

AN EXAMINATION OF THE VERBAL DEVIATIONS OF THE LANGUAGE CASE:  
THE SYNTACTIC ENVIRONMENT AND A COMPARISON OF DEVIATION  
CHARACTERISTICS WITH THE ARTICULATION AND NORMAL SUBJECT

by

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## CHAPTER I

### INTRODUCTION

For some time man has been interested in establishing norms of mental growth in children. This has led to various normative studies including studies of the normal acquisition of language. The published research on children's language has centered around the acquisition of phonemes, vocabulary, and parts of speech as well as the mean length of response and the grammatical complexity at various age levels. These studies have established criteria with which one can compare a child with other children of the same age.

In recent years the speech pathologist has become increasingly aware of the interrelationship of aberrant speech and language errors. In the past the speech pathologist has recognized that there are children who have greater difficulty with language structuring than with articulation, but there has been a lack of adequate evaluation and instructional procedure. Therefore evaluation and instruction has centered around the articulation problem with little emphasis on language structure except in the area of vocabulary development. Through the use of descriptive linguistics, the speech pathologist is now able to describe more specifically the language structure of the different cases which come in for a speech and language evaluation. Recent investigations suggest that there are at least two language structuring patterns apparent among children generally diagnosed as "infantile speech" cases. Following the presentation of papers by Hannah<sup>1</sup> and Dickson<sup>2</sup> at the 1965 meeting of the American Speech and Hearing Association, the profession is becoming aware of an increased need for a more

specific description of the speech of the child with a language structuring problem, as well as a need for some means of establishing instruction for this child. Since some researchers have noted a correlation between syntactic slot fillers and the acquisition of language, it has also been suggested that, conversely, certain slot fillers may also relate to the types of deviations that occur. If a relationship between the deviation and the slot filler can be demonstrated then the speech pathologist may be able to develop more specific instruction in order to establish the correct pattern. This may be examined through a linguistic analysis of the deviant verbal structures and immediate syntactic environments of a group of language cases. A second area which might also be examined would be the deviation pattern of the language deviant child, in contrast to that of the child with articulation deviations, and the normal child.

#### PURPOSE

The purpose of Part I of this thesis is to describe the deviant verbal structures found in the speech of several language cases and to note the relationship between the deviant structure and the pre-verbal and post-verbal slot fillers. It is hypothesized that:

The deviations found within the verbal slot are influenced by the pre-verbal or post-verbal syntactic slots.

The purpose of Part II of this thesis is to compare the verbal deviations of the several language cases with the deviant verbal patterns found in the speech of articulation cases and normal subjects. It is hypothesized that:

The language case represents a distinct deviant language structuring pattern which differs from the articulation case and the normal subject in terms of frequency of deviation, variety of deviation and consistency of performance.

## SCOPE

The scope of Part I of this thesis is concerned with a description of the aberrant verbal structures and the pre-verbal and post-verbal slot fillers found in the speech of five children diagnosed as having a significant language structuring problem. The linguistic analysis used is based on a procedure suggested by Dr. Leo Engler of Kansas State University, a procedure which used a combination slot filler and immediate constituent analysis.<sup>3</sup> The scope of Part II of this thesis is concerned with a descriptive comparison of the aberrant verbal structures in the speech of five normal subjects, five language cases and five articulation cases matched on the basis of age, sex, IQ, and socio-economic level. It was decided to investigate the area of verbal structure since, as noted by Joos,<sup>4</sup> the verbs are the most difficult syntactic slot in the English language. Loban<sup>5</sup> found the use of verbs is also the major deviation in elementary school children.

## REVIEW of the LITERATURE

Normative studies on children's language development have been well known since 1930.<sup>6</sup> The primary objective of the early studies was to discern the parts of speech, length of response and the grammatical complexity used by children at various age levels.<sup>7</sup> Recently, Loban,<sup>8</sup> in a longitudinal study, investigated the speech of 338 normal children from kindergarten through the twelfth grade. A great deal of the recent research on language development has focused upon the dynamics of development rather than the norms based on observed behavior.

One of the more productive areas of investigation based on a descriptive linguistic approach has been in the study of the child's early

acquisition of syntax. Two separate studies analyzing the language of the two year old yielded similar results in regard to the grammatical structure. Miller and Ervin<sup>9</sup> defined two word classes based on the short utterances of the two year old child. These word classes appeared to have some of the same properties as the word classes in adult speech. The operator class had properties similar to the function word class of adult speech, whereas the non-operators could be described as forerunners of lexical words. Braine's<sup>10</sup> classification paralleled the work of Miller and Ervin although he referred to these classes as pivots and x-class respectively.

As the child matures he acquires a more complex syntactic pattern. Several hypothesis have been set forth regarding the acquisition of syntax and the appropriate governing rules. The child's tendency to induce grammatical rules seems apparent when one notes the child's regularization of inflections. Brown and Fraser<sup>11</sup> say that by using such regularizations as "gooses" for "geese" or "runned" for "ran" the child smoothes the language into a simpler system than it is by applying grammatical rules of greater generality. One hypothesis by Brown and Berko,<sup>12</sup> which proposes a means by which children may induce the rules, relates to the privilege of occurrence of certain word classes. A prerequisite for the ability to make meaningful and grammatical sentences is the appreciation of syntactic similarity. Thus as the ability to use more complex syntactic patterns increases, the syntactic similarity of words becomes important in determining word association. This study discerned that with an increase in age there is an increase of homogeneous response in all seven parts of speech. Thus it appears that syntactic similarity may play a major role in the acquisition of syntax. Another hypothesis arose from Braine's first study of the word

