A Psycholinguistic Analysis of the Generative Grammar of Intermediate Grade Blacks in a Central Florida School

1976

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A PSYCHOLINGUISTIC ANALYSIS OF THE GENERATIVE GRAMMAR
OF INTERMEDIATE GRADE BLACKS IN A
CENTRAL FLORIDA SCHOOL

BY

CAROLYN JEAN TAVZEL
B.A., Florida Technological University, 1974

THESIS

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1976
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To my teacher,

advisor, and

friend,

Dr. Gladys H. Bennett
# TABLE OF CONTENTS

**LIST OF TABLES** ..................................................... vi

**TEXT**

1. REVIEW OF THE LITERATURE ....................................... 1

   NORMAL LANGUAGE DEVELOPMENT .................................. 1

   SYNTACTICAL AND GRAMMATICAL RULES ............................ 5

   ENVIRONMENTAL INFLUENCES ON THE ACQUISITION
   OF SYNTAX ......................................................... 17

2. STATEMENT OF THE PROBLEM ....................................... 19

3. PURPOSE OF THE STUDY ........................................... 20

4. HYPOTHESES ......................................................... 20

5. METHODOLOGY ....................................................... 20

6. RESULTS ........................................................... 22

7. DISCUSSION ........................................................ 27

8. CONCLUSIONS ....................................................... 34

APPENDIX A: STIMULUS WORDS PRESENTED TO THE SUBJECTS ........ 36

REFERENCE LIST ........................................................ 37

BIBLIOGRAPHY .......................................................... 42
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Comparison of the Syntactical Skills of the Three Age Groups, Black and White</td>
<td>23</td>
</tr>
<tr>
<td>2. Comparison of Correct Responses for All Three Age Groups, Black and White</td>
<td>25</td>
</tr>
<tr>
<td>3. Comparison of the Incorrect Responses of the Three Age Groups, Black and White</td>
<td>28</td>
</tr>
<tr>
<td>4. Samples of Incorrect Responses of the Black Subjects</td>
<td>31</td>
</tr>
</tbody>
</table>
A Psycholinguistic Analysis of the Generative Grammar of Intermediate Grade Blacks in a Central Florida School

One of the most impressive weapons that a child possesses to aid in the learning of language is his use of practicing and copying what he hears. He spends a great deal of time at this practice and learns to speak and understand the language that is a part of his everyday experience (Moulton, 1970). Language is an organized system of socially accepted symbols which are shared by the members of a particular culture (Berry, 1969; Chomsky, 1972; Moulton, 1970). There is a basic property which all human languages share: A linguistic structure which builds from simple sound units to complex idea units according to a hierarchical system. When comprehension and expression of a language is attempted, emphasis is placed on these levels of linguistic organization to serve as cues for proper receptive or expressive language functioning (Ruch & Zimbardo, 1971).

Language can be thought of as a vast pegboard with thousands of semantic slots through which any idea that is expressed must first be put. Once the proper semantic slots have been found, the speaker must next arrange these units into the particular structure required by his language, or the grammar of the language. In other words, the communication must be shaped into the grammatical system of the language being used in order for person A to communicate to person B an idea or thought or meaning (Moulton, 1970). Each
language has highly specialized properties that are unique to that language. The speaker must be aware of these properties as they are associated with the words and the constructions into which these words can enter. The mature speaker of a language has internalized the complex set of rules which constitute the grammar of his language system although he may be unaware of the rules that govern his sentence production and interpretation. The child who is mastering a language must construct for his own purposes a similar set of rules which will have the characteristics of his native language, or the language that surrounds him daily, and which will aid him in both speaking and understanding that language (Carol Chomsky, 1969; Noam Chomsky, 1964; Noam Chomsky, 1966). Linguistic competence is the capacity of language users to generate and understand novel but grammatically correct sentences (Carroll, 1971). These grammatical patterns which children come to generate and accept are the basic building blocks of their sentences (Strickland, 1971).

Children all over the world begin with the same hypothesis: Sentences consist of single words, and the entire sentence structure must be squeezed into this tiny space. Soon, however, the child begins adopting new hypotheses pertaining to linguistics and enlarges the space which the structure of a sentence is allowed (McNeill, 1970). The most active period for learning base syntax is between one and a half and four years. By the age of three, the base structure rules are being used by the child for the generation of sentences. By the time a child is four, some amazingly
complicated word constructions are present, and the system of construction is taking the form of the conventional structure of his society. The elements in these sentence constructions are not randomly combined but show a definite order that is consistent to all members of that environment and is thus rewarding to the member of that environment and is reinforced and encouraged (Holme, 1971; Menyuk, 1971; Morehead & Ingram, 1973; Rachlin, 1970; Reynolds, 1968).

