Language system characteristics of economically poor and non-poor northwestern Montana kindergarten children

Jerry Leonard Burk

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LANGUAGE SYSTEM CHARACTERISTICS OF ECONOMICALLY POOR AND NON-POOR NORTHWESTERN MONTANA KINDERGARTEN CHILDREN

by

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Chairman, Board of Examiners

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CHAPTER I

INTRODUCTION

Culture in human interaction is made possible through "... the ability to learn to communicate by a system of learned symbols and to transmit learned behavior from generation to generation."¹ Culture is defined by the value system and beliefs of a group of people. Because a culture is a definition of values, "... all culture ... depends upon the symbol,"² in creating values in individuals from one group to the next. An interdependent interaction appears to take place between communication and culture.

Children are taught cultural mores by the dominant attitudes that are expressed in the speech and reinforced by the behavior of parents. Walter Goldschmidt stated that, "... parental attitudes are unwittingly transmitted


in much the same manner as are nuances of speech."3

Edward T. Hall, in The Silent Language, suggested that, "... man is constantly striving to discover the meaning of the relationships between individuals and groups of individuals... He also has to learn to scale his perceptions up or down, depending upon what type of communication he is trying to unravel."4

Language study appears necessary for the study of any culture, for language is acquired by an individual through cultural functions, that is, enculturation through language systems. It appears, in addition, that languages "... impose different images of reality by their structure."5 In a statement of the linguistic determinism hypothesis, Benjamin Whorf has stated that,

the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds—and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way [i.e. enculturation] an agreement that holds throughout our speech community and is

---

5Ibid., p. 96.
codified in the patterns of our language.  

The differences in cultural behavior could, it seems, be related to the type of language that is acquired by the members of a culture. It is toward a better understanding of the distribution and occurrence of selected language elements used by two cultural groups that this study is directed.

Leslie White, a cultural anthropologist, has discussed the symbolic process as the basis of and necessary ingredient in the existence of culture. White has said that language is essential to culture and that the two interact in a dynamic fashion. He also said that a person who cannot symbolize or interact symbolically is a homo sapien, but not a human being. Although White's broad statement may be difficult to defend, it indicates the importance that he perceived in the interaction of language and culture.

Edward T. Hall has developed a unique theory of culture which is based upon a communication model that he developed with George Trager. In his book, *The Silent Language*, Hall developed a philosophy which equated culture

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7 White, p. 70.

8 Hall, *The Silent Language*. 

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and communication. He stated that,

The idea of looking at culture as communication has been profitable in that it has raised problems which had not been thought of before and provided solutions which might not otherwise have been possible.9

One seemingly neglected area of study in communication and culture has been in the pre-school and kindergarten ages. There has been very little research done in intercultural communication at the kindergarten level. Most of the studies concerning the speech of kindergarten-aged children have been longitudinal in nature. Longitudinal or developmental studies have shown the development of the language of the children without regard to the economic status of the parents of the children.

Many researchers have attempted to consider lower economic classes as a part of the population of kindergarten children. Efforts to consider the poor in those studies were an endeavor to obtain a more representative sample10 of the kindergarten children's population. It seems that there has been little if any research conducted where the economically disadvantaged child's speech was the focal point.

9Ibid., p. 97.

Studies of language have been made of different cultural groups from the senile aged to adolescence, but few, if any, studies have concentrated upon the speech of kindergarten children from economically disadvantaged families.

In the United States there has been an appeal to work with the impoverished and to help them help themselves. Head Start, Fair Chance, Job Corps and VISTA are but a few of the recent federally supported programs that have been established to cope with the consequences of poverty.

The goal of the Head Start program is to prepare impoverished children in the kindergarten ages for entry into the public school system in their community. Children in this program are taught with the end goal of developing in them a "readiness" or motivation to learn in formal schoolrooms. They are helped to overcome many of the deficiencies with which they enter the Head Start program. Health, education and the welfare of the student are emphasized to accomplish this goal.

In addition, the Head Start program concentrates on the speech of the impoverished children in order to overcome some of the restrictions that seem to be imposed by the culture of poverty.

Speech could be the vehicle through which the
culture of poverty is communicated. An impoverished cultural environment may, furthermore, perpetrate itself through speech behavior. The speech of the poverty class appears to be one means of reinforcing the child's perception of the world.

The stated purpose of the Head Start program reveals that it intends to prepare impoverished children in one year, or two in some cases, so that they can fit into the urban first grade or kindergarten. The Head Start program was dedicated to prepare impoverished children "... for the rigors of the learning process, as organized by the school and the behavioral adjustments of the classroom." Since its conception the Head Start program has focused on the language of impoverished children.

The Office of Economic Opportunity (OEO) has recognized that the impoverishment of children goes beyond low income. When the children of impoverished parents reach kindergarten age they have a number of handicaps that need special attention.

Many of the problems of poverty take root when a young child finds himself handicapped

---

Andrew J. Viscovich, "A Pre-School Project," Paper circulated in the Head Start literature that explains the program emphasis of the Oakland Public Schools which is similar to the Head Start emphasis. Director of School-Inter Agency Project, Oakland Public Schools, California, September, 1965, p. 1.
in healthy growth, learning, succeeding, asking questions, finding answers, meeting and seeing different people, and articulating feelings.\textsuperscript{12}

Language usage and language acquisition have been viewed as important factors in dealing with some of the results of impoverishment.

**Purpose of Study**

The purpose of this study was to discover whether the distribution and occurrence of thirteen syntactic elements, and the utterance length, differed when "poor" kindergarten children were compared to "non-poor," kindergarten children. Families that qualified for the "poor" category were those whose income fell below the federal poverty index for the United States. Thus, poorness of the parents was used as the indication of the economic status of the children. The "non-poor" subjects were children who were attending the University of Montana kindergarten program. Their parents were apparently able to afford the tuition to enroll children in this program and thus seemed affluent enough to classify these children as "non-poor."

By comparing syntactic elements of the language

system of a group of "poor" children with those of a "non-poor" sample, differences in the total language system might be revealed.

It was hypothesized that a statistically significant difference would occur between the language system of equated groups of kindergarten-aged children from different economic groups. It was predicted that the "poor" kindergarten groups would demonstrate a "restriction" in their language system that would not be observable in the language of the "non-poor" subjects.
CHAPTER II

REVIEW OF THE LITERATURE

This chapter contains a review of some literature that was influential in the development of this study. Basil Bernstein, Robert Hess and Virginia Shipman, and Florence Young have each described the language system of different social classes. Their research efforts were elaborations upon the Whorf-Sapir linguistic determinism hypothesis which suggests that language behavior influences thought. Walter Loban described the language system of a sample of children in a longitudinal study over a ten-year period. Norman Stageberg compiled a grammar of the English language in which he developed a modified tag-memetic or slot-filler analysis. His system provided for identification of syntactic elements according to their function in nine sentence frames that he developed.

