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ABSTRACT

This document contains nine research abstracts and five progress reports of projects, complete and incomplete, initiated in 1967-1968 by the Michigan State University Head Start and Evaluation Center. The table of contents lists 14 projects under two subheadings (1) Research Abstracts, 1967-1968 Report, and (2) Progress Reports, 1967-1968 Research Projects. (WY)

Michigan State University

Head Start Evaluation & Research 1967-68 Research Abstracts and Progress Reports

HEAD START EVALUATION AND RESEARCH CENTER

Michigan State University
College of Home Economics

in cooperation with

The Merrill-Palmer Institute

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Research Projects, complete and incomplete, initiated 1967-68

Abstract

ATTITUDES, EXPECTATIONS, AND BEHAVIOR OF PARENTS OF HEAD START AND NON-HEAD START CHILDREN

Sarah D. Hervey
The Merrill-Palmer Institute
July 1, 1968

From its original planning stages Head Start was conceived not merely a program for the child alone, but as a total-family intervention. Head Start's direct influence on the child has been evaluated carefully since the first summer Head Start was in operation, but the influence of the program upon parents has been the subject of only peripheral interest. Since Head Start seeks to influence the child not only directly through the classroom program but indirectly through the parents as well, it would seem appropriate to investigate the effects of Head Start participation upon parents by comparing them with similar parents of similar children who had not been enrolled in Head Start, with a particular focus upon those attitudes and behaviors which relate to the parent's childrearing practices. Four areas were investigated; punishment severity, obedience expectations, attitudes toward childrearing, and influence techniques.

The sample for the study was composed of parents (all mothers and as many fathers as were living in the home) of Negro upper-lower and lower-lower class kindergarten children in inner city schools. Fifty eight mothers and 45 fathers of children who had been enrolled in Head Start were interviewed; 49 mothers and 28 fathers of non-Head Start children were interviewed.

It was found that very few behavior and attitudinal differences between parents of kindergarten children who had participated in Head

Start and parents of similar children with no preschool experience could be defined. The few differences that were found were meaningful individually, but did not seem to follow any pattern. The significance of these results for Head Start was discussed, and two conclusions were drawn. First, it seemed clear that Head Start is making only part of the impact on the children that it could be making. The direct influence on the child, through classes, bears the major burden, because the potential for an indirect influence through the parents is not being realized. And second, since the parents supposedly benefit from Head Start personally as well as through the child, apparently the parents as well as the children are missing many of the benefits that Head Start might provide them.

Abstract

SOCIAL ANTECEDENTS OF PRESCHOOL CHILDREN'S BEHAVIORS

James Weber

The theoretical basis of this investigation was open-systems theory. A social-system interview was devised to describe the early social environment of the disadvantaged child. This interview focused on the child and defined the environment in relationship to him. The chief characteristic investigated was that of the presence or absence of "hierarchical-order" or the presence or absence of a central source of direction and control.

The interview was administered to 30 low-income mothers and 15 middle-income mothers. The results of the interview were compared to measures made on children shortly after their entrance into Head Start classes.

The results of the analysis indicate great variations within the low-income population. The means of the low-income mothers' responses appear to differ significantly from those of the middle-income mothers on factors non-conducive to desirable test scores. The means of the low-income mothers do not differ significantly from those of the middle-income mothers on factors which are favorable to desirable test scores.

Due to the small size of the sample and the large error variances it is difficult to reach definite conclusions. Some indications of direction were discussed, and finally some tentative indications for teachers and curriculum planning were made.

Abstract

A NOTE ON PUNISHMENT PATTERNS IN PARENTS OF PRESCHOOL CHILDREN

Sarah D. Hervey
The Merrill-Palmer Institute
August 1, 1968

This study was part of a larger interview-based investigation associated with a study of young children; the parents of the children provided the sample for the interview study. The sample was almost entirely Negro, and was about 75% lower classes. Two hundred fifty one women and 185 men were interviewed.

Eighteen situations were posed and the parents were asked whether, and if so how severely, they would punish the behavior described. Several analyses of the parents' responses were carried out:

(1) Development of an index of total punishment severity for each interviewee; analysis of variance by socio-economic class yielded no differences among classes for either sex.

(2) Factor analysis of the eighteen situations, yielding three factors: "morally" or intrinsically wrong behaviors, antisocial behaviors, and annoyances.

(3) Development of three punishment subscores based on the facts or analyses, and analyses of variance of these subscores by socioeconomic class. Men differed significantly in the severity with which they would punish antisocial and annoying behavior.

(4) Intercorrelation of punishment subscores, yielding small but statistically significant relationships between annoyances and antisocial behaviors.

(5) Multiple scalogram analyses for each sex yielded two scales in each case; the scales closely paralleled the subscores derived from the factor analyses.

The major conclusion drawn from these analyses derived from (3), above, in which it was clear that men of lower socioeconomic levels punish antisocial and annoying behaviors more severely, while there is no such difference in men's punishment of behaviors "morally" or intrinsically wrong by middle-class standards. A second important conclusion was that apparently antisocial and annoying behaviors are related in the punishment they elicit, and "moral-intrinsic wrongs" are a concept entirely different from the other punishable situations.

Abstract

FAMILY SOCIOLOGY OR WIVES' FAMILY SOCIOLOGY? A COMPARISON OF HUSBANDS' AND WIVES' ANSWERS ABOUT DECISION MAKING IN THE GREEK AND AMERICAN CULTURE

Constantina Safilios-Rothschild

Revised version of a paper read at the Groves Conference, Boston, April 22-24, 1968.

Family decision-making studies have been based on wives' answers only assuming that there is an almost perfect agreement between husbands' and wives' answers. An examination of Detroit and Athenian husbands' and wives' perceived decision-making shows a considerable degree of divergence such that decision-making studies can no longer rely only upon the wife's point of view. The present data also indicate that the overall decision-making score, as usually calculated, may not be always adequate or valid. A refinement such as the respondents' ranking of decisions for importance may greatly improve the meaning of the score and the understanding of the decision-making process.

