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ABSTRACT

Two groups of mothers and children were sampled for this study. One group of 39 was identified as middle-income or higher and the other group of 32 was identified as lower-income. The children ranged in age from kindergarten through third grade. The teaching task was adapted from the Eight Block Sort used by Hess, et al. (1968). No reliable differences in mothers' teaching style occurred as a function of the age of the child, but there were marked differences in the teaching styles of mothers as a function of socioeconomic scale. The general results of this study are similar to those found in earlier studies of maternal teaching behavior. The finding that differences in mothers' teaching style are so clearly a function of socioeconomic background should provide clues to the dilemma of why the low income child so often has difficulty adapting to the typically middle income school system and structure.

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How Mothers Teach

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It has been apparent for many years that there are cultural differences in the way mothers interact with their children but it has been only since the second world war that systematic observations of the mother's behavior in that interaction ^{have been} ~~were~~ made. From that time to the present, there have been many studies of the mother's behavior when with her children. A pervasive finding of these studies is that there are systematic differences in the way mothers teach their children which is a function of the socio-economic background of the mother.

Hess, Shipman, Brophy, and Bear (1968) conducted an exhaustive study of the interaction between mothers and their children. The study involved 163 black mother-child pairs from a large urban community. Four different social class levels were studied ranging from families at the welfare level to families who were professionals. The research strategy involved parent interviews, standardized intelligence tests, measures of cognitive functioning, and a structured situation where the mother could be observed teaching her four-year old child. There were clear and consistent differences among the social class groups

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in the mothers' teaching and control strategies. The lower class mothers tended to use status and normative appeals in their control strategies while the middle class mothers relied on the use of personal and subjective means of control. Middle class mothers used more instruction in their teaching while lower class mothers relied on authority and imperative commands in their teaching.

Brophy (1970), using a subsample from the Hess, et al (1968) study, did a more detailed analysis of the mother's teaching styles. He concluded that the teaching could not be described as two contrasting "styles" but must be considered as continuously variable from limited reactive teaching to diversified proactive teaching. There was consistency in that lower class mothers tended to use reactive teaching and control systems based on demands, all of which resulted in ineffective teaching. The middle class mothers, on the other hand, used proactive teaching and offered alternatives to a simple compliance in their control strategies with resulting effective teaching.

In a study similar to that of Hess, et al (1968), Bee, Van Egeren, Streissguth, Nyman, and Leckie (1969) reported consistent differences in mothers' teaching as a function of social class. The differences were similar to those reported by Hess, et al (1968) and indicated that middle class mothers tended to use more nonspecific suggestions, had more infrequent use of nonverbal help and used less negative feedback than did the lower class mothers. The lower class mothers tended to intrude physically in the child's problem solving activities, used a higher rate of negative feedback, and give the child more specific

and concrete suggestions than did the middle class mothers.

The research on teaching style of mothers as a function of social class has provided answers to many questions regarding the strategy of the mothers in teaching their children. The present study was designed as an extension of one aspect of the work of Hess, et al (1968). The materials for their structured teaching situation were altered to make them more appropriate for older children and observations were made of mothers teaching this new task to their children.

The following hypotheses were assessed:

1. The low SES mother will fail to provide advance organizers in her introduction of the task but the middle SES mother will provide adequate organizers prior to the task presentation.
2. Low SES mothers will provide less instruction and detail in their presentation than will middle SES mothers.
3. Low SES mothers will use more direct correction techniques and provide fewer reasons than will middle SES mothers.
4. Low SES mothers will use more negative and harsher control techniques and strategies while high SES mothers will use more positive and facilitating techniques.

Method and Procedures

Two groups of mothers and children were sampled for this study. One group of 39 was taken from a University Laboratory School and clearly identified as middle income or higher (middle SES). Another group of 32 were selected from a low income housing development and clearly identified as lower income (low SES). The children were of

the age range for kindergarten through third grade in approximately equal proportions for both the middle income and the lower income groups.

