THE LANGUAGE PERFORMANCE OF MIDDLE CLASS AND LOWER CLASS KINDERGARTEN CHILDREN AS A FUNCTION OF COMMUNICATIVE DEMANDS

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ABSTRACT

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Forty middle class (MC) and forty lower class (LC) kindergarten children were tested on a story retelling task using measures of production and communication. It was suggested that if the LC child were to interpret the communicative demands of this task in the same way as the MC child his performance on these measures would be similar to that of the MC child. Instructions and listener variables were manipulated to make the communicative demands of the situation as explicit as possible. It was hypothesized that under the conditions in which the demands were made the most explicit the LC child's language performance would improve and approach that of the MC child. The MC child was not expected to improve his linguistic behavior in the differing conditions. The results of the study indicate that even in the condition with the most explicit demands the LC children did not improve their language, nor did the MC children. It was felt that the experimental manipulations in the present study were not sufficient to change and improve the LC child's language performance. Suggestions for changing the way in which the LC child assessed the communicative demands of the classroom were made.

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The failure of lower class (LC) children in school has been well documented in reports of educators and researchers (Abramson, 1952; Curry, 1962; Hill and Giammatteo, 1963; Douglas, 1964). There is also considerable agreement among investigators that language is a primary factor influencing the discrepancy in scholastic achievement between LC children and their middle class (MC) peers. Controversy arises with regard to

1) the causes or nature of the language problem and

2) the nature of the intervention program designed to remediate the problem.

With regard to the nature of the language problem, the controversy centers on whether the LC child's language is deficient or simply different in relation to that of the MC child. Proponents of the deficiency hypothesis advocate an intervention program which assumes that the LC child must be taught the very basics of a language. The difference theorists argue that the LC child's language is adequate but different. Therefore, they suggest that specific changes, such as providing primary readers in the child's own dialect, be made in the present educational program (Baratz, 1970). Standard or MC English could be introduced after the child has learned to read and is well adjusted to the school situation.

A third approach to the study of the role of class differences in language usage is that of sociolinguists. This approach emphasizes factors which must be considered whether one accepts the deficiency or the difference hypothesis. One such factor is communicative competence (Hymes, 1967), i.e. the ability to assess communicative demands of social situations and respond accordingly. The way in which a child will interpret communicative

demands is very much a function of his language experience. As the school setting is primarily a MC environment, its communicative demands are easily understood by the MC child. However, these demands are not necessarily understood by the LC child. These theorists believe that educational efforts should be devoted to understanding the factors which contribute to interpretation of the communicative demands in order to help the LC child respond more appropriately in the classroom.

The present study examines the effect of instructions and situational factors on the interpretation of communicative demands by children of LC and MC backgrounds. A story retelling task was used to study language production and communicative ability. Instructions were used to make the communicative demands more or less explicit. It was hypothesized that as the demands were made more explicit, the LC child's performance would improve and approach that of the MC child.

BACKGROUND

Deficiency versus Difference Hypothesis

Proponents of the deficiency hypothesis (Blank and Solomon, 1968; Bereiter and Englemann, 1966, Deutsch et al., 1967; Jensen, 1969) take at face value the reports of educators and researchers that LC children do more poorly than MC children on tests which require verbal ability. Bereiter and Englemann (1966) describe the LC child's language skills as similar to those of MC children who are a year or more younger. Hill and Giammatteo (1963) found intercorrelations between socioeconomic status and subtest scores of the Iowa Test of Basic Skills. LC students did more poorly on

tests of reading, comprehension and vocabulary. Milgram et al. (1971) measured linguistic and thematic variables in the recall of a story and found that MC children surpassed the LC children on all four measures. Results of a study by Howard et al. (1970) showed that kindergarten children from lower socioeconomic backgrounds were less able to organize and express their ideas about familar objects and situations as measured by subtests of the Illinois Test of Psycholinguistic Abilities (ITPA) and sections of the Pre School Inventory (PSI).

In addition, Blank and Solomon (1968) hypothesize that this deficient linguistic ability prevents the LC child from acquiring the ability to think abstractly. The resulting cognitive deficit further reduces his chances of succeeding in school.

Most researchers draw upon their knowledge of the LC child's home situation to explain the deficiency in linguistic ability. The quantity and quality of parent-child interaction and characteristic environmental conditions have been cited as factors contributing to their lesser language ability. Studies of language development in MC children have emphasized the role of the parent as a language teacher. Cole and Bruner (1971) point out that within the LC community parental contact seems to be minimal with single parenting often the case. Milner (1951) observed that LC parents were less likely to read to their children and spend time talking to them at meal times. It is therefore reasoned that the LC child is at a disadvantage because he receives less teaching from his parents.

Besides this limited interaction with his parents, Hess and Shipman (1965) have noted that the quality of interaction between the LC mother and

child differs from that of the MC mother and her child on several dimensions. They studied MC and LC mothers in their respective homes and isolated an abstraction factor in the MC mother's language that seemed to affect the child's cognitive ability more than any other factor measured. This factor was not as apparent in the LC mother's language. Hess and Shipman also observed mother-child interaction in a specific teaching situation. The LC mother had a tendency to use coercion and minimal verbal instruction when teaching her child the task. She stressed the non-verbal aspects of the task and used more negative than positive reinforcement. In contrast the MC mother explained the task and her expectations to the child. She used verbal praise and gave more positive reinforcement than the LC mother. As the MC child performed better than the LC child on the test that measured how well they had learned the task, Hess and Shipman concluded that the mother's style of interacting with her child had an effect on her child's ability, both cognitive and linguistic. Their findings also support the belief that the LC child lacks a good model from whom he can learn an adequate language (Deutsch, 1967).

Within the LC environment itself several conditions are thought to be detrimental to acquisition of verbal abilities. Some theorists feel that the range of stimuli is minimal, repetitious and unorganized (Ausubel, 1965; M. Deutsch, 1967; Wight et al., 1970). Others (C. Deutsch, 1964), find that the LC child's environment has excessive stimulation which the child must learn to tune out because of its confusing nature. Either way this unorganized presentation of stimuli is thought to inhibit learning. (Wight et al., 1970)

The solution of the deficiency theorists to the LC child's difficulties is the initiation of programs which teach the basics of language skills to these children as early as possible (Bereiter & Englemann, 1966; Englemann, 1971). Blank and Solomon (1969) also advocate direct instruction of abstract thinking skills.