classes of the two year old. He postulated, in this second study,<sup>13</sup> that a child acquires a syntax by the process of contextual generalization which develops as the child learns the position of a unit in a sequence. In this study a nonsense language was used. The results of this investigation showed that subjects who learned sentences in which words occur in certain positions and contexts would tend to place these words in the same position in new contexts. Even phrases tended to become associated with the sentence position in which they occurred. This latter study led to Braine's development of the "place contingency" theory which proposes that even the contingencies between morphemes are learned.<sup>14</sup> As an example, the subject would learn relative positions instead of absolute positioning as accomplished previously. Thus the subject would learn "function" words as reference points for defining the position of other elements. He has begun work based on this theory, but as yet the results are incomplete and unavailable. A similar theory was suggested by Mandler and Mandler.<sup>15</sup> They proposed that in learning a sentence the "core meaning" is what is remembered. However, this may not be the content meaning of the sentence but rather the structural aspect of the sentence carried by a marker word. Therefore the units which would tend to be remembered would be those that frequently parallel the kernel sentence of transformational grammar.

The previously mentioned studies all deal with acquisition of syntax. However, as noted earlier, certain deviations in terms of the adult model also occur in the child's speech. Brown and Fraser<sup>16</sup> state that certain features of the child's language can be predicted from the mean length of utterance. They found that when the mean length of the utterance was less than 3.2 words, the auxiliary was omitted in the present progressive.



Therefore "I going home" becomes the aberrant form of "I am going home." The deviations of the normal child at various ages discerned through linguistic approach have been noted by Brown and Fraser,<sup>17</sup> Miller and Ervin,<sup>18</sup> and Menyuk.<sup>19</sup> Although this was not the primary objective of their investigations, they all noted a variety of deviations, and when the data are compared, a comprehensive view of the major problems of syntax can be seen. A major speech pathology oriented investigation of grammatical structure and syntactic deviations from a linguistic approach was done by Menyuk.<sup>20</sup> She compared the speech of the "infantile speech" case of three to five years of age with a normal child of two or three years of age. This study noted the deviations which occur and ascertained that the infantile case does not compare in terms of language structure with the normal two or three year old child. Therefore, Menyuk concluded that "infantile speech" is a misnomer. One of the most recent studies of language deviant children was reported by Hannah.<sup>21</sup> She examined the language structuring of the normal child, the language case and the articulation case. It was her observation that the language case can be distinguished from the articulation case in terms of grammatical structure. Her investigation indicates that her language cases resembled, or in certain instances exceeded, her normal cases in structural development, whereas, the articulation case tended toward lower scores in general structural development. However, in another study by Dickson,<sup>22</sup> the language case showed a significant difference in the Illinois Test of Psycholinguistic Abilities scores from the articulation case. The language case ranked lower than the articulation case but both obtained scores lower than the normal.

## JUSTIFICATION

In retrospect it is apparent that descriptive linguistics is an effective tool for the analysis of the normal language pattern of the child as well as the deviations that occur. It seems quite plausible that the acquisition of language is influenced by various syntactic slots as purported by the studies of Miller and Ervin, Braine, and Mandler and Mandler which were reviewed earlier. If, as purported, an appreciation of syntactic similarity is necessary before many meaningful grammatical sentences can be made, then it is possible that the child with a language structuring problem does not recognize the syntactic similarity of words within the same word class. This may lead to the regularization of words as described previously by Brown and Fraser. Even if he acquires an appreciation of syntactic similarity, it may be, according to Braine, that he fails to learn the position of a particular unit in a sequence. Therefore he may not have learned the position of the inflectional morphemes and he may substitute another form or omit this unit altogether. This might be shown when the child substitutes "did receive" for "received" because he fails to add the inflectional ending for the past tense. He might also omit the verb entirely as in "He home." It is impossible to determine whether the child with a language structuring problem has acquired improper sequencing patterns until a relationship between the deviation and the environmental slots is first noted. Therefore, Part I of this thesis examines the speech of several language cases with particular emphasis on the verbal slot and notes the relationships between any verbal deviations and the pre-verbal and post-verbal slots. Knowledge of the presence or absence of such a relationship would be very helpful in guiding the speech pathologist in establishing instruction for the

child with a language problem. If the deviation predominantly occurs with a particular syntactic pattern then the pathologist might develop more specific instruction in order to establish the correct pattern. Thus the child who omits the verb "be" whenever the interrogative pronoun is used in the subject slot as in "What your name?" might have instruction centered around the usage of the "be" verb in an interrogative sentence which is introduced with the interrogative pronoun.

As noted previously, Menyuk investigated the language structure of the child diagnosed as an "infantile speech". Thus it is important to examine the deviant language structures found in the speech of five sets of normal, articulation and language subjects who have been matched on the basis of age, sex, IQ, and socia-economic level. It is hoped that this will aid the speech pathologist in describing and evaluating children with various language structuring problems who have previously been diagnosed as "infantile speech" cases.

## DEFINITION OF TERMS

The following list defines some of the speech pathology and linguistic terminology that is used within this thesis.

Articulation Case - This child has a predominance of articulation errors with the verb, few structural errors and can generally be characterized as non-verbal during an evaluation.

Concord - The agreement between subject and verb in the inflectional endings used with particular reference to the person, tense and plural markers.

Did Substitution for Past - The use of the auxiliary "do" is rarely used for the indicative except for emphasis. Consistent use of "did" to form the past tense deviates from the model.

Immediate Constituent Analysis - This analysis determines the cuts between the subject and predicate and then further divides the sentence into subject, verb and post-verb, listing these divisions in their non-verbal archaic form.

Language Case - This child has very few articulation errors but has a great frequency and variety of structural errors and can generally be characterized as very verbal during an evaluation.

Metathesis - An inversion of word order.

Slot Filler Analysis - This analysis determines what specific forms can fill the subject, verb and post-verb slots. This includes the verb types, expansions and various types of modifiers.

