To the Graduate Council:

I am submitting herewith a thesis written by Elizabeth Kell entitled "Some Observations of Child Language Behavior in a Preschool Setting." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Child Development and Family Relationships.

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SOME OBSERVATIONS OF CHILD LANGUAGE BEHAVIOR IN A PRESCHOOL SETTING

A Thesis

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Master of Science

Degree

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Elizabeth Kell

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ABSTRACT

The purpose of the present study was to look at child language behavior as it occurred in the social context of a preschool setting. The subjects included four black and four white children matched for socioeconomic background and age. The specific questions asked in the study were who talks to whom, how often and under what conditions and what are the differences, if any, between the language behavior of black and white children as it relates to these variables.

Four fifteen minute video and audio records were obtained for each child during an indoor free play period. To obtain descriptive information on the social settings in which language behavior occurred, a category system was developed to account for a number a child and adult behavior commonly occurring in free play situations. Observer recorded the occurrance of these behaviors and also recorded verbatim accounts of what a child was saying at the time of occurrance.

The findings of the present study indicated that although few differences existed in the kinds of behavior exhibited by black and white children, where compared to white children black children used language much less and that their speech was usually characterized by short semigrammatical utterances. However, modification of both frequency of speech and length of utterance by black children was found to be associated with particular social situations. This finding, that black children differentiated their manner of speaking in certain

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circumstances, points to the need for futher investigations of the specific effects of environmental factors on language behavior.

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CHAPTER I

INTRODUCTION AND RELATED RESEARCH

For some time researchers and educators have known that differences in language are consistently associated with individuals and groups who are economically disadvantaged or otherwise out of the mainstream of American life. Measurable social class differences in speech (see Cazden, 1966) coupled with the now well documented fact that large numbers of children from low-income and/or minority groups are failing to profit from the educational system (Coleman et al., 1966) has led many professionials to the conclusion that while other handicaps may exist, language is at the core of the learning difficulties for the culturally different child (e.g. Brottman, 1966; Bernstein, 1970). In other words, because language is almost universally held to be a fundamental skill for educational achievement, minority group children, particularly black children, are thought to be at a distinct disadvantage because of their linguistic differences. While this position is widely held among educators, the data supporting it leaves much to be desired. As Lahey (1973) points out many of the important issues relevant to this position are still up in the air. The most important questions, how does the language of the "disadvantaged" child differ from the language of his white middle-class counterparts and which, if any, of these differences are educationally significant still have no well supported answers.

A review of the literature pertaining to sociocultural aspects of language prior to and through the midnineteen-sixties reveals striking agreement among researchers (mainly educational psychologists) in their interpretations of the language capabilities of culturally different children. From the work of these investigators and most notably from the influential writings of Hess and Shipman (1965) and Deutch and his associates (1967) culturally different children, especially black children, emerged as a group whose speech patterns were degenerate and linguistically underdeveloped laying the basis for cognitive disabilities that, in turn, led to poor school performance. Consequently, intervention programs initiated in the nineteen-sixties were based on the assumption that the language of lower-class and/or black children was inadequate for learning the skills necessary for school or even for thinking.

Recently a number of investigators have taken issue with the "deficient language" position on several important points. First, linguists, who entered the scene after the "deficient language" position was already well established in educational circles (Horner and Gussow, 1972) point out that while differences do exist, there is no evidence that the language of culturally different children is deficient (e.g. Baratz, 1968; Labov, Cohen and Robins, 1965). Indeed, the position of most linguists is that there are no inferior languages as evidenced by the fact that even the most primitive tribes have language systems as complicated as Standard English (Hall and Turner, 1974).