However, developments in the area of psycholingusitics led other researchers to question the validity of comparing LC language to MC norms. These researchers (Labov, 1970; Stewart, 1970; Baratz, 1970) objected to calling the LC child's language deficient and preferred to call it different. The proponents of the difference hypothesis support the contention of linguists that all people have the innate ability to develop a language and that no linguistic system is strutturally inferior to any other (Chomsky, 1965).

Labov (1970)and Stewart (1970) studied the language of the LC black population. The results of their investigation showed that the language used by this group does have a systematic grammatical structure which is as sophisticated as MC white English but quite distinct. They have characterized this language as a non-standard rather than a sub-standard form of English. Labov (1970) found that if black non-standard norms were used to assess the LC black child's linguistic ability this child could no longer be considered to have a deficit.

Baratz (1969) using what she called 'a bidialectical task for determining language proficiency' gave LC black and MC white children sentences in both standard English and non-standard black English that they were to repeat. LC black children performed significantly better on the non-standard stimuli than the white MC children, while the white MC children did better

on the standard stimuli. Furthermore, she found that all the children were translating the differing stimuli into their own dialect in a predictable manner. Her findings support Labov's thesis that black children are not being tested for their true linguistic ability on tests using standard English.

Baratz concludes that two dialects are involved in the educational complex of black children and that language assessment of the LC black child should involve measures of their knowledge of non-standard black English as well as standard English.

In consideration of the black child's difficulty in school Baratz (1970)suggests that the LC black child be taught basic skills such as reading and writing in his own dialect first and then be taught them in standard English.

Other researchers began to reconsider the meaning of their findings in light of this deficiency-difference controversy. For example, Howard et al. (1970)measured the language ability of MC and LC children on sub-tests of the ITPA. They found the usual discrepancy between LC and MC performance on sub-tests that measured ability to predict linguistic events from past experience and the ability to express one's ideas in spoken words. However, on closer inspection of their data they found that the LC children were giving valid responses on many of the items but that these responses were not acceptable within the rigid scoring system of the test. They also found that LC children did not differ from MC children in the comprehension of the spoken word. Thus, they concluded that some of the tests used to measure linguistic ability seem to favor a particular socioeconomic group and distort measurement of linguistic skills.

The importance, then, of the difference theory is that it encouraged researchers to look at more than the superficial results of their studies. It also emphasized the fact that the LC child does have an adequate linguistic system. These findings make suspect the hypothesis that LC children have an inferior cognitive potential because of a deficient language. However, there remains the problem that the LC child must compete for the rest of his life in a society that uses standard English. The delay in learning standard English language skills may become a factor that prevents the LC child from acquiring these skills which are essential to success in North America. Furthermore, this theory focuses mainly on the linguistic differences between LC blacks and MC whites. There remains a rather large group of LC white children who do more poorly in school although a linguistic system comparable to the non-standard black English has not been postulated for this group.

Another group of researchers has stressed the importance of the distinction between performance and ability. Their position, which shall be reviewed in the next section, offers an explanation for the difficulties experienced by white LC children in the classroom and also elucidates other problems that LC blacks experience in the school setting.

Sociolinguist Viewpoint

In general sociolinguists do not feel that an individual's linguistic performance represents his linguistic capacity (e.g. Houston, 1970; Glick, 1968). Rather, an individual's performance is related to the specific characteristics of the situation, and the social meaning it has for the speaker, and is a reflection of the speaker's communicative competence.

Cazden (1970) reviewed the variables which have been found to effect linguistic performance. These variables include topic, listener(s), interaction and mixed aspects of the situation. She refers to an example cited by Labov (1970) which highlights the different effects of listener, interaction and mixed aspects. A young black student when asked to talk about street fighting by a black field worker in an interview situation was monosyllabic in his responses. When asked a similar question by the same field worker under more casual circumstances i.e. sitting on the floor eating chips, using taboo language with a peer, this student became quite verbal and described street fights in detail.

Kernan cited by Ervin-Tripp (1973) was involved in an incident which further underlines the importance of listener and task as variables. Kernan asked a LC child were he lived. His reply was simply a hand gesture indicating the general direction of his house. A while later, however, she overheard this same child giving explicit directions to her husband in reply to the same question. It then occurred to her that she had been at the child's home earlier in the day to drive him to school, while her husband, who was to drive the child home, had never been there.

A more thorough investigation of the LC child's verbal behaviour under different conditions has been conducted by Houston (1969). She observed two registers, a School Register and a Non-school Register used by black LC children in Florida. The School Register is used in the presence of teachers and unfamiliar adults. It is characterized by foreshortened utterances, simplified syntax and phonological hypercorrection with

limited content and does not reveal the child's attitudes, feelings and ideas. The Non-school Register is used with other children and familiar adults. It is characterized by a flowing and grammatically complex syntax with extended content and much affect. Houston (1970) remarks that the majority of situations in which the LC child's language ability has been assessed are similar to the situations which elicit the School Register.

These examples of the variability of the LC child's verbal behavior help to pinpoint to some extent where his problems in the classroom may exist. It seems from these reports that in situations which are designed to evaluate the child's linguistic and cognitive abilities, the LC child fails to respond in an appropriate manner. In short, he does not give the elaborated verbal replies expected in such situations. On the other hand, the LC child has shown himself capable of such replies at other times. This emphasizes the fact that it is not enough to know how to use a language, but one must know when to use the different forms of this language. For example, elaborate language is appropriate in the classroom, but not in an emergency where a more concise form of language would probably be most effective.

Houston (1970), Osser (1971), Williams and Naremore (1969), and Bruck and Tucker (1972) suggest that the LC child has not developed the communicative competence needed to cope successfully with the classroom demands. Conversely, because the MC child is succeeding within the system it is assumed that he has this communicative competence. Thus it is concluded on the basis of the demonstrated communicative competence of the LC and MC children that the educational system is probably con-

sistent with MC values and social structures but represents a discontinuity with those of the LC. There are numerous other sources from which such a conclusion can be drawn e.g. most teachers, principals and school-board members come from MC backgrounds etc. The question which remains, however, is: in what way does the LC social structure differ from that of the MC to result in this discrepancy in communicative competence?