## CHAPTER II

## PROCEDURE

The five subjects chosen for Part I of this thesis ranged in age from 4-10 to 6-9 and were enrolled in the speech pathology program at either the Kansas State University speech clinic or the Manhattan public schools. Each subject was identified as a language case on the basis of several characteristics. This child was always very verbal during the interview, showed a predominance of structural errors with very few articulation errors, was of normal intelligence on the Peabody Picture Vocabulary Test,<sup>23</sup> and had no known organic involvement.

The subjects chosen for Part II of this thesis included the five language cases mentioned previously, five normal children and five children identified as articulation cases, comprising five sets of cases in all. All three children in each set were matched according to age, sex, IQ, and socio-economic level. The age of the normal subjects ranged from 4-11 to 6-10 and the age of the articulation cases ranged from 5-2 to 6-2. Each child was of normal intelligence on the Peabody Picture Vocabulary Test. The normal subjects were characterized as having developed clear and intelligible speech which did not call attention to itself. The articulation cases were identified on the basis of the following characteristics: The child was less verbal than the normal or language case during the interview, and showed a predominance of articulation errors with only a few structural errors.

Because both instruction and evaluation sessions include an adult authority figure, the examiner was a speech pathologist who structured

an interview situation with the child similar to the clinical situation between a client and therapist. The first five minutes were given over to a relatively spontaneous conversation in which the subject related a story or activity with which he was familiar. During this time a minimum of stimulation was used by the examiner. After this relatively unstructured period, the child was asked to comment on six TAT<sup>24</sup> pictures previously chosen by a clinical psychologist for their general application and minimum of possible anxiety stimulating material.

The entire interview was recorded and transcribed orthographically without punctuation onto a manuscript. The taped interview was then replayed and all pauses were marked onto a manuscript with a slash (/), in order to segment the corpus into minor sentences, completely developed syntactic units and sentence fragments, including aberrant structures. The corpus was then analyzed linguistically using a procedure, suggested by Dr. Leo Engler of Kansas State University, which is based on a combination slot filler and immediate constituent analysis. A more complete description of the analysis of the verb types and expansions and the pre-verbal and post-verbal slot fillers can be found in Appendix B. The linguistic elements filling the subject, verbal and post-verbal slots were then ascertained. Any segment that had a deviant verbal structure was then separated from the corpus. Each verbal deviation was classified into the following major categories: Omission of the verb, Omission of the auxiliary, Concord, Archaic expression, Metathesis, Sequence of Tenses and Wrong Verb Form. Examples of these deviations can be found in Appendix C. All of these classifications were subdivided into more specific types by describing the verb type which was omitted, whether it was copulative,

transitive, or intransitive and which type of auxiliary was omitted, (be, have or do). The aberrant concord form was divided according to the inflectional endings omitted, person, tense or plural morpheme. Each deviation was then tabulated for each subject.

After the verbal deviations were tabulated for all the subjects, the pre-verbal and post-verbal syntactic slots for each type of deviation were tabulated for the five language cases. This was done in order to note any relation between the pre-verbal or post-verbal syntactic filler and the type of deviation which occurred. Thus, the number of interrogative pronouns, personal pronouns and other subject slot fillers that occurred before each type of deviation were tabulated. This same procedure was used in the post-verbal slot.

The figures accruing from the first tabulation were then transformed into percentages or ratios and tested for significance by means of the Friedman Analysis of Variance Technique.<sup>25</sup>

## CHAPTER III

## RESULTS

## INTRODUCTION

This chapter is concerned with the examination of the deviant structures found within the verbal slot in five sets of matched language, articulation and normal subjects. The results are discussed in two separate parts. The first part describes the aberrant verbal structures found in the speech of the five language cases and the relationship of the pre-verbal or post-verbal syntactic slot fillers to the specific verbal deviations. The second part discusses the characteristics of the language case in relation to those characteristics of the articulation case or normal subject as ascertained through an examination of the deviant structures found within the verbal slot.

## SYNTACTIC ENVIRONMENTAL CONDITIONS

Table I, Ia, and Ib in Appendix A describe the syntactic environmental slot fillers, the pre-verbal syntactic slots for the omission of the verb "be", and the deviant concord structures respectively. The deviant structures examined in Table Ia and Ib were limited to those that were used by at least four of the five language cases. Applying the Friedman Analysis of Variance Technique, it was ascertained that there was no significant difference among the fillers which precede a specific deviation in the verbal slot. In Table Ic - Ie the post-verbal syntactic slot fillers are described and analyzed for statistical significance. Again it was found that there was no significant difference among the slot fillers which follow a specific deviation



in the verbal slot. Table I indicates that even when one reviews the predominant error of each case that there appears to be little correlation between the syntactic environment and the deviation. The exception is the L I, who predominantly used the interrogative pronoun with the omission of "be". In reviewing the manuscript, it was seen that the child repeated the phrase, "What your name" eight consecutive times, thus increasing the frequency of the specific syntactic environment. This was not true of any other language case. Therefore, it appears, on the basis of these data, that the syntactic environment does not influence specific deviant structures. According to these data, the problem does not appear to be one of improper sequencing of specific units as Braine has hypothesized. Weksel<sup>26</sup> has stated that he and his associates have completed an unpublished study and find Braine's notion of contextual generalization does not form an adequate basis for a theory of the acquisition of syntax. However, it must be noted that these data do not preclude the results of an in-depth analysis of a much larger corpus. With a longer corpus of an individual child a relationship between the deviant structure and the syntactic environment might be discerned.