The concept of linguistic determinism, as first defined by Whorf and Sapir, has been refined and modified by many contemporary theorists. One of the more recent investigators has been the British sociologist Basil Bernstein. In studies of the language characteristics of the London lower-class, Bernstein derived a set of attributes
with which he described the socio-cultural environment of lower-class children:

1. The family structure is less formally organized.
2. Values of the family do not encourage an ordered universe—spatially or temporally.
3. Exercise of authority is not related to a stable system of rewards and punishments.
4. The future is conceived of in general terms in which chance, a friend, or relative play a major role.
5. Present or near present activities have greater value than the relation between present activity and the attainment of a distant goal; there exists no development of time continuum.
6. The child's relationship to the mother is of a direct, immediate nature; initially, personal qualifications are made through expressive (non-verbal) symbolism.
7. In the mother-child relationship, subjective intent is not verbally explicit or elaborated.
8. Attention is directed toward status rather than person.

This environment involves and teaches the child a code (type of language) having the following characteristics:

1. Short, grammatically simple, often unfinished sentences with a poor syntactical form.
2. Simple and repetitive use of conjunctions (so, then, because, etc.).
3. Little use of subordinate clauses used to break down the initial categories of the dominant subject.
4. Inability to hold a formal subject through a speech sequence, thus facilitating a dislocated information content.
5. Rigid and limited use of adjectives and adverbs.
6. Infrequent use of impersonal pronouns as subjects of conditional clauses or sentences.
7. Frequent use of statements where the reason and the conclusion are confounded to produce a categoric utterance.
8. A large number of statements and phrases that signal a requirement for the previous speech to be reinforced—"Wouldn't it," "You see," "Just fancy," etc. This process is termed "sympathetic circularity."

9. Individual selection from a group of idiomatic sequences will frequently appear.

10. The individual qualification is implicit in the sentence organization; it is a language of implicit meaning.

Such an environment and code is likely to produce the following cognitive effects:

1. A relatively low level of conceptualization.
2. An orientation to a low order of causality.
3. A lack of interest in processes.
4. A preference to be aroused by, to respond to, what is immediately given rather than to the implications of a matrix of relationships.
5. Low intensity of curiosity and less extensive curiosity.
6. Restricted mode of establishing relationships.

Such an environment, code and cognitive implications produce the following social effects:

1. A preference for a particular form of social relationship where individual qualifications are non-verbally communicated, or mediated through the limited possibilities of a restricted code.
2. A preference for inclusive social relationships and a great sensitivity to the demands of solidarity with the group.
3. Socially induced conservatism and resistance to certain forms of change.
4. A tendency to accept and respond to an authority that inheres in the form of the social relationships.
5. A preference for social relationships where meaning is implicit, where what is not said, when it is not said, and how it is not said, form strategic orienting cues.
6. Maximum identification with the aims and principles of a local group, rather than with the complex, differentiated aims of the major society.
7. A tendency to minimize the experience of guilt in relation to particular classes of situations and so permitting a range of
antisocial behavior by divorcing individual responsibility and guilt from the valuative judgments of the behavior involved.

8. A situation calling for an explicit individual qualification may well be one that engenders critical psychological stress.¹³

Bernstein's elaboration upon the Whorf-Sapir hypothesis regarding intercultural communication has acted as an impetus for other researchers. Robert Hess and Virginia Shipman elaborated upon Bernstein's hypothesis in a research project involving the nature of instructions of mothers from four socio-economic classes to their four-year-old children.

In a research project involving 163 Negro mothers of four-year-old children, Hess and Shipman¹⁴ studied cultural deprivation and its effect upon the mind in problem solving. The 163 mothers involved in this study came from the following four socio-economic status levels:

1. college-educated, professional and managerial levels
2. blue-collar, skilled occupational levels with no more than a high school education
3. unskilled or semi-skilled occupational levels with elementary school education
4. unskilled or semi-skilled occupational levels with fathers absent from the home and supported by public assistance.

¹³Howard J. Campbell, "The Bernstein Hypothesis," Dittoed handout from the California State College at Fresno.

Three tasks were presented to the mothers who were instructed to teach their children the following:

1. Plastic toys were to be sorted by color and function.
2. Eight blocks were to be sorted by two characteristics simultaneously.
3. The mother and child were to work together on an Etch-a-Sketch toy, copying designs that were provided by the researchers.

Hess and Shipman inferred from the language behavior of the mothers, following the instructional periods, that some of the mothers used a number of linguistic structures which might lower the demand upon the resources of the children's minds and increased numbers of non-verbal responses. Increased occurrence of linguistic structures that tended to lower the demand upon the resources of the children's minds and non-verbal responses appeared to be related to a decrease in the level of education and a decrease in the economic status of the mothers.

Hess and Shipman studied the language system of mothers from four social classes. Their emphasis was concerned with the effect that linguistic structures in different social classes might demand from the mental resources of children. Florene Young reported a similar study, which concerned itself with the effect of socio-economic class upon language, but the focus of that study pertained to the language of pre-school children.
Young\textsuperscript{15} studied language systems of "relief" and "regular" pre-school children. "Relief" subjects were the students of the University of Georgia Nursery school when it operated as a project of the Emergency Relief Administration. "Regular" subjects were the children of parents who paid the nursery school tuition.

The purpose of Young's study was to discover whether language variations resulted from the variables of sex, age, and environmental setting with pre-school subjects from different socio-economic classes.

The age range for the 74 subjects was from 30-65 months with a mean age of 47.6 months for the four-year period of the study (1934 to 1937).

Recordings were made of the children's speech in four environmental settings. The settings varied in the following ways:

1. Outdoor—free play with the subject choosing his companions, toys and type of play activity.
2. Indoor—confined play which was often influenced by having to leave parents and not having the preferred playmate.
3. Dinner—subjects sat at a table with an adult and one to four other children.
4. Picture—many different types of activities were made available for the child.

\textsuperscript{15}Florene Young, "An Analysis of Certain Variables in a Developmental Study of Language," Genetic Psychological Monographs, XXIII (February, 1941), 3-141.
An assistant was on hand also to prompt the child if spontaneous responses did not occur. It was discovered that the length of response varied significantly with the four settings.

Parts of speech were found to vary in frequency with the different settings and the socio-economic class of the subjects. "Regular" children were found to be superior overall with "regular" girls having the best responses and the "relief" boys having the worst.

Young's study was a longitudinal investigation of the productive language of pre-school aged children over a four-year period. A much more detailed longitudinal study was completed by Walter Loban who considered a number of language variables that were not included in Young's study.

Loban studied both productive and receptive language in a longitudinal study over a ten-year period. Data were gathered from the subjects on the language variables—speaking, writing, reading, and listening—once a year during the study. His emphasis was on both semantic and structural aspects of language variables.

The subjects were a representative group of the kindergarten population of Oakland, California, which

16Loban, Language Ability: Grades Seven, Eight and Nine.
included a range of socio-economic backgrounds. Thus, children from very low socio-economic status were pooled with children of very high socio-economic status.

Data were gathered on the following language variables:

1. vocabulary
2. oral and written language
3. reading and listening proficiency
4. teacher evaluations of the child's language skill.

All of the subjects were ranked from 1-338. "High" and "low" extremes were selected as separate groups for comparison. The "high" and "low" extremes consisted of 24-30 children who were ranked according to the teacher evaluation of the children's language ability. The results of this comparison with respect to sentence construction, indicated that members of the "high" group had a tendency to use more uncommon sentence constructions. When all of the subjects were considered as a whole, there was a great deal of similarity in the sentence constructions.