Additional support for the different but not deficient position comes from the fact that almost without exception studies which point to shortcomings in the language capabilities of minority group children have been conducted in artificial settings using assessment techniques such as interviews (Templin, 1957; Young, 1940) tests (Gerber & Hertel, 1969) and other formal data gathering techniques. The severe limitations of such research strategies have been pointed out by Horner and Gussow (1972): "To assess a lower-class child in such a situation may be somewhat equivalent to taking a fish from water putting it on a table and observing that it has no means of locomotion" (p. 163). Only recently have a few researchers ventured into natural settings to conduct their investigations and the results of these studies have forced a reevaluation of the distorted, stereotyped image of the culturally different child commonly held by educators. Labov (1968) for example has demonstrated that in contrast to the truncated language samples elicited in artifical settings, black children can be shown to have a wide range of verbal skills when setting conditions are more familiar and less threatening. More recently Houston (1969) observed two quite distinct manners of speech in children in rural Florida, a meager type used in schools, interviews, and similiar situations and a complex, sophisticated type used among family and peers.

Referring to the work of researchers such as Labov and Houston, Gumperz and Hernandez-Chavez (1972) summarize:

> There is overwhelming evidence to show that when both middle-class and nonmiddle class children, no matter what their native language, dialect, or ethnic background come to school at age five or six, they have control of a fully formed grammatical

> system. The mere fact that their system is distinct from that of the teacher does not mean that it is not rule governed. Speech features that strike the teacher as different do not indicate failure to adjust to some universally accepted English norm rather, they are the output of dialect or language specific rules that are every bit as complex as those of Standard English (p. 84).

Finally, with regard to the position that language differences (translated as deficiencies) constitute the major obstacle in the culturally different child's ability to learn is the question of what role language actually plays in cognitive ability. Piaget (1955) for example, postulates that language is not a sufficient condition for the constitution of intellectual operations. This aspect of the problem is beyond the scope of the present research, nevertheless, it remains to be demonstrated that certain formal characteristics of language are necessary for certain kinds of thinking or intellectual activities.

In summary, the position that lower-class children, particularly black children, fail to succeed in school because of inferior language capabilities has been questioned as several important points. First, linguists have pointed out that there is no evidence that simply because the language of culturally different children is different from Standard English is it in any way an inferior language. Secondly, most studies responsible for perpetuating the viewpoint of linguistic deficiency were conducted in artifical settings, not in situations where lower-class children exhibit their most complex language behavior. When observed in more natural settings they exhibit a language that contains all the complexities of the language spoken by middle-class whites. Finally,

there is some question concerning the role language itself plays in cognitive ability.

I. THE PROBLEM

Recent systematic research on dialect, grammar, and other formal features of culturally different language has begun to dispel many of the distorted assumptions about the inferior language capabilities of lower-income and/or black children. Nevertheless, the predominant view among educators that certain formal characteristics of language are directly related to success in the classroom has resulted in educational programs designed to change certain formal characteristics of culturally different child language so that they conform to white Standard English. That is, programs were designed to teach lower-class and/or black children to "talk like" their middle-class counterparts; an effort which has been conspicuously ineffective (Bailey, 1968; Shuy, 1968).

This preoccupation with the formal characteristics of language has resulted in almost total neglect of how language functions for the child or how a child uses the language he has. While the focus on purely formal characteristics of language can provide a perfectly valid description, there are important limitations as Horner and Gussow (1972) point out:

> The formal orientation has tended to imply that a detailed and accurate description of a language or a nonstandard dialect will uncover trouble spots in each, suggest an approach to their elimination or modification, and ultimately result in an individual with an enhanced ability to learn. Where the language differences of lower-class children are concerned, such an assumption is at best open to question. It is likely that if we could take what we

> now think of as a middle-class child and substitute for his middle-class phonological and grammatical forms a lower-class phonology and grammar, he would still perform in school more like a middle-class than a lower-class child. There is simply no evidence that certain formal characteristics interfere with the learning of anything except other formal characteristics. We may argue that a child's teacher may like him better or that he will be more comfortable if he speaks a standard dialect, but we have no empirical foundation for assuming that differences in the way children sound are in any way central to the problem of whether or not they can learn in a classroom (p. 157).

The formal orientation of linguistics as Blank (1972) points out has provided an extremely limited empirical basis from which to derive guidelines for teaching language skills to children whether disadvantaged or otherwise. Futhermore, in assessing child language differences, linguists have generally focused on some characteristic of the child such as socioeconomic variables while ignoring situational variables which, as Labov (1965) and Houston (1969) have demonstrated, are equally influential.