#### COMPARISON of MATCHED LANGUAGE, ARTICULATION and NORMAL SUBJECTS

In Chapter II it was stated that one of the characteristics which was noted for the diagnosis of a child as a language case was the increased verbalization during the interview situation. This is verified by Table II which compares the percentage that the language, articulation and normal subjects each contribute to the total number of segments. There was a significant difference at the .01 level of confidence in the amount of

verbalization within a structured situation that each group contributed. The language cases verbalized the most, the articulation cases verbalized the least and the normal subjects were in between the two extremes.

On the basis of subjective evaluations, it was thought that there might also be a difference in the variety of deviations used by the three groups of subjects. The deviations were grouped into two major classifications, omissions and concord. Table III compares the variety of omission deviations contributed by the language, articulation, and normal subjects. There was no significant difference at the .05 level of confidence in the variety of concord deviations produced. The language subjects produced almost twice as many types of deviation in concord as the other two groups. It was also noted during the initial tabulations, presented in Table V, that the language cases had deviations in metathesis, sequence of tenses, and wrong verb form, whereas the articulation cases had no deviations in these classifications and the normal subjects only showed deviations in the wrong verb form.

Since there was a difference in the amount of verbalization that each group contributed within a structured situation, the percentage of deviations manifested by each group should be in proportion to the percentage of their total contribution if there is no difference among the three groups. Table VI and Table VII compare the percentage of the total verbalization of each group to the percentage that each contributed to the omission deviation and concord deviation respectively. The language subjects demonstrated deviations in both omissions and concord out of proportion to the number of segments which they contributed to the total

corpus. This was significant beyond the .05 level of confidence. In terms of concord, the normal subjects demonstrated, beyond the .05 level of confidence, correct structures out of proportion to the number of segments which they contributed to the total corpus. However, the normal subjects did not show this for the omission deviations. The articulation subjects did not deviate from the hypothesized performance in either omission or concord. Thus the language case has a greater percentage of total errors than the articulation or normal subject, even when taking into consideration the proportion that each group contributed to the total verbalization.

The next characteristic, examined in Table VIII, ascertained whether the range of difference between the correct and incorrect productions of the omission type deviations varied significantly among the three groups of subjects. The data showed that the normal subjects had a greater range between the number of correct and incorrect productions due to the greater consistency of correct productions. The language and articulation subjects did not show a strong trend in the consistency of correct or incorrect production. It was also noted that the individual variation was greater, within the language group, as the ranges between incorrect and correct productions varied from -3 to +34. In Table IX the range of difference between the correct and incorrect productions of the concord type deviations was examined. There was no significant difference in the range between correct and incorrect production from one group to another in regard to concord deviation.

The difference in the consistency of performance between the omission and concord deviations led to the final characteristic examined. This examination noted whether there was any observable trend toward homogeneity of scores on any of the specific deviations within the language, articulation and normal groups. Tables X, Xa, and Xb describe the specific omission deviations in regard to the percentage that each case contributed to that total production of the error. The specific concord omissions are described in Tables XI, XIa, and XIb. It was found that the separate subjects of all three groups tended to vary individually with respect to the types of errors noted. There did not appear to be any one deviation that was more difficult than another for any group.

#### DISCUSSION

Table XII summarizes the preceding tables for syntactic environment and gives the  $Xr^2$  value for the Friedman Analysis of Variance Technique. As noted previously, Braine's theory of contextual generalization as an explanation of syntax acquisition does not apply when examining the deviant structures. The syntactic environment does not appear to influence the deviant verbal structures of the language case.

Table XII. A summary of the statistical significance for the tables on syntactic environment.

Table		$Xr^2$
Ia	Environmental Slot Fillers Pre-Verbal Be Omission	4.62
Ib	Pre-Verbal Concord	2.04
Ic	Post-Verbal Be Omission	2.52
Id	Post-Verbal Aux. Be Omission	.78
Ie	Post- Verbal Concord	7.11

Table XIII summarizes the tables concerned with certain characteristics of the language case and gives the  $Xr^2$  value for the Friedman Analysis of Variance Technique and the X value for the sign test as well as the statistical significance. It was discerned that the language case represents a distinct syntactic pattern, which differs from the articulation or the normal subject. They verbalize significantly more than the other two groups. This might account for the development of grammatical complexity noted by Hannah earlier. Mussen and Conger<sup>27</sup> have stated that increments in sheer quantity of speech in the child from two to five years of age are accompanied by greater complexity of grammatical structure. Although the language case is able to use grammatical structures that are comparable to the normal subject it was also ascertained that the child with a language structuring problem has twice as many types of concord deviations as the other two groups. This may indicate a different level of development than shown by the articulation case. Loban<sup>28</sup> and Templin<sup>29</sup> have noted that concord, particularly the agreement of subject and verb is a more predominant error than omissions for the normal elementary school child. Therefore, the language case attempts greater grammatical complexity and also has more deviations in the most predominant error found in the speech of the normal child. The language case also has a greater number of errors in both concord and omission than one would expect on the basis of the percent of verbalization contributed by this type of case. The child with predominantly an articulation problem however, shows the least amount of verbalization and again this might account for Hannah's observation that they do not attain the level of grammatical complexity of the normal child.

Menyuk<sup>30</sup> states that almost all the basic syntactic structures used by adults are found in the grammar of children as young as 2 years 10 months. She further notes that most of the structures were used at an early age and used consistently. Therefore it would appear that the articulation case shows less maturation in the development of grammatical complexity. The language case is able to achieve the grammatical complexity shown by the normal subjects yet he has not attained the consistency of correct productions that is shown by the normal subjects. In this instance it would not appear to be a case of maturation, but may be a reflection of a psychological problem.

Table XIII A summary of the statistical Significance for the tables concerned with the characteristics of the language case.