Bernstein (1970) developed a theory in the early 1950's which combines psychological, linguistic, and sociological principles to describe differences between LC and MC speakers. He describes two fundamental types of linguistic codes, one restricted and the other elaborate. Briefly, restricted codes develop and are used when all members of a group share an extensive set of experiences, expectations and beliefs, and when the group emphasizes the importance of "we" over "I". The function of language in this case is to increase the bonds of community by minimizing the individual expression of experiences. It is also used to express authority and control. As a result, lexical and syntactic diversity is minimal and the meanings that are conveyed by a restricted code are implicit, particularistic, and concrete.

The elaborate code arises when the "I" is stressed over the "We". A wide diversity of intentions and experiences are encouraged. The speakers must make explicit their intentions, experiences and beliefs so that they may be shared by other members of the group. The elaborate code is an extremely flexible form of speech which has available a high degree of syntactic and lexical options. It can be used to convey meanings that are abstract and explicit.

Very generally, Bernstein proposes that the LC has developed and uses a restricted code, and the MC, an elaborate code.

Bernstein (1970) does not wish to imply that because the LC individual uses a restricted code he has a language deficit. His theory does not exclude the LC individual from developing the ability to use an elaborate code. However, the differing demands within the social structures of the LC and MC make it more likely that the LC person will use a restricted form of language under most conditions. It also follows from this hypothesis that an individual who uses a restricted code in an environment that assumes the use of an elaborate code will be at a disadvantage.

Studies by Hawkins (1969), Bruck and Tucker (1972), and Williams and Naremore (1969) lend support to Bernstein's hypothesis of a restricted code within the LC class and an elaborate code within the MC. On a story retelling task Hawkins (1969) found that LC children used more exophoric pronouns than MC children. An exphoric pronoun is one that does not have an explicit noun reference. The speaker assumes that the listener knows what he is talking about. Bruck and Tucker(1972) had similar results. They also found on an abstract design description measure that the LC child's language contained fewer explicit features than that of the MC child. Williams and Naremore (1969) found that on descriptive tasks ranging from reporting on last night's television program to discussing career choice, LC children used more implicit and concrete forms of nouns and pronouns than MC children. The observations made by Hess and Shipman (1965) on differences between MC and LC mother-child interactions also seem to point to the use of these specific codes within the classes. The LC mother was more authoritarian and less verbally helpful than the

MC mother which is characteristic of the restricted code.

Examples of the LC child using an elaborate code have also been given. Upon more closely examing the results of their study Williams and Naremore found that the LC children were answering the questions with what was minimally demanded, while MC children went beyond what was expected of them. When the LC children were asked to be more explicit, they complied. They in fact used the same percent of elaborate utterances as the MC children.

Robinson (1965) in giving two letter assignments to MC and LC twelve and thirteen year old boys and girls, expected to find that the first assignment (to write to a good friend about the news of the past fortnight) would presumably elicit informal language (or restricted code) from all subjects and that the second assignment (advising a Governor of the school how some money he had donated might be spent) would presumably elicit formal language (or elaborate code) from anyone who could use it. Contrary to his expectations there were no significant differences between the MC and LC formal letters. This indicated that at least in the written form, LC children are capable of using an elaborate code comparable to that used by MC peers, when the task is clearly specified.

Finally the incident recounted by Kernan (Ervin-Tripp, 1973) in which the LC child could give a detailed explanation of where he lived despite behavior to the contrary at an earlier time, is a good example of the LC child's ability to use elaborate language in certain instances.

Statement of the Problem

Results of these studies indicate that LC children can and do use elaborate language in certain circumstances. Some of the conditions noted are ones in which

1) the child is asked to be explicit until some criterion is reached;

2) the situation is meaningful to the child;

3) the child has been directly taught to use elaborate language.

In both the classroom setting and in testing situations these conditions are not always found. For example, many tasks in the classroom are redundant and repititous; testing procedure often does not allow for extensive probing of the child's knowledge; little time is spent at school in teaching children these skills (Ervin-Tripp, 1973).

Bruck and Tucker (1972), in reexamining the story retelling test used in their study suggested "The LC child may have assumed that the listener knows all the relevant information (i.e. he knows the story...) and for this reason did not use explicit features to the same extent as the MC child." p. 46. In other words this is an instance of a situation which is not meaningful to the LC child and hence his failure to use elaborate language.

The problem that remains is: how can the LC child be encouraged to assess the classroom situation as one in which he should use the elaborate language available to him? Probing, until the child produces such language is one way of achieving this end (Williams and Naremore, 1969). However, such a method is time consuming and may have ill effects on the motivation

of the child. Another method, that of making the situation meaningful to the child, does have the advantage that it takes motivational factors into account but it might be impossible to use this method in the teaching of certain subjects. A way of avoiding this difficulty might be the use of a game in which the instructions encourage the use of elaborate language for success. Finally, the child could be taught how to use language to improve communicative skills in the classroom. Of course a combination of these might be the most effective in altering the LC child's linguistic behavior in the classroom.

The present study investigated the use of different instructions and situations on the LC child's assessment of the communicative demands of a particular task i.e. retelling a story. As the story is usually retold to the reader, such a task has the implicit of unspoken demand that accompanies it: "Tell me the story as if I don't know it." Because MC children include many more explicit features in their stories, (Bruck, 1972; John et al., 1970), it is assumed that the MC child understands this demand, whereas the LC child does not. In order to determine whether LC children would become more explicit if they understood this demand the following conditions were used. In one group the children were asked by the reader to pretend that she did not know the story when they were asked to retell it. This is an example of a kind of "game" that could be used in the classroom. In the second group the children were asked to retell the story to an outside person who did not know the story. It was hypothesized that the LC children would improve their linguistic behavior i.e. they would use more explicit and fewer implicit features, as the communicative demands of the situation were made clearer, than those LC children for whom the demands

were not made clear. It was also hypothesized that the LC child's performance would approach that of the MC child under these circumstances. It was felt, however, that the MC child's performance would not be significantly affected because he already understood the demands of the situation and was doing the best he could.

