG children during the project years, through home and school visits, in connection with testing sessions, and through the service of the research aide as school aide during the first grade year. Much was learned about their attitudes and behavior, from observations and individual conversations, as well as through interviews with parents and teachers. Much that the adults said about them could be checked against such observations and conversation. The account of what they said and did is drawn from this kind of information, rather than from systematic interviews in which the same questions were put to each child.

Despite striking differences in the experiences and responses of individual EG children during the program and the follow-up period, certain themes--with multiple variations--run through all of them. All the children, for example, experienced and reacted to the program; all of them experienced and reacted to its termination and their subsequent entry into regular school classes.

For some, the transition appeared relatively easy. A few parents said they thought that the project had helped their children to get along in the new setting. And, as has been reported, many thought it had given them a head start with their school work--although the 1971 school records give little indication that the majority of the EC children maintained an academic advantage over the comparison group.

At the same time, for some of the children, loss of the program was clearly traumatic. They missed the other children in the project, they missed the drivers, with their fatherly mixture of firmness and warmth. They missed the daily transportation to and from school. They missed the teachers who ultimately, if not at the outset, became committed to their welfare and school achievement. They missed the sense of being "special," and of being recognized as unique individuals, participating in a special program. And, as has been noted, some parents thought their children were at a disadvantage in coping with peers who "don't know how to do anything but fight."

The element most frequently mentioned by the children was transportation, whether for itself or as a symbol of other elements. During the third grade year, Mrs. Glenn commented that "Judith cried because the cab doesn't come any more. Her teacher says she wants a lot of attention...Judith talks a lot about the cab and doesn't want to go to school...She asks, 'Where is Mr. Morgan (the cab driver)? She also misses the project children..." Kristine Hemingway's father, at about the same time, remarked that "Kristine wishes she was back in the project and riding with 'Fat Daddy,' who is Mr. Bolby, the cab driver."

About one-third of the parents, during this year, volunteered similar reports of mingled protest and grief, on the part of the children, that things were not as they used to be.

It is clear that by no means all of the children suffered a traumatic transition from the program to regular school classes. Some who really missed the project nevertheless appeared to adjust rather quickly. An indirect and somewhat ambiguous clue to the proportions who made a reasonably smooth transition is provided by the report of the staff social worker, based on repeated contacts with the EG mothers. The clue is ambiguous because not all the mothers gave an opinion on this point, and some may not have known how the children really felt about it.

By the social worker's estimate, in November of the year following the termination of the project, almost half of the mothers said that their EG children liked school, and a slightly smaller number said they definitely disliked school. Both groups included some who were doing well academically and some who were doing poor work. Those who definitely disliked school were about evenly divided between boys and girls, but the girls slightly outnumbered the boys among those whose mothers said they liked school.

For some, the problems of transition persisted. Even at the end of the fourth grade year (1971), according to the report of an interview with his mother, Boris Blake was "constantly saying he wants to go to school with the cab children, and talks about the University people. He complains that his teacher puts work on the board, tells the class to do it without explaining anything, and then leaves the room for long periods of time. One day he didn't even try to do the board

work. When the teacher asked him why, he told her that he didn't know anything about the work on the board and wanted her to explain it to him. The teacher said that if he wouldn't do the work he did not belong in the classroom, so he left. He went to the office and told the principal what happened and that, when he went to school before, the teachers had stayed in the room and taught the children."

That some protest was reflected in the poorer behavior ratings of the EG boys, as compared with those in CG, seems probable, although it cannot be documented. Randy Cowan became so difficult that the school several times threatened to expel him, and was deterred only by the pleadings and promises of his mother. Near the end of the fourth grade year, "the school threatened to expel Randy again last week, but Mrs. Cowan talked them into giving him another chance." The reprieve did little to improve his school work, and later his mother exclaimed in despair, "how can he learn anything when he spends all his time in the principal's office!"

Andrew Barrows was less fortunate than Randy, according to the notes of the staff aide who escorted the children to and from the testing session, also near the end of the fourth grade year: "When I took Andrew back to his classroom, he didn't enter it. He told me he had to make a telephone call, and went into another room. As I took Priscilla Owens into the same classroom, their teacher told me Andrew was not allowed to come back into it."

Testing sessions

Apparently a good many of the children in EG and in CG viewed the testing sessions as part of their "special status." True, one test session escort reported, after the final round, that "the children

thought the test questions were corny, and also the tester." Nevertheless, they obviously looked forward to the ride, the contact with other project children, and the book they usually received before leaving. According to various field notes:

"When I was doing the telephoning in the early stages of the testing, many mothers told me that the children were disappointed because they had not been to the University yet. 'Mary thought you were coming last week. She is looking for you every day.' "

"Irene Davenport was glad to see me and asked if we were going to take her to school again. Nearly all the children I spoke with asked the same question."

"Nearly all the children in our cab loads wanted to know how soon they would be 'picked up' again. Many of them wanted to bring their friends to share in their 'good time.' "

"Many of the children we went to get at the schools must have told their classmates about the sessions. Quite a few times when I would return a child to the class, the other children would start asking as soon as we got into the room, 'Did you get your book?' The child would hold the book up to show them, and grin. Their faces showed a great deal of pride and pleasure at having an unusual 'adventure.' "

Individual attention

The project teachers, as has been reported, were impressed by the hunger of the EG children for individual attention, and some EG parents deplored the tendency of the project to foster expectations of it that would not be satisfied either at school or at home. Members of the

research team also were struck by expressions of a need they assumed to exist in all children, but to be especially strong in these.