Abstract

INTERRELATIONS BETWEEN SOCIAL-EMOTIONAL BEHAVIOR AND INFORMATION ACHIEVEMENT OF HEAD START CHILDREN

Marjorie Noble
Sarah D. Hervey

The major theoretical position underlying this study was founded on the increasing recognition by social scientists of the need for a process conception of the human being which recognizes the "whole" person instead of a simple partite breakdown of the person into his component systems. In applying this conception to the study of children in the school, concern with the implications of the fact that "persons" go to school, and not simply equipment for learning, becomes paramount. The awareness that every mental function is imbedded in a personal life implies that studies of cognitive functioning should include reference to the individual's personality.

With the advent of Project Head Start there developed an increasing interest in studying the disadvantaged child in the school, as it has been found that children who have known only poverty tend to be unsuccessful in school. Head Start offers fertile ground for exploring the interrelationship between social-emotional behavior and cognitive learning in children coming from deprived backgrounds.

The present study, in affiliation with the national Head Start evaluation program, attempted to explore this interrelationship in 133 Head Start children representing a wide range of community types and ethnic groups in the middle west.

Abstract

MODIFICATION OF COGNITIVE SKILLS AMONG LOWER-CLASS NEGRO CHILDREN: A FOLLOW-UP TRAINING STUDY. REPORT NUMBER 6.

The four purposes of this study were (1) to test the long-range effects of classification training (CT) on disadvantaged black children, (2) to evaluate the effects of reintroducing CT to those previously trained, (3) to compare CT at two age periods (5 and 6 years old), and (4) to compare CT with attention training (AT). Of the 69 children used in this study, 30 had received CT the year before, and 39 had received no training (NT). CT focuses on the many attributes of objects that may be used as a basis for grouping. AT teaches the child to focus on observable attributes and to discriminate among them. The children were pretested, and 59 of them were divided into six groups: (1) CT-CT (the symbols signifying that the group received CT the previous year and the current year), (2) NT-CT, (3) CT-AT, (4) NT-AT, (5) CT-NT, and (6) NT-NT. Pretraining scores on a battery of grouping tasks indicated that the previous year's training had had a lasting effect, at least in facilitating a more flexible approach to classification in the current year. CT-CT, NT-AT, and NT-CT children showed a significant increase in grouping responses on posttests. (WD)

RELATION OF SPATIAL EGOCENTRISM AND SPATIAL ABILITIES OF THE YOUNG CHILD

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John S. Watson

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Abstract

The hypothesis of this study was that a high positive relationship exists between a child's accuracy in predicting object locations when (a) the child moves to various positions around a display and (b) when a doll is moved to various positions and the child does not move (Piaget task). The data of 48 Ss from 3½ to 6½ years of age, approxiamately, did not support the hypothesis but indicated that correct predictions are very frequent when the child moves and very infrequent when the doll is moved. The similarities and differences between the two tasks were discussed to account for the discrepancy in the levels of difficulty.

Social Class and Parent's Aspirations for Their Children

Hyman Rodman

and

Patricia Voydanoff

This is a study of educational, occupational, and income aspirations as they are related to social class. A basic assumption underlying the research is that individuals have a "range of aspirations" rather than a single " level of aspiration." The project has two major objectives. The first is to develop measures of aspiration which take into account the possibility of a range of aspirations. The second objective is to test the extent to which individuals in different social classes do have a range of aspirations. The basic hypothesis is that within the lower classes there will be a wider range of aspirations than in the middle class. This hypothesis has beeen supported for the measures of aspiration developed so far and will be tested further with more complex measures.

Abstract

SUBPOPULATIONAL PROFILING OF THE PSYCHOEDUCATIONAL DIMENSIONS OF DISADVANTAGED PRESCHOOL CHILDREN

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If compensatory educational programs are to have a meaningful impact in meeting the various idiosyncratic needs of the heterogeneous disadvantaged populations they must be tailored to the educational strengths and weaknesses of these various subpopulational groups. Currently there is a dearth of comprehensive descriptive information on the psychoeducational dimensions of disadvantaged preschool children from the many disadvantaged sub-groups across the nation. Even less information is available concerning the family process variables of which these child dimensions are a function. The focus of this research therefore was to complete an exhaustive review of published and unpublished material concerning these variables and to develop from this information a descriptive model which could be implemented to determine the differential abilities and family-child socialization processes of sub-populational groups.

The proposed model was developed and a procedure for implementation outlined in the latter sections of the report.

The model is divided into three major parts: subpopulations of the disadvantaged, psychoeducational dimensions of the children, and process variables in the home. The subpopulations were identified and defined as cultural group, rural or urban locale, geographic area, social class and sex.

Progress Report

HETEROGENEOUS VS. HOMOGENEOUS SOCIAL CLASS GROUPING OF PRE-SCHOOL CHILDREN IN HEAD START CLASSROOMS

Robert P. Boger
Sarah D. Hervey
Joan Hamachek
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With the advent of programs planned specifically for the disadvantaged has come also the problem that such programs by definition single out the disadvantaged and isolate them from the rest of society as the special program is conducted. Such isolation is often necessary if the program is to have maximal impact upon the group it serves by focusing all its resources on that group. But isolation such as is required, for example, by the Head Start guidelines' recommendation (of 90% disadvantaged children per class) must also be balanced against the adverse effects that isolation might have upon the very individuals a program seeks to serve.

The Head Start program raises this problem as a very real dilemma between two alternative courses of action. Head Start as it operates normally focuses on disadvantaged children in a context which separates them from the rest of society and seeks to influence them through classroom and family intervention. The classes are held in and for the disadvantaged neighborhood, and the teacher provides the only link with the world outside the ghetto, be that ghetto an Indian reservation or a block of tenements. It is exactly this kind of education, however, that has gained disapproval in recent years. The U.S. Commission on Civil Rights' report, Racial Isolation in the Public Schools, the Coleman report, and the report of the National Advisory Commission on Civil Disorders all support the position that racial isolation in education is debilitating and only perpetuates the already overwhelming problem of a segmented educational system for a socioeconomically segregated society. The solution offered

by these reports is based on the proposition that interracial and interclass contact is an essential component of quality education. For Head Start children, this means that we cannot adequately prepare children for the diverse society they will meet as school children and later as adults by isolating them from the culturally and economically more advantaged groups.