The results of the study with respect to the total number of subjects indicated the following:

1. Listening and speaking seemed to be the foundations for developing proficiency in all of the language variables considered.
2. Children who read well seemed to write well.
3. Children who scored well on the oral tests also scored well on the listening tests.
4. Vocabulary and intelligence were highly correlated when intelligence was measured by the Kuhlmann-Anderson group test of intelligence.

5. A low, but positive, correlation resulted between the health of the children and their language proficiency.

The results of any language analysis depend upon how the individual syntactic elements and/or structure of the language system are identified. Loban identified the basic sentence structure and the syntactic elements in those structures by checking their placement in nine basic English sentence patterns. The individual syntactic elements in this study were identified by their placement in nine basic English sentence frames that have been described by Norman C. Stageberg.

Stageberg's\textsuperscript{17} textbook provides an introduction to English grammar. The book is primarily concerned with structural grammar, with occasional allusions to transformational grammar. Stageberg describes grammar as a closed, circular system where definitions of the syntactic elements in the grammar are difficult to discern. To deal with the definitions of the syntactic elements that comprised the grammar, Stageberg described nine sentence frames which contained the basic syntactic elements of English in a context.

\textsuperscript{17}Norman C. Stageberg, \textit{An Introductory English Grammar} (New York: Holt, Rinehart and Winston, 1965).

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The context that Stageberg created in the sentence frames made it possible for individual words to be identified by their function in the sentence. Thus, the basic syntactic elements were structurally defined by their function in an English sentence.

Before proceeding with definitions of the nine sentence frames and thirteen syntactic elements by their form, a definition of the linguistic term word may be helpful in understanding the nature of the analysis of the language system investigated in this study. An unequivocable definition of the linguistic term word is difficult to create. For the purposes of this study Stageberg's definition of word was accepted: A word is a free form that cannot be divided into smaller free forms. A free form is any segment that can be spoken alone with meaning. Words can be divided into two categories, 1) complex words 2) simple words. Complex words contain at least one bound morpheme as an immediate constituent. Simple words consist of a single free base.

Function and form class criteria can be used to categorize the syntactic elements in Stageberg's nine sentence frames. For instance, the difference between a noun and a nominal is that a noun is a word form that functions in the noun position, whereas a nominal is any word in the noun position. An explanation of the nine sentence frames
will be considered first and Stageberg's form class definitions will follow.

Pattern 1: Noun Verb* Adjective
Food is good.

The noun of the sentence is the subject of the verb. This frame is capable of being expanded (i.e. That food is good; That food is very good, etc.). The expansion test for frame (1) holds true for most testing cases. There are, however, many adjectives which will not take the expansion or modification by very (e.g. afraid, ashamed, aware, aghast, etc.).

The verb in sentence frame (1) is a be verb; these forms consist of the following:

1. am
2. is
3. are
4. was
5. were
6. be
7. being
8. been

Pattern 2: Noun Verb (be form) Uninflected Word
The girl is here.

The difference between sentence frame (1) and (2) is the meaning of the word be.

(1)--be means "may be described as"
(2)--be means "may be located" or "occurs"

Pattern (2) will not take the test expansion that was described in reference to sentence pattern (1).

Uninflected Words are the following types:

here, there, up, down, in, out, inside, outside, upstairs, downstairs, on, off, now, then, soon, tomorrow, yesterday, over, through, above, below, before, after, etc. For most words in the third position "there" or "then" can be substituted;
often a prepositional phrase with "there" or "then" meaning will occupy the third position.

**Pattern 3:** Noun\textsubscript{1} verb (be) Noun\textsubscript{1}

My brother is a doctor.

The subscript after the second noun means that it has the same referent as the first noun. A noun in the third position is called a subjective complement. Personal pronouns may also occupy this position, for example:

This is she.
It's me.
It was they.
That's mine.

**Pattern 4:** Noun \text{InV} (intransitive verb)

Girls giggle.

The subject in this sentence frame is tied to the verb. When a noun cluster is in the subject position, it is the head-word of the cluster which is tied to the verb and it is, therefore, the subject. And if the verb is preceded by auxiliaries, the subject is tied to the first auxiliary.

The auxiliary verbs are the following:

can, could, may, might, shall, should, will, would, must, ought (of all auxiliaries only be, have, and do can change form).

Intransitive verbs are self sufficient verbs, that is, they can stand alone with the subject. It can be modified by words and word groups. It is not usually completed by a noun or pronoun.

**Pattern 5:** Noun\textsubscript{1} TrV (transitive verb) Noun\textsubscript{2}

The girl bought a dress.

The verb in this case is completed by a noun which has a different referent from that of the subject. The verb may be completed by either a noun or pronoun for which him, her, it or them may be substituted.
Transitive verbs have two forms, 1) active 2) passive. Active verbs are those that are followed by a direct object. Passive verbs can be made from the active voice of transitive verbs. This can be done when:

1. The object of the active form becomes the subject of the passive form.

2. The passive is made up of a form of the verb be plus a past participle.

3. The subject of the active verb may be made the object of the preposition by or it may be suppressed.

Pattern 6: Noun₁, TrV, Noun₂, Noun₃

The mother bought the girl a dress

The subscript (1), (2), and (3) indicate that each noun has a different referent. If the first of the nouns after the verb is omitted, when Noun₃ is the direct object, the sentence pattern would become pattern (5).

An indirect object can be replaced by a prepositional phrase. To or for can replace the indirect object; other prepositions will also fit occasionally.

A passive sentence can be made from pattern (6) by making either the direct object or indirect object the subject of the passive verb.

The verbs that can be used in this pattern are limited. Some of those verbs are the following:

give, make, find, tell, buy, write, send, ask, play, build, teach, assign, feed, offer, throw, hand, pass, sell, pay
Pattern 7: Noun₁ TrV Noun₂ Noun₂

The players chose Harry captain.

Both nouns after the verb have the same referent. In the object order of the two nouns the direct object comes first. If the second noun was eliminated the sequence would become pattern (5). If the verb were changed to passive only the direct object could become its object.

Very few verbs can be used for pattern (7). Some of the verbs that can be used are the following:

name, choose, elect, appoint, designate, select, vote, make, consider, imagine, think, believe, suppose, find, prove, label

Pattern (7) has variations in which the third position is occupied by forms other than a noun; however, these are in all cases related to the direct object; for example:

He considered her beautiful.-----Adjective
I thought the caller you.---------Pronoun
I thought him upstairs.-----Uninflected Word

Pattern 8: Noun Linking Verb Adjective

The acrobat seems young.

Linking verbs link the verb to the adjective. Any verb except be that can be fitted into the example position of the linking verb is, by function, a linking verb.

Common linking verbs are the following:

seem, appear, become, grow, remain, taste, look, feel, smell, sound, get

Pattern 9: Noun₁ Linking Verb Noun₁

My brother remained an athlète.

Noun₁ in both cases refers to the same referent. The verbs which will fill the linking verb position are limited ever further; they are:

remain, become, appear, seem, continue
The form-class definitions of syntactic elements examined in this study were as follows:

**Noun**--Nouns are identified by two aspects of form, their inflectional morphemes and their derivational morphemes. The inflectional morphemes are the noun possessives \(-s_1\) and the noun plural \(-s_2\). Any word which has the possessive \(-s_1\) is a noun and any word which has the plural \(-s_2\) is also a noun. If a word does not have the \(-s_2\) but can take it in the same position in a sentence, it is a noun.