The research aide noted what seemed to be an insatiable appetite for physical contact with adults. "So many of EG...needed to touch the adults--actually, some needed to practically throw themselves on you. It wasn't necessary for them to have you speak to them--you could be talking to another adult or child even--just so they could hang on to you or your dress or coat. This included even some of the rougher children--Randy, Norma, Harvey, etc. These children would more or less dart up to you, grab your hand or arm, or throw their arms around you, then dash off to do something else."

This need may or may not relate to another observation: "So many of them have their house key hung around their necks, meaning that they take care of themselves after school and usually are responsible for younger siblings."

In a number of instances, a positive response to individual attention was reflected in improved school work; and occasionally the vehicle for attention was personal cleanliness. The grooming of the children varied as much as the housekeeping of their mothers. On the whole, they were remarkably well groomed and well dressed, reflecting successful efforts of maternal pride against considerable odds. A visitor to the nursery school, viewing the group from the observation booth, remarked, "You'd never guess by looking at those children that they came from homes in poverty." Some wore shabby clothes that were clearly hand-me-downs but nevertheless were spotless or at least reasonably clean.

A very few, however, were dirty enough to arouse unconcealed distaste in classmates and even in a few public school teachers. One of these

children was Gwen Miller, whose school work responded dramatically to the sartorial efforts of the research aide who doubled as teacher's aide during the first grade year. "I kept a wardrobe of clothing for Gwen at the school. I would take her into the teachers' lounge as soon as she arrived and bathe her, dress her in clean clothes, and the kindergarten teacher would do her hair. The children had been complaining that she smelled and was dirty, and would tease her and didn't want to sit next to her in the cab or classroom. She was being kept back in the kindergarten class when we started cleaning her up. All the adults went out of their way to tell her how nice she looked. This began to pay off. She began to pay attention in class, to try to do the work and take part in the games instead of just sleeping or fighting as she had been doing. We put her own things on her before we sent her home, because we knew from experience that we would never see the clothes again. Around Christmas time she was doing so well that they decided she could be put in with the slow group of the first grade. She continued to try to do her work--as long as we could keep her and Norma Scudder apart."

Another child from whom personal cleanliness was linked with personal attention was Randy Cowan. According to the research aide, "In second grade, Randy was not brushing his teeth. I had a private talk with him about this. The next morning he took me aside to show me that he had brushed them. This kept up for several days. Then I wasn't at school for a few days--I've forgotten why. When I came back, his teeth again were not clean. Randy came over to me and said, 'If I'd known you were going to be here today, I'd have brushed my teeth this morning." To me, this points up how desperate these children are for personal attention.

Under-achievement

That a number of EG children, in addition to Gordon and Priscilla, appear to be under-achieving in their school work has already been reported. Available information does not permit comparison with the CG children in this respect, since much less is known about them. It may be assumed that a great many children in inner-city schools are under-achieving, to judge by the literature and by anecdotal accounts from teachers and parents.

Lacking any solid comparison, there is no basis for estimating how much, if at all, under-achievement among EG children is directly attributable to termination of the project. Certainly not all of it, for some of it was evident during first and second grade, when the program was being continued, but was subject to problems (already described) that are common to many school situations. That under-achievement problems showed a marked increase after the program ended may be related to the changed school situation for EG, but a causal relation cannot be documented.

A number of the EG parents reported that the children's teachers said they were doing all right at school, but could do much better--an opinion amply documented by the school report cards. Such comments were made about a few children who were receiving good school grades, and a number of others who were barely keeping up with their classes. Teachers and parents also reported that some who were being retained for a second year in the same class were fully capable of doing grade level work if they would "only, only try."

Although the impression of especially frequent under-achievement among EG children cannot be fully documented, bringing together a few examples, some of which have been scattered throughout the report, will illustrate its basis:

Donald Andrews was doing very well in his school work but, according to his mother, was not "really doing his best," because he no longer received special assignments that challenged him and "kept him on his toes." He was getting bored with school, and was no longer as much ahead of his class as formally.

Virginia Rich was also doing work that satisfied her teacher, but missed the challenge of special assignments and was becoming dangerously bored.

Julian Noble, on the other hand, was so "turned off" by his present school that his mother said it was hard to persuade him to go there every morning. "He doesn't like it and won't work." T extent of her efforts to promote regular attendance is questionable, but the results of nonattendance were obvious. This very bright boy was retained for a second year in third grade. According to a project note written near the end of the third grade year, "Julia seems to have given up--it's a cheerful resignation but rather complete."

Comments and Conclusions of the Research Team

Introduction

We undertook this study because we sincerely believed that a traditional middle-class early school program, with good teachers, adequate materials and, to the extent possible, warmth in interpersonal relations, could, in some way, compensate for the cultural deprivation of ghetto children. The findings show that, on the average, we were wrong. Although some of the children clearly received some benefit, we regretfully conclude that the answer to the initial project question is "No": a traditional nursery school program would not give these children what they need in order to enjoy a satisfactory and satisfying school experience.

The temptation to argue with the results of this study is great. We could begin by arguing with our own experimental methodology, since the numbers in our groups were small and assignment was non-random. But the researcher who belittles his own methods does so only when he doesn't like his results; therefore, his objectivity is suspect and he does not deserve much of an audience.

A second argument would contend that the program as administered in the schools departed in important ways from our model of an ideal early school program. But this argument loses strength when we remember that we never intended to run a laboratory experiment under rigid control; what we conceived was a demonstration that could

subsequently be implemented on a larger scale. And it is perfectly obvious that large scale implementation would involve at least as much slippage, inefficiency and uncooperativeness as we experienced.