A common assumption is that children have mastered the basic foundations of their native language by age four and a half to five years since the basic sentence types accepted as being used by an adult are also being used by the child of this age. It has been observed that the speech of children of this age contains most, if not all, of the more frequent structures of language as well as many of the less frequent ones. The child who enters school at the normal starting age still has much to learn before his competence approaches adult standards even though the foundations of language competence are established in early childhood (Carroll, 1971; McConnell, Love, & Clark, 1974; Menyuk, 1971). A gradual disappearance of the discrepancies between the child's competence and the adult's competence will occur over the next four or five years of development. It has been recorded that the child's grammatical development will be completed by age eight if he follows the developmental pattern of ninety-eight percent of the world's children. However, the fact that some children are still developing
certain constructions at this age indicates that some fairly basic syntactical rules are being learned considerably beyond this accepted age of grammatical mastery. At eight years, the child has a fair command of syntactic tools needed in both expression and comprehension of language. It has been recorded that language is established between eight and a half and nine years of age. However, acquisition may take place even beyond this age. Verbal components begin to be noticeable to age nine and do not reach maximum size until age eleven. As can be noted from the information mentioned above, the development of language skills is still important as the child reaches more advanced levels. Not only are certain construction skills lacking, but the child's language usage at this age also lacks the grammatical artistry of adults (Berry, 1969; Carol Chomsky, 1969; Hass & Wepman, 1974; Lenneberg, 1967; Strickland, 1971).

An interest in child language has coincided with an interest in transformational grammar. Children do not learn sentences as memorized sequences but instead derive rules for combining words into sentences by a complex analysis of the language which leads to a grammar that gives evidence of being productive, systematic, and regular. This is an essential and exclusively human ingredient: to build new forms on the basis of old ones which consist of definite patterns. When asked to describe the rules governing the correct way to express himself, neither the adult nor the child can do so.
However, this is one of the most astounding aspects of linguistic competence: the creativity of language or the ability to produce and immediately understand new sentences that bear no resemblance to sentences which are familiar (Chomsky, 1966; Holme, 1971; McNeill, 1970; Moulton, 1970; Munn, Fernald, & Fernald, 1969). The investigations of generative grammar are interested in this ability to produce and understand an indefinite number of novel sentences. Generative grammar assigns structural descriptions to sentences. It deals with the rules of structure that are implanted in mental processes far beyond the level of actual or even potential consciousness (Chomsky, 1969; Fries, 1964). Competence refers to the knowledge which a native speaker of a language must possess in order to produce and understand the grammatical structures of his language. Performance is the overt expression of competence in the linguistic activities of writing, listening, speaking, and reading. Every acceptable English sentence has a structure which characterizes all the sentences in that language. A person who has learned a language has acquired a competence by learning the rules of his language that relate sound and meaning in a particular way and a certain level of performance by being able to apply these rules to overt expressions (Chomsky, 1972; Gleason, 1965; Marge, 1969).

Transformations

Language does not occur randomly. Grammatical structures have form and meaning and occur in certain situations but not in others.
Knowledge of the use of linguistic structures and the constraints on these structures is necessary for linguistic competence. A linguistic description of this overall structure of language is the transformational model of language. Transformational rules indicate the operations for constructing various sentence types by addition, deletion, punctuation, and substitution. These rules also help determine permitted grammatical transformations (Bloom, 1974; Fries, 1964; Lado, 1957; Menyuk, 1971). According to psycholinguists, a person's thoughts are unconsciously converted from an internal structure, the idea, to a surface structure, the way the sentence is said, by transformational rules. Two of the internal language events involved in transformational grammar are semantic encoding, or arranging the internal idea to fit the language system, and grammatical encoding, or arranging the semantic units to fit the structure of the language. One necessary aspect of language, therefore, is this internal transformation since it involves a relation between the underlying and the surface structures (McNeill, 1970; Meacham, 1969; Ruch & Zimbardo, 1971).

**Communication Structure**

In order to describe a sentence structure, part of the task is to discover what goes with what. The basic grammatical unit is the morpheme which may be a word or a part of a word. A morpheme conveys a meaning of some sort. For example, the symbol "cat" is a morpheme which brings a picture to mind: it has meaning. By
changing this symbol to "cats", the letter "s" also becomes a morpheme because it conveys an added message of plurality to the original morpheme. Therefore, in the symbol "cats", two morphemes are present: "cat" and "s". Once again, the morpheme is the smallest meaningful unit of grammar (Gleason, 1965; Meacham, 1969; Moulton, 1970).

Another device which signals grammatical meaning is word order. The basic device which signals meaning in this aspect of grammar is that of construction: putting two or more forms together in order to give a larger form, which leads to the sentence or message. A sentence is an assemblage of words, expressed in proper form, and concurring to make a complete thought. Two elements are needed to express a complete thought: (1) a subject, which refers to the person or thing about which the statement is made; and (2) a predicate, which makes the statement about the subject (Fries, 1964; Gleason, 1965; Lado, 1957; Moulton, 1970). A simple positive sentence is called a kernel sentence. The basic sentence form is $S = N + V$ in which case "S" is the sentence, "N" is the noun, and "V" is the verb. The subject and predicate mentioned earlier correspond to the Noun Phrase and the Verb Phrase. A Noun Phrase is obtained by performing the following transformation:
dog $\rightarrow$ big brown dog.