Nouns are also identified by noun-forming derivational suffixes added to verbs, adjectives and nouns. Such derivational suffixes are \(-\text{ance}\), as in acceptance; \(-\text{ade}\) as in blockade; \(-\text{tion}\) as in deception; \(-\text{ty}\) as in deformity; and \(-\text{ing}\) as in painting, to name a few. (Pronouns were considered to be a small sub-class of the noun category for the purposes of this study.)

**Nominal**--Certain sentence positions are characteristically the habitation of nouns. Some of these positions are the following:

1. Subject of the Verb
2. Subjective Complement
3. Object of the Verb
4. Indirect Object of the Verb
5. Object Complement
6. Object of the Preposition
7. Retained Object

Any word, irrespective of its form class, is a nominal if
it fits into one of the above noun positions.

Verb—Verbs have a maximum of five different inflectional forms. They are the following:

Stem---------------------------rise
Present Third Person Singular----rises
Present Participle--------------rising
Past Tense---------------------rose
Past Participle-----------------risen

Any word which has three or more of these inflectional forms is a member of the form-class called verb. Verbs are always single words.

Verbal—Verbals are those forms which occupy the verb positions as illustrated in the nine basic sentence patterns. They come after the opening noun or noun clause. These positions are the habitat of verbs and their accompanying auxiliaries including be, have, and do forms in varying combinations. Any verb form taking a subject or complement, object of the verb, subjective complement or, modified by an adverbial is a verbal regardless of its position.

Adjective—A word which is inflected with -er and/or -est and which is capable of forming adverbs with -ly and/or nouns with -ness is called an adjective.

Adjectival—Adjectivals, like nominals, occupy certain characteristic positions. The main position is between the determiner and the noun. In addition, words which function as adjectives without the inflectional
suffixes which identify that form class, are adjectivals.

Adverb--The adverb has only three suffixes to set it apart from other form-classes. The three suffixes are the -ly attached to an adjective stem (e.g. just, justly; fortunate, fortunately; etc.), or the derivational suffix -wise and the free form -like.

Adverbial--The position class, adverbials, cannot be pinpointed without difficulty and enormous complications. There are, however, common adverbial positions that can be set forth:

1. Before the utterance with or without juncture.
   
   Really, you should know better.
   Now it's time to go.

2. After the subject and before the verb.

   She actually expects to marry him.

3. After the auxiliary or first auxiliary.

   He would seldom make the effort.

4. After the verb in sentence pattern (4) and after the verb be in patterns (1), (2), and (3).

   He drove recklessly.
   She is seldom late.
   She is outside.
   My brother is always a gentleman.

5. After the complement of the verb.

   Hoskins will be quarterback tomorrow.
   Hoskins will play football tomorrow.
   Hoskins may be chosen captain tomorrow.

As a last resort for identifying adverbials try elimination.
If the word in question is not a nominal, verbal, or adjectival—and not a structure word—then it is by elimination an adverbial. (Uninflected words in this position were considered as adverbials in this study.)

**Conjunction**—In English there is a small structure class consisting of eight words called coordinating conjunctions. They are the following:

- and
- but
- for
- nor
- not
- or
- so
- yet

There is also a sub-class of coordinating conjunctions known as correlative conjunctions.

- either...
- both...
- neither...
- not (only)...
- or
- and
- nor
- but (also)

**Determiner**—A determiner is a word that patterns with a noun. It precedes the noun and serves as a signal that a noun is soon to follow. A partial list of determiners consists of the following:

- a/an
- the
- her
- his
- its
- my
- our
- their
- your
- that
- these
- those
- this

**Preposition**—Prepositions are words like of, in, and to which are usually followed by a noun, personal pronoun or a noun-substitute, called the object of the preposition. English has a small group of prepositions of
which the most frequently used are:

at on
in from
by to
of with
for

In addition to the one-syllable prepositions there are two-syllable prepositions like the following:

about behind inside
after below into
above beneath beyond
against between outside
among despite under
before except upon

Qualifier—Qualifiers are recognized by position alone since the members of this class have no characteristic form. The qualifier position is before an adjectival or an adverbial. Position before the adjectival and adverbial accepts both qualifiers and adverbials. Words in this position are termed qualifiers unless they can also be employed in the adverbial position; in this case the word would be classified as an adverbial.

Auxiliary—The category of auxiliary has ten members in all; they are the following:

can could
may might
shall should
will would
must ought (to)
CHAPTER III

METHOD

Chapter I of this thesis was concerned with an introduction to communication and culture. Emphasis was focused on the interaction that takes place between communication and culture. The purpose of this study was also explained in Chapter I, and described how the interaction of communication and culture are involved in this research project.

Chapter II was concerned with a review of some of the literature that was influential in the development of this study. Included in that review were the results and conclusions of some contemporary researchers who studied the interaction of communication and culture, and definitions of the 13 syntactic element categories which were used in analyzing the subject's utterances.

Chapter III will be concerned with the definition of an utterance, the subjects involved in this study, the apparatuses used in collecting the data, the stimulus material and the procedure that was used in this study.
Definition of Utterance

An utterance, for the purpose of this study, was described as a segment of speech that was bound by silence. An utterance was identified by listening to a tape recording using vocal pause (silence) as an initial cue that a potential utterance was about to occur. Beginning with the "silence" cue, the following speech pattern was transcribed into a typewritten statement. Transcription was ceased at the next vocal pause. The transcribed language elements that occurred between the initial pause and the terminal pause were called an utterance.

Within the silence-bound segments it was possible for the subject to link structures like Stageberg's sentence frames together. Each of the silence-bound speech segments was checked to discover whether more than one of Stageberg's sentence frames or its expansion was contained therein. If more than one speech segment was structured in a manner that paralleled one of Stageberg's sentence patterns, that segment of speech was counted as one utterance. For example:

It's time for me to go now stay by the house.

This segment of speech was transcribed as an utterance according to the binding silence. If that speech segment was divided between the words "now" and "stay," two
utterances could be made. The first of the two segments paralleled sentence frame (3) \textit{i.e.} Noun_1 be Noun_{1-7}. The first noun is the word "it" and the verb "is" modified the noun. The noun "time" completed the sentence frame with a restatement of the subject of the verb. The second part of the speech segment paralleled sentence frame (5) \textit{i.e.} Noun_1 (understood) TrV Noun_{2-7}. The subject "you" is understood and is modified by the transitive verb "stay." Noun_2 is the subject of the preposition "by," which is the head-word of the prepositional phrase that completed the verb.

The above examples take the meanings of the complementing nouns into consideration. Noun_1 after the be verb was the same reference as Noun_1 before the verb. Although meaning was not considered in this study, the above examples show how Stageberg's sentence frames function.

If two of Stageberg's sentence frame slots were filled between the vocal pauses, each was counted as a separate utterance.