The argument that seems to have most validity concerns the criterion measures used in this study. Since our objectives had to do with success in school and with the inculcation of existing educational values, we adopted criteria which reflected the way decisions are made in schools, emphasizing the cognitive academic values of the dominant society. Only in the crudest way did we deal with the childrens' social development and with the emergence of attitudes, values and skills in the interpersonal human relations sphere. It would be sophistry to say at this point that, because we did not measure these affective factors, we can claim success in them. Rather, we admit that we do not know; the little evidence we have is only slightly encouraging.

The fact is that, within the limits of what is feasible in a school day, we were unable to compensate for the disadvantage and the deprivation that the children brought with them. It was clear from the outset of the nursery school program that hungry children are unlikely to be responsive to cognitive enrichment, that children who lack shoes or coats are not likely to attend school regularly, that those who need sleep are not likely to be alert and responsive to new stimuli.

When one considers the physical deprivation in which some of these children live, it seems outrageous to expect the schools to open for them the gateway to the joys of learning. For these children were hungry, not only for food, but also for love, for respect, for human kindness, for models, for stimulation and experience. We thought we could provide some of these desiderata, but the deficit was too great.

In spite of our discouragement, we believe that the project has yielded some clues pointing to ingredients needed for more effective programs and ingredients needed for effective program evaluation. It is unlikely that a study such as this could add novel insights or principles to the field of education. It is possible, however, that this kind of effort can add to or subtract from the persuasiveness of one or another among the many insights and principles already under debate.

We think that, in addition, the project strongly documents some research needs seldom questioned in theory and seldom applied with sufficient zeal.

Some notes for future experiments

Discipline and permissiveness. The follow-up research team concurs with many of the comments made by teachers, parents, and initial research staff, concerning the program during nursery school and the three subsequent years.

The nursery school setting was undoubtedly "warm, benign, and pleasant." The children received individual encouragement and a good deal of cognitive stimulation and straight information that they might not have obtained so early (if at all) without the program. Some children with special problems received much needed attention, and drank it up thirstily.

On the other hand, the approach may have been somewhat "over-permissive," even for middle-class children. We suspect that the EG parents were right in being concerned about the sharp contrast between home and nursery school with regard to permissiveness. Somewhat firmer

structure and discipline, without sacrifice of individual attention, might have served them better.

We do not imply that school and home climate and patterns need to be identical. On the contrary, we agree with Catherine Chilman* that complete congruence is not necessary. Bilingualism offers a suggestive analogy. At one time it was thought that if children learned two languages before they had mastered one, they might be intellectually slowed down or even become stutterers. Later it was conluded that very young children are quite capable of perceiving that there are two sets of rules for two different languages. It seems likely that they are equally capable of learning that there may be two sets of rules for two different settings. Obviously they realized that the language of home and street was not the language expected in the schoolroom.

At the same time, we think the history of this project shows that there are limits to the degree of discrepancy that children can absorb without dislocation. In the present instance, we suspect that the disparity was very great.

The kindergarten situation seemed a more appropriate blend of firmness and warmth--those two ingredients that reappear consistently as leading essentials in successful child-rearing. The head teacher was experienced in working with inner-city children, and did not encounter the problems that some of the other teachers had to work through. (1) Her approach was clearly more understandable and acceptable to the EG parents. (2) The children experienced both firmness and individual

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* Chilman, 1971.

attention. (3) Although many of them continued to have problems, it seemed to us that these could not be attributed to the program.

The attempt to achieve a reasonable balance of firmness and warmth, avoiding both harshness at one end of the continuum and overprotection at the other, continued in the first and second grade.

Concerning parent involvement. Our data yield little evidence of a relationship between a child's nursery school performance and the extent to which his parents became involved in the nursery school activities. On the other hand, a number of projects have reported that more systematic and cognitively oriented parent involvement does appear to contribute to the children's school achievement at various levels.

We accept what we view as substantial evidence showing (1) the value of involving parents in promoting their children's school achievement; (2) the lack in very poor families, including poor black families, of what Strodtbeck* has called "the hidden curriculum of the middle-class home"--that is, the unceasing stimulation of learning activities and curiosity, and the consistent rewarding of efforts at exploration and discovery.

What is less clear is the other side of the coin: the assumption, that unless inner-city parents can be induced to install the hidden curriculum in their homes, the children cannot achieve well at school; that if parents cannot be involved in and stimulated by an intervention program, the child cannot be helped to achieve his maximum potential. This seems to doom a great many children; and a good many from the inner-city have made it without such parental involvement. This is not to question the positive value of parental involvement, but rather to

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* Strodtbeck, op. cit.

struggle with the negative implications of its absence.

It seems likely that the problems of parent involvement (and related problems of values) will be solved, not by cognitive missionaries, but rather by a sensible working out of what began as a rather hysterical application of the "client participation" doctrine in the poverty programs of the sixties. In a few places, inner-city parents, or rural parents, have learned a good deal about educational needs and possibilities--in at least one instance, through observing the operations of middle-class white parents on an integrated committee directing a preschool project. One group demanded, and finally won from the local Board of Education, a continuation program so that their children should not lose the benefits gained in preschool. Another group, having achieved genuine autonomy in a situation intended to provide merely token observance, floundered for a while. Ultimately, they decided that they needed expert consultation, obtained it, and used it effectively.

On the whole, experience with "community control" so far cannot be described as a glowing success. Often the requirement of parent participation in the Parent-Child Centers, for example, is met in word rather than in deed. Sometimes too much control is yielded too soon to inexperienced but headstrong groups. Yet it may well be that the development of sound and genuine participation in the planning and conducting of educational programs (rather than setting up post hoc committees to carry out plans already formulated) is the most promising road to the kind of parent involvement that contributes to children's school achievement.