Quite clearly an alternative to the normal Head Start procedure is demanded by these considerations. In order to provide for Head Start children the most enriching experiences, it is necessary to build into those experiences contact with the rest of society -- those culturally and economically more advantaged children with whom they will be interacting all their lives.

Contact with advantaged children is not to be sought for Head Start children only for the abstract benefits of acquaintance with another socio-economic/cultural group, however. There is ample evidence to support the contention that children learn from one another in any social setting; it is reasonable to hypothesize then that disadvantaged children would learn from the advantaged children with whom they interact. It is this hypothesis on which the present study was based. It was not to be expected, however, that contact with advantaged children would as if "by magic" have a universally beneficial effect upon the disadvantaged child; rather it was hypothesized that those characteristics of middle class children's traditional advantage over lower-class children would show the greatest effect on the Head Start children.

The variables of chief interest in this study were three, judged to be areas in which it was most likely that repeated contact with advantaged children would benefit the Head Start children. The first, cognition, was

chosen because of the obvious importance of cognitive functioning in the early school years. Deutsch (1963) points out that while the relationships between socioeconomic background and school performance is not a simple one, the effects are seen first in perceptual, language, and cognitive behaviors. Others (e.g. Miller and Swanson, 1960) point out that when some childrearing patterns typical of middle-class homes are used, the child develops more abstract, symbolic, "idea-oriented" cognition patterns, while childrearing patterns typical of lower-class homes tend to produce more concrete, "thing-oriented," non-verbal cognition. Since advantaged children generally have more practice with abstraction and other cognitive behaviors in their first years of life, and it was hypothesized that some of this experience could well influence the disadvantaged child.

The second variable considered in this study, language, was chosen because of the importance of language in the accumulative gap between disadvantaged and advantaged schoolchildren. Among children who come from disadvantaged backgrounds there is a high proportion of school failure associated with reading and other language-related disabilities. Goldberg (1967) suggests that verbal and symbolic experiences lay the foundation for later academic achievement; she notes further that the likelihood of middle-class children's having these experiences is much greater than for lower-class children. It was hypothesized that the language model presented by the advantaged child would be an influence upon the disadvantaged child's language patterns, and the influence of this model would be evident in the Head Start child's increased language facility.

Socialization, the third variable examined in this study, was selected because advantaged children's socialization patterns more closely resemble the expectations for constructive social interaction commor in public school situations, while disadvantaged children less often demonstrate the patterns of socialization acceptable to the schools. It was hypothesized that a disadvantaged child exposed to advantaged children's socialization patterns would tend to adopt some of these patterns for himself.

In this study the contact with advantaged children was the intervention introduced into the otherwise normal Head Start program. The major objective of the study was to investigate the effects on disadvantaged children of introducing these advantaged children into Head Start classes. It was presumed that the intervention would be an enrichment in Head Start children's preschool experience and would be manifest in certain measurable changes taking place in the Head Start children.

Procedure

Design

Three classes in the Lansing, Michigan Head Start program were designated as experimental classes. Thirty-two disadvantaged children were assigned to the classes in such a way that two classes included eight disadvantaged children each and one class, the control group, was composed of sixteen disadvantaged. To the two classes of eight disadvantaged children each were added eight advantaged children, bringing the total in each group to sixteen. The teachers assigned to the three classes were as much alike as was possible regarding experience, teaching style, and demographic characteristics. The design for analysis purposes was a pre-post comparisons plan.

Sample

The population from which the sample for this study was drawn is the group of Head Start-eligible children residing in the district served by the Capitol Area Economic Opportunity Commission of Lansing, Michigan. This population of children is approximately half Negro, one-third white, and the remainder Spanish-American. When the sample of four-year olds for the special classes arranged for this study was drawn from among the available children, this racial distribution was maintained. Each group of eight children in the sample was composed of four Negro children, three white children and one Spanish-American child. Attrition through the year changed these numbers somewhat, but the general balance was maintained (see Table 1; numbers after attrition are in parentheses).

TABLE 1.

Racial Distribution of Sample Children

Experimental Group One	Experimental Group Two	Control Group
4 Disadv. Negro (4)	4 Disadv. Negro (3)	8 Disadv. Negro (6)
3 Disadv. White (3)	3 Disadv. White (3)	6 Disadv. White (5)
1 Disadv. Span-Amer. (1)	1 Disadv. Span-Amer. (1)	2 Disadv. Span-Am. (2)
4 Advantaged Negro (2)	4 Advantaged Negro (4)	
3 Advantaged White (3)	3 Advantaged White (3)	
1 Advan. Span-Amer. (0)	1 Advan. Span-Amer. (0)	

Design Limitations

In the ideal study of advantaged children's effects upon disadvantaged children, two additional factors would be controlled or accounted for in some way. First, in a study such as this, the teacher's influence is always a confounding factor. No matter how carefully teachers are matched across groups, or how scrupulous the randomization, it is difficult to separate teacher effects from treatment effects of from differences among children. Further, the methodology of assessing teacher effects is not advanced enough to permit the partialing out of the teacher variable. Logistically it is next to impossible to account for teacher effects by having one teacher work with two classes, one experimental and one control, although this plan might approach the ideal. In this study, the teachers' influence was markedly important, seriously confounding the results.

A second ideal design feature would be an adjustment of the treatment effects. Pettigrew's research has demonstrated that as the proportions of white and Negro children change in mixed classrooms, so also do the effects of the mixture on the children. In the Head Start situation, it

would be wisest to investigate the various effects of different "mixtures" of advantaged and disadvantaged children. It is hoped that this idea can be incorporated in future studies since the limited nature of this pilot study made such a line of investigation impossible.

