Syntactical rule differences in black dialect that can be more helpful to young adolescents' perceptions than the corresponding rules in standard English were studied. The syntactical rule in black dialect that was identified as being more explicit than the corresponding rule in standard English was the invariant "be" verb form (as in "I be honest"). The perception studied was young adolescents' recognition of apparent contradictions; for example, in a given situation, a person can be honest and lying. Results suggest that more emphasis be placed upon young adolescents as rule-makers and rule-users. Theories such as the Whorf Hypothesis and the Bernstein Thesis did not satisfactorily explain the decision-making processes used by the children when deciding to use or not to use two contradictory words to describe the same person or object. (RB)
A TEST USED TO DETERMINE THE EXTENT TO WHICH
THE WHORF HYPOTHESIS AND THE BERNSTEIN
THESIS ARE APPLICABLE TO EITHER
BLACK DIALECT OR TO STANDARD
ENGLISH

G. Thomas Fox, Jr.
University of Wisconsin-Madison

A paper to be presented to the American Educational Research Association
meeting in Chicago, April, 1974.
"It is axiomatic that the best medium for teaching a child is his mother tongue. Psychologically, it is the system of meaningful signs that in his mind works automatically for expression and understanding. Sociologically, it is a means of identification among the members of the community to which he belongs. Educationally he learns more quickly through it than through an unfamiliar medium."

UNESCO (1953)

"(The school) is concerned with making explicit and elaborating, through language, principles and operations as these apply to objects and to persons."

Basil Bernstein (1970)
Introduction

There are children in our inner city schools who use and are familiar with linguistic rules that are different from Standard English. This situation has been recognized to be important to reading programs and is used to explain many of the inner city child's difficulties with reading. Recent studies have been concerned with the different phonological rules of Black Dialect because beginning reading skills depend upon the child's recognition of the relationship between the sounds he speaks and hears and the symbolic notation he is learning. As important as phonological rules are to the Black Dialect speaking child's acquiring of reading skills, there is a larger controversy that is still unresolved.

Simply put, that is the controversy which surrounds the notion that the phonological and lexical rules that a child has learned at home which are not the rules of Standard English cannot be useful to the child's education. If the child enters the classroom with some linguistic rules different from Standard English, then that is a problem that the classroom must solve rather than an opportunity to enrich the possibilities of understanding the world.

Past studies on children who speak Black Dialect have been concerned with alleviating the problem of the child knowing one language and being

expected to conduct his classroom learning in another language. A concern of this study is that children bringing different linguistic rules into the classroom may provide that classroom with more opportunities to construct skills and procedures with which to understand, appreciate and marvel at this world and the human conditions in which we all are placed.

**Problem**

There are two major hypotheses about the possible effects of Standard English and Black Dialect on children's perceptions of their world: The Whorf Hypothesis and The Bernstein Thesis.

**The Whorf Hypothesis**

The Whorf Hypothesis suggests that certain linguistic structures support (or can limit) how a people perceive their surroundings. To be a little more specific, the Whorf Hypothesis suggests that because of different features of two language structures, one set of relationships will be perceived by one linguistic group and a different set of relationships can be perceived by a different linguistic group. This hypothesis has been tested comparing Native American with Standard English and Japanese with Standard English but the results of both studies are inconclusive. One

study tested the Whorf Hypothesis to compare the recognition of plurals by Black Dialect speakers with Standard English speakers but, again, the results are inconclusive. A major purpose to these studies was to test the possibility, expressed by Carroll, that there is "a potential influence of linguistic patterning on the cognitive functioning and the conceptual development of the child as he is inducted by his language into the world of experience."

When comparing Black Dialect and Standard English, the Whorf Hypothesis suggests that if linguistic structural differences exist, then these differences may be important to children's perceptions of some phenomena. There are structural linguistic differences between Black Dialect and Standard English where Black Dialect provides more meaningful clues to children than Standard English.

One example is an additional form of the verb be in Black Dialect. In Standard English the sentence *he is happy* carries one of at least two meanings: either a) he is happy always or b) he is happy right now but it may pass away in the future and return again some other time. In Black Dialect, there is the sentence *he is being sometimes* omitted but there is also the additional grammatical form, *he be happy*, which carries the more specific meaning that this state is permanent.

6. T. Frentz (1970). Of course, one could agree, before looking at Frentz's results that there may be little reason to suspect that children from either language group would be deficient in their perceptions of plural action.


or at least likely to recur. In this way, Black Dialect provides more linguistic cues than Standard English for the identification of permanent (or possibly recurring) qualities. Black Dialect provides one structural cue (the verb \textit{lie}) and Standard English provides no structural cues for identifying recurrent qualities.