A Verb Phrase is obtained following the transformation below:

\[ \text{eat} \rightarrow \text{can eat.} \]

As can be seen, the Noun Phrase is obtained by adding an article to N and a Verb Phrase is obtained by adding an auxiliary verb to V (Moulton, 1970; Ruch & Zimbardo, 1971).

Throughout the transformational process, a basic structure of Subject, Verb, and Object remains fairly constant as in the example below: Billy sees Daddy.

Thus, further meaning can be brought in by means of transformational rules: for instance, the changing of a declarative statement into a
question or a negative; or by adding possessives and adjectives; or by embedding one sentence within another; or by joining them with conjunctions (Lee, 1974).

To know English means being able to understand English structure. The structural signals that are present in words reflect their grammatical role. Thus an understanding of the parts of grammar is necessary in order to fully understand the structure of the language. These parts of grammar are: (1) nouns; (2) noun phrases; (3) plurals; (4) verbs, (5) verb phrases; (6) pronouns; (7) negations; (8) interrogatives; and (9) passives (Gleason, 1965). These terms will be discussed individually below.

Nouns are subjects, objects of verbs, and objects of prepositions (Moulton, 1970). This can be seen in the example below: Billy sees Daddy.

```
<table>
<thead>
<tr>
<th>S</th>
<th>V</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>sees</td>
<td>N</td>
</tr>
</tbody>
</table>

Billy sees Daddy
```

This can also be seen in the example below: Billy drove to town.

```
<table>
<thead>
<tr>
<th>S</th>
<th>V</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>drove</td>
<td>Prep. Phr.</td>
</tr>
<tr>
<td>Prep.</td>
<td>to</td>
<td>N</td>
</tr>
</tbody>
</table>

Billy Prep. to town
```
A Noun Phrase is obtained by an expansion of a noun with the use of modifiers (Lee, 1974; Menyuk, 1969; Moulton, 1970). This expansion occurs in the following example: bright shiny sun.

![Diagram of noun phrase structure]

Plurals are in some cases determined by the addition of a voiced /-z/ or a voiceless /-s/ as in the following examples: cat → cats and hand → hands.

![Diagram showing plural formation of cat and hand]

Plurals can also be formed by the addition of /-en/ as in the following: ox → oxen.

![Diagram showing plural formation of ox]

A change in the internal structure of a word may also indicate a plural (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970).

![Diagram showing plural formation of goose]

geese
Verbs indicate what action is occurring in the sentence (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970). This is illustrated in the following sentence: Billy drove the car.

Verb Phrases involve the expansion of verbs with the addition of auxiliary verbs. Auxiliary verbs carry a meaning which is superimposed upon the meaning of the original verb as in the following: John buys. → John does buy.

Tense markers indicate past, present, or future action as in the example being illustrated on the next page: John buys. → John will buy.
Ability (can), probability (may), necessity (must), and conditional (could, might, and should) may also be superimposed upon the verb (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970).

Pronoun usage requires the recognition of the noun phrase and a replacement of this phrase with the proper pronoun. Pronoun selection requires that the speaker know the pronoun vocabulary of his language and the differences in meaning represented by person, gender, number, and case (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970). Use of the pronoun in replacement for the noun phrase can be seen below: The children are eating. They are eating.

Negation takes many forms. It may be a quantifier (no), a negative adverb (never), or a negative pronoun (nobody). It may involve the negative morpheme "not" after the first auxiliary verb. This is demonstrated in the following example: The woman will
The woman will not go.

Some negative contractions are also permissible (Lee, 1974; Menyuk, 1969; Moulton, 1970). An example of a negative contraction is below: Sue does not go. → Sue doesn't go.

An Interrogative gives a declarative statement the element of question. The yes-no question seeks negation or affirmation. In this type of transformation the first auxiliary verb is reversed as in the following: He is eating. → Is he eating?

The following is also an example of this auxiliary verb reversal: He has been eating. → Has he been eating?

The wh-question seeks information, and the wh-word is placed at the beginning of the structure with the reversal of auxiliary verb
also performed as in the following illustration: He will go. → When will he go?

The use of the auxiliary words "do" and "have" also change statements into questions (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970).

This can be seen in the example below: You have some. → Do you have some?

The Passive is a complicated syntactic structure requiring considerable rearrangement of the basic sentence. The Subject-Verb-Object order must be reversed so that the speaker interprets one as being acted upon, not as performing the action. The recipient of the action becomes the subject, the doer becomes the object, and the verb tells what action was received by the subject (Fries, 1952; Menyuk, 1969; Moulton, 1970). The following examples illustrate the passive structure.