Table		$\chi^2$	X
II	Percentage of Verbalization	8.40***	
III	Variety of Omission Deviations	.15	
IV	Variety of Concord Deviations	7.60*	
VI L	Percent of Contribution to Omission Deviation		0**
A			2
N			1
VII L	Percent of Contribution to Concord Deviation		0**
A			1
N			0**
VIII	Range of Difference for Omissions	6.10*	
IX	Range of Difference for Concord	2.80	
X	Language Contribution to Omission Deviation	.12	
Xa	Articulation Contribution to Omission Dev.	.30	
Xb	Normal Contribution to Omission Deviation	.14	
XIa	Language Contribution to Concord Deviation	.73	
XIb	Articulation Contribution to Concord Dev.	.15	
XIc	Normal Contribution to Concord Deviation		1

\* Significant at the .05 level

\*\* Significant beyond the .05 level

\*\*\* Significant at the .01 level

## SUMMARY

Through the examination of the normal structures by Hannah and the data concerned with deviations collected in this thesis it has been discerned that there are at least two different syntactic patterns represented by children generally considered as "infantile speech" cases. The articulation case is characterized by 1) a lack of verbalization during an interview situation, 2) use of grammatical complexity below that of the matched normal, and 3) the deviant structures occur in proportion to the total verbalization of the articulation case. Therefore one notes the predominance of the articulation pattern rather than any unusual language structuring problem. The language case, conversely, is characterized by 1) extensive verbalization during an interview situation, 2) use of grammatical complexity which is equal to that of the matched normal, 3) the deviations are greater than the proportion of total verbalization, 4) there is a greater variety of deviations than shown by any other group and 5) there is a lack of the consistency of correct production which is shown by the normal child. Although the language case is distinguishable on the basis of an increased frequency and variety of deviations, a syntactic environmental relationship should not be discerned between specific deviations and specific pre-verbal or post-verbal slot fillers. Therefore, specific instruction for the language case cannot be developed on the basis of any syntactic relationship at this time.



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## APPENDIX A

Table I. The deviant verbal structures and the pre-verbal and post-verbal slot fillers.

Verbal Deviation	L I		Post-Verbal	Freq.
	Pre-Verbal	Freq.		
Omission of Be	Inter. Pron.	10	Adv-Adv	3
	Pers. Pron.	1	Noun	8
	Dem. Pron.	1	Adj.	1
	Noun	1	Negation	1
Omission of Aux. Be	Pers. Pron.	1	V-ing + Prep'l	2
	Noun	2	V-ing + I.O.	1
Concord	Her & Him	2	Prep'l	1
	Indef. Pron.	1	Pers. Pron.	1
	Noun	2	Noun	2
	Pers. Pron.	1	Obj. Cl.	1
L II				
Omission of Be	Dem. Pron.	2	Det. + Noun	2
	Him	1	Adj.	2
	Coord. conj.	1	Noun	1
	Indef. Pron.	1		
Omission of Aux. Do	Inter. Pron.	1	Det. + Noun	1
Omission of Aux. Have	Coord. Conj.	1	Noun	1
Concord	Indef. Pron.	1	Adj.	2
	Det. + Noun	1	∅	2
	Pers. Pron.	2		
Sequence of Tenses	Pers. Pron.	1	Det. + Noun	2
	Coord. Conj.	1	Opt. Adv'l	1
	Sub. Conj.	1		
Wrong Verb Form	Coord. Conj.	1	Pers. Pron.	1
	Pers. Pron.	1	Noun	1
	Det. + Noun	2	Particle	2
	Noun	1	Adj.	1

TABLE I Cont.

Verbal Deviation	L III		Post-Verbal	Freq.
	Pre-Verbal	Free.		
Omission of Be	All of us	1	Adj.	1
	Dem. Pron.	3	Inter. Pron.	2
	Pers. Pron.	2	Prep'l	2
Omission of Aux. Be	Pers. Pron.	1	V-ing + Noun	1
Omission of Aux. Have	Pers. Pron.	1	Noun	1
Omission Verb Intr.	Pers. Pron. + Mod.	1	Opt. Adv.	2
	Noun	1		
Concord	Pers. Pron.	5	Noun	2
	Noun	6	Opt. Prep'l	2
			Opt. Adv'l	1
Did Subst. for Past	Pers. Pron.	6	Wh Pron.	1
	Noun	7	Pers. Pron.	4
	Ind. Pron.	1	Noun	2
			∅	1
			Opt. Prep'l	1
			Opt. Adv.	3
			Adv.	1
			Lost Frag.	1
L IV				
Omission of Be	Noun	1	Prep'l	1
Omission Aux. Be	Noun	1	Opt. Adv'l.	2
	Pers. Pron.	3	Prep.	2
			∅	1
Omission Aux. Have	Pers. Pron	1	Det. + Noun	1
Omission Aux. Do	∅	1	Pers. Pron.	1
Omission V-ing	Pers. Pron.	1	Prep'l	1
Omission Verb To	Pers. Pron.	1	Opt. Adv'l	1
Concord	There	4	Det. + Noun	1
	Here	1	Noun	2
	Thems	1	Indef. Pron.	1
	Pers. Pron.	1	Adv.	1
			Adj.	1
		Opt. Prep.	1	

TABLE I Cont.

Verbal Deviation	L V		Post-Verbal	Freq.
	Pre-Verbal	Freq.		
Omission of Be	Noun	1	Adj.	1
	Dem. Pron.	1	Det. + Noun	1
Omission Aux. Be	Noun	9	V-ing	1
	Pers. Pron.	1	V-ing + Opt.	5
			Adv'l	
			V-ing + Part. + D.O.	2
			Part.	1
		D.O.	1	
Omission Tr. Verb	Pers. Pron. + Mod.	1	Det. + Noun	1
	Noun	1	Indef. Pron.	1
Concord	Noun	1	Pers. Pron.	1
	Pers. Pron.	2	Part. + D.O.	1
			∅	1

Table Ia. The frequency and Friedman Analysis of Variance\* rank of the pre-verbal syntactic slot fillers for the omission of verb be.