The plan for the EG nursery school was to form a partnership with parents, or rather a conspiracy to achieve for their children better opportunities than their parents had received. As noted earlier, the plan was never fully realized. Yet it seems possible that other programs in other places will work out approaches, built on more solid principles, that go far beyond the attempt at mutual respect and cooperation envisaged in the early sixties.

The public school system. Many accounts of our inner-city public schools have been written. There have been many exposes of the miserable physical conditions, dearth of supplies, disaffection and disinterest on the part of the teachers, wild unruliness on the part of the pupils, and a good deal of rigidity on the part of administrators and teaching staff. The multiplying numbers of descriptions and exposes almost make one hesitate to add to them. Yet anyone who has really been involved from day to day, who has seen and heard the process of public elementary school education, feels impelled to bear witness.

Perhaps one excuse for yielding to this imperative is the fact that the picture is mixed. Whatever is wrong with our public schools is wrong in spite of heroic efforts on the part of a few unusual administrators and teachers, who were convinced that (1) the children can learn; (2) they must be stimulated to think; (3) new materials and methods are not panaceas; (4) other new materials and methods are not necessarily terrifying.

The notes also offer evidences of efforts by teachers to help individual children.

Since such teachers exist, it would be unfair and inaccurate to

overlook them. It would also be inaccurate to overlook the fact that they are rare. It is ironic that efforts to "professionalize" teaching should in fact tend to de-professionalize it--if professionalism involves emphasis on background, skills, concern for quality of work, and solid commitment to one's profession. There was (and still is) urgent need to win true professional status for teachers, and to support this status with competence on the one hand and adequate salaries on the other hand. But in the effort to win appropriate recognition and compensation for teachers, focus has somehow shifted to the point where some teachers either fear or object to talking with a child for one moment after the closing bell.

The heavy time schedule of the teachers has been referred to (What the Teachers Said). It was difficult to persuade some of the public school teachers to confer with members of the research team, even though monetary compensation and a meeting place outside the school grounds were offered.

Project notes include comments about unusual custodians. "I have observed that in schools where you see the custodial staff busy, the appearance of the school shows it. Also, in quite a few schools, I have noticed when these men take an interest in the children--speaking to them when they are in the hall, asking how they are making out, getting them to pick up things they drop or throw, etc., the children respond."

On the administrative level, the picture was also mixed, with shadows predominating over rays of light. The project could not have been conducted without the active interest, energy, and imagination of a few key school officials. They devised solutions to organizational

problems, worked out arrangements for space, smoothed out tangles, and were unfailingly available for consultation about logistics and also about findings.

Yet it was necessary for the generous and enterprising few to pick up the pieces of the project when it suffered from broken promises, broken appointments, and a wall of bland indifference that seemed impossible to breach. Considering the problems of school officials during the late sixties, reluctance to become entangled with one small project rich in nuisance value should have caused no surprise. Yet the forms in which this reluctance was expressed did cause surprise to the point of disbelief on the part of the research team. Time and again we found ourselves echoing the words of the EC parents: "They don't really care."

General observations on experimental programs

Hypotheses on score decline. The decline in mean IQ scores for both EG and CG (but especially for EG) is a familiar but by no means invariable finding. The majority of preschool enrichment programs have encountered it. The relatively rare exceptions are grasped as support by those whose theories, experience, and/or inclinations argue against accepting the familiar finding as inevitable. The more frequent outcome serves a similar purpose for those on the other side of the fence--and, in strictly quantitative terms, serves them more substantially.

A number of explanations have been offered for the typical decline in the IQ scores of children from very poor homes as they move from the lower to the higher school grades. The most frequently heard hypotheses include the following:

--Change in the nature of the tests as children grow older, as described by Cronbach,* among others;

--"Innate incapacity" of the children, as argued by Jensen;**

--The inadequacies of our present public schools***

Teachers' low expectations concerning pupil performance****
Insufficient training and commitment, and overburdened schedules of the teachers
Deficiencies in plant, supplies, building maintenance and staff resources;

--Discontinuity between the home environment and the schools

Adverse home conditions, including family disorganization, poverty, and paucity of intellectual stimulation
Adverse community influences and models.

It cannot, of course, be assumed that these explanations would be mutually exclusive, or that only one would be involved. Effects are more likely than not to proceed from multiple causes, which are more likely than not to interact with one another.

Without attempting to review the supporting data reported in the preceding sections, the conclusions we draw concerning the various explanations are summarized below.

Change in the nature of the tests. The argument here is that, as the years advance, the tests include a larger proportion of verbal and abstract-reasoning items and a smaller proportion of nonverbal items; and that inner-city children, because of limited opportunities for stimulating experience, are weaker on the type of item that becomes increasingly predominant.

For firm evidence on this point, it would be necessary to show whether, as the years advance, the children perform better on non-verbal than on verbal and abstract-reasoning items. Such a comparison

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* Cronbach, op. cit.
** Jensen, op. cit.
*** Clark, 1970.
**** Clark, 1965; Rosenthal and Jacobson, op. cit.

is extremely difficult, since the number of non-verbal and non-abstract items does in fact diminish.

A modest item analysis, already reported, offers neither clear support nor clear challenge to the nature-of-tests argument. The item analysis confirmed already available evidence that EG scored slightly better than CG on verbal parts of the various tests, and slightly less well on parts involving numbers skills. Since the mean scores of CG did not decline during the two-year period, 1969-1971, and those of EG did, the better performance of EG on the verbal portions of the tests suggests that greater verbal content in the tests was not responsible for the decline in both groups and the greater decline in EG.