Instrumentation

Cognitive behaviors were measured using two major instruments, the Weschler Preschool and Primary Scale of Intelligence (WPPSI), and the Cincinnati Autonomy Test Battery (CATB). In addition, several of the other instruments described below contain scales relevant to cognitive functioning; results from these additional measures were used to supplement the WPPSI and CATB results.

The Weschler Preschool and Primary Scale of Intelligence was developed particularly for use with children of ages 4 through 6½. It is similar in concept and method to the other Weschler tests in that the subtests which comprise the verbal, performance and total IQ scores may also be treated as separate measurements of different abilities (Weschler, 1963, 1-2). The subtests in order of presentation, include:

Information
Animal House
Vocabulary
Picture Completion
Arithmetic
Mazes
Geometric Design
Similarities
Block Design
Comprehension

These subtest scores, plus the Verbal IQ, Performance IQ, and Total IQ scores provided one basis for analyses of cognitive effects.

Reference is to test manual.

The Cincinnati Autonomy Test Battery measures several "autonomous" behaviors, that is, "self regulating behaviors that facilitate effective problem-solving"(Banta, 1968).

> Effective problem solving does not necessarily mean the achievement of correct solutions to conventional problems, but rather the development of behaviors which are useful in a world that presents problems demanding creative as well as conventional solutions. It may be much more important for early childhood education to be concerned with the care and nurturance of these emerging tendencies than to be concerned only with conventional problems. (Banta, 1968).

The CATB tests "are concerned with the ways in which a child solves a problem, not just his ability to perform a task 'correctly'..." The CATB, in its present form provides test scores on fourteen basic variables...

Curiosity: Tendency to explore, manipulate, investigate, and discover in relation to novel stimuli.

Innovative Behavior: Tendency to generate alternative solutions to problems.

Impulse Control: Tendency to restrain motor activity when the task demands it.

Reflectivity: Tendency to wait before making a response that requires analytic thinking, when the task demands it.

Incidental Learning: Tendency to acquire information not referred to in the instructional stimuli.

Intentional Learning: Tendency to acquire information specified in the instructional stimuli.

Persistence: Attention to a problem with solution-oriented behavior where the goal is specified.

Resistance to Distraction: Persistence, with distracting stimuli present.

Reference is to Banta, Thomas J., "Tests for the Evaluation of Early Childhood Education: The Cincinnati Autonomy Test Battery (CATB)," undated mimeo paper, to be published in Volume I of Cognitive Studies, 1968.

Field Independence: Tendency to separate an item from the field or context of which it is a part.

Task Competence: Ratings of tendency to deal effectively with problems of many kinds.

Social Competence: Ratings of ability to work comfortably with adults.

Kindergarten Prognosis: Ratings of ability to do well in conventional kindergarten.

Curiosity Verbalization: Tendency to talk to self or tester about a novel object while exploring it.

Fantasy-Related Verbalization: Tendency to engage in fantasy, expressed while exploring a novel object. (Banta, 1968, 3-4).

The CATB was chosen for inclusion in the present study because of it obvious value as a supplement to the traditional intelligence measures as represented by the WPPSI. The variables tapped by this instrument are not closely related to measured intelligence, but represent instead other behaviors which are related nevertheless to school behavior. The CATB is unusually well-suited for use with the disadvantaged child because it relies very little on verbal cues and is so administered that a child's understanding of the task is assured before his performance is actually measured -- there is no chance of a low score due to misunderstanding of instructions.

Language skill was measured in this study using three sets of measurements: (1) verbal portions of the WPPSI, (2) subscales of the CATB incorporating verbal responses, and (3) ratings from the Videotape Rating Scale (see discussion below) which focus on the child's use of language.

The twelve measurements of language or language-related behavior were:

WPPSI Subtests
- Verbal IQ
- Information
- Comprehension
- Vocabulary
- Similarities

CATB Subtests
- Incidental Learning
- Curiosity Verbalizations
- Fantasy-related Verbalizations

VRF Ratings
- Use of Elaborated Code
- Complete Sentences
- Variety of Verbs
- Descriptive Adjectives

Three major instruments were used to measure socialization, the Kansas Social Interaction Observation Procedure (SIOP), the M.S.U. Videotape Rating Form (VRF) and the Parten-Newell Teacher Rating of Play Behavior. Data for the SIOP and VRF were collected simultaneously by a timed observation schedule procedure. While the SIOP observer was in the classroom collecting objective data on a particular child's social interactions, a second observer took anecdotal records of the observed child's behavior, and a remote control camera videotaped the same behavior. This observation, videotaping session was repeated three times, yielding three five-minute segments of raw data on the child's free play behavior during the one week taping session. These three sources of data (SIOP, anecdotal records and videotape segment) were used by the two observers to complete the VRF ratings.

The SIOP was designed to measure the frequency of various types of interaction among two or more persons during free play activities in the classroom. The scale was originally developed for use in the

national Head Start evaluation as a procedure for describing peer-child and adult-child interactions. While the SIOP was designed to yield quantitative data on 106 variables, only twenty-nine of these variables were selected for intensive investigation in the present study. The variables that were selected focus on verbal and nonverbal interactions among the child, his peers and/or adults in the classroom. Following is a list and brief definitions of these 29 variables:

1. Σ Verbal Interactions S and A: The frequency of verbal interactions between the observed child and an adult.

2. Σ Verbal Interactions S and P: The frequency of verbal interactions between the observed child and a peer.

3. Σ Nonverbal Interactions S and A: The frequency of nonverbal interactions between the observed child and an adult.

4. Σ Nonverbal Interactions S and P: The frequency of nonverbal interactions between the observed child and a peer.

5. Σ Verbal-Nonverbal Interactions S and A: The frequency of interactions containing <u>both</u> verbal and nonverbal cues between the observed child and an adult.

6. Σ Verbal-Nonverbal Interactions S and P: The frequency of interactions containing <u>both</u> verbal and nonverbal cues between the observed child and a peer.