Occasionally speech segments were broken by beginning the thirty-second segments of the samples in the middle of an utterance, or some utterances were clipped short by the thirty-second sample segments. In either case the words in the portion of speech that fell into the
thirty-second segments were counted and the broken utterance was counted as one utterance.

The analysis of the data collected for this study consisted of the identification of fourteen characteristics of the language system of the subjects. The characteristics of the language system were the following:

1. nouns
2. nominals
3. verbs
4. verbals
5. adjectives
6. adjectivals
7. adverbs
8. adverbials
9. qualifiers
10. auxiliaries
11. determiners
12. prepositions
13. conjunctions
14. utterance length

Subjects

The subjects involved in this study were kindergarten-aged children from three kindergarten groups.

Group I was comprised of twelve subjects who were selected from the Missoula Head Start Program at Central Elementary School. Each of the twelve lived in a home where the family income was below the federal OEO poverty index. These children represented the "poor" subjects in this study.

The children had been in attendance at the Head Start class for a period of eight and one-half months
in preparation for introduction into a public urban first grade in the fall of 1968.

Group II was comprised of twelve kindergarten-aged subjects from the University of Montana kindergarten program. By their attendance at the University kindergarten program, these children were considered to be "non-poor." Parents who were able to afford the tuition to enroll children in this program seemed affluent enough to classify these children as "non-poor."

Like the children in the Head Start program, these children had been in attendance at the kindergarten for approximately eight and one-half months. These subjects were, likewise, preparing to enter the first grade in the fall of the academic year of 1968.

Group III was used as a control group which was comprised of ten Head Start kindergarten-aged subjects from Charlo, Montana. These subjects had not attended a formal kindergarten program during the 1967-68 academic year, but were involved in a summer program preparing them for the urban public school with peers of the same age. These subjects came from families whose economic status fell below the OEO poverty index.

The data were gathered from these subjects on the second day of their school meeting in Charlo, thus minimizing the effect of pre-school training provided by the
Head Start program.

**Apparatus**

Two tape recorders were used to gather data. A portable Sony transistorized tape recorder was used along with a Rheem Caliphone solid state tape recorder.

**Stimulus Material**

The stimulus material that was used to elicit language from the subjects was a children's storybook. Upon advisement by the Missoula Head Start kindergarten teacher, the series about a monkey storybook character was selected. In this series the story entitled *Curious George Rides a Bike* was selected. This selection met the approval of the other two kindergarten teachers.

**Procedure**

Approval was secured from the teachers in the respective kindergarten classes prior to the recording of the stories. Each subject was selected from the class and isolated in a place where excess noise would be less likely to distract from the comprehensibility of the recording. The children to be recorded were randomly selected from the group of qualified subjects in each of the three groups.

The language samples elicited in this study were
recorded in a natural laboratory; the surroundings of the school room and the school building were familiar to each of the subjects, allowing them to feel somewhat comfortable while telling their stories.

While walking to the designated place where the recording was to be done, the researcher talked freely with each of the subjects before the actual recording. At the designated spot each child was told what his task in the recording was to be. The instructions went generally as follows:

Today I would like for you to tell me a story about *Curious George Rides a Bike*. I will show you the pictures of the story and you can tell me a story from those pictures. This is your very own story and you can tell it any way that you would care to. I will open the storybook to the first page and show you a picture of Curious George and then I will turn the page to the first picture in the storybook and let you begin with your very own story. Do you understand what I mean? You will be telling the story to me and to my friend [Rheem or Sony] who will keep the story for me so that I can listen to your story again and again. Are there any questions before I turn the page to the first picture of the story?

Before continuing, each subject was asked if he understood what was expected of him. If the subject did not understand the instructions, they were repeated again. When the subject had affirmed his understanding of the task that was expected of him, the book was opened to the first page of the story.
While the subjects were telling the story there were periods of hesitation. The children were stimulated to start talking again by different questions. For instance, the subjects were asked, "Now what is happening to Curious George?" or "And then . . ." in order to keep the story in a relatively continuous whole.

After the recording was completed, the children were thanked for the story that they had told. Furthermore, each was asked if he would like to hear part of the story that he had told. After hearing part of the story that had been recorded the subject was returned to the classroom.

When all of the stories for each group had been recorded, the tape-time for each group was totaled. This total tape-time was divided into thirty-second segments. The total number of thirty-second segments was used as the ceiling for selecting thirty of the total number of thirty-second segments from a table of random numbers. Thus a total of fifteen minutes of speech was analyzed for each group of subjects.

The analysis of the language samples was recorded on a grid which consisted of twenty horizontal slots and nine vertical slots. The individual syntactic elements, coded from 1 to 13, were recorded on the grid, providing for rapid identification of number and length of utterances.
Four analyses were performed on the data. A multiple t test\(^{18}\) was applied to determine whether the length of utterances differed among the three groups. A Spearman Rank Correlation\(^{19}\) was calculated to check for similarities in the ranked distributions of the syntactic elements among the three groups. In order to discover whether differences existed among the three groups in the number of words in the samples, a Kruskal-Wallis One Way Analysis of Variance\(^{20}\) was applied to the data. When differences were found to exist, a multiple Mann-Whitney U test\(^ {21}\) was applied to the data in order to discover the nature of the differences among the groups.


\(^{20}\)Ibid., pp. 184-193.

\(^{21}\)Ibid., pp. 116-127.
CHAPTER IV

RESULTS AND DISCUSSION

Results

This chapter contains the results of the data analysis and a discussion of those results. The presentation covers the reliability of the sampling procedure, data about the total language output of subjects, an analysis of patterns of syntactic elements, and a brief discussion of the results.

Reliability of Sampling Procedure

The sampling procedure used in this study could have biased the results since subjects who talked for longer periods of time had a higher probability of being sampled and included in the analysis. To check on the representativeness of the sampled utterances, the number of times that each of the 34 subjects was represented in the sample was tabulated (see Appendix, Table 5). This analysis revealed that three subjects had not been sampled at all; two from the University kindergarten group, and one from the Head Start group. The median times each subject was sampled in each group was 3 times in the Head
Start group; 2 times in the University kindergarten group; and 3 times in the control (Charlo) group.

Linguistic patterning of the 13 syntactic elements did not differ among the groups as indicated by comparisons of percentages that each syntactic element represented in the language samples. When a Spearman Rank Correlation statistic was calculated for the ranked distribution of the syntactic elements, the results indicated that the Head Start group correlated with the University group with a correlation coefficient of .96; the Head Start kindergarten group correlated with the control group with a correlation coefficient of .98; and the University kindergarten group correlated with the control group with a coefficient of .96.

TABLE 1

CORRELATIONS OF LINGUISTIC PATTERNING FOR THE 13 SYNTACTIC ELEMENTS COMPARING ALL THREE GROUPS

<table>
<thead>
<tr>
<th>Head Start Group</th>
<th>Head Start Group</th>
<th>University Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>-vs- University Group</td>
<td>-vs- Control Group</td>
<td>-vs- Control Group</td>
</tr>
<tr>
<td>.96*</td>
<td>.98*</td>
<td>.96*</td>
</tr>
</tbody>
</table>

*Spearman Rank Correlation, significant at the .05 level of significance.

Ibid., pp. 202-213.
Total Speech Output Analysis

The total speech output analysis refers to the responses of all of the subjects sampled in one group taken as a whole. The results of this analysis are reported in Table 2.