Our hunch is that the changing nature of the tests probably played a relatively minor role, but our data do not raise that impression beyond the level of a hunch. Even though EG tended to perform slightly better than CG on verbal items, it could still be that the performance of both was depressed by lack of verbal facility. Yet if so, why did the scores of CG remain relatively stable?

"Innate incapacity" of the children

Because of inherent defects in the conceptualization of "intelligence" and crippling defects in the construction and standardization of existing intelligence tests, we have little patience with what has come to be known as the Jensen thesis;* we do not conclude that innate incapacity is a major element in the school achievement problems of EG and children like them. It may be that the mean average "IQ" of black children is a bit above or a bit below that of white children. However, until their physical, social, and

* Jensen, op. cit.

psychological environments have been equalized for several generations (long enough to right the balance on the effects of maternal malnutrition in pregnancy as well as of the physical, intellectual, and psychosocial ills built up through years of discrimination and deprivation) there is no way to find out. When and if some "true" difference is discovered, we suspect that it will be unimportant as compared with other factors.*

Meanwhile, we have known these children as varying from dull to bright and even very bright, as judged by our observations and those of testers and teachers. We have watched them through the years as some of the brightest ones "turned off." We have seen some (like Donald Andrews and Virginia Rich) doing well in school and nevertheless being disaffected through lack of stimulation and challenge and involvement.

The programs that succeed--including the early years of our own program--demonstrate that inner-city children have the capacity for satisfactory school performance, if only the schools can discover how to teach them to learn. The exceptional teachers referred to earlier demonstrate that teachers can be gifted, committed, and effective in working with inner-city children--if only we can discover how to teach them to teach and, more important still, how to expect good performance from them. If these two prerequisites can be met, we would have no anxiety about the children's expectations of themselves.

The continuing crisis in our public schools demonstrates that, as many educators and investigators freely concede, we have not yet discovered how to supply these prerequisites.** In any case, we do not see the locus of our school problems as lying mainly in the children.

Nor is the locus of problem solely within the public school system. The derelictions of the society with regard to "reality

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* Jensen, op. cit.

** Maccoby and Zellner, 1970.

factors" have already been mentioned, as has the importance of the value placed on learning by family, community, and the society at large. It must be recognized also that our current problems with regard to education exist in a climate of unprecedented change, alienation, group frictions, and violence. The daily papers bear witness to the effects of this prevailing climate on the public schools, in reports of vandalism and conflicts, some of them racial. Recently the headlines featured the suicide of a black teacher because he believed dying was the only way to get the attention of "the vast majority of black students who did not take a stand..."*

It is not the function of this report to identify causes or propose solutions to these broad social ills. They are noted here only by way of supporting our conclusion that (1) the locus of problem is not in the children; (2) much of it is in the schools; (3) much of it is beyond the control of the schools. Nevertheless, some schools have been successful in spite of the current climate and social problems. And, if more schools could succeed to the extent now possible, the results might contribute to coping with those broader problems.

Inadequacies of our present public schools

Concern about the deficiencies of our public schools has been expressed and documented in countless books, articles, and reports, of which a few have received a great deal of attention.** In relation to the present program, a few of the many points raised are especially relevant.

Low expectations concerning pupil performance. The self-fulfilling prophecy as an explanation of poor and deteriorating school achievement by

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* New York Times, March 19, 1972.

** Kozol, 1967; Kerner, 1968; Silberman, 1970; U.S. Commission on Civil Rights, 1967.

inner-city children has been urged especially by Rosenthal and Jacobson.*

The experiment described in Pygmalion in the Classroom has been criticized (and with some cogency) for defects in research method. Yet some of its harshest critics comment that, although the data do not firmly support the hypothesis, they suspect the hypothesis has considerable validity.

A number of other experiments, by Rosenthal and others, give more solid support to the proposition that the expectations of the practitioner affect the outcome of treatment. Some of these are in the fields of medicine and of psychiatry.

Kenneth Clark was among the first to proclaim that the reason inner-city children don't learn is that their teachers don't expect them to learn.** In Dark Ghetto he describes the effects of such low expectations. In the Appendix to A Possible Reality he gives examples of the positive effects of high expectations.

To a considerable extent, of course, the expectation of poor or of good performance becomes effective through its repercussions on the child. The importance of the child's self-concept, and the tonic effects of experiencing a "taste of success" have by now become generally accepted in relation to school programs. Difference of opinion pertains less to the importance of his belief about his own ability than to the desirability of working directly on self-concept or of trusting it to improve if the way is opened for him to do well in school.

Our own school observations and interviews with teachers give strong support to Clark's position. How expectations can be raised is another question. Probably the most effective way is by mounting

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* Rosenthal and Jacobson, op. cit.
** Clark, 1965; Clark, 1970.

more successful programs that demonstrate, to teachers and to children, that the capacity is there if it can be mobilized.

Public school teachers. A number of points have been made about the problems many public school teachers meet in their classrooms. To elaborate on them here would be outside the focus of this report and the expertise of the research team. It should be merely noted that, as already documented, our evidence strongly supports inclusion of this element in the constellation of factors obstructing satisfactory school achievement.

Deficiencies in resources and supplies. With regard to our public schools, as to so many other features of our society, "reality factors" are glaringly neglected. Deficiencies in plant, in school supplies, in space, in building maintenance, in numbers of available staff, cannot be blamed for all our educational ills. But they obviously contribute, and--unlike some other school-related problems--they could be solved.