7. Total Verbal Interactions: The frequency of all verbal interactions between the observed child and another person.

8. Total Nonverbal Interactions: The frequency of nonverbal interactions between an observed child and another person.

9. Total Verbal-Nonverbal Interactions: The frequency of interactions containing <u>both</u> verbal and nonverbal cues between an observed child and another person.

10. Σ S and A Interactions: The frequency of social interactions between an observed child and an adult.

11. Σ S and P Interactions: The frequency of social interactions between an observed child and a peer.

12. Total Verbal Initiations by S: The frequency of verbal initiations made by the observed child.

13. Total Nonverbal Initiations by S: The frequency of nonverbal initiations made by the observed child.

14. Total Verbal Responses by S: The frequency of verbal responses made by the observed child.

15. Total Nonverbal Responses by S: The frequency of nonverbal responses made by the observed child.

16. S to A Initiations Responded to: The frequency of initiations made by the observed child to an adult that is responded to by the adult.

17. S to P Initiations Responded to: The frequency of initiations made by the observed child to a peer that are responded to by the peer.

18. A to S Initiations Responded to: The frequency of initiations made by an adult to the observed child that are responded to by the child.

19. P to S Initiations Responded to: The frequency of initiations made by a peer to the observed child that are responded to by the child.

20. Total Initiations Responded to: The frequency of initiations made either to or by the observed child that are responded to.

21. S to A Initiations Not Responded to: The frequency of initiations made by the observed child to an adult that are not responded to by the adult.

22. S to P Initiations Not Responded to: The frequency of initiations made by the observed child to a peer that are not responded to by the peer.

23. A to S Initiations Not Responded to: The frequency of initiations made by an adult to the observed child that are not responded to by the child.

24. P to S Initiations Not Responded to: The frequency of initiations made by a peer to the observed child that are not responded to by the child.

25. Total Initiations Not Responded to: The frequency of initiations made either to or by the observed child that are not responded to.

26. Total S to A Interactions: The frequency of interactions with the observed child initiating to an adult.

27. Total S to P Interactions: The frequency of interactions with the observed child initiating to a peer.

28. Total A to S Interactions: The frequency of interactions with an adult initiating to the observed child.

29. Total P to S Interactions: The frequency of interactions with a peer initiating to the observed child.

The V.R.F. was developed primarily to investigate the quality, as well as the quantity, of these behaviors. As stated before, the timed segments from the S.I.O.P. anecdotal records and the videotape segment were compiled to provide the data that the two observers used to complete the V.R.F. ratings.

The V.R.F. is used to count the frequency of four types of interactions: child to peer, peer to child, child to adult, and adult to child. The form also rates for each interaction the complexity, the firmness, the type of compliance, and whether the initiation of the interaction was a request or a directive. Aggressive, sympathetic, and dependency behaviors are recorded when they occur. (See Appendix for more complete description of variables). These data are generated for each child for each of the three five-minute time segments. In addition, after the raters have completed a five-minute time segment for a child, a summary V.R.F. is completed. This twelve-item rating scale is used to measure factors that affect the quality of

socialization behaviors. The factors are:

1. Elaborate-restricted verbal code
2. Always-never uses complete sentences
3. Large variety of verbs-no verbs
4. Many-no descriptive adjectives
5. Long-short attention span
6. Dramatic play a great deal-rarely
7. Accepts-does not accept delayed goal
8. Independent (leader) - dependent (follower)
9. Active-passive
10. Variety of activities
11. Innovative-imitative
12. Positive-negative relationship with teacher

The ratings for the three five-minute segments for each child were added together. The twelve summary V.R.F. scores were used as the data for analysis. (See Appendix for further description of these twelve dimensions).

The post videotape data was collected and rated by a different team of observers than the team that had collected the pre data. After training the new team on the procedure for taping, the two teams (four observers) went into one of the experimental classrooms and taped the play behavior of eight children. The teams then rated these data independent of one another. These ratings allowed the investigators to calculate an interteam reliability coefficient for each of the major variables: Interchange-subjects involved, request or directive, clarity of the request or directive, complexities of the request or directive, and type of compliance. The degree of overlap between the two teams on each basic variable was computed. These coefficients, which may be viewed as coefficients of "reproducibility" or accuracy of prediction from one rater to the other, appear in Table 2.

TABLE 2

Rating Scale	Coefficient
Interchange - subjects involved	.965
Request or directive	.793
Clarity of request or directive	.655
Complexity of " " "	.862
Compliance	.586

Reliability analysis of the twelve general ratings together yielded a Pearson Product-Moment correlation of .811.

Ratings of the child's social behavior were also developed using the Parten and Newell system for classifying social interaction. The teacher recorded at three prearranged moments in the day which of six categories of behavior the child was exhibiting at the moment. The six categories are: unoccupied behavior, solitary play, onlooker behavior, parallel play, associative play, and cooperative play. This procedure was followed for five consecutive days. Data were generated that represented the proportion of each child's play behavior in each of the six categories.

In addition to the instruments used as described above to measure the three variables about which major hypotheses were made, several other instruments were used in this study as part of several ongoing instrument-development studies. One instrument was part of a study of the child's first four years of life as they related to certain cognitive and social measures taken at age four (Weber, 1968). A second instrument used experimentally in this study was the Play-Situation-Picture-Board Sociometric, a measure devised by Boger for use in the 1967-1968 national Head Start evaluation. This instrument uses pictures of toys (dolls, blocks, etc.) and play situations (sandbox, trikes, etc.) to elicit from the child a choice of classmates (whose Polaroid pictures are mounted on a board) with whom he would like to share the activity. Although the

sociometric instrument was in the early states of development, the data obtained from the instrument was used to supplement the other measurements of social interaction.

A third instrument used somewhat experimentally within this study was the Brown IDS Self-Concept Referents Test. This instrument, also used by the 1967-1968 Head Start Evaluation, measures the strength of the child's self-concept by asking him to report which of a series of bipolar adjectives best characterize him in his own and others' estimation. Some tentative hypotheses might have been made regarding the self-concepts of the experimental group versus the control group, but the concept and instrumentation were so tentative that it seemed best to conduct this portion of the data analysis as an exploratory analysis.