If intervention programs are to be developed which deal more effectively with the problem of educational disadvantage, then a broader view of language is obviously needed. As Hymes (1972) argues:

> What is crucial is not so much a better understanding of how language is structured, but a better understanding of how language is used; not so much what language is, as what language is used for. Linguists have generally taken questions of use and purpose for granted. They have not related the structure of language to the structure of speaking. Yet if one thing is abundantly clear, it is that the problems in many American classrooms have to do precisely with this relationship (p. xii).

What Hymes is advocating is a more ecological conception of language behavior.

More specifically, if we begin with the assumptions that there are no inferior languages and that all languages adequately meet the needs of

the linguistic communities that speak them (Horner and Gussow, 1972) the problem becomes not simply one of identifying differences in the formal characteristics of language, but of identifying how children from various subgroups use their language and, critically important for the development of educational programs, of identifying how contextual variables affect the use of language in different settings.

The present study is an exploratory attempt to look at language behavior as it occurs in the social context of a preschool setting. The focus of attention will be on situational variables associated with the use of language.

CHAPTER II

METHOD

I. SUBJECTS AND SETTING

The subjects were eight five year old children enrolled in an experimental kindergarten program operated by the Department of Child Development at the University of Tennessee. All children in the program were from low income families and were referred to the program by the State Department of Public Welfare. The children studied included three white males, one white female, and four black females. Although subjects were matched for socioeconomic background and age, the composition of the group did not allow for matching by sex, i.e., there were no black males in the program and only one additional white female who was seven.

The subjects attended the kindergarten program four afternoons each week for three hours a day. The program consisted of both indoor and outdoor freeplay periods, a period for large group activities, a time for small learning groups and a snack period. The staff included one full time graduate student who functioned as head teacher and two undergraduate student teachers. Several other students worked in the program on a part time basis, usually three to four hours each week. All full as well as part time staff were white females.

Throughout the study the indoor free play period was used to record child behavior. During this period children engaged in a variety of activities moving

freely from one activity to another. Active play such as climbing, sliding, etc. was encouraged as well as quieter activities such as reading or painting. Although teachers were always present in the room during this period they did not usually initiate any kinds of organized activities with the children. Rather, they were available to the children when needed and readily participated in activities upon request.

II. APPARATUS

A sophisticated data retrieval system developed and tested in similar settings by Nordquist (1971, 1972) was used in the present study. The system allowed for the simultaneous collection of audio and video records of child behavior. Records of child language were obtained in the following manner: the child being monitered was asked to wear a "special vest" housing a small wireless microphone and radio transmitter. The design of the vest allowed the child complete freedom of movement without even the most vigorous activities interfering with the position of the microphone or the quality of audio transmissions. Voice transmissions were telemetered to a Space Labs receiver (Biotel 170) located in an observation booth adjacent to the classroom. These audio signals were then amplified by a Shure audio master and relayed to a video tape recorder.

Videotape records of behavior were obtained using a video recorder (Sonoy-AV 3400) also housed in the observation booth. The booth allowed one way observation into both the classroom and a locker room/play room adjacent to the classroom. Because the scoring system used in analyzing

the videotape records called for a division of the tapes into ten second intervals, prerecorded time interval signals were also relayed to the video recorder via an audio tape recorder.

III. OBSERVATION AND RECORDING TECHNIQUES

Four fifteen minute videotape records were obtained on each child over a period of six weeks. Although frequent and sporadic absences among the subjects prevented strict scheduling of recording sessions, observations of each child were evenly distributed over the six week period.

In order to obtain descriptive information about when children used language, i.e., in what kinds of social situations, child and adult behaviors were categorized and a coding system established. Briefly, the categories accounted for broad classes of play behavior including cooperative, parallel, solitary and inappropriate play. Social attention from teachers and peers, approach behaviors, imitative behavior, instruction from teachers and compliance or noncompliance to instructions were also covered by the category system. A complete description of the categories, definitions and coding methodology can be found in Appendix A.

From videotape records observers, one of whom was the investigator, recorded the occurrence of child/adult behaviors within successive ten second intervals on a behavior score sheet. A copy of the score sheet may be found in Appendix B. Regardless of duration, any occurrence of a behavior class was scored once for each interval in which it occurred.