The children were taken home.

The man was bitten by the dog.
Combined Structures

There are two basic types of combined sentences: (1) compound; and (2) complex. The procedures for putting these forms together is known as embedding. Embedding is accomplished by performing various transformational rules. The simplest way to combine sentences is with a conjunction; however, the choice of conjunction is very important since it indicates the relationship between the two sentences (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970).

An example of this kind of sentence is shown below.

\[
\text{Sentence} + \text{Conj.} + \text{Sentence} \\
\text{Billy got the cookies} + (\text{and}) + \text{Sally got the milk.}
\]

Wh- words can be used as conjunctions to join two basic sentences. The wh- words replace the adverb of time, place, and manner which would normally be placed in the second sentence. This following example will help illustrate this construction.

\[
\text{Sentence} + \text{Conj.} + \text{Sentence} \\
\text{We left for school} + (\text{when}) + \text{It was time to go.}
\]

Certain deletions can also be made when joining sentences to prevent unnecessary redundancy. This is necessary in complex sentences in which one sentence is restructured so that it can be embedded into another sentence (Fries, 1952; Lee, 1974; Menyuk, 1969; Moulton, 1970). This can be seen in the following sentence: The boy is in the kitchen. The boy ate the cookies. → The boy who ate the cookies is in the kitchen.
The boy is in the kitchen. (The boy) ate the cookies.

Language and Meaning

Meaning of a language lies in an individual's association of the auditory or visual symbol for a word with the object which it denotes. Much of the meaning of a language also lies in its grammar. Words which are strung together, therefore, do not produce a meaningful message unless they are arranged into the accepted grammatical structure of the language. Exactly what grammatical structure is used in a language is quite arbitrary: the important thing is that all who speak that language use the same structure. Otherwise, meaning will be lost (Moulton, 1970).

There are certain compulsory grammatical categories in language which force the speaker or listener to interpret meaning into sentences and words. There are at least eight of these categories in standard American-English:

(1) Number. This category denotes singular and plural. It is compulsory in nouns (i.e. dog/dogs), in some pronouns (i.e. he/they), in the noun modifiers "these" and "those", and in the present tense agreement between subject and verb (i.e. the dog bites/the dogs bite).

(2) Gender. This category defines kind, type, or sort. It involves personal (i.e. the man/he, the woman/she) and impersonal (i.e. the chair/it).
(3) Case. This category involves subjective (I, he, she, we, they, who) and objective (me, him, her, us, them, whom) cases.

(4) Definiteness. This category includes definite (i.e. the man) and indefinite (i.e. a man).

(5) Person. This includes "first person" (I, we), "second person" (you), and "third person" (he, she, it, they). The distinctions between singular and plural are also made in standard American-English as in the following examples: first person singular (I) and first person plural (we).

(6) Tense. The common divisions in this category are present, past, and future (i.e. see, saw, will see).

(7) Aspect. This category denotes whether an action is looked upon as complete or incomplete, as occurring at one specific time or over a period of time, or as occurring once or repetitively (i.e. I worked here for five years - complete; I have worked here for five years - incomplete).

(8) Voice. This category refers to the active structure in which the action is expressed in a word (i.e. shot) and the passive structure in which the action is expressed by a phrase (i.e. was shot) (Moulton, 1970).

Environmental Influences on the Acquisition of Syntax

For a variety of reasons, children sometimes have difficulty learning the structural skills which are necessary for meaning. Some are born into communities where the dialect is very different
from that of standard American-English, and a lack of communication between the two communities will perpetuate dialectical differences (Burling, 1973; Kenneth O. Johnson, 1975). It is known that the environment in which a child is reared has relevance to emerging language skills. Language is an identity label. It forms a bond between the individual and those with whom he communicates. It tells the individual who he is and what group he belongs to. Every community has its own language which is adequate for communication within the everyday lives of its members and which is reinforced and encouraged by the members (Adler, 1973; Kenneth R. Johnson, 1969; Lado, 1957; Rachlin, 1970; Reynolds, 1968).

Schools have attempted to teach standard American-English to black school children for years with complete failure due to the fact that this relationship between language and culture was forgotten. The schools have been trying to replace a functional language (the Black Language) with a nonfunctional one (standard American-English) that is not reinforced in the home environment. There has also been an erroneous belief that the Black dialect is substandard; however, it was found that these children have a full and adequate language form that is cohesive and consistent. It was the linguists who discovered that the Black child uses a systematic and definite pattern of sentence structure that differs from standard American-English but is not substandard. Black English has grammatical patterns that are similar to standard American-English.
It is the areas of difference that can be a major problem when the child enters school and must cope with structural rules that are different from his own (Kenneth O. Johnson, 1975; Kenneth R. Johnson, 1969; Levy & Cook, 1973; Ramer & Rees, 1973).