METHOD

Subjects

Forty English speaking kindergarten children from a MC area and forty English speaking kindergarten children from a LC area were the subjects. The children were selected on the basis of their fathers' occupations which served as an index of social class. The fathers' occupations were obtained from the school or the parents and were rated according to the Blishen Scale (1958). The rating assigned to a given occupation on this scale is a function of income, years of schooling, and sex. Occupations are ranked and grouped in seven categories. The mean rating for the MC group was 2.2. This rating indicates a professional, semi-professional or managerial level and includes occupations such as engineer, teacher, librarian, commercial artist and insurance agent. The mean rating for the LC group was 5.9, indicating that these parents were employed as semi-skilled and unskilled labour. Occupations typical of this group were construction foreman, carpenter, teamster, janitor, and labourer.

The subjects were informally screened by their teachers: children with obvious speech defects or emotional problems were not included in the study.

The schools attended by these children were all members of the Protestant School Board. Therefore, the program goals and curricula were similar. Two of these schools were in a LC area and one in a MC area.

All the children had been in their respective classes since September and were tested in May.

Test

A story retelling task was used in the assessment of language production and communicative ability of the children. This technique was originally devised by John and Horner (1965) to provide information about the child's ability to narrate logically and explicitly a sequence of events that had just been read to him.

The story selected for this study was "Sylvester and the Magic Pebble" written by William Steig (1969). In 1972 Bruck revised the text and took out some of the illustrations to make it shorter and easier for the children to understand. The revised version was used in this study. The text is included in Appendix A.

This story was chosen because it was considered important that the story selected be unfamiliar to the children in the study. At the time of testing the book was unavailable in Canadian bookstores and was not known to any of the teachers. Before testing began each child was asked if he recognized the story. Only one child had heard the story before and was eliminated as a subject. Another reason for the choice of this story was to make it possible to compare the findings of the present study to those of Bruck (1972).

Testing Procedure

There were two female testers. In order to establish rapport both testers visited the classes for three days each before formal testing began. The time was spent playing and talking with the children, helping the teachers if they needed assistance and observing the instruction that occurred.

The MC and LC children were divided into four groups of ten with boys and girls equally represented in each group. The groups differed in three ways: the conditions under which the story was read, the conditions under which the story was retold and the instructions given. (See Table 1).

For all the groups the experimenter, (E), informed each child that she would ask him to retell a story she was about to read. After reading the story and showing the pictures as she went along, E gave the child the book and asked him to tell the story as best he could using the pictures as a guide.

As can be seen in Table 1: group 1, only E was present during both the reading and the retelling of the story. The instructions to the child were, "Tell me the story as best you can."

In group 2, only E was present during both the reading and the retelling of the story. The child was asked "Tell me the story as best you can, but pretend that I don't know the story."

In group 3, both the E and an observer, O, were present during the reading of the story; during the retelling, only O was present. The child was asked, "Tell O the story as best you can."

In group 4, only E was present during the reading of the story; only O was present during the retelling of the story. The child was instructed, "Tell the story as best you can to O who doesn't know the story." Care was taken to ensure that the children did not suspect that O had actually heard the story on numerous occasions!

Testing Procedure in each Group

Group	Conditions: Reading	Conditions: Retelling	Conditions: Instructions	Name of Conditions
1	E present O absent	E present O absent	Tell me the story	K
2	E present O absent	E present O absent	Tell me the story, but pretend I don't know it	DK
3	E present O present	E absent O present	Tell O the story	K
4	E present O absent	E absent O present	Tell the story to O who doesn't know it	DK

Group 1 and 3 were designated as the K condition, i.e. the listener "knows" the story; group 2 and 4 were designated as the DK condition, i.e. the listener "doesn't know" the story. (See Table 1).

During the retelling of the story the only comment made by either listener, E or O, was "Turn the page", or once the page was turned, "What happened here?" If the child had difficulty starting the story, the listener asked, "Who is in the story?" While the child retold the story the listener looked at the pictures. The child's retelling of story was tape recorded.

Scoring

The stories were transcribed from the tapes. Pauses in the narrative were noted and false starts were ignored.

Production:

The following were used to measure production.

a) Grammatical units. A unit is defined as a group of words preceeded and followed by a pause that expresses a complete thought. Each of the following exemplifies one unit:
   - "The donkey was scared because he saw a lion."
   - "He was scared."
   - "No."

   This measure was originally devised by Loban (1963).

b) Narrative details. The total number of details in the story was counted. This total was the sum of relevant, irrelevant and other details as defined below:
   i. Relevant Details. A list of the 48 most relevant details in the story was prepared by Bruck (1972). (See Appendix B)

ii. Irrelevant Details. An irrelevant detail is either: a detail that repeats one previously mentioned; a detail that is not important to the meaning of the story; or a detail that expresses a thought that is inconsistent with the meaning of the story.

iii. Other Details. These include those details that were not complete enough to be counted as relevant details but could not really be counted as irrelevant details.

c) Nominal Groups. The number of nominal groups that the child used in his narrative was counted. The nominal group is a feature of Halliday's "Scale and Category Grammar" (Halliday, 1969). It is made up of three parts, only one of which is relevant to this study, the head. The head is an obligatory part of the nominal group and consists of either a noun or a pronoun which acts as a subject of complement within a clause. The following exemplify heads within nominal groups:

- "It started to rain."
- "The donkey with the stone in his hand."
- "They asked the dogs and cats and mice."

In this study if a subject was deleted before a verb, this deletion was also counted as a nominal group (e.g. "The donkey saw the lion and was scared". Here are three nominal groups: donkey, lion and "deleted he").

The number of nominal groups was used as an additional measure of production because it is thought to be more sensitive to grammatical complexity than the measure of "grammatical

units". Grammatical complexity may be considered an important factor in determining how much story is retold.

Communication:

Communicative ability was assessed by measures of both clarity and ambiguity. The former refers to how accurately and explicitly the child retold the story and the latter to how much of the text was irrelevant and confusing. Because production was measured elsewhere percentages were calculated for all measures of communication in order to insure that better scores on the measures of communicative clarity were not simply a reflection of a higher score on the measures of production.

The following were used to measure clarity.

a) Percent of relevant details. This measure was obtained by dividing the number of relevant details, as defined in the previous section, by the total number of narrative details and calculating the percent.

b) Percent of clearly referenced pronouns. The total number of pronouns used as heads of nominal groups was counted. The pronouns were examined to determine whether the child had previously mentioned the noun to which the pronoun refers and if he used a referent, how clear the connection was.

A clearly referenced pronoun is one where the noun is usually used immediately preceding the transition from

noun to pronoun. (e.g. "The donkey was scared and he wanted to go home".) The percent of pronouns that were clearly referenced was calculated.