Thus, when considering the applicability of the Whorf Hypothesis to Black Dialect or to Standard English, it is reasonable to ask: Are there some specific grammatical rules of Black Dialect, easily and quickly learned by teachers, that can aid elementary school children's perception of their surroundings better than Standard English?

This question refers to educational policies as much as it relates to perceptual theories. The question is simply a beginning to see if there are some specific linguistic rules of Black Dialect that can be overtly recognized, supported and encouraged within the classroom for classroom purposes of explication.

9. Korzybski discusses the ambiguity and possible restrictiveness of the verb \textit{to be} in all Indo-European languages, including Standard English. He suggests, for example, that the structural similarity between \textit{I am a man} and \textit{I am tired} may be related to some of the more important Aristotelian rules of logic, especially the rule of contradictions. A. Korzybski (1941).

10. Since the focus of this study is upon the possible effect of language upon a child's perception of his world, neither the strong evidence for respecting the Black Dialect as a rule following code (see Baratz and Baratz) nor the conflicting evidence of how Black Dialect is used in the home (e.g., compare Labov and Deutsch) will be discussed in detail. The assumption of course is that Black Dialect is a viable linguistic code no better nor no worse than other codes (an assumption that even Bernstein followers are now willing to make) and that due respect must then be shown the young speakers of Black Dialect who have learned this code.
One reason why this question has not been asked in previous studies may lie in a tacit assumption that the Bernstein Thesis is applicable to Black Dialect.

**The Bernstein Thesis**

The Bernstein Thesis has evolved into the proposition that there are two possible effects of language usage upon a people's perception. One possible effect, as in the Whorf Hypothesis, is the structure of the language. The second effect, however, includes the kind of setting in which that language has been used by its speakers. It is in terms of this second effect that Bernstein applies the words "narrow" or "restricted" to a language. The Bernstein Thesis proposes that if the experiences and uses of a language "code" have been narrow or restricted, then the effect of the language will be to restrict its speakers' perceptions.

Bernstein has attempted to clarify this argument by further defining the sense in which a language code is "narrow" or "restricted." As Bernstein now wishes his thesis stated, for example, it is possible for a linguistic code to be "restrictive" for literary or more explicative uses but be "elaborate" for inter-personal communication. In fact, as a sociological theory, the Bernstein Thesis assumes that the above description is appropriate for low SES dialects. Using the Bernstein Thesis, since it is the literary, explicative uses of a language upon which formal education...

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12. Earlier Bernstein said that one could compare the linguistic structures of languages and find good ("elaborate") linguistic structures and poor ("restricted") linguistic structures. Later Bernstein says that one cannot compare languages on their linguistic structure since the linguistic potential of any viable language is unlimited.

is based, the speaker of a low SES dialect must learn and use Standard English in order to increase his educatability.

There is little empirical evidence to either support or refute this latest version of the Bernstein Thesis as it applies to Black Dialect in American inner cities. The case study of Labov, however, is the most interesting. In his study, Labov compares the logical argument of a seventeen year old Black Dialect speaker with the logical argument of an older Black speaking Standard English. The study shows a dramatic difference in the clarity of the two logical arguments, favoring the argument made in Black Dialect. If the Bernstein Thesis were correct about Black Dialect, one would not expect the speaker of Black Dialect to be more logical than the speaker of Standard English. Labov recognizes some of the other confounding factors to his case study (for instance, the overelateness of Standard English and the discomfort of both subjects). However, not only did Labov suggest that the Bernstein Thesis was not true for Black Dialect in his case study, but he suggested that the Bernstein

14. Although there have been many studies that have attempted to support or refute the applicability of older versions of the Bernstein Thesis to Black Dialect (e.g., comparisons of word usage), these studies no longer are applicable to the latest version of the Bernstein Thesis. It may be interesting to note, however, that if comparisons in word usage were considered to be important, there would be strong evidence for respecting the comparative uses of Black Dialect with those of Standard English. See Baratz (1970) and Fox (1972).

Thesis may be applicable to Standard English. (That is, that the experience of the SE speaker with SE may be responsible for the SE speaker's lack of logical argument.)

Bi-lingual Nature of Black Dialect Speakers

It has been mentioned before that this study was designed not only to question the possible relationship between linguistic rules and child perception but it was also designed to provide some direction to educational policy makers. With that in mind, it seemed appropriate to address the bi-lingual nature of the Black Dialect speakers. There are studies that suggest that the Black Dialect speaking child is also at least a competent listener in Standard English. Thus, it was considered important to see if a Black Dialect speaker performed similarly on a perceptual task if it were performed in Black Dialect or in Standard English. If the Black Dialect speakers performed similarly in both languages, the necessity for including Black Dialect in the classroom may be perceived as being less urgent than if the Black Dialect speaker performed less efficiently in Standard English.