Analysis Procedures-Preliminary Results

Three major analyses are being conducted within the framework of this study. The first is centered on the major hypothesis of the study, that disadvantaged children should benefit from exposure to and interaction with advantaged children. The comparisons being made are between the one control and two experimental groups of disadvantaged children. Data analyses of the measurements from the instruments described above and for the most part F-tests on the pre-post gains exhibited by the control and experimental groups.

The second group of analyses compares disadvantaged Negro with disadvantaged white children on pretest measures, post-test, and gains. These comparisons included children from all three groups. The analyses are largely one-way analyses of variance.

The third major group of planned analyses consist of a comparison between the advantaged and disadvantaged children in the experimental groups. Most of the comparisons will be post hoc, since complete pretest data were not gathered on the advantaged children.

The major hypothesis of the study, that disadvantaged children should benefit from exposure to and interaction with advantaged children as suggested by Coleman (196-) and others, have our support in the initial analyses of several parts of the data. Subtests of the CATB, particularly resistance to distraction ($p = .002$), supported the contention that disadvantaged children did indeed gain certain skills that would increase their potential educability more in those classes holding a higher percentage of advantaged peers. The evidence, however, seems far from clear-cut. Equivocal is undoubtedly the best term that can be used to describe the evidence of the analyses we have thus far run with regard to this central issue. For although evidence was continually in the direction hypothesized, the majority of dimensions showed differences vbetween experimental and control groups whose probability of occurrence by change was greater than the .05 percent level generally maximally allowable for confident conclusive interpretation.

The sample size of the study was small initially, and attrition within the experimental classes (from sixteen to eleven in one class) reduced the number of subjects further to the point where one or two subjects could radically effect the resulting variance. We are presently reexamining the scored protocols to determine if scoring or other testing errors for which we have information could in fact be effecting any of the scores in the treatment groups.

Completion of the analyses and final report of the study is anticipated by January, 1969.

Progress Report

RELATIONSHIPS BETWEEN TEACHERS' AND EXAMINERS' PERCEPTIONS OF HEAD START CHILDREN

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August 15, 1968

As part of the 1966-67 national Head Start evaluation program, teachers rated their children pre and post on the Behavior Inventory, an instrument which records the teacher's observations of the child's social-emotional status at the time of rating. While the instrument was designed to yield behavioral adjustment scores that would be descriptive of the child, the writers would suggest that it is more likely an instrument revealing teacher perception or attitude--how the child is perceived--rather than reflecting actual child behavior.

Perceptions of the child were also gathered from another source, The Binet Rating Scale, which was completed by examiners testing the children at the beginning and again at the end of the Head Start program. The Binet Rating Scale, originally developed by E. Kuno Beller of Temple University and only slightly altered for this study, provides the examiner with fairly precise behavioral descriptions of the end points of each of eight six-point scales. Ratings were made immediately after the testing by the examiner.

This study will seek to determine the relationships between the two sets of perceptions of the child. Behavior Inventory scores and

Binet Rating Scale scores will be intercorrelated for a sample of approximately 90 children from the Michigan State University Head Start 1966-1967 evaluation sample.

This study is part of a larger study of teacher perceptions, "Teacher and Examiner Perceptions as Related to I.Q. Change in Head Start Children," the senior author's doctoral research. It is anticipated that the analysis for this research will be completed by September 1, 1968, and writing will be completed during the fall and winter of 1968.

Progress Report

STUDIES OF PARENTS' INFLUENCE TECHNIQUES AND RELATIONSHIPS WITH CHILDREN'S BEHAVIORS

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August 31, 1968

Background

Building upon previous investigations by Sigel and others into the ways parents influence, control, or redirect their children's behavior, four questions were posed and responses obtained from 251 mothers and 185 fathers of primarily lower-class young children as part of an interview study conducted at Merrill-Palmer Institute during 1966-1968.*

The four questions used in this study were:

Tell me what you would SAY in these situations:

A. When I told X he is not supposed to jump on the furniture in the living room, he began to scream and to hit me, so I said:

B. We had X's friend come over here one day. As soon as he started to play with one of X's toys, he told him he could not touch or play with them. I went to X and I said:

* See The Head Start Evaluation and Research Center: 1966-1967, Volume II, for full particulars.

C. Through the window I noticed X was outdoors making something. Just as he was about to finish, a playmate of his about the same age as X accidentally damaged it. From what I could see, I was sure it was an accident. By the time I got outside, X was hitting and kicking at his playmate, who was crying. While there seemed to be no danger of either of them getting really hurt, I didn't think that X was doing the right thing in hitting his playmate, so I said:

D. X had been playing alone for quite a while. Then he came over and said: "Mommy, (Daddy) come play with me." I was busy at the time trying to get some things done. I told him I was busy and could not come right then. He left for a few minutes and then came back with the same request, so I said:

The parents' responses to these four questions were coded into four major categories based on Sigel's previous development of the influence-control concept. The four categories are:

A. Unqualified power assertion, in which the parents make use of their jurisdiction over the child to alter the situation by physical punishment, isolation, insistence upon a specified behavior, and so on.

B. Qualified power assertion, in which the parent punishes, isolates, directs or insists, but adds either a reason or a cushion or both to his exertion of authority.

C. Appeals, bargains, or suggestions, in which the child has a choice of compliance.

D. Nonintervention, in which the parent either ignores the situation, otherwise refrains from intervention, or acquiesces.

The distribution of responses to these four questions is presented in Table 1 for both men and women with breakdowns according to Hollingshead's Two-Factor Index of Social position.

Table 1. Raw data and Percentage Distributions of Parents' Responses to Four Influence Technique Questions by Sex and Socioeconomic Class.