The following were used to measure ambiguity.

a) Percent of irrelevant details. This measure was calculated by taking the number of irrelevant details as defined in the previous section and dividing it by the number of narrative details.

b) Percent of ambiguously referenced pronouns. These pronouns fall into one of two categories:

i. The pronoun does not refer to any previously used noun. Hawkins (1969) calls these exophoric pronouns.

ii. The pronoun has a noun referent but it is unclear for either of two reasons:

The child has used two nouns in the previous sentence and then switches to two pronouns which are the same gender or number. (e.g. "The donkey saw the lion. He was scared. He walked away.") or the noun to which the pronoun refers appears several ideas back in the story. Between the noun reference and the pronoun other nominal groups have appeared. The percent of pronouns that were ambiguously referenced was calculated.

c) Percent of Wrongly Referenced Pronouns. These include number and gender changes from noun to pronoun (e.g. "The donkey went outside. She found a stone.").

Reliability:

E scored all the protocols. A scorer who had not participated in the testing procedure was trained in the scoring procedure and also scored forty of the eighty protocols. Results were compared. Discrepancies in the scoring were discussed and a compromise reached. This scorer then scored a random sample of five LC and five MC protocols. A Pearson's r of .82 was obtained indicating that it is possible to reliably categorize the responses of the subjects.

RESULTS

Production

To determine the effects associated with social class, condition and listener upon language production, separate 2 x 2 x 2 analyses of variance ($\alpha = .05$, df = 1,72) were performed on each dependent variable. The independent variables were social class (LC vs. MC), condition (K vs. DK), and listener (E vs. O). The dependent variables were the number of grammatical units, the number of heads of nominal groups, and the number of narrative details. The means of the dependent variables are shown for each of the groups by class in Table 2.

A significant effect due to social class was found for all of the dependent variables with the MC group having a higher mean score than the LC group. The significant F values and alpha levels for each production measure are shown in Table 3.

On the measure of number of grammatical units a significant effect ($p < .05$) was found in the condition by listener interaction with the KO-DKO mean difference larger than the KE-DKE mean difference. From Figure 1 it can be seen that condition and listener interacted in the following way: DKO resulted in the highest production of grammatical units, while KO, KE and DKE resulted in fewer units and comparable levels of production.

No other significant main or interaction effects were found.

In summary, the MC children produced significantly more language than the LC children in the retelling of their stories. Neither condition nor listener significantly altered language production except on the

TABLE 2

Summary of the Means for each Group on the Measures of Production

Measure		Means: Know.		Don't Know	
		E	O	E	O
1. Number of Grammatical Units	LC	21.7	19.0	22.0	24.2
	MC	24.9	23.4	22.4	26.3
2. Number of Heads of Nominal Groups	LC	55.7	47.5	52.5	60.1
	MC	62.4	67.3	62.6	66.3
3. Number of Narrative Details	LC	27.7	23.7	27.4	29.3
	MC	29.5	31.8	30.2	31.3

TABLE 3

Results of Analyses of Variance for the Measures of Production

F Values

	Class	Condition	Listener	Class by Condition	Class by Listener	Condition by Listener	Class by Condition by Listener
1. Number of Grammatical Units	4.17*	1.42	0.15	1.06	0.34	4.34*	0.01
2. Number of Heads of Nominal Groups	8.10**	0.33	0.28	0.46	0.37	0.94	1.27
3. Number of Narrative Details	5.63*	0.79	0.04	0.68	0.79	0.68	1.31

** $p < .01$
* $p < .05$
for all measures df = 1,72

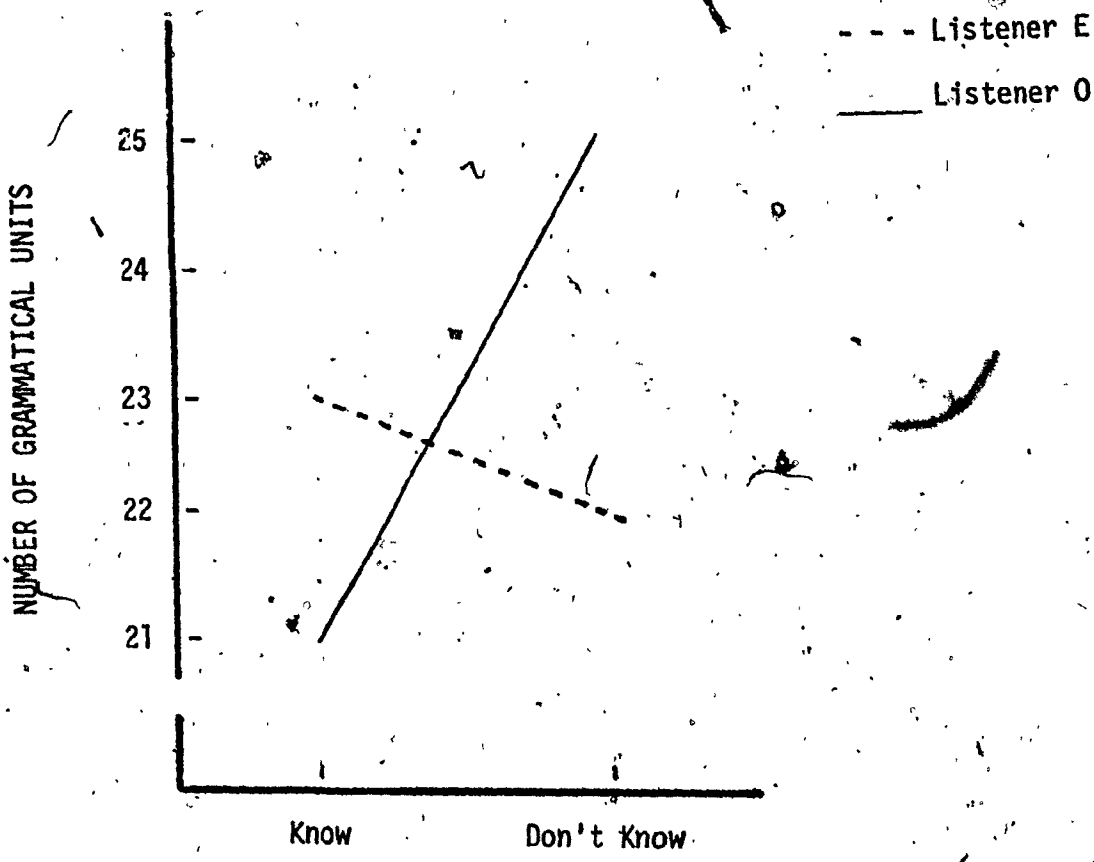

FIGURE 1: The Relationship between condition and listener for the Number of Grammatical Units