Similarities appeared between the mean number of words per sample per subject and the mean number of words for the thirty samples as a whole, in all three groups. This seems to indicate that the means for the groups as a whole yielded a very good indication of the responses of the individual subjects. This would appear to give some validity to the Mann-Whitney U tests that were applied to check for differences between the occurrence of the syntactic elements among the three groups.

For example, the Head Start group used a mean number of 38.6 words per sample, which was very similar to the mean number of words per sample for the thirty samples as a whole (38.9); the University kindergarten group used a mean number of 31.7 words per sample per subject, which was very similar to the mean number of 31.8 words per sample for the thirty samples and the control group used a mean number of 30.0 words per sample per subject, which was very similar to the mean number of 30.3 words per sample for the thirty samples (see items 2 and 3, Table 2).
### TABLE 2
SUMMARY OF COMPARED MEASURES ON TOTAL SPEECH OUTPUT

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Head Start Group</th>
<th>University Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mean Length of Story Told by Subjects in Minutes</td>
<td>6.9&lt;sup&gt;a&lt;/sup&gt; (Range=4.4-9.7) (Median=6.3)</td>
<td>6.2 (Range=4.0-8.6) (Median=5.5)</td>
<td>5.9 (Range=2.5-8.0) (Median=6.6)</td>
</tr>
<tr>
<td>2. Mean Number of Words per Sample Interval for the Thirty Samples</td>
<td>38.6&lt;sup&gt;b&lt;/sup&gt;&lt;sup&gt;*&lt;/sup&gt;</td>
<td>31.7</td>
<td>30.0</td>
</tr>
<tr>
<td>3. Mean Number of Words per Sample Interval for the Thirty Samples</td>
<td>38.9&lt;sup&gt;b&lt;/sup&gt;&lt;sup&gt;*&lt;/sup&gt;</td>
<td>31.8</td>
<td>30.3</td>
</tr>
<tr>
<td>4. Mean Utterance Length in the Number of Words Used by the Subjects Sampled</td>
<td>8.8&lt;sup&gt;c&lt;/sup&gt;&lt;sup&gt;*&lt;/sup&gt;</td>
<td>6.7</td>
<td>7.4</td>
</tr>
</tbody>
</table>

<sup>a</sup>Kruskal-Wallis one-way analysis of variance.

<sup>b</sup>Mann-Whitney U test.

<sup>c</sup>t test.

<sup>*</sup>Significant at the .05 level or beyond.
There was no significant difference between the mean length of the stories that were told by the three groups when they were compared by a Kruskal-Wallis one-way analysis of variance\(^{23}\) (see item 1, Table 2). The mean length of the story, timed in minutes, was 6.9 in the Head Start group, 6.2 in the University group, and 5.9 in the control group.

There was a significant difference between the mean number of words per sample for subjects when the three groups were compared by a Kruskal-Wallis one-way analysis of variance (see item 2, Table 2). In order to clarify the nature of the resulting difference, a multiple Mann-Whitney U test was applied to that data. The results of that comparison indicated that the number of words per sample for each subject in the Head Start group was significantly higher than the other two groups (38.6 to 31.7 and 30). Comparisons between the University group (31.7) and the control group (30.0) did not yield significant differences.

There was a significant difference between the mean number of words per sample for all thirty samples when the three groups were compared by a Kruskal-Wallis one-way analysis of variance (see item 3, Table 2). In order to clarify the nature of the resulting difference, a multiple Mann-Whitney U test was applied to that data (see item 3, \textit{ibid.}, pp. 184-193.)
Table 2). The results of that comparison indicated that the mean number of words per sample for all thirty samples in the Head Start group (38.9) was significantly higher than the other two groups. Comparisons between the University group (31.8) and the control group (30.3) did not yield significant differences.

There was a significant difference between the mean utterance length in number of words for the thirty samples when multiple t tests were used to compare the Head Start group (8.8) to the other two groups (see item 4, Table 2). The results of a comparison of mean utterance length in the number of words for the thirty samples did not yield significant differences when the University group (6.7) and the control group (7.4) were compared.

Patterning of Syntactic Elements

This section reports the occurrence of syntactic elements in the language output of the subjects. Nouns ranked first in the percentage of occurrence in all three groups—Head Start group (31.4), University group (35.0), and the control group (32.9). Verbs ranked second in percentage of occurrence—Head Start group (18.6), University group (23.6), and the control group (22.3). Nouns and verbs seemed to be the basis for the patterning of the language system in the groups under study. These two
### TABLE 3

PERCENTAGE AND RANK OF OCCURRENCE OF 13 SYNTACTIC ELEMENTS

<table>
<thead>
<tr>
<th>Syntactic Element</th>
<th>Head Start Group</th>
<th>University Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Rank*</td>
<td>%</td>
</tr>
<tr>
<td>Noun</td>
<td>31.4</td>
<td>1</td>
<td>35.0</td>
</tr>
<tr>
<td>Verb</td>
<td>18.6</td>
<td>2</td>
<td>23.6</td>
</tr>
<tr>
<td>Adverbial</td>
<td>9.9</td>
<td>3.5</td>
<td>7.9</td>
</tr>
<tr>
<td>Determiner</td>
<td>9.9</td>
<td>3.5</td>
<td>10.9</td>
</tr>
<tr>
<td>Conjunction</td>
<td>9.4</td>
<td>5</td>
<td>7.5</td>
</tr>
<tr>
<td>Adjectival</td>
<td>7.7</td>
<td>6</td>
<td>5.5</td>
</tr>
<tr>
<td>Preposition</td>
<td>7.2</td>
<td>7</td>
<td>8.0</td>
</tr>
<tr>
<td>Adjective</td>
<td>2.7</td>
<td>8</td>
<td>0.7</td>
</tr>
<tr>
<td>Auxiliary</td>
<td>2.1</td>
<td>9</td>
<td>0.2</td>
</tr>
<tr>
<td>Nominal</td>
<td>0.4</td>
<td>10</td>
<td>0.1</td>
</tr>
<tr>
<td>Adverb</td>
<td>0.3</td>
<td>11.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Qualifier</td>
<td>0.3</td>
<td>11.5</td>
<td>0</td>
</tr>
<tr>
<td>Verbal</td>
<td>0</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>99.4%</strong></td>
<td><strong>99.5%</strong></td>
<td><strong>99.6%</strong></td>
</tr>
</tbody>
</table>

*Decimal fractions in rank are the result of ties in percentages.

**Deviations from 100% are the result of rounding."
elements combined to represent 50\% of the syntactic elements in the language system of the Head Start group, 58.6\% in the University group, and 55.2\% of the syntactic elements in the language system of the control group.

Adverbials ranked third in the percentage of occurrence in the language system of the Head Start group (9.9) and the control group (12.5), but ranked fifth in percentage of occurrence in the University group (7.9).

Determiners ranked fourth in percentage of occurrence in the language system of the Head Start group (9.9) and the control group (10.8); however, they ranked third in percentage of occurrence in the University group (10.9).

Conjunctions ranked fifth in percentage of occurrence in the language system of the Head Start group (9.4), sixth in the University group (7.5), and seventh in the control group (5.5).