Socioeconomic Class and Sex of Interviewee	Unqualified power assertion	Qualified power Assertion	Appeal, bargain, suggest.	Noninter-vention
	A: Screaming and Hitting Parent			
Women				
1 & 2	11 44.0%	10 40.0%	4 16.0%	None
3	13 59.1%	5 22.7%	4 18.2%	None
4	50 56.8%	23 26.1%	15 17.1%	None
5	60 51.7%	30 25.9%	26 22.4%	None
Men				
1 & 2	10 43.5%	8 34.8%	5 21.7%	None
3	13 68.4%	4 21.1%	2 10.5%	None
4	37 52.1%	12 16.9%	22 31.0%	None
5	34 47.2%	18 25.0%	20 27.8%	None

B: Sharing Toys

Socioeconomic Class and Sex of Interviewee	Unqualified power assertion	Qualified power assertion	Appeal, bargain, suggest.	Nonintervention
Women				
1 & 2	9 36.0%	11 44.0%	5 20.0%	None
3	9 40.9%	8 36.4%	5 22.7%	None
4	33 37.5%	24 27.3%	31 35.2%	None
5	38 32.8%	40 34.5%	38 32.8%	None
Men				
1 & 2	7 30.4%	8 34.8%	8 34.8%	None
3	5 26.3%	10 52.0%	4 21.1%	None
4	28 39.4%	20 28.2%	23 32.4%	None
5	30 41.6%	22 30.0%	20 27.8%	None

C: Aggression Against Playmate

Women				
1 & 2	2 8.0%	16 64.0%	7 28.0%	None
3	5 22.7%	14 63.6%	2 9.1%	1 4.5%
4	17 19.3%	43 48.9%	28 31.8%	None
5	20 17.2%	59 50.9%	37 31.9%	None
Men				
1 & 2	4 17.4%	12 52.2%	7 30.4%	None
3	3 15.8%	9 47.4%	7 36.8%	None
4	15 21.1%	35 49.3%	21 29.6%	None
5	21 29.2%	31 43.1%	20 27.8%	None

D: Attention-Seeking

Socioeconomic Class and Sex of Interviewee	Unqualified power assertion	Qualified power assertion	Appeal, bargain, suggest.	Nonintervention
Women				
1 & 2	1 4.0%	3 12.0%	none	21 84.0%
3	none none	2 9.1%	none	20 90.9%
4	1 1.1%	21 23.9%	none	66 75%
5	3 2.6%	33 28.4%	none	80 69.0%
Men				
1 & 2	none	4 17.4%	none	19 82.6%
3	none	5 26.3%	none	14 73.7%
4	none	13 18.3%	none	58 81.7%
5	3 4.2%	14 19.4%	none	55 76.4%

D-1: Further breakdown of Attention-Seeking

	Total Nonintervention	Acquiescence	Postponement	Rejection
Women				
1 & 2	21	12 57.1%	9 42.9%	none
3	20	11 55.0%	9 45.%	none
4	66	35 53.0%	29 44.0%	2 3.0%
5	80	28 35.0%	44 55.0%	8 10.0%
Men				
1 & 2	19	10 52.6%	9 47.4%	none
3	14	5 35.7%	7 50.0%	2 14.3%
4	58	25 43.1%	26 44.8%	7 12.1%
5	55	19 34.5%	25 45.5%	11 20.0%

The data represented in Table 1 are presently being analyzed. It is apparent that some sex and socioeconomic class differences do occur; these will be interpreted in the light of current theories of child and family behavior patterns.

The data available from this study will also be used in studying interrelationships between parents' influence-control patterns and children's behaviors. The children of this sample of parents participated in another study, and data are available on variables relating to impulse control, motor skills, and classification abilities.

The two analyses mentioned above will be carried out during the 1968-1969 year. It is anticipated that the final report for this project (or reports, if the two analyses above are conducted and reported separately) will be prepared in early 1969.

Progress Report

NUTRITIONAL STATUS AND MENTAL DEVELOPMENT

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The relationships that have been found in developing countries between the lowered intellectual capacities of children and a severe form of protein-calorie undernutrition underscores the importance of assessing the nutritional status of disadvantaged children in this country for purposes of determining the relationship between nutrition and intellectual functioning. Specifically, these are the questions asked by this study. What is the nutritional status of urban American disadvantaged children? What is the relationship of nutritional status to mental growth and development? If undernutrition is found will it be reflected in delayed intellectual achievement as well as retarded physical development? What is the relationship of physical maturation to the development of perceptual-motor factors of intelligence? Is the lower intellectual capacity of disadvantaged children related to undernutrition as well as to psycho-social environmental factors?

The proposed sample consisted of an eight-celled design of 30 five-year-old children per cell distinguished by race, sex, and socioeconomic group differences. Methods of appraisal consisted of anthropometric determinations of body size and physical maturation, assessments of food intake by dietary interviews, biochemical appraisals of nutrient levels and determinations of intellectual performance by administration of psychological tests primarily non-verbal in character and perceptual-

motor in orientation.

Because of limitations on funds, it was necessary to concentrate data collection on two of the proposed eight cell sample, the Negro disadvantaged male and female children, and to eliminate the relatively more costly biochemical appraisals. It was felt that although no precise judgments of nutritional status could be rendered, the anthropometric and dietary intake data would reveal gross nutritional inadequacies and point out future direction.

Due to difficulties of obtaining participation of subjects not part of a "captive" population, it was possible to complete the data collection on twenty-two subjects, ten boys and twelve girls. All of our measurements of the body size of the Negro disadvantaged children studied seem to point to a child who is slightly shorter in stature, but heavier in weight than his lower middle class Caucasian counterpart. The index of physical maturation (skeletal age assessment) used revealed progress that was consistent with the measurements of external body dimensions. The body size of the boys in our study seemed to be slightly more affected by what is assumed to be adverse environmental conditions than the girls.

This stockier physique in our estimation does not reflect gross nutritional inadequacies since all of the physical measures of our children were bracketed within the ranges of measurements of children who were known not to have dietary inadequacies. If severe undernutrition were prevalent in our children, one would expect some overlapping of measurements at the lower ends of the distributions of

measurements of normal children with the median values for our sample falling much below the third percentile as has been documented by studies of children with severe protein calorie undernutrition.