Reliability checks were made periodically throughout the study. Reliability for each behavior category was calculated as the number of agreements plus the number of disagreements, multiplied by one hundred. Reliability was never lower than 85%.

After each tape had been scored for categorized behaviors, observers viewed the tapes again and entered verbatim accounts of child speech in a space on the score sheet corresponding to the time interval in which speech occurred. Thus, a finished tape provided a record not only of what a child was doing but what he was saying at the time. Although the verbatim records of speech were converted to frequency of occurrence measures when the data was analyzed, one objective of this exploratory study was to determine how effectively verbatim accounts of speech could be obtained using the data retrieval system described earlier. Observers could replay each speech episode as many times as necessary to record exactly what was said. In the instance that what was said could not be understood after repeated listening, observers recorded a large X for phrases or sentences which were unintelligible and a small x for single words that could not be understood. No formal system for assessing the reliability of the verbatim accounts was established. However, when two observers recorded speech behavior at the same time there was strong agreement in their accounts. What disagreements did occur usually involved single words and there were virtually no disagreements over the occurrence of unintelligible speech.

IV. TREATMENT OF THE DATA

The purpose of this exploratory study, as stated earlier was to look at child language as it occurred in social context. The specific questions addressed to the data were who talks to whom, how often and under what conditions and what are the differences, if any, between the language behavior of black and white children as it relates to their variables. Frequency of occurrence measures for all behavior categories were computed for each child over all four sessions and converted to mean percentages based on the total possible number of occurrences. Verbatim accounts of speech were also converted to frequency measures by counting each interval in which speech occurred as one unit of language behavior. In order to obtain information on how the occurrence or nonoccurrence of language behavior relates to what a child is doing and whom he is doing it with, conditional frequency of occurrence measures for each activity category within which language occurred were also computed anc onverted to mean percentages. All data was pooled by race.

CHAPTER III

RESULTS AND DISCUSSION

Table 1 presents frequency of occurrence percentages for activity categories based on the total number of possible occurrences for each category over all four sessions. As the table indicates there is very little difference in the kinds of activities black and white children engaged in when total frequency percentages for each activity are considered. An exception is the solitary play category. Black children did spend more time in solitary play than white children. Although few differences exist in total frequencies of the various categories, some interesting differences become apparent when the data is considered in terms of whether children were engaging in activities with same or different race peers. First, the black subjects were in cooperative play with white children considerably more than the target white children played with black children. In fact, the white children played almost exclusively with other white children in both cooperative and parallel play. Black children, on the other hand, played almost as much with white children as with other black children. This is particularly interesting in light of the finding that black and white children approached each other with the same frequency. This suggests that black children were more successful in their approaches to white children than white children were when approaching blacks, i.e. black approaches to white children more often resulted in cooperative play. Further

Table 1

Frequency Percentages for Behavior Categories

	BLACK CHILDREN				WHITE CHILDREN			
	Same Race	Different Race	Mixed Group	Total	Same Race	Different Race	Mixed Group	Total
Cooperative play	.06	.10	.02	.18	.18	.01	.01	.22
Parallel play	.11	.09	.20	.37	.32	.06	.09	.44
Solitary play				.40				.29
Approaches to adults				.06				.09
Approaches to peers	.01	.03	.03	.06	.05	.03		.08

elaboration of the differences in behavior categories will accompany discussion of the situational contexts in which language behavior occurred.

Table 2 represents conditional percentage measures for all activity categories within which language occurred. This measure is based on the total frequency of occurrence for each category across all four sessions. Table 2 shows that white children used language much more than black children in virtually every social situation. The most striking differences in conditional frequencies of language behavior occurred in cooperative play. Although, as pointed out in Table 1, black and white children spent approximately the same amount of time in cooperative play, the total frequency percentage of speech in this category was 65% for white children compared to only 38% for black children. This difference is even more interesting when broken down in terms of whether children were talking to peers of the same or different race. Both black and white children used language more when playing with peers of different race. However, black children only used language 25% of the time when in cooperative play with other blacks; white children when playing cooperatively with other white children used language much more often, 63% of the time. When playing with peers of different race or with mixed groups, black children used language 44% and 28% of the time respectively. Again this is much less than white children in similar situations. Even though the white children under study very rarely played with black children, .01% of the time, when they were in cooperative play with black children or in groups of mixed race they used language 100% of the time.