The teaching task used in this study was adapted from the Eight Block Sort used by Hess, ^{et al} and Shipman (1968). The task materials consisted of twelve blocks of varying size, shape, and color with either an X or an O marked on the end and a 12" x 12" board with one side divided in half by a white line and the other side divided in quarters by white lines. The session began with a trained administrator teaching the mother in a non-directive manner how to sort the blocks. She was first taught to sort the blocks into two groups using only one attribute (i.e., tall blocks and short blocks, round blocks and square blocks) and then taught to sort the blocks into four groups all possible ways by combining two attributes (i.e., tall round blocks, tall square blocks, short round blocks, and short square blocks; round X blocks, round O blocks, square X blocks, and square O blocks; etc.). The blocks were designed to allow for three different sorts of two groups and four different sorts of four groups. The mother was taught to preset criterion and was asked to verbalize the rationale for each grouping she made as the teaching progressed.

The mother was then asked to teach her child to sort the blocks into all possible four-part groupings and also to verbally express the reasons for each grouping made. She was given a maximum of twenty minutes to do this and told that she could teach the child any way she wished; there was no particular procedure she should follow. She was also given a short listing of the possible ways to group the

blocks so she did not have to rely on her memory. The child was then brought into the room and the mother-child teaching period began.

While the mother was teaching the child the trained administrator sat nearby and observed using both an observation checklist and an audio tape recorder. The data from the tape recordings will not be discussed in this paper, but will be presented separately at a later date. The observation checklist, developed specifically for this study, included items for both the orientation and teaching portions of the session. The orientation period was defined as the interval beginning when the child sat down at the table and ending when the mother first asked the child to sort the blocks into four groups. Thus the introduction may have included such things as general introductory statement, e.g., "We are going to play a game", an introduction to the various attributes of the blocks, and having the child sort the blocks into two groups using a single attribute. Since the mother was asked to teach her child to sort the blocks into four groups, anything occurring before the mother requested a four-group sort was considered orientation.

The teaching portion of the session was defined as the interval beginning with a request by the mother for a four-group sort and ending with the termination of the session, either because the mother stated she was finished or twenty minutes had passed. During the teaching period, the trained administrator observed such phenomena as (1) which of the four possible groupings of four-parts the mother and child made and how often each one was done; (2) how the mother corrected the child

when he made a mistake; and (3) the control strategy used by the mother when the child resisted the task.

The data were analyzed by a series of chi square two by two designs. When appropriate a median split was made and the groups were treated as high or low but where the data were yes-no or occurred-not occurred ~~it~~^{they} were treated as such.

Results

Since no reliable differences in mother's teaching style occurred as a function of the age of the child, the variable was disregarded in subsequent analyses. Consequently, Table I presents data comparing the behavior of middle SES mothers as a group regardless of the age of the child with lower SES mothers as a group with no breakdown by age of child for the various measures. (See Table I.)

It is clear from an examination of Table I that there are marked differences in the teaching styles of mothers as a function of socio-economic scale. The differences begin with the comparison of the number of mothers of each social class providing advance organizers. An advanced organizer was defined as any statement made by the mother providing information to the child concerning what was going to happen, e.g., "We are going to learn how to sort these blocks." Significantly more middle SES mothers provided advanced organizers than did low SES mothers.

The other aspect of the orientation period observed here was the extensiveness of the mother's introduction to the attributes. This

included both discussion of each attribute and having the child sort the blocks using only that attribute. A rating scale was developed to evaluate how thoroughly each attribute was covered (i.e., pointed to, labelled, labelled and pointed to, etc.). The sum of these ratings was the mother's score for Detail of Introduction. Table I shows that the middle SES mothers provided significantly more detail of introduction than lower SES mothers. While the low scores and high scores are nearly identical for the two groups of mothers the medians provide a clue to the actual distribution of scores within that range. This means that despite the fact that the two groups showed nearly identical ranges of scores, the middle SES mothers gave more thorough introductions than the low SES mothers.

Turning to the teaching portion of the session, it can be seen from Table I that middle SES mothers made significantly more four-part groupings than lower SES mothers. There were four different groupings which could be made using two attributes simultaneously and if the mother covered each grouping only once the minimum number made would be four. An examination of the raw data revealed that only three middle SES mothers covered less than four groupings while twelve lower SES mothers covered three or fewer. The data also indicate that many of the middle SES mothers, 25 out of 39, covered groupings more than once, that is, provided the child with repeated practice on the groupings. The same cannot be said for lower SES mothers where only 9 out of 32 covered more than four groupings.