Two explanations may account for these findings. First, body physiques due to cultural patterning and physique preferences have been found to be characteristic of different socioeconomic levels. Since lower class groups exhibit a shorter, stockier body build than the middle class, perhaps our children are simply reflecting these sociocultural differences. A second hypothesis suggested by the data is that a nutritional threshold is in operation. Our children may be experiencing food intakes that are "borderline" so that the child is able to adapt physiologically and thus gross growth discrepancies are not apparent.

The dietary intake data tend to confirm this picture of "borderline" nutrition in the disadvantaged Negro children studied. A judgment of extreme malnutrition in the direction of either over or undernutrition could not be justified by the nutrient levels obtained from the dietary calculations of the food intake data. Deficiencies of two nutrients, protein and calories, have been suggested as etiological agents in the physiological and neurological changes accompanying severe undernutrition. In the diets of the children we studied, however, both protein and calories were in the group of nutrients shown to be least likely to be lacking. The results of the analysis of the dietary interview schedules for food habit information rather surprisingly revealed a prevalence of middle-class meal patterns

and middle-class foods in the food intakes of the disadvantaged children studied.

Further scrutiny of the findings resulting from the anthropometric and dietary evaluations of the nutritional status of the children point to the necessity of including biochemical appraisals. The investigations of the interrelationships between these three methodologies will project a more precise and comprehensive picture of nutritional status. From our extensive study of the anthropometric data, it also is apparent the available normative data is a feasible yardstick for our purposes. A comparison population of middle-class children would, in our opinion, only serve to highlight difference in body size and possibly levels of nutrient intake without revealing more insights into the physiological well-being of the child.

The tests used to assess mental development were The Goodenough-Draw-a-Man test, the Seguin-Goddard Form Board, three sub-tests of the WPPSI, and the Block Design from the Wechsler Pre-school and Primary Scale of Intelligence. The scores from this battery of tests revealed only two significant correlations--the height measurements of the girls and measurements of head circumferences of the boys. We also found no relationship between the standard scores of the WPPSI and Draw-a-Man test contrary to other published reports. Because of this and our subjective impressions of the children's reaction to the test, we feel that the Draw-A-Man test should be eliminated and replaced by one more of the WPPSI sub-tests.

Progress Report

A PILOT STUDY TO CHARACTERIZE CHILDREN'S SELF-SELECTED ACTIVITIES WITHIN THE NATURALISTIC CONTEST OF THE PRESCHOOL MILIEU

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October 31, 1968

Purpose

Concern for the education of disadvantaged preschool children brought not only the establishment of Head Start programs per se, but also fostered considerable research effort focused on comprehensive program evaluation. In Head Start there are vast differences in programs and their curricular emphases. Research to date has consisted largely of comparing traditional preschool programs with special programs (e.g. Sprigle Sequential Curriculum, the Bereiter-Englemann method), and experimenting with other curricular aspects (e.g. programmed material, operant conditioning).

Many of the current programs being researched, and the majority of Head Start classes in operation, include a period of self-selected activity within their programs. Some programs, especially the structured ones (e.g. Bereiter-Englemann), while they include such a period, consider it merely as a "recess" and do not utilize it as a potential learning source. In contrast, traditional programs utilize self-selected activities as one of the major learning sources in their curricula, assuming

that children will engage in those activities which interest them and in turn enhance their development. Still other programs use a combination of structured and self-selected activities. While there is difference of opinion regarding the use and effectiveness of self-selected activities, to date no research has been done to support or refute the positions held by various educators. Considering the fact that a large percentage of Head Start classes use self-selected activities (to a greater or lesser degree) in their programs, an analysis of it as a learning source appears relevant, if not imperative.

The unique problem to which this pilot study is addressed is to the factors specifically associated with empirical change (process), rather than to empirical change per se (product). Rather than examining the "product" or result of using self-selected activities (e.g. pre- to post-test gains in developmental abilities), this study instead will examine the dynamics of children's behavior, occurring during periods of self-selected activity, as a function of the ecological system (i.e. space, materials, and children). The primary objective is to determine if children exhibit behavior patterns during periods of self-selected activities. More specifically, do children when engaged in self-selected activities, exhibit predictable, recurring patterns of behavior over time? If such patterns exist, are they associated with the developmental abilities of the children?

Procedures and Tentative Analysis

In order to determine whether activity patterns are present during a self-selected activity period, the total daily program simulated a standard preschool program. Activities included: free play (self-selected) indoors and outdoors, teacher-directed group activities and a snack time (Filming was of indoor self-selected activities only). Thus the setting was naturalistic rather than experimental in nature.

The independent variables were the ecological system components: space, materials, and children. The space consisted of one playroom, divided into four equal activity areas or "behavior settings" (blocks, dramatic play, creative arts and crafts, and manipulative toys and books). The areas were randomly rotated for each session. The materials or "behavior objects" were distributed in each of the areas and remained constant throughout the study. There were seven children in the group. In addition, there was one adult in the playroom to supervise the children's activities. He remained in a central area, outside of the "behavior settings." The teacher generally did not initiate contact with the children, but responded only to their initiation.

The dependent variables are the observed interactions between the child and the components of the ecological system (space, materials, children). Specifically, these variables were: area usage, peer interaction, and material usage. Area usage was defined as the physical location of behavior for an individual child. Peer interaction was defined according to an adaption of the Parten classification schema. Material usage was defined as the toy, materials, and/or equipment

physically touched and utilized by the individual child.

Thus far, coding has been completed for area and material usage only. Coding consisted of recording the areas and materials utilized by each child, individually, during a thirty-second interval and continuing for the entire self-selected activity period. Frequency and sequence of utilization of areas and materials is available from this coding. Tentatively, the raw data is being converted into percentages and will be analyzed for patterns. Trends which appear significant will be pursued with appropriate statistical tests. Coding and analysis of peer interaction will commence after area and material usage has been completed.