Table 2

Conditional Frequency Percentages for Activity Categories within which Speech Occurred

	BLACK CHILDREN				WHITE CHILDREN			
	Same Race	Different Race	Mixed Group	Total	Same Race	Different Race	Mixed Group	Total
Cooperative play	.25	.44	.28	.38	.63	100	100	.65
Parallel play	.50	.38	.28	.39	.41	.60	.13	.35
Solitary play				.19				.54
Approaches to adults				.79				.97
Approaches to peers	.70	.77	.33	.74	.88	.72	.33	.79

Another large difference in language frequency occurred when children were in solitary play. Although black children spent more time playing alone, white children talked in solitary play almost three times as often.

The low frequency of language usage by black children in cooperative play, particularly the low frequency when playing with other black children, might suggest that language is a less important medium of communication for black children, at least for maintaining cooperative interactions. However, the fact that black children talked less in virtually every situation including solitary play may reflect the influence of gross situational variables. Several of the studies previously cited have indicated that the language behavior of black children is often artificially suppressed in school settings. In these settings their language is typically characterized by very low frequencies and short, semigrammatical utterances. In order to investigate this hypothesis and also to determine whether the overall low frequency of black language could in part be a result of differences in the lengths of speech episodes, frequency percentages for single word utterances were computed for both black and white subjects.

It was found that black children used single word utterances 72% of the times they used language. White children almost never spoke in single words. Rather, their speech usually consisted of phrases or sentences. Further analysis of the verbatim accounts of speech revealed that almost without exception when black children did speak longer utterances it was when approaching adults, when approaching white peers, or when playing cooperatively with white peers.

Finding that the frequency of speech was much lower for black children and that the length of their speech episodes was usually much shorter is not sufficient evidence for assuming that the preschool environment of the present study suppressed their language behavior. Additional data from home or other more natural settings would have to be gathered for comparison before such an assumption could be confidently made. However, several studies mentioned earlier which did compare speech of the same children in different settings strongly suggest that low frequencies of speech and short utterances do represent artificially suppressed language behavior. It does appear that within the particular setting of the present study increases in both frequency and length of speech episode were associated with certain situational variables. While functional statements about the effects of these variables would require experimental manipulations, there are several possible explanations for why the black children modified their speech when talking to white peers and adults. For example, several studies are available which indicate that children modify the complexity of their speech on the basis of their perception of the language capabilities of the listener, or, in other words, on their perception of the listener's ability to understand what was said (e.g. Cazden, 1970). It could be speculated that the black subjects found that white children and adults simply did not understand them unless they used more elaborate speech than was found to occur when blacks were talking to other blacks. Another somewhat related explanation might be extrapolated from Kochman's proposal (1972) that a high degree of familiarity with certain situations or

people who share common life experiences often evokes a distinct style of speaking among blacks that is characterized by an economy of words with a high incidence of significant nonverbal communication such as gestures, facial expressions, etc. Low familiarity or identification evokes a style of speech that is more formal and is characterized by more elaborate speech episodes.

Because of the nature of the present study and the kinds of questions addressed to the data, any explanations of why black children increased the length of their speech episodes when talking with adults or white peers or why their frequency of language behavior was greater when playing with white peers necessarily remain matters of speculation. The important points are that differences in the language behavior of black and white children were found, and that there was situational relatively for certain types of utterances by black children or that black children differentiated their manner of speaking in certain social situations. These findings emphasize the necessity for research focusing on the identification of specific effects of various situations on language behavior.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Several conceptions and misconceptions about the language behavior of culturally different children were discussed and the scarcity of descriptive data on how children use language and how the use of language is related to social context was pointed out. The present study represented an exploratory effort to look at child language behavior in one particular setting with a focus on how the occurrence of speech was associated with certain situational variables and to assess the differences in the language behavior of black and white children as it related to these variables. The findings of the present study, that the language behavior of black children occurred at a very low frequency characterized in most instances by short semigrammatical utterances and that modifications of both frequency and length of utterance were associated with particular social situations, point to the need for further investigations of the effects of environmental factors on language behavior. Obviously these investigations must extend beyond frequency counts of speech episodes and descriptions of the length of these episodes to descriptions of the functions of language in specific contexts. If this is to be done we need to learn how to describe, analyze and theorize about what is actually said, by whom, to whom, when and where.