Corrections by the mother when the child made a mistake were categorized into two groups: those where the mother provided an

explanation or reason for the correction, e.g., "That block has an X on it so it goes with the other tall X blocks, not the tall O blocks," or "The short round blocks should all be together"; and those where the mother provided no explanation or reason, e.g., "That's wrong," or "Change that so it is right." The total number of corrections of each type for each group of mothers was used for the analysis. Middle SES mothers used many more corrections during the teaching session than did lower SES mothers. In addition, the two groups of mothers differed significantly in the types of corrections used. Middle SES mothers used more corrections along with a reason while lower SES mothers used slightly more corrections without any reasons.

The last set of data in Table I pertains to the control strategies used by a mother when her child resisted the task. The frequency of use of different control strategies was tallied during the teaching period. These strategies were then categorized as positive or negative and the total number of each type for each group of mothers was used in the chi square analysis. The results clearly show that middle SES mothers used positive control strategies almost exclusively (i.e., encouragement, reasoning) while lower SES mothers used negative control strategies predominately (i.e., threat, physical restraint).

Discussion

The results of this study are similar to those found by earlier studies of maternal teaching behavior and thus provide further evidence to support the hypothesis that there are systematic differences in the

way mothers teach their children which are a function of socio-economic level. The finding that there were no reliable differences in the mother's teaching behavior as a function of the age of the child supports the idea that the results of this study should resemble those of Hess, et al (1968) since the tasks used in the structured teaching situation were similar.

Hess, et al (1968) and Brophy (1970) both report that middle SES mothers gave more complete and detailed introductions than lower SES mothers. The results of this study agree with those findings. Although the measures used to evaluate the introduction were different in this study, the overall result is the same--middle SES mothers provided a more detailed introduction to the task than lower SES mothers.

Previous studies of maternal teaching behavior have not examined the number of groupings made by the mother, so the results concerning this measure cannot be related to earlier findings. The fact that middle SES mothers by and large provided repeated practice on the various groupings while lower SES mothers did not is an interesting finding. This result may mean that the middle SES mothers wanted to be sure that their children would be able to perform the groupings and thus felt repetition was necessary while the lower SES mothers felt that once through each grouping was enough. This finding may be related to how well the mother can assess the child's level of mastery of the task.

Although this study examined correction techniques in terms of whether or not an explanation or reason were given, it was clear

from the examples given that these findings are related to what Hess, et al (1968) labeled "specific feedback." Both the present study and the study by Hess, et al (1968) found that middle SES mothers are more specific in their feedback than lower SES mothers.

While this study used the categories of positive and negative for the control strategies used by the mothers, Hess et al (1968) used two separate measures--one titled "praise and encouragement" and the other "coercive control." The earlier study found that middle SES mothers used significantly more praise and encouragement than lower SES mothers while there was no difference in the amount of coercive control used by the two groups. An examination of the entries in the chi square table for control strategies in Table I reveals that the same situation exists. The large differences between the two groups lies predominately with the number of positive control strategies used.

Conclusion

The fact that differences in mother's teaching style are so clearly a function of socio-economic background should provide clues as well as rationale to the dilemma of why the low income child so often has difficulty adapting to the typically middle income school system and structure. It is not surprising that the child meets with frustration in attempting to adapt to a teacher who is so obviously different than his mother in her approach to teaching. It is not surprising that the school teacher who uses open teaching styles and positive reinforcing systems for the control of behavior in the lower income child meets with frustration when such systems are ineffective. Both child and teacher are ill prepared to meet the demands of such an educational situation.

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Table I

Cell frequencies, chi squares and probabilities as a function of socio-economic level (lower SES = LSES, middle SES = MSES). Data are based on median splits except where marked otherwise.

Category		MSES	LSES	χ^2	P
Advance Organizers	Yes	34	10	21.02	.001
	No	5	22		
Detail of Introduction	Above	22	11	3.89	.05
	Below	13*	20*		
	Low	0	0		
	High	19	18		
Number of Groups Made in Teaching	Median	15	10	19.81	.001
	Above	25	3		
	Below	14	29		
	Low	2	0		
Number of Corrections With or Without Reasons	High	14	11	17.13	.001
	Median	7	4		
	With R	113	10		
	Without R	26	15		
Number of Control Strategies	Positive	22	3	14.08	.001
	Negative	4	12		

*Scores falling at the combined median were dropped.