Thus there were three general purposes to this study:

Purpose A: To test the applicability of the Whorf Hypothesis to speakers of Black Dialect and speakers of Standard English only.

Purpose B: To test the applicability of the Bernstein Thesis to speakers of Black Dialect and speakers of Standard English only.

Purpose C: To test certain features of the bi-lingual nature of the Black Dialect speakers.

PROCEDURES

The perception chosen for comparison was the child's recognition of the existence of contradictions. More specifically, the dependent measure was the willingness of the child to state apparent contradictions (the child's willingness, for example, to state that someone is both "mean" and "nice" or both "smart" and "dumb").

The perception of apparent contradictions was chosen for four reasons. First, it seemed to be closely related to the additional structured use of the verb be in Black Dialect. The implied recognition of time as a factor when applying a quality to a person in Black Dialect (i.e., the differences between I (is) happy and I be happy) suggested that this added structural clue of Black Dialect may help in identifying those cases when I can be called both happy and sad. The ambiguity of Standard English on the other hand, may force a child to depend upon the Aristotelian rule that contradictions do not exist (i.e., that two opposite qualities cannot exist in the same person or object at the same time).

The second reason for choosing apparent contradictions is simply that they do exist. A person can be not only both hungry and good (not contradictory) but both good and bad, right and wrong, hungry and full.

17. In fact, Howey (1965) conducted a study with Standard English speakers only and found a very low willingness of children to state apparent contradictions.
Certainly Clark's description of the contradictions within the inner city is applicable to many American realities.

(It) is ferment, paradox, conflict and dilemma. (It) is hope, it is despair, it is churches and bars. It is aspirations for change, and it is apathy. It is vibrancy, it is stagnation. It is cooperation and concern, and it is suspicion, competitiveness, and rejection.19

The final two reasons for choosing the perceptions of contradictions are the importance of child recognition of contradiction to current child developmental theory (e.g., Piaget, Lawson, Erikson) and some recent observations that conflict (and contradiction) is tacitly being ignored in the classroom.

For example, an important feature to Piaget's rationale for each child's progress through developmental stages is "equilibrium" or the child's awareness that too many contradictions exist within that child's own organization system. Apple is one who is seriously suggesting that conflict (including contradiction) is being ignored in the classroom, not only to the detriment of science but to the detriment of the student who has not been approached with any of the political and moral dilemmas that are part of living in any society.

15. J. Flavell (1963), pp. 244-249.
The general study design was a 3 x 2 factorial design (see Figure 1). The two main effects were language and sex. There were identified three levels to the language effect: a) speakers of Black Dialect hearing Black Dialect, b) speakers of Black Dialect hearing Standard English, c) speakers of Standard English hearing Standard English.

The general factorial design was then modified to a one way design with planned contrasts since a number of a-priori hypotheses were stated.

![Figure 1. General design of study.](image)

21. In the larger study (Fox, 1972), age was also a main effect. Comparisons between ages are reported in a paper delivered at the 1973 NCTE Conference (Fox, 1973).

22. The only other controlled variable was that every child who participated in the study had scored 85 or above on an IQ test (i.e., that every child was classified by the schools as being of at least "normal" intelligence). All other variables which may be expected to relate a child's willingness to state apparent contradictions were considered to be randomized.
The population to which the study was to be generalized were inner city children, both speakers of Black Dialect and speakers of Standard English only. The sample was drawn from three schools in the Inner city of Milwaukee, Wisconsin. All three schools were located in the central city and served about the same socio-economic class of student.

From these schools 180 children (60 from each linguistic group 30 per cell in Figure 1) were randomly chosen. The number of children chosen for the study was made with two considerations. First, was that a high power was desired for the statistical tests because it was felt to be important for the study to be able to pick up an opposite hypothesis, if in fact, it were true. The second consideration was that for an initial study such as this there could be an important distinction made between a "statistical difference" and a "meaningful difference." Only large differences were considered to be meaningful in the sense that a large difference would then suggest exploration for future study.

23. It is necessary to note that in Milwaukee there is not yet a linguistic survey of the various features of the Black Dialects used. Dr. B. Osheika of the Institute for the Study of Urban Linguistics at the University of Wisconsin-Milwaukee has stated in a personal conversation that an informal and incomplete survey of Black Dialect speakers in Milwaukee does suggest that the invariant be form is being used. Informal observation by the author at various inner city schools confirmed this.

24. See W. Walster and A. Cleary's paper, "The use of statistical significance as a decision rule," a publication of the Psychometric Laboratory, University of Wisconsin.
Definitions

An apparent contradiction is the statement X is p and X is not p that is resolvable by further analysis. This analysis may be either about what is meant by the verb is (is at time t or is in situation y) or about what is meant by p (if p has pj meanings, which of the Pj meanings are being used).