Until very recently technological limitations prevented the collection of verbatim accounts of language, an initial and minimal

requirement for developing appropriate categories for the study of language functions. Now, with the development of data retrival systems such as the one described in the present study this is possible. The problem, then, becomes one of identifying the characteristics of functional language behavior within contexts and once this is accomplished, of determining what specific features of the environment are causally related to various functions of language. Cazden (1970) has suggested that the most practical focus for this type of research should be an identifying how contextual features of the school environment effect the functions of language since these contextual features are something educators could do something about. There is some hazard, however, in attempting to modify the functions of language in the classroom without a clear picture of how various functions of language are promoted in the home environment. Not only does the language of culturally different children differ from that of their white-middle-class counterparts but their cultural milieus are also quite different. At a time when most research focuses on how different children respond differently in the same settings, it should be extremely useful to focus on how the same children respond differently in different settings. That is, it is quite probable that different environments, specifically the home and school, promote different uses of language.

Thus, it is essential that before efforts are made to modify how culturally different children use their language in the classroom, we must have information on how these efforts might affect the child's ability to function in his home environment.

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APPENDIXES

APPENDIX A

Child Behavior Categories

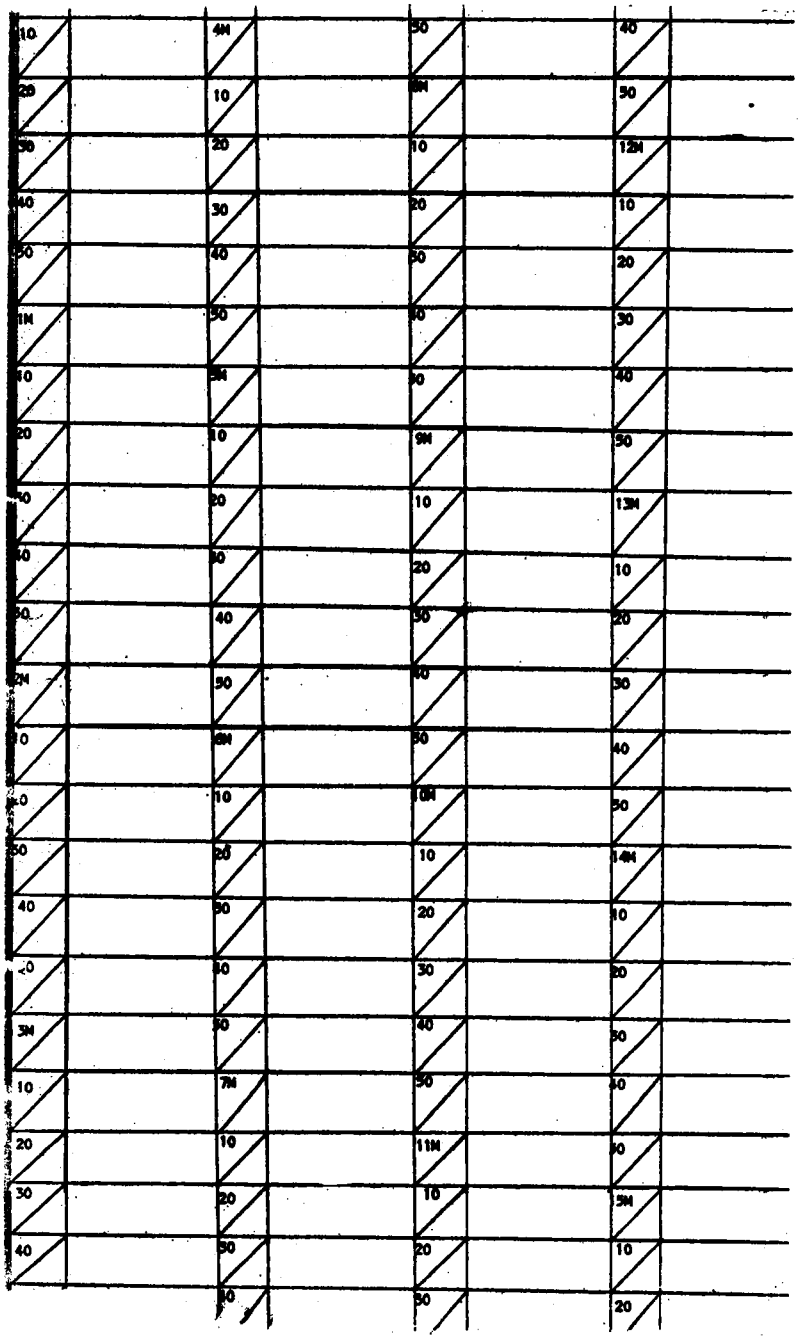
Code	Behavior	Definition
CP	Cooperative play	Engaging in the same activity with another child. Accompanied by visual, verbal or physical contact. Physical contact includes object contact such as handing a toy to another child, adding to the same structure, etc. CP must be initiated by a social approach. Code CP_1 for playing with same race peers, CP_2 for peers of different race, CP_3 for group of mixed race.
PP	Parallel play	Engaging in the same activity as another child but with no visual, verbal or physical contact. Code PP_1 for play with peers of same race, PP_2 for peers of different race. PP_3 for group of mixed race.
SP	Solitary play	Playing alone. Not engaged in same activity as another child. No visual, verbal or physical contact with another child.
IP	Inappropriate play	Hitting, taking toys, yelling, spitting, etc. Disrupting the play of another child. Engaging in behavior designated inappropriate by the teacher.
Aa	Approaches to adult	When child initiates contact with an adult. Scored only when child has not been in contact with adult for at least 10 sec.
Ap	A-proaches to peers	When child initiates contact with another child. Scored only when child has not been in contact (CP) with another child for