Case	Dem		Him		Noun		Coord Conj.+ (Other)	
	Ind + Int.	Rank	Pers.	Rank	Rank	Rank	Rank	Rank
I	11	4	1	2.5	1	2.5	0	1
II	3	4	1	2.5	0	1	1	2.5
III	3	4	2	3	0	1	1	2
IV	0	2	0	2	1	4	0	2
V	1	$\frac{3.5}{17.5}$	0	$\frac{1.5}{17.5}$	1	$\frac{3.5}{12}$	0	$\frac{1.5}{9}$

Table Ib. The frequency and Friedman Analysis of Variance rank of the pre-verbal syntactic slot fillers for deviant concord structures.

Case	Her +		Ind.		Det + Noun		Pers.	
	Him	Rank	Pron.	Rank	Noun	Rank	Noun	Rank
I	2	3.5	1	1.5	2	3.5	1	1.5
II	0	1	1	2.5	1	2.5	2	4
III	0	1.5	0	1.5	6	4	5	3
IV	1	2.5	5	4	0	1	1	2.5
V	0	$\frac{1.5}{10}$	0	$\frac{1.5}{11}$	1	$\frac{3}{14}$	2	$\frac{4}{15}$

Table Ic. The frequency and Friedman Analysis of Variance rank of the post-verbal syntactic slot fillers for the omission of verb be.

Case	Adj.		Inter		Prep'l		Adv-Adv		Det + Noun	
	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
I	1	3	0	1.5	0	1.5	3	4	8	5
II	2	4	0	2	0	2	0	2	3	5
III	1	3	2	4.5	2	4.5	0	1.5	0	1.5
IV	0	2.5	0	2.5	1	5	0	2.5	0	2.5
V	1	$\frac{4.5}{17}$	0	$\frac{2}{12.5}$	0	$\frac{2}{15}$	0	$\frac{2}{12}$	1	$\frac{4.5}{18.5}$

\* Sidney Siegel, "Friedman Analysis of Variance Technique," Non Parametric Statistics, (New York, 1956), pp. 166-173.

Table Id. The frequency and Friedman Analysis of Variance\* rank of the post-verbal syntactic slot fillers for the omission of the auxiliary be

Case	Prop		Obj	Adj		Det + Noun		Rank
	Part.	Rank		Rank	Opt. Adv	Rank	∅	
I	2	4	1	3	0	1.5	0	1.5
II	0	1.5	0	1.5	2	3	3	4
III	0	2	0	2	0	2	1	4
IV	2	3.5	0	1	2	3.5	1	2
V	2	$\frac{2}{13}$	3	$\frac{3}{10.5}$	5	$\frac{4}{14}$	0	$\frac{1}{12.5}$

Table Ie. The frequency and Friedman Analysis of Variance\* rank of the post-verbal syntactic slot fillers for deviant concord structures.

Case	Part D.O.	Adj		Det +		Ind		Rank	Prep	Rank	∅	Rank
		Rank	Adv	Rank	Noun	Rank	Pers.					
I	1	4	0	1.5	2	6	1	4	1	4	0	1.5
II	0	2.5	2	5.5	0	2.5	0	2.5	0	2.5	2	5.5
III	0	2	1	4	2	5.5	0	2	2	5.5	0	2
IV	0	1.5	2	5	3	6	1	3.5	1	3.5	0	1.5
V	1	$\frac{5}{15}$	0	$\frac{2}{18}$	0	$\frac{2}{22}$	1	$\frac{5}{17}$	0	$\frac{2}{17.5}$	1	$\frac{5}{15.5}$

\*Sidney Siegel, "Friedman Analysis of Variance Technique," Non Parametric Statistics, (New York, 1956), pp. 166-173.

Table II. The percentage and Friedman Analysis of Variance\* rank of the verbalization contributed during a structured situation by five sets of language, articulation and normal subjects.

Set	Language		Articulation		Normal	
	Percent	Rank	Percent	Rank	Percent	Rank
I	46	3	17	1	37	2
II	55	2	41	1	71	3
III	38	3	25	1	37	2
IV	49	3	20	1	31	2
V	44	$\frac{3}{14}$	15	$\frac{1}{5}$	41	$\frac{2}{11}$

Table III. The frequency and Friedman Analysis of Variance\* rank of the variety of omission deviations used by five sets of language, articulation and normal subjects.

Set	Language		Articulation		Normal	
	Freq.	Rank	Freq.	Rank	Freq.	Rank
I	2	1.5	4	3	2	1.5
II	4	3	0	1	2	2
III	4	3	1	2	0	1
IV	6	3	3	2	0	1
V	3	$\frac{3}{13.5}$	2	$\frac{1.5}{9.5}$	2	$\frac{1.5}{7}$

Table IV. The frequency and Friedman Analysis of Variance\* rank of the variety of concord deviations used by five sets of language, articulation and normal subjects.

Set	Language		Articulation		Normal	
	Freq.	Rank	Freq.	Rank	Freq.	Rank
I	3	3	2	2	0	1
II	4	3	0	1	1	2
III	6	3	2	2	0	1
IV	2	3	1	1.5	1	1.5
V	2	$\frac{3}{15}$	1	$\frac{1.5}{8}$	1	$\frac{1.5}{7}$

\*Sidney Siegel, "Friedman Analysis of Variance Technique," Non Parametric Statistics, (New York, 1956), pp. 166-173.



Table V. The frequency that the language, articulation and normal subjects contribute to the different types of verbal deviations.