There were three types of apparent contradictions identified in this study. One type of apparent contradiction is resolvable by time. For instance, he is nice one minute and mean the next. A second type of apparent contradiction is resolvable by considering the contradiction in a relative sense. For instance, he may be tall in one group but short in another. The third type of apparent contradiction is resolvable by there being more than one sense of the word (or words). For instance, he is ugly in looks and he is beautiful in spirit. There is a meaning for "ugly" that is not contradictory to a meaning for "beautiful."

There were three types of situations identified where apparent contradictions may occur. One is the social situation. The social situation describes the inner feelings or inner characteristics of a person (for example, a person being mean, nice, happy, sad). The second is the physical situation. The physical situation describes the characteristics of an object (for example, a ball being heavy, light, hard, soft). Third is the physical-social situation. The physical-social situation describes the physical, non-emotional characteristics of a person (for example, a person being thin, fat, neat, messy).
A questionnaire of eighteen short stories was devised and was taped in both Standard English and in a Milwaukee Black Dialect. Each story contained two episodes, each of the two episodes described the same person or object having opposite qualities. For each story, the child would listen to the two episodes describing the same person or object and then be asked to describe the person or object appearing in both of these episodes by using one word, a second word (the two words were opposites) or both words. Each word was appropriate to one of the episodes. The child was shown two cards, each card with one of the words on it, and would choose the word (or words) by picking the card with the word that he wanted to use and putting that card (or cards) into a box in front of him. Precautions were made in order that each child could listen and answer alone.

The following is an example in Standard English of one of the stories used on the tapes.

James polished his shoes every day, ironed his own slacks and always wore a trim and stylish shirt. He kept his hair in the cool style and it was always clean and brushed. James was one of the cleanest and fanciest dressers in the school. At home, James never made his bed and would leave all his dirty socks, dirty shirts, sweaters and underwear all over the floor. His desk at school was always piled and stuffed with crumpled papers and torn books. His mother and teachers had to clean up after James.

describe James, using the words NEAT or MESSY or both.
The questionnaire, including the introduction and two sample stories, took about 25 minutes.

Each story was classified by two criteria: the type of situation in the story (physical, social or physical-social) and the type of apparent contradiction that would occur if both words were to be chosen (time, relative or more than one sense of the word.) Figure 2 shows the organization of the eighteen stories by type of situation and type of contradiction. It also includes the words used and the random order of the stories on the tape.

Dependent Variable

For each child, the dependent variable was the total number of times that the child chose two opposite words to describe a person or object. Four dependent measures were used for the seven hypotheses: the total score and three partial scores, the partial time score, partial social score and partial physical score. A total score could range from a score of 0 (two contradictory words never used for any of the stories) to 18 (two contradictory words used for all the stories). A partial score could range from a score of 0 to 6 since these partial scores were the number of times that a child used two contradictory words across the particular type of situation (read down in Figure 2) or across the particular type of contradiction (read across in Figure 2).

Hypotheses

As stated before, in order to be consistent with the consideration of large power and statistical meaningful differences, the general two-way
Figure 2. Organization of stories by type of situation and type of contradiction, including antonyms used at end of each story and the order of the story on the tapes.

**Type of situation**

<table>
<thead>
<tr>
<th>Social</th>
<th>Physical-Social</th>
<th>Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>happy &amp; sad</td>
<td>loud &amp; soft</td>
<td>sunny &amp; shady</td>
</tr>
<tr>
<td>alert &amp; careless</td>
<td>hot &amp; cold</td>
<td>hard &amp; soft</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>mean &amp; nice</td>
<td>neat &amp; messy</td>
<td>small &amp; large</td>
</tr>
<tr>
<td>dreamer &amp; doer</td>
<td>hungry &amp; full</td>
<td>heavy &amp; light</td>
</tr>
<tr>
<td>14</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>smart &amp; dumb</td>
<td>growing &amp; shrinking</td>
<td>wild &amp; tame</td>
</tr>
<tr>
<td>honest &amp; lying</td>
<td>rich &amp; poor</td>
<td>close &amp; far-away</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>more than one sense of word</td>
<td>17</td>
<td>13</td>
</tr>
</tbody>
</table>
factorial design (language and sex) was modified to include specific hypotheses. The three purposes of this study suggested seven specific hypotheses.

Since Purpose A was to test the applicability of the Whorf Hypothesis to young adolescent speakers of Black Dialect and Standard English, hypotheses one and two were suggested.

Hypothesis 1. Children who speak Black Dialect will be more willing to state apparent contradictions than children who speak Standard English only.