There has been empirical support to show that an interference exists when the speaker of nonstandard English attempts to function in a standard American-English environment. For the most part, structural signals are very familiar; but they are familiar only when the English being spoken is the same as that which is normally heard. The basic sentence structure is the key to a message; and if this structure cannot be discovered, the message is not understood. The listener must be able to determine the grammatical structure in order to understand a language, otherwise a problem in information transfer will develop (Beasley & Beasley, 1973; Gleason, 1965; Lee, 1974; Levy & Cook, 1973).

Statement of the Problem

By the time a child enters first grade, he is expected to be capable of performing fairly complex grammatical skills. Students who speak a different dialect from the standard American-English used in the schools will be handicapped in this environment. The processes of cognitive and linguistic competence appear to function together in certain tasks, and it is believed by many educators that this nonstandard dialect will impair the cognitive development of these black students since the language used in the curriculum of the
schools is based on a middle class cultural experience. Children readily read a language which they also speak because they can understand and identify with the imagery that the written words create. In the same manner, the child who is reading a language with which he is not familiar may be receiving images that are distorted and/or incorrect. Spoken language is the foundation upon which reading is built; therefore, a spoken language which is different (i.e. Black, Puerto Rican, Indian) will greatly hinder those who are working from another type of foundation (DeStefano, 1973; K. O. Johnson, 1975; K. R. Johnson, 1969; Menyuk, 1971; Stark, 1975; Strickland, 1971).

**Purpose of the Study**

The purpose of this study was to determine the frequency of nonstandard grammatical structures generated by a sample of black culture intermediate grade subjects as compared to a sample of white culture intermediate grade subjects.

**Hypotheses**

1. The black subjects will show more nonstandard grammatical structures than will the white subjects at all three age levels being studied.

2. The older black subjects will exhibit fewer nonstandard grammatical structures than will the younger black subjects.

**Methodology**

Subjects for the study were black students enrolled in the
public school system in Osceola County, Florida, a county in which approximately ten percent of the students are black. The age ranges of the subjects were as follows: (1) 9.8-10.2; (2) 10.8-11.2; and 11.8-12.2 years. These age levels were chosen because the foundations for language are established by approximately age 9.0 yet the children are still neurally flexible enough to adapt to differing language environments without much difficulty (Menyuk, 1969; Carroll, 1971).

Five black subjects from each age group were randomly selected for the study. Each black subject was matched to a white subject according to age in order to control for any regional dialect which might be present in the community. All subjects, both black and white, were determined by the classroom teacher as having auditory and visual acuity which was functional in the classroom. None of the subjects were enrolled in any of the special education programs offered by the school system at the time of the study.

The subjects were shown twenty 4" X 6" cards, one at a time, on which were printed words standardized as being conceptually present by age nine (Murphy, 1957; Snider and Osgood, 1969). These words can be found listed in Appendix A. The subjects were asked to repeat each word aloud and then create a sentence using that word. Prompting was employed by the examiner only when necessary in order to obtain a response from the subject. All responses were both audio tape recorded and manually recorded by the examiner.
The subjects' responses were then analyzed to determine the frequency of nonstandard grammatical structures (those structures differing from accepted standard American-English structures) and were classified as follows: (1) correct, or conforming to standard American-English structural rules; (2) incorrect, or nonstandard; and (3) no response, indicating that the subject was unable to generate a sentence using the designated word. The total possible correct score was twenty, with one point being given for each correct response.

Because of the small number of subjects, a t-test was run to determine the significance of the differences between the mean correct scores of the black and the white subjects. This t-test was chosen because it allows for the computation of a standard error for the sample population and the deviation of the sample's values from the population's values, therefore giving a more accurate significance level for the general population.

Results
As was hypothesized, the black subjects exhibited more nonstandard grammatical structures than did the white subjects. While it can be seen in Table 1 that generally the white subjects decreased the number of no-responses with increased age, a reversal in this pattern was found in the black sample. Three of the youngest black subjects were unable to respond to the stimulus word as compared with five of the youngest white subjects. This
Table 1
Comparison of the Syntactical Skills of the Three Age Groups, Black and White

<table>
<thead>
<tr>
<th>Group</th>
<th>No Response</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.8-10.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>3</td>
<td>74</td>
<td>23</td>
<td>100</td>
</tr>
<tr>
<td>Wht</td>
<td>5</td>
<td>91</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>10.8-11.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>1</td>
<td>74</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>Wht</td>
<td>1</td>
<td>92</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>11.8-12.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>7</td>
<td>58</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Wht</td>
<td>2</td>
<td>91</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

level of no-response decreased in the 10.8-11.2 group for both the black and the white subjects. This level of no-response increased, however, in the 11.8-12.2 group to the level of seven no-responses for the black subjects and two no-responses for the white subjects. A drop in performance of the older black group can again be observed in the number of grammatically correct responses. The white subjects in all age groups totalled between ninety-one and ninety-two correct responses with no appreciable change between the age groups. The black subjects responded in a grammatically correct
way seventy-four times in both the 9.8-10.2 group and the 10.8-11.2 group, but the 11.8-12.2 group responded correctly only fifty-eight times out of one hundred possible correct responses. While the two younger black groups responded incorrectly twenty-three and twenty-five times respectively, the oldest black group responded incorrectly thirty-five times. It should be noted at this time that the older white subjects also responded incorrectly more often than did the youngest white group; however, this did not occur with as large a difference in performance.