	Language	Articulation	Normal
Omission Be Verb	27	3	1
Omission Aux. Be	21	4	6
Omission Have Aux.	3	3	2
Omission Do Aux.	2	2	0
Omission Verb Intr.	2	0	0
Omission Verb Tr.	2	0	0
Omission V-ing	1	0	0
Omission Verb To	1	0	0
Concord (Pl) Be	8	2	4
Concord (Pl) Aux. Be	1	1	1
Concord (3s) Intr.	4	2	0
Concord (Past) Intr.	4	2	0
Concord (3s) Tr.	3	1	0
Concord (Past) Tr.	5	0	0
Concord (3s) Get	2	0	0
Concord (Past) IO	1	0	0
Concord (3s) Senses (Intr)	1	0	0
Concord (3s) Verb To	1	0	0
Did Subst. for Past Intr.	5	0	0
Did Subst. for Past Tr.	8	0	0
Metathesis Be Verb	1	0	0
Metathesis Get Verb	1	0	0
Metathesis Verb Intr	1	0	0
Sequence of Tenses Intr	2	0	0
Sequence of Tenses Tr	3	0	0
Wrong Verb Form Be Verb	2	0	1
Wrong Verb Form Intr	3	0	1
Wrong Verb Form Tr	1	0	1

Table VI. The percentages that the language, articulation and normal subjects contribute to the total corpus and the percentages each contributes to the omission deviation.

Set	Language		Articulation		Normal	
	% of Total	% of Dev.	% of Total	% of Dev.	% of Total	% of Dev.
I	46	68	17	20	37	12
II	55	67	17	0	28	33
III	38	91	25	9	37	0
IV	49	69	20	31	31	0
V	44	78	15	11	41	11

Table VII. The percentages that the language, articulation and normal subjects contribute to the total corpus and the percentages each contributes to the concord deviation.

Set	Language		Articulation		Normal	
	% of Total	% of Dev.	% of Total	% of Dev.	% of Total	% of Dev.
I	46	63	17	37	37	0
II	55	83	17	17	28	0
III	38	83	25	17	37	0
IV	49	78	20	11	31	11
V	44	33	15	33	41	33

Table VIII. The range of difference between the correct and incorrect productions of the omission deviations as manifested by the language, articulation and normal subjects.

Set	Language		Articulation		Normal	
	Range	Rank	Range	Rank	Range	Rank
I	-3	1.5	-3	1.5	21	3
II	14	2.5	7	1	14	2.5
III	2	1	17	2	40	3
IV	34	2	12	1	35	3
V	5	$\frac{1}{8}$	14	$\frac{2}{7.5}$	53	$\frac{3}{14.5}$

Table IX. The range of difference between the correct and incorrect productions of the concord deviations as manifested by the language, articulation and normal subjects.

Set	Language		Articulation		Normal	
	Range	Rank	Range	Rank	Range	Rank
I	-2	2	0	1	21	3
II	-2	3	1	2	0	1
III	-7	1	9	2	18	3
IV	-4	1	5	2	21	3
V	-1	$\frac{2}{9}$	0	$\frac{1}{8}$	6	$\frac{3}{13}$

Table X. The percentage and Friedman Analysis of Variance rank that each language case contributed to the specific omission deviations.

Set	Be. Om.		Aux. Be Om.		Aux. Have Om.		Aux. Do Om.	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
I	49	4	19	3	0	1.5	0	1.5
II	18	2	5	1	33	3	50	4
III	22	3	5	2	33	4	0	1
IV	4	1	19	2	33	3	50	4
V	7	$\frac{3}{13}$	52	$\frac{4}{12}$	0	$\frac{1.5}{13}$	0	$\frac{1.5}{12}$

Table Xa. The percentage and Friedman Analysis of Variance rank that each articulation case contributed to the specific omission deviations.

Set	Be Om.		Aux. Be Om.		Aux. Have Om.		Aux. Do Om.	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
I	33	2	25	1	66	4	50	3
*II	0	0	0	0	0	0	0	0
III	0	2	0	2	0	2	50	4
IV	33	2.5	50	4	33	2.5	0	1
V	33	$\frac{4}{10.5}$	25	$\frac{3}{10}$	0	$\frac{1.5}{10}$	0	$\frac{1.5}{9.5}$

Table Xb. The percentage and Friedman Analysis of Variance rank that each normal subject contributed to the specific omission deviations.

Set	Be Om.		Aux. Be Om.		Aux. Have Om.	
	Percent	Rank	Percent	Rank	Percent	Rank
I	0	1	33	2	50	3
II	0	1	50	2.5	50	2.5
*III	0	0	0	0	0	0
*IV	0	0	0	0	0	0
V	100	$\frac{3}{5}$	17	$\frac{2}{6.5}$	0	$\frac{1}{6.5}$

\*No deviations were shown for these sets.

Table XI. The percentage and Friedman Analysis of Variance rank that each language case contributed to the specific concord deviations.

Set	Plural Be		3.s. Intr		Past Intr.		3.s. Tr.		Past Tr.	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
I	0	1.5	25	3	0	1.5	33	4	75	5
II	14	4	0	2	25	5	0	2	0	2
III	0	1	75	5	50	4	33	3	25	2
IV	86	5	0	2	25	4	0	2	0	2
V	0	$\frac{2.5}{14}$	0	$\frac{2.5}{14.4}$	0	$\frac{2.5}{17}$	33	$\frac{5}{16}$	0	$\frac{2.5}{13.5}$

Table XIa. The percentage and Friedman Analysis of Variance that each articulation case contributed to the specific concord deviations.

Set	Plural Be		Plural Aux. Be		3.s. Intr.		Past Intr.		3.s. Tr.	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
I	0	2	0	2	50	4	100	5	0	2
II*	0	0	0	0	0	0	0	0	0	0
III	0	2	0	2	50	4	0	2	100	5
IV	0	2.5	100	5	0	2.5	0	2.5	0	2.5
V	100	$\frac{5}{11.5}$	0	$\frac{2.5}{11.5}$	0	$\frac{2.5}{13}$	0	$\frac{2.5}{12}$	0	$\frac{2.5}{12}$

Table XIb. The percentage that each normal subject contributed to the specific concord deviations.