Hypothesis 2. Children who speak Black Dialect will be more willing to state apparent contradictions resolvable by time than children who speak Standard English only.

Since Purpose B was to test the applicability of the Bernstein Thesis to Black Dialect, hypotheses three and four were suggested.

Hypothesis 3. Black Dialect speakers will be more willing to state apparent contradictions in social situations than speakers of Standard English only.

Hypothesis 4. Black Dialect speakers will be more willing to state apparent contradictions in social situations than in physical situations.

Since Purpose C was to provide evidence about the bi-lingual nature of young adolescent Black Dialect speakers, hypotheses five, six and seven were suggested.
Hypothesis 5. Black Dialect speakers who hear Black Dialect will be more willing to state apparent contradictions than Black Dialect speakers who hear Standard English.

Hypothesis 6. Black Dialect speaking boys who hear Black Dialect will be more willing to state apparent contradictions than Black Dialect speaking boys who hear Standard English.

Hypothesis 7. Black Dialect speaking girls who hear Black Dialect will be more willing to state apparent contradictions than Black Dialect girls who hear Standard English.

RESULTS

Means and variances used in computing the contrasts for the seven hypotheses are in Figure 3. The differences between means, computed critical values, statistical decisions and alpha and power level for each comparison are in Figure 4. The verbal conclusions from this data and the statistical analyses for the seven hypotheses follow.

Conclusion 1. Young adolescents who speak Black Dialect are not more willing to state apparent contradictions than young adolescents who speak Standard English only.

Conclusion 2. Young adolescents who speak Black Dialect are not more willing to state apparent contradictions resolvable by time than young adolescents who speak Standard English only.
<table>
<thead>
<tr>
<th></th>
<th>Black Dialect speakers hearing Black Dialect</th>
<th>Black Dialect speakers hearing Standard English</th>
<th>speakers of Standard English only hearing Standard English</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Variance</td>
<td>Mean</td>
</tr>
<tr>
<td>total score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max. 18.00)</td>
<td>9.167</td>
<td>(13.579)</td>
<td>7.917</td>
</tr>
<tr>
<td>total score for boys</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.467</td>
<td>(15.111)</td>
<td>8.233</td>
</tr>
<tr>
<td>total score for girls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.867</td>
<td>(12.047)</td>
<td>7.600</td>
</tr>
<tr>
<td>partial time score (max. 6.00)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.300</td>
<td>(2.382)</td>
<td></td>
</tr>
<tr>
<td>partial social score (max. 6.00)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.167</td>
<td>(2.926)</td>
<td></td>
</tr>
<tr>
<td>partial physical score (max. 6.00)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.100</td>
<td>(2.370)</td>
<td></td>
</tr>
</tbody>
</table>
Figure 4. Analysis of contrasts and the resulting statistical
decisions for hypotheses 1 through 7.

<table>
<thead>
<tr>
<th>comparison</th>
<th>means</th>
<th>difference</th>
<th>computed critical value</th>
<th>statistical decision</th>
<th>alpha level</th>
<th>power*</th>
</tr>
</thead>
<tbody>
<tr>
<td>C₁</td>
<td>9.167 - 9.100</td>
<td>.067</td>
<td>1.651</td>
<td>N.S.</td>
<td>( .01)</td>
<td>.90</td>
</tr>
<tr>
<td>C₂</td>
<td>3.300 - 3.452</td>
<td>-.182</td>
<td>not needed</td>
<td>N.S.</td>
<td>( .01)</td>
<td>.90</td>
</tr>
<tr>
<td>C₃</td>
<td>3.167 - 3.233</td>
<td>-.067</td>
<td>not needed</td>
<td>N.S.</td>
<td>( .01)</td>
<td>.90+</td>
</tr>
<tr>
<td>C₄</td>
<td>3.167 - 3.100</td>
<td>.067</td>
<td>.705</td>
<td>N.S.</td>
<td>( .01)</td>
<td>.90+</td>
</tr>
<tr>
<td>C₅</td>
<td>9.167 - 7.917</td>
<td>1.250</td>
<td>1.526</td>
<td>N.S.</td>
<td>( .01)</td>
<td>.99+</td>
</tr>
<tr>
<td>C₆</td>
<td>8.467 - 8.233</td>
<td>.234</td>
<td>2.194</td>
<td>N.S.</td>
<td>( .01)</td>
<td>.92</td>
</tr>
<tr>
<td>C₇</td>
<td>9.867 - 7.600</td>
<td>2.267</td>
<td>2.185</td>
<td>*</td>
<td>( .01)</td>
<td>.92</td>
</tr>
</tbody>
</table>

* All comparisons are one-tailed. The chosen significant difference in standard deviation units was two-thirds standard deviation units for hypotheses 1 through 4 and 1 standard deviation unit for hypotheses 5 through 7.
Conclusion 3. Young adolescent speakers of Black Dialect are not more willing to state apparent contradictions in social situations than young adolescent speakers of Standard English only.