A source of never-ending surprise is our failure to do the simple and obvious things that are necessary but not sufficient prerequisites, while we are still groping to find answers to some of our educational dilemmas, beginning with earliest preschool and continuing into school.

That the dilemmas are very much with us is affirmed by Maccoby and Zellner,* among others. The Head Start Planned Variation program, they say, "is based on the assumption that we do not know very much about why our public schools have failed to produce an acceptable level of academic achievement in millions of youngsters growing up in the big cities and rural backwaters of our nation"; and they comment elsewhere that "schools for these children are not the only ones in

* Maccoby and Zellner, op. cit.

trouble during the present period of rapid social change; the issues faced in Follow-Through classrooms turn out to have implications for almost every classroom and almost every teacher."

It is fitting and proper that we continue to strive for solutions. But it is unfitting and improper that, while we are waging that struggle, we fail to do the simple and obvious things that we know are essential and know how to do.

The poor condition of some schools attended by EG and CG has already been described. The overcrowding in the school attended by Boris Blake roused his mother to frantic efforts that ultimately rescued him, but left five classes still meeting in one noisy, distracting auditorium. Some school buildings are not only overcrowded, but also in a sorry state of disrepair, and subject to dismaying lapses in ordinary maintenance--dirty, smelly, and strewn .ith litter.

It amounts to national idiocy for the world's richest country to finance elaborate experimental programs while failing to assure to each school the minimum physical requirements for evoking good school performance. This is like trying to build a house from the second story up, without concern for such mundane items as first story or foundation.

The situation is hardly news. But the ten commandments aren't news either, and our media still find it newsworthy to report stealing, killing, and bearing false witness. Only when we stop breaking the obvious rules will it be time to stop talking about the violations.

Discontinuity: Experimental program vs. home vs. school

It is our impression that several of the factors listed above contribute in varying degrees to the decline in test and school performance observed in experimental groups. However, our reading of the various types of evidence suggests that such programs generally suffer from two kinds of dissonance: the first involves conflict between the mores of the program and the mores of the ghetto; the second involves the "culture shock" experienced by the children when they move from the relatively sheltered project situation to the jungle of inner-city public schools.

Beginning with kindergarten, EG had started each year in a new school, with new arrangements and something less than warm acceptance. Each year they met the unknown and unfriendly new setting with reactions varying from negative to neutral. Nevertheless, from nursery school through second grade, EG was a stable group, even though after kindergarten they acquired new classmates. The EG entity served as a supportive constant, a small social cocoon. And by the end of each project year, the environment also had become more friendly.

Moreover, they were a "special" group, taken to and from school by a fatherly cab driver, given special lunches and snacks, taken on interesting excursions.

It is possible that the crucial factor in their special status was not the project perquisites, but rather the individual attention--the unflagging recognition that each child was a special individual in his own right. The importance attributed to this element by parents and teachers has been reported, as well as the frequently mixed

feelings about the children's acute need for individual attention and the unrealistic expectations it might engender.

At the beginning of the third grade year, the EG children were turned loose in the jungle, not as a mutually familiar and supportive group, but as individual strangers in strange surroundings, subject to unaccustomed expectations and demands. They were no longer "special" in any sense, including--for most of them--in being recognized as individuals and receiving a substantial amount of individual attention.

The culture shock hypothesis derives some support from a number of findings and observations reported in the preceding sections: for example, the better performance of EG on the project tests than on school achievement tests, a difference not perceptible in CG; the poorer attendance records and behavior ratings of EG as compared with CG; the failure of a few boys with above-average IQ scores to be promoted to the next grade at the end of the year, although, on the whole, the non-promoted children averaged lower than the promoted ones on the Stanford-Binet IQ test.

A hint of culture shock is implicit in material volunteered by parents and children during home interviews, and journeys to and from testing sessions, after the end of the second grade year: for example, Mrs. Sedgwick's speculation that perhaps her little girl had been "somewhat spoiled by having such good teachers"; Mrs. Blake's complaint that the teachers at the current school "just don't care whether the children learn"; Boris Blake's declaration that "this isn't the way school is spozed to be." And of course, the recurrent parental concern about individual attention is inherently concern about one aspect of culture shock.

A more positive aspect of the culture shock hypothesis is its underlining of the rightness and importance of such efforts as the Planned Variation Program in Head Start. The history of most preschool enrichment programs strongly indicates the need for continuity in educational experience, at least during the early years. We obviously do not yet know just what type of program is best adapted to happy and successful school performance for different kinds of children. But whatever curricula and teaching methods may prove to be effective in different settings, under different circumstances, and with different groups of children, it is clear that preschool innoculation with the "right" program is unlikely to be enough in itself. Continuity will be needed.

During the sixties, a good many program planners and developers believed that such innoculation might be sufficient. In retrospect, the belief seems surprisingly naive. It is as if we assumed that an adequate diet, rich in vitamin and mineral supplements, from birth through age five, would insure a child against malnutrition in later life, regardless of the defects of his later diet.

Projects such as this have taught us (1) that a "classic" nursery school program is unlikely to provide inner-city children with the basis for satisfying school performance; (2) that much exploration remains to be done in order to discover what kinds of programs would be more effective toward this end; (3) that, whatever the precise nature of the preschool program, there must be some degree of continuity between it and the school experience.

Adverse home conditions. There is, of course, a different kind of discontinuity that has been the focus of much discussion and research:

he discontinuity between values, behavior, resources, and expectations that inner-city children find in the classroom and those they find in their homes. That this dissonance exists and takes a heavy toll was an underlying assumption of this and many other projects, and is not seen as a point of difference between EG and CG. That assumption, which is so widespread that it requires no documentation, has been strongly supported by the experience in this project.