Prepositions ranked seventh in percentage of occurrence in the language system of the Head Start group (7.2), and fifth in the University (8.0) and control group (8.2).

The remaining elements in the language systems were made up of very small percentages of nominals, adjectives, adverbs, auxiliaries, and qualifiers.
Verbals, as defined by Stageberg, did not occur in either of the sampled language segments of any of the three groups.

The seven highest ranked syntactic elements (nouns, verbs, adverbials, determiners, conjunctions, adjectivals, and prepositions) that occurred in the language samples of subjects in this study yielded a percentage of the total output which was similar to the results of Florene Young\textsuperscript{24} and Dorothea McCarthy.\textsuperscript{25} Although Young and McCarthy did not label the syntactic elements in the language system as they were in this study, they did use near-equivalent terminology. For instance, Young did not use the terms, "adjective," "adverbial," and "determiner," but did call these elements "adjective," "adverb," and "article." McCarthy used the terms "adjectives," "adverbs," "nouns," "verbs," "conjunctions," and "prepositions," but did not include "determiner" or a near equivalent in her analysis.

Nouns, verbs, adverbials, determiners, conjunctions, adjectivals, and prepositions represented 97.6\% of the total language output of the three groups in this study. The same seven syntactic elements represented

\textsuperscript{24}Young, p. 123.

\textsuperscript{25}Dorothea McCarthy, \textit{The Language Development of the Pre-School Child} (Minneapolis: The University of Minnesota Press, 1930), p. 118.
97.4% of the language system of the pre-school children (30-65 months of age) as reported by Florene Young, and 95.7% of the language system of children who were 54 months old as reported by McCarthy's normative analysis. It appears, from these results, that the data gathered in this study were consistent with other descriptions of the composition of syntactic elements in the language system of pre-school children.

Discussion

The results of this study indicated that the Head Start group provided significantly higher language output per subject and as a whole than the University or control groups. There were no significant differences between the output of the University kindergarten subjects and the control group.

Relationships between the thirteen syntactic elements in terms of occurrence indicated that there was a very high (.96 and above) correlation between the Head Start and the other two groups in terms of the occurrences of the thirteen syntactic elements. Young's and McCarthy's studies revealed that the occurrence of the thirteen syntactic elements was very similar in this study to their reported findings regarding the percentage of the seven highest ranked elements in the language system.
The differences that resulted from the data analysis indicated that the Head Start group talked more than the other two groups. Results of this nature seem to indicate that the Head Start program provided some form of reinforcement which may have been responsible for this increased output. The precise nature of reinforcement which might have been responsible for this increased output was not isolated. There appears to be no systematic research completed dealing with kindergarten curricula and kindergarten teaching methods that would explain the output difference.
CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

Introduction

The Head Start program, sponsored by the Office of Economic Opportunity, was established to provide ways and means for the economically disadvantaged to improve themselves. Impoverishment appears to involve a complex pattern of factors that encompass more than just a lack of money.

The term "culture of poverty" has been coined to describe the beliefs and values related to circumstances of impoverishment. One central element in passing the beliefs and values from individual to individual appears to be the reinforcement received through patterns of speech and language behavior. The passage of the poverty culture from generation to generation appears to be encouraged by the way in which impoverished individuals think and talk about themselves and their environment. In addition to the transmission of values and beliefs by means of speech communication, it appears that the
culture of impoverishment reinforces the development of unique patterns of language, which might be noticeable in the restriction of language structure and output.

Purpose

This study was conducted to discover whether there was a difference between the language output of a group of "poor" subjects, chosen from the population of the impoverished culture, and a group of "non-poor" subjects, chosen from the population other than that defined as impoverished.

A review of available literature revealed that little research had been conducted to describe the language output of kindergarten-aged children from impoverished environments. It seems possible that differences in language output may be manifested in the language habits and patterns of children by the age of entry into kindergarten. If so, methods of language development in the schools may need to be re-examined to account for enculturation factors. Differences that result from such influences might possibly be more clearly identified by studying the language of children prior to their entry into the public schools.
Subjects

The subjects in this study were three groups of kindergarten-aged children: a group defined as "poor," comprised of twelve subjects, who were enrolled in a Head Start program in Missoula Montana; a group defined as "non-poor," comprised of twelve subjects who were enrolled in the University of Montana kindergarten (both groups had been enrolled in kindergarten programs for approximately eight and one-half months, and were preparing to enter a public first grade in the fall of 1968); and a third group defined as the "control group," who were enrolled in a summer Head Start program in Charlo, Montana, in preparation for entering a public school first grade in the fall of 1968. The data from the "control group" were collected on the second day of their classroom meetings to minimize the effect of the Head Start language training program.

Method

Each of the subjects in the three groups was shown the storybook *Curious George Rides a Bike*, which functioned as stimulus material. The children were told that they were to tell the researcher a story about the pictures that were contained in the storybook. When each subject had acknowledged his understanding of the task,
the storybook was opened to the first page.

Each of the subjects viewed all of the pictures that were contained in the storybook and told the researcher a story which was tape recorded. When the thirty-four stories had been collected on tape, the total time on each tape was divided into segments of thirty seconds. Each of the segments was counted, and thirty of the segments were selected for analysis from a table of random numbers.

The thirty sample segments for each group were transcribed from the tape into typed statements. The words in these speech samples were identified according to Norman Stageberg's definitions of the syntactic elements, and samples were then divided into utterances and subjected to analysis.

Results and Conclusions

The data in this study revealed that the patterning of the thirteen syntactic elements in the language system of the subjects did not differ significantly from one group to another.

The Spearman Rank Correlation analysis indicated that there was a very high (.96 and above) correlation between the Head Start and the other two groups in terms of the occurrences of the thirteen syntactic elements.
Florence Young's and Dorothea McCarthy's studies revealed that the occurrence of the thirteen syntactic elements was very similar in this study to their reported findings regarding the percentage of the seven highest ranked elements in the language system (95.7 to 97.4 in this study). When language output was compared among the three groups, the Head Start group had significantly higher language output per subject and as a whole than the University or the control group. There were no significant differences between the output of the University group and the control group.

Implications

It seems that the Head Start program was using some system of reinforcement which stimulated a significantly larger linguistic output for the Head Start subjects when compared with the University group and the control (Charlo) group. The nature of the reinforcement in the Head Start program might be attributed to any of a number of methods that are utilized in that program.

The Head Start program is very highly structured and the emphasis upon structure is indicated by the opening remarks in a manual prepared for Head Start teachers.

Regardless of professional skill and experience, a staff responsible for a group of young children cannot do a professional job without careful planning together; mapping out the goals for a
summer session, a full-year session, or a two-
year period of time, if this is the duration
of the program.26

Furthermore, the activities of the Head Start children are
to be planned precisely.

Regardless of the length of day, the sequences
of time should follow the natural pace and
needs of the children for a vigorous activity,
quiet experiences, nutrition, bathroom and
rest. The plans should be based on the recog-
nition that everything done with the young
child and by the young child leads to learning,
and that his opportunities to learn are clearly
related to the reciprocal, rewarding, stimu-
lating relationship with adults and children
at the center.27

This quotation indicates that an emphasis is placed upon
the planning of child-centered activities in the Head
Start program. It alludes to some of the experiences that
are planned for Head Start children so that learning is
facilitated.