Conclusion 4. Young adolescent Black Dialect speakers are not more willing to state apparent contradictions in social situations than in physical situations.

Conclusion 5. Black Dialect speakers who hear Black Dialect are not more willing to state apparent contradictions than Black Dialect speakers who hear Standard English.

Conclusion 6. Black Dialect speaking boys who hear Black Dialect are not more willing to state apparent contradictions than Black Dialect speaking boys who hear Standard English.

Conclusion 7. Black Dialect speaking girls who hear Black Dialect are more willing to state apparent contradictions than Black Dialect speaking girls who hear Standard English.

Validity of Assumptions of the Study Design

There are four assumptions basic to the one-way design with planned contrasts: a) random sampling, b) independent performance, c) normality of parent population and d) homogeneity of variance. A discussion of the validity of these four assumptions to this study follows.
Random sampling was attempted through the selection of the schools used, selection of the boys and girls within the schools and through a randomization of whether Black Dialect speakers heard Black Dialect or Standard English.

Two precautions were taken to assure that the children performed independently. First, the children listened to the tapes by earphones, seated so that no child could see what another child was choosing. Second, it was emphasized to the children that this was a questionnaire about people's opinions and that their friends' opinions might change if they heard about the stories from others. Teachers reported that this approach was successful.

The validity of normality of populations for the scores on the questionnaire can be suspected to be not true. In fact, an assumption of the Whorf or Bernstein Hypotheses is that the scores from this questionnaire will not be normally distributed, but skewed in one direction or another. With the large numbers (30) per cell, however, this assumption can be considered to be satisfied to a reasonable extent for the statistical tests chosen.

In addition to having equal n's per cell, the $F_{\text{max}}$ ratio was never exceeded for any of the comparisons performed in this study. Thus, the assumption of homogeneity of variance is satisfied.

25. The techniques used are explained in detail in Fox (1972).

26. Kirk, (1968), pp. 60-61, 103. It is also interesting to note that a description of the score groupings by either medians or quartiles supports the descriptions of the cell means for the data.

27. $F_{\text{max}} = \frac{\text{largest of } K \text{ variances}}{\text{smallest of } K \text{ variances}}$ with degrees of freedom equal to $K$ and $n-1$ (Kirk, ibid., p. 62)
Therefore, these four assumptions to the one-way design with planned contrasts are considered to be satisfied. In addition to addressing these four assumptions, precautions were undertaken in this study and checks were made for content validity, internal consistency and reliability of the questionnaire itself.

DISCUSSION

There were three purposes to this study. Purpose A was to test the applicability of the Whorf Hypothesis to Black Dialect or to Standard English. Purpose B was to test the applicability of the Bernstein Thesis to Black Dialect. Purpose C was to look into the bi-lingual nature of the Black Dialect speakers. A discussion of the results of this study to each of these three purposes follows.

Discussion on the Applicability of the Whorf Hypothesis to Black
   Black Dialect and Standard English

Conclusions one and two state that there is no evidence to suggest that the Whorf Hypothesis applies to Black Dialect or Standard English young adolescents’ willingness to state apparent contradictions. The high degree of variance within each language group and the very small differences in means (see figure 3) imply that the linguistic structural difference between Black Dialect and Standard English is not a major variable in the children's perceptions of contradictory situations.
Discussion on the Applicability of the Bernstein Thesis to Black Dialect

There is no evidence from this study that the Bernstein Thesis is applicable to Black Dialect. For example, there is absolutely no evidence to suggest that the language experience of Black Dialect speakers with Black Dialect is more oriented towards people than to things (conclusion 4). In fact, the mean score for girl Black Dialect speakers in physical type situations is higher than any other mean score of any group in any type of situation. There is also no evidence that the language experience of the Black Dialect speakers is more oriented to people than the language experience of speakers of Standard English only (conclusion 3).

Thus, if the Bernstein model is accepted, (Perception = Language structure + Language experience) the evidence of this study supports Labov, the Baratzes and Stewart in their descriptions of the home uses of Black Dialect. There is nothing in this study to suggest that the home uses of Black Dialect are any more or less elaborate than the home uses of Standard English for Standard English speakers. There is absolutely no evidence to support the arguments of Hess, the Deutsches, Moynihan or Green that Black Dialect is somehow socio-linguistically deficient.