Code	Behavior	Definition
Ap (con't)	Approaches to peers	at least 10 seconds. Score Ap_1 for approaches to peers of same race, Ap_2 for approaches to peers of different race, Ap_3 for approaches to groups of mixed race.
Ia	Imitation of adult	When child behavior matches behavior during the same interval or the interaval following the time interval during which adult behavior occurred. Continue scoring as long as behavior matches.
Ip	Imitation of peers	When child behavior matches behavior of peer. Score the same as for approaches to adults. Code Ip_1 for imitation of same race peers, Ip_2 for different race peers, Ip_3 for groups of mixed race.
C	Compliance with instructor	When child begins to comply with adult instruction either during the interval when instruction was delivered or the interval immediately following. Continue to code C in successive intervals until child completes instruction or with new instruction is delivered.
	Adult/Peer Behaviors	
A	Social Attention from Adult	Any form of social attention. Verbal attention, physical contact such as petting, holding hands, hugging, nodding, appearance, etc. If attention is negative in nature such as yelling at a child, shaking, etc. Code A-.
I	Instructions from Adult	Specific instruction given by the teacher.

Code	Behavior	Definition
aA	Approach by Adult	When adult initiates contact with child. Scored only when child has not had contact with adult (A) for at least 10 seconds.
Pa	Approach by peer	When peer initiates contact with child. Scored only when child has not been in contact with peer (CP) for at least 10 seconds. Code Pa_1 for approaches by same race peers, Pa_2 for different race peers, Pa_3 for mixed group.

APPENDIX B

Behavior Score Sheet



VITA

Elizabeth Kell was born January 30, 1950, in Copperhill, Tennessee. She attended public elementary school in Copperhill and was graduated from Copper Basin High School in 1968. The following September she entered Maryville College and in August 1972 completed the requirements for a Bachelor of Arts degree in Psychology.

She began graduate studies in the Department of Child Development at The University of Tennessee in September, 1972, and received the Master of Science degree in 1974.