Our experience with the families makes it clear that the home situations of many children put a great burden on the school to promote academic achievement in the absence of strong home support for good school performance, and the presence of stresses and multiple deprivations. This does not mean that the parents fail to urge their children to do well in school, but rather that they do not succeed in providing the kinds of reinforcement conducive to school achievement under present stimulation and incitement to curiosity but also placing a high value on the learning process and its gratifications.

The culture shock hypothesis is by no means conceived as an explanation that rules out several of the others. It is viewed, rather, as recognition of an additional and major complication, which would be far more amenable to modification by program planners and practitioners than is, for example, the discontinuity between home and school. Whether the home-school discontinuity could be or should be modified, and how, and which end of the "discontinuum" should change most in order to achieve harmony with the other end, are questions receiving a great deal of attention from a variety of planners, administrators, teachers, and researchers. However, while answers are being sought and before they are found, the breach between a "good" preschool program

of any variety and the typical public school experience could, should, and must be healed.

Adverse community influences and models. Community influences that can affect children's school achievement include (among many others) attitudes, models, and values. Such influences have received extensive and well-deserved attention in the literature. Without attempting to summarize those most frequently cited, it may be observed that social-psychological community influences detrimental to school achievement can be divided roughly into two classes: (1) those that downgrade education and school; (2) those that fail to exalt education and school.

Examples of the first type would be the inner-city veneration of "machismo" and scorn for sissy pursuits; and neighborhood models who "made it in a big way" through successful and illicit activities--"big men" with Cadillacs and without education.*

The second type is illustrated by the kind of study done by Stodolsky and Lesser.** The study compares the school achievement of two groups of Jewish children, and attributes the higher achievement of one group to the strong value placed on education by their families and communities.

The influence of community attitudes and values on school achievement is proverbially (and accurately) illustrated by the high value placed on book-learning among most Jews and the relatively high

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* Brown, 1965.
** Lesser, et al., 1965.

scholastic performance of Jewish students as a group. As the preceding example illustrates, not all Jewish groups place an equally high emphasis on scholastic achievement, but over-all the value is very high in the hierarchy, and seems to have persisted through various levels of ghettoization and assimilation.

It seems doubtful that the value placed on scholastic achievement will be enhanced by efforts to sugar-coat and disguise the learning process after the ingenious manner of Sesame Street. The "open classroom" approach that encourages curiosity and makes the learning process its own reward seems to offer a great deal more promise for enhancing the perceived value of education. And there may be more to build on than is often supposed. "First grade children always want to learn," said the project teacher who taught EG in kindergarten and first grade, "they are fascinated by all the new things they are discovering. It's only later that they decide school isn't really the thing, after all."

Community influences also include a host of reality factors that do not go away just because they are so often forgotten, such as poor housing, overcrowding, noise, dirt, lack of recreation facilities, etc. Their role does receive sporadic recognition, but efforts to combat them are seldom regarded as integral parts of educational programs.

Concerning program evaluation

The first step in program evaluation is definition of goals: the purpose to be achieved by the program under evaluation, and the purpose of the evaluation itself.

The purpose of the program has been stated and discussed. The purpose of the evaluation was to learn whether the kind of program offered

would substantially improve the school performance of children in poverty.

This type of evaluation, in effect, poses its question in terms of success or failure. It is neither the only nor the most fruitful type of evaluation. Yet, when program planners are uncertain about the relative advantages and disadvantages of various program approaches, it becomes a practical necessity.

A major hazard in this kind of success-failure evaluation is that when people begin to think in terms of success or failure they so often think in over-simplified terms. They seek a single "success quotient" that will tell them, once and for all, whether the program does or does not help. This kind of thinking can be fatal to programs and to program evaluations. To try to discover whether, and to what extent, a program achieves its purpose is not synonymous with seeking a single, simple, either-or answer.

From the outset, it was assumed that in order to know whether the program did or did not accomplish its purpose, it would be imperative to know which kinds of children did or did not seem to benefit from it. Accordingly, although total group means are reported, main emphasis has been on subgroup analysis.

In our view, the main research value of the study lies (1) in the vivid evidence it offers of the need to base any evaluation--actuarial or diagnostic--on painstaking analysis of subgroup variations; and (2) in its specific documenting of the need to employ genuinely effective controls for sex and for SES within a population often lumped as presumably homogeneous with regard to SES.

It is encouraging that an increasing number of investigators are recognizing and acting upon the need to establish SES controls within a poverty population.

With regard to SES controls, however, it is of crucial importance that the effort to establish them be whole-hearted, vigorous, and sensitive. A chronic threat to the integrity of research findings is the half-hearted or perfunctory pseudo-control, especially of SES. Again and again reports state that SES level has been controlled, when in fact the controls are defective or deceptive.

Pseudo-control for SES can be socially harmful as well as methodologically inferior--for example, if generalizations are made concerning differences between Negroes and whites. When poor people are also black, differences associated with SES are often interpreted as black-white differences. Many studies that control roughly for SES ignore the tendency of black families to fall near the low edge of a broad division by income, making no allowance for the fact that black families within one broad income level may have an average income substantially below the average of white families in that level.* Or worse still, they acknowledge the fact in a passing statement but ignore it in data analysis. This was done some years ago, in a well known comparison of Negro and white marriages.** Coleman, et al., in stratifying their sample, actually used a different division point for whites and Negroes. The lowest level for whites included six or fewer from a list of household items; the lowest level for Negroes included four or fewer.***

Lack of even perfunctory effort at SES control is a prolific source of misguided folklore. Campbell has shown, for example, that if national

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* Bureau of Labor Statistics, 1966; Herzog, 1967.
** Blood and Wolfe, 1960.
*** Coleman, et al., 1966.

estimates of illegitimacy rates were related to income, the difference between blacks and whites would be drastically reduced.* Lefcowitz has demonstrated roughly (as have some others) that color differences on a number of variables, such as family composition, education of children, relative education of wife and husband, are dwarfed by differences related to income.** Examples could be multiplied. And their destructive effects are multiplied through generalizations based on inadequate SES controls that contribute to or re-enforce distorted racial stereotypes--all because SES differences are allowed to masquerade as differences between blacks and whites.