This need not imply that the Bernstein model be considered not useful. In the next section that model will be used in discussing how Standard English may be considered to be "restrictive" (in the same sense that Bernstein defines the term) for Black Dialect speakers, especially girls. It can be emphasized, however, that the results of this study suggest that the Bernstein Hypothesis is not applicable to Black Dialect.

Discussion on the Bi-lingual Nature of Black Dialect Speakers: The Differences Between Hearing Standard English and Hearing Black Dialect

Black Dialect speaking girls did not perform this task similarly when listening to Black Dialect as they did when listening to Standard English. The differences between hearing Black Dialect and Standard English were consistent for Black Dialect speaking girls across age, across types of contradictions and across types of situations (see Figures 5-7). This consistency for the Black Dialect speaking girls (along with the large differences chosen to be statistically significant) suggest that there can be little doubt that there was a real difference between Black Dialect speaking girls hearing Black Dialect and Black Dialect speaking girls hearing Standard English.

A language difference between hearing Black Dialect and hearing Standard English was not observed for the boy Black Dialect speakers. It may be interesting to discuss some of the most plausible explanations for this result.
Figure 5. Comparison between total scores of girl BD speakers hearing BD and girl BD speakers hearing SE.
Figure 6. Comparison between partial scores of types of situations for girl BD speakers hearing BD and for girl BD speakers hearing SE.

Figure 7. Comparison between partial scores of types of contradictions for girl BD speakers hearing BD and for girl BD speakers hearing SE.
One explanation for Black Dialect speaking girls being less willing to state apparent contradictions in Standard English than in Black Dialect is that, although the messages were received in both languages, the decisions were made differently depending upon the language heard. When listening to Black Dialect, the girls decide to choose two apparently contradictory words more often than when they listen to the same stories in Standard English. If different decisions are being made (this would be so if the Black Dialect speaking girls receive the message as clearly in Standard English as they do in Black Dialect), then it could be for one of two reasons.

One reason could be that there are non-linguistic pressures (e.g., social rules or other rules) that are different for Black Dialect speaking girls when listening to Black Dialect than when listening to Standard English. For instance, when Black Dialect speaking girls listen to Standard English, there may be an authoritarian role assumed (or some other role perceived) that would not allow for the ambiguity implied in choosing two opposite words. It should be noted that the evidence from this study could support this explanation only if it were considered that the rules that the Black Dialect speaking girls were using differently when hearing the two languages were being applied over a general range of topics. The differences found between hearing Black Dialect and hearing Standard English were consistent for every type of situation, type of contradiction and age group (see Figures 5-7). That the set of results are so generally applicable to the various kinds of
apparent contradictions could suggest a further conjecture that the rule may either directly relate to the stating of apparent contradictions (e.g., one and only one choice can be made) or that the rule may be generally applicable to many different kinds of phenomena. Labov suggests that the second case may be true in his discussion of New York speech, specifically in his discussion of language as a system for integrating values. If this explanation seems the most plausible, it should be noted that the results of this study suggest that for Black Dialect speaking girls, the language system is more of a value system than for the boy Black Dialect speakers.

A second reason that could be given for Black Dialect speaking girls to choose differently when listening to Standard English than when listening to Black Dialect is that the respective rules of each language are very important to the Black Dialect speaking girls. This would imply that either the linguistic rules of the respective languages (the Whorf Hypothesis) or the experiential use of the respective languages (the Bernstein Thesis) affect the girls' willingness to state apparent contradictions. Since the Black Dialect speaking boys and girls perform similarly when hearing Black Dialect, it seems more probable that the difference between hearing Black Dialect or Standard English for the girls lies in their low willingness to state apparent contradictions when listening to Standard English. In other words, the Black Dialect speaking girls are using Standard English as if it were a "restrictive" code.

Since a large part of the experience of Black Dialect speaking girls with Standard English comes from the classroom, this could be taken as a fairly strong indictment on the school. If one uses the Bernstein Thesis for explaining this result, the reason could be that there is little experience within the school for identifying situations where apparent contradictions may occur.

In fact, one interesting observation from this study suggests that it may be true that all children of this age have little experience with applying apparent contradictions in the school setting. There were three stories where both episodes took place in school and three stories where both episodes took place out of school. If one compared the respective difficulty of these apparent contradictions, there seemed to be no real difference between the two sets of stories. All sex and language groups, however, were at least 50 percent more willing to state apparent contradictions for pairs of situations that occurred out of school than for pairs of situations that occurred in school. For example, children were twice as willing to state that a child can be both honest and lying (out of school) than both smart and dumb (in school).

The second possibility, then, is that Standard English is a "restrictive" language (in Bernstein's sense) for Black Dialect speaking girls.