interaction suggests that the children of the group in which the listener did not know the story, DKO, reacted differently from those of the group in which they were asked to pretend that the listener did not know the story, DKE (See Figure 1). Because similar, though not significant interaction patterns were noted in the other two measures, there is reason to suppose that these are not parallel groups as had been assumed when deciding upon the research design. (See Table 2). The conclusion then that the children did not modify their language in response to the varying communicative demands that the conditions presented is not entirely valid because of this confusing element in the DK condition. Inspection of the means in Table 2 reveals that production was the highest under the DKO i.e. the true don't know, condition. Furthermore, the LC children seemed to be improving more noticeably under the DKO condition than the MC. (See Table 2). Therefore, an analysis of variance ($\alpha = .05$, df = 1,36) was performed on the LC results to further explore the effects of condition and listener on the production measures. No significant results were obtained. We must then conclude that the LC child did not alter his verbal production significantly under the different conditions.

Communication

Because the measures of communication are expressed as percentages nonparametric statistical tests were used to determine the effects associated with the independent variables; social class, condition, and listener, on these measures. The Mann-Whitney U Test (Klugh, 1970, p. 304) was used to analyze the main effects of the independent variables. The Kruskal-Wallis one way analysis of variance by ranks test (Klugh, 1970 p. 305) was

used to analyze interaction effects. This was done by doing distribution-free multiple comparisons based on the Kruskal-Wallis rank sums if a significant H was obtained on the Kruskal-Wallis Test (Hollander and Wolfe, 1973, p. 124). The dependent variables were percent of relevant details, and percent of clear pronouns which were the measures of communicative clarity, and percent of irrelevant details and percent of ambiguous pronouns, which were the measures of ambiguity. A summary of the mean percent of the dependent measures obtained in each group by class is found in Table 4.

With regard to clarity, Table 5 shows that a significant difference ($p < .05$) exists between the MC and LC children with the MC group having a higher mean percent of relevant details and clear pronouns than the LC group. No significant main effects due to condition or listener were found by the Mann-Whitney U Test. (See Table 5). These results are consistent with the findings on the measures of production i.e. MC children do better that LC children.

A significant H value ($p < .01$, $df = 3$) was obtained on the Kruskal-Wallis Test for both measures. These values can be seen in Table 6. Multiple comparisons of the means for each group were made. These results are also in Table 6. On the measure, percent of relevant details significant differences ($p < .10$) were found between the MCKE group and the LCDKE group. On the measure percent of clear pronouns the significant differences were between the MCKE group and LCDKE and between MCKE and LCKO. These results indicate that the differences between the performance of MC and LC are due mainly to these groups. Within each class no significant

TABLE 4

Summary of the Mean Rank Sums for each Group on the Measures of Communication

Means

		Know		Don't Know	
Clarity		E	O	E	O
Percent of Relevant Details	LC	47.15	30.90	26.90	29.85
	MC	51.90	47.80	46.00	43.50
Percent of Clear Pronouns	LC	36.90	30.75	30.95	26.95
	MC	58.80	48.45	43.80	47.40
Ambiguity					
Percent of Irrelevant Details	LC	33.20	42.15	55.50	48.05
	MC	30.65	36.90	42.70	36.85
Percent of Ambiguous Pronouns	LC	45.25	48.70	51.80	53.90
	MC	23.15	31.70	37.25	33.75

TABLE 5

Results of the Mann-Whitney U Test for the Measures of Communication

Measure	Significant Zu Values		
	Class	Condition	Listener
Clarity			
Percent of Relevant Details	2.61*	1.52	0.96
Percent of Clear Pronouns	3.50*	1.24	0.81
Ambiguity			
Percent of Irrelevant Details	1.4	1.84*	0.19
Percent of Ambiguous Pronouns	3.60**	1.27	0.67

** $p < .01$
* $p < .05$

TABLE 6

Results of Kruskal-Wallis Analysis and the comparison of means based on the Kruskal-Wallis rank sums for the Measures of Communication.

Measure	Significant H Values	Significance differences between the means of each class x condition x listener group
Clarity		
Percent of Relevant Details	18.8**	MCKE - LCDKE = 25.0* all other differences N.S.
Percent of Clear Pronouns	22.3**	MCKE - LCDKE = 31.85* MCKE - LCKO = 28.05' all other differences N.S.
Ambiguity		
Percent of Irrelevant Details	14.1*	MCKE - LCDKE = 25.15' all other differences N.S.
Percent of Ambiguous Pronouns	24.3**	MCKE - LCDKO = 30.7' all other differences N.S.

** $p < .01$
* $p < .05$
' $p < .10$

difference in performance was found as a result of the varying conditions in each group.

With regard to ambiguity, the Mann-Whitney U test indicated a significant effect ($p < .01$) due to class on the percent of ambiguous pronouns (See Table 5). No significant effects due to condition or listener were found. A significant H value ($p < .01$) was obtained as can be seen on Table 6 and significant differences ($p < .10$) were found between the means of the MCKE and LCDKO groups. Once again on this measure MC and LC children performed differently with the MC children giving a lower mean percent of ambiguous pronouns. The performance of the children in each class did not vary as a function of listener and condition variables in each group.

On the measure percent of irrelevant details the Mann-Whitney U Test revealed no significant effect due to class. This was the only measure on which LC and MC children performed at approximately the same level. A significant difference was found ($p < .05$) between the K and DK conditions. The subjects in the K condition gave a lower mean percent of irrelevant details than those in the DK condition. (See Table 5). No significant listener effects were found. The comparison of means indicated that the largest mean differences ($p < .10$) were between the MCKE group and the LCDKO group. (See Table 6).

In summary, the MC group did better on the measures of communicative clarity as they gave a higher percent of these measures than the LC group. However, the MC children did not perform consistently better than the LC children on the measures of ambiguity. They both gave approximately the same mean percent of irrelevant details although the MC did give a lower mean percent of the ambiguous pronouns.