This is not, of course, to deny the existence of ethnic and cultural differences; but merely to point up the social disservice done by ignoring or obscuring the existence and impact of SES factors.

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* Campbell, 1966.
** Lefcowitz, 1965

REFERENCES

Anastasi, Anne and D'Angelo, Rita. "A Comparison of Negro and White Children in Language Development and Goodenough Draw-A-Man IQ," The Journal of Genetic Psychology, 81:147-165, December, 1952.

Beller, E. Kuno. "The Evaluation of Effects of Early Educational Intervention on Intellectual and Social Development of Lower-Class Disadvantaged Children," in E. Grotberg (Ed.), Critical Issues in Research Related to Disadvantaged Children. Princeton, N. J.: Educational Testing Service, 1969.

Bloom, B. S., Davis, A. and Hess, R. Compensatory Education for Cultural Deprivation. New York: Holt, Rinehart and Winston, Inc., 1965.

Brown, Claude. Manchild in the Promised Land. New York: Macmillan, 1965.

Brown, Fred. "An Experimental and Critical Study of the Intelligence of Negro and White Kindergarten Children," The Journal of Genetic Psychology, 65:161-175, September 1944.

Chilman, Catherine S. "Some Angles on Parent-Teacher Learning," Childhood Education, 48 (3):119-125, December 1971.

Clark, Kenneth. Dark Ghetto. New York: Harper and Row, 1965.

_____. Appendix to A Possible Reality: A Design for the Attainment of High Academic Achievement for the Students of the Public Elementary and Junior High Schools of Washington, D. C. New York: Metropolitan Applied Research Center, Inc. (MARC), 1970.

Coleman, James S., et al. Equality of Educational Opportunity. U.S. Department of Health, Education and Welfare, Office of Education, OE-38001, National Center for Educational Statistics. Washington, D. C.: Government Printing Office, 1966.

Comprehensive Tests of Basic Skills. Technical Report. Monterey, Calif.: McGraw-Hill, 1970.

Cronbach, Lee J. Essentials of Psychological Testing. New York: Harper and Row, 1960.

_____. "Heredity, Environment, and Educational Policy," Harvard Educational Review, 39(2):338-347, Spring, 1969.

Deutsch, Martin and Brown, Bert. "Some Data on Social Influences in Negro-White Intelligence Differences," Journal of Social Issues, 20(2):24-35. 1964.

Durost, Walter N., ed. Directions for Administering Metropolitan Achievement Tests, Primary II Battery. New York: Harcourt, Brace & World, Inc., 1959.

Gray, Susan W. and Klaus, Rupert A. The Early Training Project: A Seventh Year Report. Nashville, Tenn.: George Peabody College for Teachers, Demonstration and Research Center for Early Education, 1969.

Herzog, Elizabeth. About the Poor: Some Facts and Some Fictions. U.S. Department of Health, Education and Welfare, Office of Child Development, Children's Bureau Publication No. 451. Washington, D. C.: Government Printing Office, 1967.

Herzog, Elizabeth and Sudia, Cecelia E. Boys in Fatherless Families. U.S. Department of Health, Education and Welfare, Office of Child Development, Children's Bureau. Washington, D. C.: Government Printing Office, 1970.

Hunt, J. McV. "Has Compensatory Education Failed? Has It Been Attempted?" Harvard Educational Review, 39(2):278-300, Spring, 1969.

Jensen, Arthur R. "How Much Can We Boost IQ and Achievement?" Harvard Educational Review, 39(1):1-123, Winter, 1969.

Kagan, Jerome S. "Inadequate Evidence and Illogical Conclusions," Harvard Educational Review, 39(2):274-277, Spring, 1969.

Katz, I. "Research Issue on Evaluation of Educational Opportunity: Academic Motivation," Harvard Educational Review, 38:57-65, 1968.

Kennedy, W. A. "A Follow-up Normative Study of Negro Intelligence and Achievement," Monographs of the Society for Research in Child Development, Vol. 34, No. 2, 1969.

Kennedy, W. A., Van De Riet, V. and White, J. C. "A Normative Sample of Intelligence and Achievement of Negro Elementary School Children in the Southeastern U.S.," Monographs of the Society for Research in Child Development, Vol. 28, No. 6, 1963.

Kerner, Otto. Report of the National Advisory Commission on Civil Disorders. New York: Bantam Books, 1968.

Kittrell, Flemmie P. "Enriching the Preschool Experience of Children from Age 3: I. The Program," Children, 15(4):135-139, July-August 1968.

Kozol, Jonathan. Death at an Early Age. New York: Houghton Mifflin, 1967.

Kraft, Ivor, Fuschillo, Jean and Herzog, Elizabeth. Prelude to School, An Evaluation of an Inner-City Preschool Program. U.S. Department of Health, Education and Welfare, Office of Child Development, Children's Bureau Research Report No. 3. Washington, D. C.: Government Printing Office, 1968.