Table 2 shows the breakdown of the correct responses in terms of mean correct score, standard deviation from the mean, level of difference between the means as determined by a t-test, and the probability levels of significance. It was observed for the white subjects that the mean correct score was higher and that the standard deviation from the mean was smaller in all three age groups than it was for the black subjects. It can also be seen once again that the oldest black subjects responded with a lower level of accuracy than did the two younger groups to a level of significance that was less than .001. The level of significance for the 9.8-10.2 and the 10.8-11.2 groups was less than .001. This level of significance (.001) was also found for the total sample. The 11.8-12.2 group had a significance level of less than .01.

It can be seen by looking at Table 2 that the mean correct score for the white subjects ranged from 17.8-18.4, with a difference
Table 2

Comparison of Correct Responses for All Three Age Groups, Black and White

<table>
<thead>
<tr>
<th>Group</th>
<th>$\bar{x}^a$</th>
<th>$s^b$</th>
<th>$t^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.8-10.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>14.4</td>
<td>2.4</td>
<td>8.10**</td>
</tr>
<tr>
<td>Wht</td>
<td>17.8</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>10.8-11.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>14.8</td>
<td>2.78</td>
<td>8.78**</td>
</tr>
<tr>
<td>Wht</td>
<td>18.4</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>11.8-12.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>11.2</td>
<td>3.28</td>
<td>4.70*</td>
</tr>
<tr>
<td>Wht</td>
<td>18.2</td>
<td>1.66</td>
<td></td>
</tr>
<tr>
<td>Total Sample</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>13.47</td>
<td>3.13</td>
<td>4.36**</td>
</tr>
<tr>
<td>Wht</td>
<td>18.13</td>
<td>1.31</td>
<td></td>
</tr>
</tbody>
</table>

Note. The total possible correct score was 20.

$a\bar{x}$ = mean correct score.

$bs$ = standard deviation from the mean score.

$ct$ = level of difference between the means.

*$p$ = significance level at less than .01.

$**p$ = significance level at less than .001.
of only .6. The standard deviation for the white subjects ranged from 1.0-1.66, with a difference of .66. This shows that the average mean correct score for the white subjects was approximately 18.13 with those who differed from the mean scoring below or beyond this score by increments of only approximately 1.37. In other words, those subjects who did not respond at the mean level of 18.13 points varied from this mean by only 1.37 points.

The black subjects ranged from 11.2-14.8 points, with a difference of 3.6. The standard deviation for these subjects ranged from 2.4-3.28, with a difference of .88. This shows that while the black subjects responded at a mean level of approximately 13.47 points, those who differed from the mean did so to a degree of approximately 2.82 points.

By comparing the black and the white total samples, it can be seen clearly that the white subjects scored, on the average, 4.66 points higher than did the black subjects and varied from the mean at a level of 1.82 points less than did the black subjects.

It also becomes evident by looking at Table 2 that the older blacks performed at a lower accuracy level than did the two younger black groups. The 9.8-10.2 group exhibited 14.4 correct responses while the older blacks achieved only 11.2 correct responses, with a difference of 3.2. The 10.8-11.2 group exhibited 14.8 correct responses, with a difference from the oldest group of 3.6. The standard deviations also showed a large difference. The 9.8-10.2
group had a standard deviation of 2.4 while the 11.8-12.2 group had a standard deviation of 3.28. This showed a difference of .88. The 10.8-11.2 group had a standard deviation of 2.78, with a difference from the oldest black group of .5. It should also be noted that the standard deviations became increasingly larger with the advancing age of the black subjects, but this pattern was not observed in the white sample.

It was also observed that the black males generally showed more grammatical errors than did the black females. This difference in performance based on sex was not observed in the white population. Eliciting stimulus sentences were required ninety-five percent of the time to obtain responses using the verbs "see" and "walk" in the past tense for both the black and the white populations. The words "their", "them", "your", and "you're" were difficult for all subjects, even for those who eventually responded correctly.

Discussion

This study set out to determine whether or not a nonstandard language pattern existed in black subjects at an intermediate grade level. It is evident from the results that not only does the black culture seem to affect the use of a nonstandard language pattern but that age or maturation level may also play a role in the development of these nonstandard grammatical patterns.