Condition, K vs. DK, affected only one of the four measures of communicative ability. The DK group gave a higher mean percent of irrelevant details than the K group. This result was contrary to expectations as it was hypothesized that under the DK condition children would be less ambiguous.

The multiple comparison of means test indicated that within the LC there was no significant change in communicative behaviour as the conditions and listeners varied. This result was also contrary to the one expected. In addition, inspection of the means (Table 4) shows that all the children did the best on these measures in the condition MCKE which is believed to resemble the classroom situation. They gave the highest percent of the measures of clarity and the lowest percent of the measures of ambiguity in this situation.

DISCUSSION

Three questions were investigated by this study. How is the LC child's language affected when the communicative demands of a situation are made clearer? Does the LC child's language resemble that of the MC child under such conditions? Finally, how is the MC child's language affected when communicative demands are changed? It was hypothesized that the LC child's linguistic performance would improve and approach that of the MC child as the communicative demands were clarified. The MC child's language was not expected to improve as it was assumed that the MC child had already correctly interpreted the communicative demands of the task and thus could respond appropriately. The instructions to the children and the listener conditions in this study were designed to encourage the LC children to interpret the communicative demands of the story retelling task in the same manner as the MC children.

The results of this study indicate that neither the pretend condition nor the different observer condition significantly altered the performance of the LC child on the story retelling task. More specifically his language remained the same on measures of production and communication and did not approach that of the MC child who received better scores on all the measures except one. The only measure on which their performance was similar was the percent of irrelevant details, a measure of ambiguity. The results also show that the MC children did not alter their verbal behavior significantly under the different conditions, as was expected.

The failure of the LC children to improve their language performance in the conditions with more explicit communicative demands makes one of two conclusions possible: (1) The LC children were already functioning at maximum capacity. Encouraging them to reassess the demands of the situation did not change their performance because they could do no better. (2) The manipulations of instructions and listener attributes were not sufficient to make the LC children assess the demands of the experimental condition differently from the original task. Nor were they sufficient to allow the LC children to assess the demands in the same way as the MC children seemed to be assessing them.

The first conclusion implies that the LC child has a language deficit and for this reason cannot improve his linguistic behavior no matter what the circumstances. This position is supported by the data that the deficiency theorists (Bereiter and Englemann, 1966; Jensen, 1969; Blank and Solomon, 1968) present as evidence of the validity of their theory. In addition, developmental theorists and researchers (Piaget, 1959; Flavell, 1968) emphasize the kindergarten child's limited ability to perceive a situation from another's point of view. Flavell (1968) investigated the communicative ability of children on a game description task and found that the capacity of a child to adjust his linguistic output to the needs of his listener increased as a function of age. Six year old children did not change their descriptions of the game significantly from listener to listener. From the above argument one is led

to believe that the LC children in this study were hindered by developmental as well as linguistic factors from improving their behavior in response to the demands of the tasks.

The following objections are raised in reply to this conclusion. Arguments have been presented in a previous section of this paper which have questioned the validity of the deficiency position. Furthermore, the majority of developmental theorists draw their conclusions from research which examines the behavior of children who are predominantly of the MC. The inferences about typical developmental stages based on such data are not necessarily applicable to LC children. The factors which affect their behavior in a language situation may be different than those which affect the MC children (Houston, 1970; Cazden, 1970). Finally, on reexamination of the protocols of the children's stories it was noted that a factor other than listener condition affected the LC child's assessment of the demands of this task. The story told by the LC child was one which was dependent on the pictures in the story for best comprehension. This observation has been made by other researchers (Hawkins, 1969; Bruck, 1972; Milgram, et al. 1971). In these studies both the child retelling the story and the listener could see the pictures, but the scoring system rewarded to use of language which assumed the absence of the pictures i.e. explicit language.

Elkonin (1971) has noted that pictures elicit situational, or implicit speech. Furthermore the illustrations of the stories used in the studies by Bruck (1972) and Hawkins (1969) were such that one could

easily derive the essentials of the story line without benefit of the text. It seems possible that the LC children did not feel that it was necessary to be more explicit even in the different listener conditions because "the pictures told the story". For this reason they did not make their pronoun references clearer and did not include all the relevant details. The language the LC children used was similar to the restricted code which is believed to be used in situations which assume a shared experience. In this case, in which the listener could also see the pictures, the LC child may have presumed that this type of language was sufficient and acceptable. This tendency of the LC child to give what is minimally expected in a communicative situation has also been noted by Williams and Naremore (1969). Thus in the present study one variable i.e. listener who doesn't know the story, was accounted for in an effort to encourage the LC child to assess the communicative demands of the situation in a MC manner. However, this second variable, availability of the pictures to the listener, was not controlled and may have been one of the factors which caused the LC child's failure to respond differentially to the various listener conditions. It is suggested that if the listener were not able to see the pictures the LC child's language might change, and become more explicit in response to these demands. This suggestion is made in the light of the fact that our knowledge of the LC child's linguisitc ability is limited. It is felt that some effort should be made to find optimal conditions for measuring the extent of LC child's abilities so that more valid methods for helping him use these abilities in the classroom may be developed.

The finding of this study that the MC & LC children performed similarly on one of the two measures of ambiguity lends some support to similar findings by Bruck & Tucker (1972). They noted that on both a story retelling task and on an abstract design description task that the MC child's language contained as many implicit or ambiguous features as that of the LC child. The factor which differentiated their speech was the greater amount of explicitness in the MC child's speech. This use of explicit features makes it easier to understand what the child is trying to communicate. The presence of ambiguous features, however, does interfere with communicative ability.

It was also noted that while the DK condition did not affect the behavior of the children within each class, it did affect the behavior of the children as a whole on one measure i.e. the percent of irrelevant details, a measure of ambiguity. If this is a reflection of the children's attempt to alter their behavior in response to the listener "not knowning the story" one can only conclude that their attempt was not one that would be very effective in increasing the listener's ability to understand the story.

It seems then, that all kindergarten children would benefit from some instruction in the effective use of language in differing communication situations. This need to teach communicative skills is further underlined by Bruck (1972) who noted on the basis of her study that while the children were acquiring grammatical skills over the course of the school year they were not making similar gains in communicative skills.