Set	Plural Be		Pl. Aux. Be	
	Percent	Percent	Percent	Percent
I*	0	0	0	0
II	25	0	0	0
III*	0	0	0	0
IV	25	100	100	100
V	50	0	0	0

\*No deviations were shown for these sets.

## APPENDIX B

## VERB TYPES

1. Subj. + Fin V + noun or adj or adv Be	The man's a professor
2. Subj. + Fin V + noun or adj Become	He becomes a professor
3. Subj. + Fin V + adj or adv Get	He gets angry
4. Subj. + Fin V + noun or adj Compl	He looks a fright
5. Subj. + Fin V + adj Sense (intr)	Sugar tastes sweet
6. Subj. + Fin V + $\emptyset$ or adv Intr	He works (well/here)
7. Subj. + Fin V + 1 object Tr	I see him
8. Subj. + Fin V + indirect and direct obj IO	He bought a present for his wife
9. Subj. + Fin V + 2 objects Fact.	They elected him president
10. Subj. + Fin V + obj + V-ing Senses (Tr)	I heard him sing
11. Subj. + Fin V + noun Middle	He weighs 200 pounds

## VERB EXPANSIONS

1. Fin V	He goes/went
2. Fin Pres. Part. V aux. Be	He is/was going
3. Fin Past Part. V aux. Have	He has/had gone
4. Fin Pres. Part V aux. Have Been	He has/had been going
5. Fin Base Form V aux. Modal	He will go
6. Fin Past Part V aux. Modal Have	He will have gone
7. Fin Pres. Part V aux. Modal Have Been	He will have been going
8. Fin Base Form Modal To inf V aux. Modal	He will be able to go
9. Fin Past Part Modal To inf V aux. Have	He has been able to go
10. Fin Past Part Modal To inf V aux. Modal Have	He will have been able to go
11. Fin V to	He ought to go
12. Fin Past Part aux. Be or Get	The window is broken
13. Fin V-ing Modal Be	He will be going

## APPENDIX C

## EXAMPLES OF ABERRANT STRUCTURES

Omission Be Verb	"What your name"
Omission Aux. Be	"I going home"
Omission Intr. Verb	"You can't here to stop me"
Omission Tr. Verb	"You can a thing onto it"
Omission Aux. Have	"He got moustache and teeth"
Omission Aux. Do	"How this one go"
Omission Verb-ing	"They are try to go up the wall"
Omission Verb To	"Why don't you want pull out of here"
Concord (3.s.) Get	"He get drowned"
Concord (3.s.) Intr.	"Yes he do"
Concord (3.s.) Tr.	"The lady wash her hands"
Concord (3.s.) Compl.	"He look different"
Concord (3.s.) Starts To	"Then it start to rain"
Concord (Past) Intr.	"Know what happened - He fall in"
Concord (Past) Tr.	"A bunny rabbit give a truck and chick"
Concord (past) I.O.	" He give truck to me"
Concord (Pl.) Be	"There's no cracks"
Concord (Pl.) Aux. Be	"They was working"
Did Subst. for Past Intr.	"A woman did come"
Did Subst. for Past Tr.	"I did see him"
Metathesis	"I want to put here it"
Sequence of Tenses	"He saw it and picks it up"
Wrong Verb Form	"He bringed it to me"

## FOOTNOTES

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AN EXAMINATION OF THE VERBAL DEVIATIONS OF THE LANGUAGE CASE:  
THE SYNTACTIC ENVIRONMENT AND A COMPARISON OF CHARACTERISTICS  
WITH THE ARTICULATION AND NORMAL SUBJECT

by

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This thesis is concerned with an examination of the verbal deviations used by the child diagnosed as a language case. Based on Braine's theory of contextual generalization, which relates to the child's acquisition of syntax, it was thought that the child's use of deviant structures might be related to the syntactic environment. According to this theory the child might be unable to learn the proper position of a unit in a sequence. This would account for the child's use of the auxiliary verb "did" to form the past tense as in "did receive" instead of adding the past tense marker to form "received". Therefore, the first part of this thesis describes the pre-verbal and post-verbal syntactic slot fillers and their relation to specific verbal deviations. According to the data used in this thesis there was no significant relation between the syntactic environment and the deviant verbal structure. The data concurred with Weksel's statement that Braine's theory did not provide an adequate basis for syntax acquisition.

At the 1965 convention of the American Speech and Hearing Association, two reports were presented which suggested that there are at least two different cases, generally classified as "infantile speech". Thus, based on several characteristics predetermined through subjective evaluations, the second part of this thesis examined the verbal deviations used by five sets of children who were diagnosed as either language, articulation, or normal subjects. They were then matched according to age, sex, IQ, and socio-economic level. It was hypothesized that if they were all from the same population then there would be no difference in the amount of verbalization, variety of structural errors and frequency of errors among the three groups. The results of this thesis indicate that the language cases verbalize significantly more than the other two groups, whereas the articulation case verbalizes the least.

The language case used almost twice as many types of concord deviation and has a greater number of errors in both concord and omissions than can be attributed on the basis of the increased verbalization. Hannah noted that the language case achieves the same level of grammatical complexity shown by the normal subject; yet, according to the data of this thesis, the language case has not attained the consistency of correct productions that is shown by the normal subjects. The articulation case, according to Hannah does not achieve the level of grammatical complexity of the normal or language case. Thus it is concluded that the language case represents a distinct deviant language structuring pattern from the articulation case or the normal subject.