The third possibility, but probably the less plausible explanation for the observed difference for Black Dialect speaking girls is that they did not receive the messages as clearly in Standard English as they did in Black Dialect. Stated differently, girl Black Dialect speakers were
more competent listeners in Black Dialect than they were in Standard English. As unusual as this explanation may seem without the boy Black Dialect speakers also showing this difference in listening comprehension, there is a possibility that this may be the case. Brimer, for instance, did find in a study of the listening comprehension of ten to twelve year old boy and girl speakers of Standard English that the girls did not comprehend complex messages as well as boys. The explanation that Brimer (and Carroll in a reaction paper) gave for this result was that early verbal expressivity of the girls may mean that the girls had a different way of listening than the boys who showed a later maturity in verbal expressivity. Both Brimer and Carroll hypothesized that the girls were listening by translating what they heard into how they would speak. The process of translating into one's own terms at the ages of ten to twelve, they hypothesized, could lose something of a complex message. The boys, they hypothesized, were not translating when listening but were listening in some other ways that did not use their own verbal expressions.

The lack of certainty in the above hypothesis, considered along with the apparent simplicity of the messages, however, suggests that there is little reason to suspect that Black Dialect speaking girls are less willing to state apparent contradictions in Standard English than in Black Dialect simply because they do not hear and understand the message as clearly in Standard English as in Black Dialect.

Thus, there are three possibilities offered here for the difference in girl Black Dialect speakers' willingness to state contradictions when listening to Black Dialect than when listening to Standard English. None of these suggestions has been thoroughly tested but each is an interesting possibility with important implications to child development as well as to classroom practices. The first possibility is that the two languages are being used as two value systems by the Black Dialect speaking girls (the value system of Standard English being more restrictive in allowing the stating of apparent contradictions than that of Black Dialect). The second possibility is that the Black Dialect speaking girls are more likely to reflect a language effect upon their perceptions of apparent contradictions. This possibility suggested that the Bernstein Thesis may be applicable to Standard English for Black Dialect speaking girls (that is, that Standard English is being used as a "restrictive code" by Black Dialect speaking girls). The third possibility discussed is that Black Dialect speaking girls are not as good listeners in Standard English as they are in Black Dialect. The third possibility seems the least plausible.

Limitations

One limiting feature of the questionnaire was that it was a passive (listening, then choosing) exercise. This is a limitation because (although it was observed that the children were attentively making silent decisions) there was no way to monitor what tactics the young adolescent actually used in order to come to each decision.
One suggestion for a more direct test of the Whorf Hypothesis could be the following study. Person A could listen to the questionnaire on tape, then verbally give the story to person B. Person B could then be asked to give his version of the story to a third party. B's story could then be scored on the extent to which both episodes of the story (quality p and quality not p) are included. A study such as this would be involving the active verbalization of the young adolescent and the process could be monitored as well as the results. In this way a more direct description of the speech habits as well as the usefulness of certain constructions of Black Dialect(s) could be achieved.

IMPLICATIONS

Implications for Educational Policy Makers

The implications of these results to educational policies towards Black Dialect are twofold. Most important is the implication to educators' attitudes towards Black Dialect. Black Dialect in no way was observed to be a language that had been used by its young speakers in a manner that is less useful to the classroom than the Standard English that had been used by its young speakers. This observation supports many recent arguments to respect Black Dialect.

Second, and also important to educational policy makers who must consider how the two languages can be used in the classroom, is the possibility that it is not Black Dialect that is a "restrictive" language code for speakers of Black Dialect but that Standard English is a restrictive code.
Implications for Future Educational Research

Implications from this study suggest that further research into young adolescents as rule-makers and rule-users may be fruitful. Several theories such as the Whorf Hypothesis and the Bernstein Thesis do not satisfactorily explain the decision-making processes that were used by the children when deciding to use or not use two contradictory words to describe the same person or object. The results from this study suggest that instead of continuing to look into the effect of linguistic rules, it may be more useful to further clarify the tacit use of rules of logic, social roles or other aesthetic, moral or religious rules that may affect a child's decision.

One general finding that may have important implications to current child developmental theory was the rather unwillingness of most of these children to state apparent contradictions (generally 50% of the time or less). An important feature to Piaget's theory of child development, for example, is that a child moves from one developmental state to another when he or she becomes aware of too many internal contradictions. The results of this study suggest that children may be willfully disregarding the contradictions set up in certain situations and by certain conditions (for example, Black Dialect speaking girls hearing Standard English). The implication here is that more detailed research into the ways in which contradiction is handled by different children (and adults) may prove important to our understanding of human intellectual development.
It is hoped that the implications of these suggestions will fascinate educators enough both to search for more information about the young adolescent and to respect all young adolescents as both rule-users and as rule-makers.
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