As can be seen in the results, the black subjects exhibited
more nonstandard grammatical structures at all three age levels than did the white subjects. Therefore, the first hypothesis was supported by the data obtained. However, the second hypothesis was not supported. It was hypothesized that the number of nonstandard grammatical forms would decrease in the language of the oldest black subjects. The results indicate that, for this sample, the

Table 3
Comparison of the Incorrect Responses of the Three Age Groups, Black and White

<table>
<thead>
<tr>
<th>Group</th>
<th>Word</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.8-10.2</td>
<td>foot, plural form (1); your (2); does (2); them (2); see, past tense (5); their (3); walk, past tense (4); have been (2); Daddy's (1); you're (1)</td>
<td>23</td>
</tr>
<tr>
<td>Blk</td>
<td>see, past tense (2); them (1); you're (1)</td>
<td>4</td>
</tr>
<tr>
<td>Wht</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.8-11.2</td>
<td>foot, plural form (1); your (2); does (2); them (1); see, past tense (5); their (3); walk, past tense (2); have been (3); Daddy's (4); you're (2)</td>
<td>25</td>
</tr>
<tr>
<td>Blk</td>
<td>their (4); your (2); Daddy's (1)</td>
<td>7</td>
</tr>
<tr>
<td>Wht</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.8-12.2</td>
<td>when (3); eating (2); never (2); see, past tense (3); their (4); walk, past tense (5); foot plural form (3); your (1); does (2); them (2); have been (2); Daddy's (3); you're (3)</td>
<td>35</td>
</tr>
<tr>
<td>Blk</td>
<td>see, past tense (1); their (1); your (1); them (2); you're (2)</td>
<td>7</td>
</tr>
<tr>
<td>Wht</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
number of nonstandard forms tends to increase with age. Table 3 displays the words that were used incorrectly by each age group and the frequency of the incorrect responses. This table shows that the black subjects in all age groups did show errors to a much larger degree than did the white subjects.

In the 9.8-10.2 age group, the white subjects made four errors on three of the concepts while the black subjects made twenty-three errors on ten of the concepts. Those words used incorrectly by the white subjects were also used incorrectly by the black subjects; therefore, these errors cannot be considered as being due solely to the black language based on this data. It should be noted, however, that these errors did occur more often in the black population than in the white population.

In the 10.8-11.2 age group, the black subjects made twenty-five errors on ten of the concepts while the white subjects made seven errors on three of the concepts. Again, the errors made by the white population were also made by the black population; but in this age group, the errors were made to an approximately equal degree by both race groups. In this group, therefore, it appears as if the errors on these concepts may have been due to maturation levels instead of the black language.

In the 11.8-12.2 age group, the white subjects made seven errors on five of the concepts while the blacks made thirty-five errors on thirteen of the concepts. Those concepts missed by the
white subjects were also missed by the black subjects, again to an approximately equal degree.

This table again shows that while the number of errors remained approximately the same for all of the white age groups, the oldest black subjects made considerably more errors on more concepts than did the two youngest groups of black subjects. There are several possible explanations for these findings:

(1) It is possible that peer group pressure may become stronger as the children get older to use the dialectical patterns of language associated with the black culture.

(2) It is possible that as the school curriculum becomes increasingly difficult, the black students experience so much difficulty due to a conflict between their native black language and the standard American-English used in the schools that they increase their use of this nonstandard language form in order to rationalize for themselves their difficulty with the material.

(3) It is possible that these black students are exhibiting at a pre-puberty age an awareness of the difference between the black and the white cultures and are adapting the nonstandard language patterns of the black culture as an outward sign of their black awareness.

However, these explanations are not supported by research. They are presented merely as tentative explanations for this unexpected increase in nonstandard grammatical structures in the older black


Table 4

Samples of Incorrect Responses of the Black Subjects

<table>
<thead>
<tr>
<th>Stimulus Word</th>
<th>Sample of Response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>see, past tense</td>
<td>I seen.</td>
<td>13</td>
</tr>
<tr>
<td>foot, plural form</td>
<td>My foots hurt.</td>
<td>3</td>
</tr>
<tr>
<td>foot, plural form</td>
<td>I walk on my feets.</td>
<td>1</td>
</tr>
<tr>
<td>foot, plural form</td>
<td>Is these feet clean?</td>
<td>1</td>
</tr>
<tr>
<td>your, plural form</td>
<td>Your nice.</td>
<td>5</td>
</tr>
<tr>
<td>does, plural form</td>
<td>Does you go?</td>
<td>6</td>
</tr>
<tr>
<td>them, plural form</td>
<td>Them and I went.</td>
<td>5</td>
</tr>
<tr>
<td>their, plural form</td>
<td>Their is your house.</td>
<td>10</td>
</tr>
<tr>
<td>walk, past tense</td>
<td>I walk home yesterday.</td>
<td>11</td>
</tr>
<tr>
<td>have been</td>
<td>He have been there.</td>
<td>7</td>
</tr>
<tr>
<td>Daddy's</td>
<td>Daddy's go to work.</td>
<td>8</td>
</tr>
<tr>
<td>you're</td>
<td>You're cat is yellow.</td>
<td>6</td>
</tr>
<tr>
<td>when, plural form</td>
<td>When I go to church.</td>
<td>3</td>
</tr>
<tr>
<td>eating</td>
<td>We eating now.</td>
<td>2</td>
</tr>
<tr>
<td>never, plural form</td>
<td>Don't never do that.</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. There were fifteen subjects in the study above.
Table 4 shows the words which were used incorrectly by the black subjects and the frequency with which the same incorrect transformation was made by different subjects. As can be seen, only one stimulus word was transformed incorrectly into three different forms. The word "foot" in the plural form was transformed into "feets", "foots", and "these feet". It should be noticed, however, that plural transformations were indeed happening. The other stimulus words listed in Table 4 were all transformed into the same nonstandard form.