In addition to the emphasis upon structure in the
Head Start program, specific types of activities have been
outlined which would seem to facilitate language develop-
ment in the children. Teachers in Head Start kindergartens
are encouraged to use books, pictures, records, and audio-
visual materials for teaching various language skills.

   for Teachers, Daily Program III (Washington: U.S. Govern-

27Ibid., p. 2.
Close contact between center staff and library personnel provides a fine consultation source for borrowing and purchase of books and audio visuals, as well as opportunities to learn added skills in storytelling, poetry presentation, uses of materials for information purposes, and ways of assisting children to use these resources on their own.28

It appears that emphasis in this area might be partly responsible for the trend in the results of this study.

The concept of symbolism is also introduced to Head Start children in structured and symbolic media such as clocks, scales, maps, globes, money, and stamps. Children are acquainted with some of the "artifacts" and common symbols in their society. The stated purpose for the introduction of these symbols is to:

... help the child move gradually from sensory-motor-oral language expression to an ability with symbols that will eventually help him become a reader and enjoy many vicarious experiences throughout his life.29

It seems that one of the goals of the Head Start program is to increase the amount of receptive and productive language in kindergarten-aged children. The results of this study seemed to support the assumption that there is value in a highly structured language development program for kindergarten-aged children.

28Ibid., p. 11.
29Ibid., p. 17.
Although it was not the purpose of this study to investigate the nature of kindergarten speech and language development programs, it would appear that such a task ought to be undertaken. Arthur W. Staats has stated that,

Our system of reinforcement in the school situation has developed in the practical task of educating children. It has never been subjected to systematic study and to research and development that is based upon basic principles of behavior.30

It also appears that more work needs to be done in developing and implementing successful methods for teaching language skills. Staats has commented that:

... additional means must be instituted to provide training for children for whom we expect there to be inadequate training in the home. To some extent this has been recognized by our society and we have seen the development of Project Headstart ... for culturally deprived children ... this is a step in the right direction.31

The results of this study indicate that the structure of the Head Start program may be an effective way of encouraging greater language output in children. The specific factors which make it effective were not, however, isolated in this study.

It appears that the most significant implication


31Ibid., p. 555.
that can be drawn from the results of this study is that there may be a need to investigate teaching methods, curriculum structure, and reinforcement systems in kindergarten language development programs.

Suggestions for Further Study

The Head Start program, according to the results of this study, increased the rate of linguistic output of the subjects in its enrollment. Since there has been little or no research on methods of encouraging high levels of language output, it may be valuable to investigate this area of inquiry. There are many variables in the reinforcement system of the Head Start program which might be responsible for this increase, but the task of isolating the differences between the Head Start program and a non-Head Start program, when the goals of the non-Head Start type program are not clearly defined, may be difficult.

Kindergarten and elementary school teachers might possibly incorporate a similar type of reinforcement into their teaching if the differences between the two programs were discovered.

One might expect the linguistic rate to decrease when the Head Start training was completed and the child entered a public school. It is possible, however, that the increased linguistic output might be self-reinforcing
after one or two years of Head Start training. It would seem valuable to study the linguistic output of children who had completed the Head Start training to see if the effects of the program faded away.

**Suggestions for Researchers**

Certain difficulties were encountered in this study which might be avoided by other researchers. The most serious of the difficulties was encountered when the speech samples were being transcribed into typed form. Speech samples that were recorded on the small Sony tape recorder were very hard to understand. Although the microphone was placed very close to the subject, there was still minimal fidelity. A full-size tape recorder with a directional microphone might have greater recording fidelity and greater volume control, so the children's voices could be amplified when they speak softly and are difficult to understand.

Occasionally the children were distracted from the stimulus material during the recording sessions. Distractions would seem less likely if film strips were shown as stimulus material rather than a book. The attention of the child would possibly be better focused on a screen in a darkened room, and the environment for the recording sessions would possibly be more constant.
Experience in this study indicated that recognition of these two factors could possibly eliminate or diminish some difficulties in further research in this field of inquiry.
APPENDIX
TABLE 4

SUMMARY OF THE DISTRIBUTION OF THE SYNTACTIC ELEMENTS IN EACH OF THE GROUPS AS A WHOLE

<table>
<thead>
<tr>
<th>Syntactic Elementsa</th>
<th>Head Start Group</th>
<th>University Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>367</td>
<td>335</td>
<td>300</td>
</tr>
<tr>
<td>Nominal</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Verb</td>
<td>217</td>
<td>226</td>
<td>204</td>
</tr>
<tr>
<td>Verbal</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Adjective</td>
<td>31</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Adjectival</td>
<td>90</td>
<td>53</td>
<td>62</td>
</tr>
<tr>
<td>Adverb</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Adverbial</td>
<td>116</td>
<td>76</td>
<td>114</td>
</tr>
<tr>
<td>Qualifier</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Auxiliary</td>
<td>25</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Determiner</td>
<td>115</td>
<td>105</td>
<td>99</td>
</tr>
<tr>
<td>Preposition</td>
<td>84</td>
<td>77</td>
<td>75</td>
</tr>
<tr>
<td>Conjunction</td>
<td>110</td>
<td>72</td>
<td>42</td>
</tr>
</tbody>
</table>

aListed in the sequence in which they were defined, Chapter II.
### TABLE 5

<table>
<thead>
<tr>
<th>Subject</th>
<th>Head Start Group Time</th>
<th>University Group Subject Time</th>
<th>Control Group Subject Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>9:40</td>
<td>1. 5:30</td>
<td>1. 8:00</td>
</tr>
<tr>
<td>2.</td>
<td>6:30</td>
<td>2. 4:55</td>
<td>2. 7:00</td>
</tr>
<tr>
<td>3.</td>
<td>9:00</td>
<td>3. 4:40</td>
<td>3. 6:50</td>
</tr>
<tr>
<td>4.</td>
<td>4:20</td>
<td>4. 4:00</td>
<td>4. 4:50</td>
</tr>
<tr>
<td>5.</td>
<td>5:50</td>
<td>5. 8:55</td>
<td>5. 2:50</td>
</tr>
<tr>
<td>6.</td>
<td>4:50</td>
<td>6. 7:00</td>
<td>6. 3:50</td>
</tr>
<tr>
<td>7.</td>
<td>8:55</td>
<td>7. 6:45</td>
<td>7. 4:50</td>
</tr>
<tr>
<td>8.</td>
<td>4:55</td>
<td>8. 7:10</td>
<td>8. 6:00</td>
</tr>
<tr>
<td>9.</td>
<td>7:00</td>
<td>9. 7:05</td>
<td>9. 5:00</td>
</tr>
<tr>
<td>10.</td>
<td>6:15</td>
<td>10. 6:30</td>
<td>10. 5:50</td>
</tr>
<tr>
<td>11.</td>
<td>6:30</td>
<td>11. 6:50</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>4:30</td>
<td>12. 4:50</td>
<td></td>
</tr>
</tbody>
</table>
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Young, Florene M. "An Analysis of Certain Variables in a Developmental Study of Language," *Genetic Psychology Monographs,* XXIII (February, 1941), 3-141.