Others (Loban, 1966; Williams and Naremore, 1969; and Ervin-Tripp, 1973) remark too that very little time in the school curriculum is devoted to teaching communicative skills.

Shantz and Wilson (1972) give evidence that these skills can be taught in some degree to seven year old children. They trained children by involving them in the both sides of the communication situation; by allowing them to observe the behavior of other children and by giving suggestions as to how to improve their language for most effective communication. The children who had been trained, transferred their skills to a test situation and performed significantly better than they had on a pretest. They also performed significantly better than a control group who had not received this training. Shantz and Wilson [redacted]eded particularly in eliminating ambiguous features in the child[redacted]anguage.

The direct implications of the present study ar[redacted]ed to a group of kindergarten children from the Montreal region. However, on the basis of other research in this area and in the light of present findings some conclusions can be drawn. LC children do not respond to the demands of a communicative situation in the same way as MC children. They respond by using less explicit language in these situations, but this behavior is thought to be a response to situational variables rather than a lack of linguistic ability. Some suggestions were made as to ways in which situational variables of communicative tasks could be altered in order to help the LC child assess the demands of these tasks more appropriately.

Increased knowledge of factors which influence linguistic performance of LC children should be useful in developing ways of helping the LC children adjust to the communicative demands of the classroom. It was also suggested that the teaching of communicative skills be more extensively included in the present school curricula. The success of Shantz and Wilson (1972) implies that these skills can be taught.

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APPENDIX A

Text of the Revised Story:

Sylvester and the Magic Pebble

Once upon a time there was mother donkey, father donkey, and baby donkey who lived together in a house. Baby donkey collected stones. One day, baby donkey went outside and found a beautiful red stone. He picked it up. He was cold from the rain, so he said, "I wish it would stop raining." And immediately the rain stopped. Baby donkey was so surprised. "Maybe this red stone is magic," thought Baby donkey. So he said, "I wish it would rain again" and so it did. Baby donkey was so happy to have found a magic stone. "Now I can have everything I want. I'll bring it home to Mommy and Daddy and all my friends. Then they can wish for everything they want." But on his way back home, he saw a hungry lion and he was so scared he said, "I wish I were a rock." And he turned into a rock. The lion sniffed around the rock and couldn't find the donkey so he left. Meanwhile baby donkey was now a rock and he couldn't turn into a donkey again because he couldn't pick up the magicstone that was lying beside him.

Back home, mother donkey and father donkey were so sad because their baby hadn't come back. The next morning they asked their neighbors if they had seen baby donkey but they said, "No". They asked the children, the kittens, the puppies, and the piglets if they had seen baby donkey but they said that they hadn't seen him for two days. They went to the police. The police couldn't find the baby donkey. All the dogs were looking for

baby donkey. They sniffed and smelled all through the forest but they couldn't find him. Mother donkey was so sad and so was father donkey. One day they decided to go on a picnic. So they went and they sat on a rock. Father donkey found the little red stone lying on the grass and he picked it up. "Baby donkey would have loved this stone for his collection," he said. Then he put it on the rock. Mother donkey was still sad and wished that their baby was with them again. Baby donkey, the rock, thought "I wish I were a donkey again." And he changed back to a donkey again because the magic stone was on his back. Mother and father donkey were so happy to see him again. They all went home and they put the stone in a box and they never touched it again.

APPENDIX B

Relevant Story Details

1. Three donkeys lived in a house.
2. The baby collected stones.
3. He found a stone.
4. It was raining.
5. He wished it would stop.
6. It stopped.
7. He thought the stone was magic.
8. He wished it would rain again.
9. It did rain.
10. He was happy to have found it.
11. He wanted to bring it home to his parents and friends.
12. He started to walk home.
13. He saw a lion.
14. The donkey was scared.
15. He wished he were a rock.
16. He turned into a rock.
17. The lion sniffed around the rock.
18. He couldn't find the donkey.
19. The lion left.
20. The donkey couldn't turn back to a donkey again.
21. Because he couldn't pick up the stone.
22. The stone was beside him.

23. His parents were sad.
24. Because they had lost their baby.
25. They asked the neighbors.
26. Had they seen the baby.
27. They said no.
28. They asked all the animals.
29. Had they seen the baby.
30. They said no.
31. They went to the police.
32. They said they couldn't find him.
33. The dogs looked for him.
34. They couldn't find him.
35. The parents were sad.
36. They went on a picnic.
37. They sat on the rock.
38. Father found the stone.
39. Baby would love this.
40. He put it on the rock.
41. Mother wished the baby was there.
42. The baby wished he was a donkey again.
43. He changed into a donkey again.
44. Because the stone was on his back.
45. They were happy.
46. They went home.
47. They put the stone away.
48. They never touched it.

APPENDIX C

Summary of Analysis of Variance for the Number of Grammatical Units

Source	Mean Square	df	F-ratio	P
Total	32.291	79.		
Between	50.213	7.		
Class	127.513	1.	4.174	.042
Condition	43.513	1.	1.424	.235
Listener	4.513	1.	.148	.704
Class x Condition	32.512	1.	1.064	.306
Class x Listener	10.512	1.	.344	.566
Cond. x Listener	132.613	1.	4.341	.038
Class x Condition x Listener	.312	1.	.010	.916
Within	30.549	72.		

APPENDIX D

Summary of Analysis of Variance for the Number of Heads of Nom Groups

Source	Mean Square	df	F-ratio	P
Total	299.757	79.		
Between	475.144	7.		
Class	2289.800	1.	8.099	.006
Condition	92.450	1.	.327	.576
Listener	80.000	1.	.283	.603
Class x Condition	130.050	1.	.460	.507
Class x Listener	105.800	1.	.374	.550
Cond. x Listener	266.450	1.	.942	.664
Class x Condition x Listener	361.250	1.	1.278	.261
Within	282.708	72.		

APPENDIX E

Summary of Analysis of Variance for the Number of Narrative Details

Source	Mean Square	df	F-ratio	P
Total	49.79	79.		
Between	67.27	7.		
Class	270.1	1.	5.63	0.018
Condition	37.8	1.	.79	0.620
Listener	2.1	1.	.04	0.830
Class x Condition	32.55	1.	.79	0.620
Class x Listener	37.8	1.	.80	0.623
Cond. x Listener	27.6	1.	0.58	0.570
Class x Condition x Listener	63.0	1.	1.3	0.262
Within	48	72.		