The verb "see" in the past tense was transformed to "seen" by thirteen of the fifteen black subjects. This same transformation was made by three of the fifteen white subjects. The verb "walk" plus a word denoting time (i.e. yesterday) were used as the transformation of "walk" in the present tense to "walk" in the past tense. All of the white subjects responded correctly to this stimulus word, but eleven of the fifteen black subjects responded with the nonstandard form "walk". Therefore, it can be seen that these verbs were transformed from the present tense to the past tense by both the black and the white subjects. The black subjects responded, however, in a nonstandard way which was repeated over and over by the different subjects.

A confusion existed between the homonyms "your" and "you're". These two words were used interchangeably by the black and the white subjects, but the blacks confused them twice as often as the
whites. Since the subjects were given a visual cue of the word, this confusion cannot be attributed to a lack of understanding about the specific word being requested due to the similar pronunciations. This same confusion existed between the words "their" and "there". In this case, also, the black subjects exhibited this confusion twice as often as the white subjects.

A nonstandard noun-verb agreement was exhibited by the black subjects during the use of "does", "eating", and "have been". A double negative was used when the word "never" was employed in a sentence. "Them" was used in the subjective form approximately one-third of the time by the black subjects. These transformations were only exhibited, on the average, by less than half of the black subjects.

The conjunction "when" was transformed by the black subjects into "when" plus a statement, thus giving the appearance of a fragment sentence. It was observed, however, that these children did use the characteristic voice inflections of a question. This would indicate that they may possibly have been using "when" in an interrogative sentence but were not inverting the subject and verb to form the standard American-English interrogative sentence.

The contractions "Daddy's" and "you're" were confused with the words "daddys" and "your". This would indicate that contractions, even when accompanied by a visual cue, are being perceived as one word and not as a shortened form of two words or
as a possessive form of one word.

In summary, it can be seen that the black subjects did show more nonstandard grammatical structures than did the white subjects to a significant degree. It can also be seen that the nonstandard transformations that were exhibited by the black subjects showed a consistency among the subjects. This would indicate that these nonstandard transformations are not unique to each black individual but are common to the black culture and are thus reinforced and encouraged by the black culture.

Conclusions

It must be mentioned that this study was designed to be exploratory research into the area of black language to determine if a nonstandard language form was present in black intermediate grade students enrolled in a rural school system.

It can be seen that the black subjects did generate significantly more nonstandard language forms than did the white subjects and that these nonstandard language forms exhibited by the black subjects were consistent among these black subjects. It can also be seen that the number of nonstandard grammatical structures increased as the age of the black subjects increased.

Although this exploratory study involved a very small number of subjects, the findings seem to suggest several areas for further study.
Implications for future study

(1) This study should be replicated with a larger population to determine if the significance levels found in this study are the same.

(2) This study should be replicated in different settings, both urban and rural, to determine if a grammatical difference exists between these two environments.

(3) This study should be replicated in settings in which the black-white ratio is as equal as possible to determine the effect of increased exposure to black language.

(4) The unexpected finding concerning the increase of nonstandard grammatical forms should be studied further to strengthen the significance level obtained in the findings of this study.

(5) Research should be done to determine if the presence of nonstandard grammatical structures is affecting cognitive development or if another factor such as vocabulary is causing difficulty in cognitive functioning.

(6) A screening program should be devised for the classroom teacher so that she may screen the grammatical structures, both standard and nonstandard, of her students and be able to recognize those areas in which her students show the most deficits in grammatical functioning in order for her to better help her students.
Appendix A: Stimulus Words Presented to the Subjects

(1) when
(2) eating
(3) will, interrogative
(4) will, future tense
(5) he
(6) never
(7) see, present tense
(8) see, past tense
(9) their
(10) walk, present tense
(11) walk, past tense
(12) foot, singular form
(13) foot, plural form
(14) your
(15) does
(16) them
(17) have been
(18) cat, plural form
(19) Daddy's
(20) you're
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