

PROPOSALS FOR THE TRANSFORMATIONAL  
DERIVATION OF THE AUXILIARY  
FROM THE VERB

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## PREFACE

This thesis is concerned with the transformational derivation of the auxiliary from the verb in deep sentence structure. A feature or features carrying the specifications for its exact form can be placed on the main verb segment, which will authorize the derivation of the auxiliary required by a sentence. This is a simpler and more economical process than that used by Jacobs and Rosenbaum, who present the auxiliary as one of the basic constituents of every sentence, whether the sentence as used in communication has an auxiliary or not. Since many sentences do not have auxiliaries in their surface structures, a deletion transformation must be used to remove the unnecessary element.

A basic rule has been formulated which synthesizes all of the features which might be needed to derive the various auxiliary types. Any desired auxiliary is produced only when the auxiliary transformation is authorized by the presence of features for its specific derivation on the verbal segment. This makes for a simplification of the grammar.

I wish to take this opportunity to express my

appreciation for the assistance and guidance given me by the members of my committee. Dr. John Battle, under whose excellent and inspired instruction I first became interested in transformational grammar, gave very generously of his time and talents to guide my work. He was always available for counsel and encouragement, and his suggestions and directions were very helpful. Dr. David S. Berkeley and Dr. D. Judson Milburn served on my committee also, and I appreciate their interest and advice.

Finally, I would like to thank my husband and our family for their understanding, confidence, and encouragement. Without the inspiration, motivation, and support they gave to me, this thesis would never have been written.

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## CHAPTER I

### THE PROJECT

The purpose of this paper is to present an alternate way of deriving the auxiliary verb in deep sentence structure. It is a simpler and shorter process than that used by Jacobs and Rosenbaum in their book English Transformational Grammar. These writers put the auxiliary constituent into every deep sentence structure, whether the sentence, as actually used in communication, has an auxiliary or not. The writer believes that the elimination of any unnecessary involvement with the auxiliary would be a grammatical improvement and simplification. Why process an element if it is neither needed nor used?

The study will show the application of this derivation to sentences containing the perfect auxiliary, the progressive form, the copula, and the do auxiliary. It will also show how the process applies to the interrogative construction, the negative construction, and the contraction as they affect the auxiliary. The modal will be considered also, with sample derivations and a discussion of the overlapping of meaning with the resultant ambiguity modals frequently present.

Below is a phrase structure rule which would omit the auxiliary from deep structure:

$$S \text{ ----} \rightarrow N P \quad V P$$

This phrase structure rule simply means that the sentence consists of or may be rewritten as a noun phrase and a verb phrase.

#### Explanation of Transformational Grammar

Before proceeding, perhaps a brief explanation of transformational grammar and its key terms would be helpful to the reader. Transformational generative grammar is the term applied to the movement in American linguistics led by Noam Chomsky and others. It is a system of rules which seeks to capture the greatest number of generalizations possible about a language. Chomsky thinks a grammar should explain what is grammatical and what is not and clarify ambiguous and synonymous surface structures. He says a grammar should have both "descriptive adequacy" and "explanatory adequacy." A grammar is, in his opinion, "descriptively adequate" if it correctly describes the competence, or the largely subconscious knowledge, behind the speaker's use of the language. He considers a grammar "explanatorily adequate" if it constructs a theory of how anyone acquires a language.<sup>1</sup>

The transformationalists see the grammar as a complex association of three components: phonological, semantic, and syntactic. The semantic properties of a sentence are related to the meaning; the phonological properties are concerned with the pronunciation of the sentence, and the syntactic component is the creative part, containing the phrase structure rules and the lexicon, which generates an infinite set of sentences composed of individual lexical items. In short then, transformational grammar is a way of systematizing all the many rules of grammar that now exist.<sup>2</sup>

Although Chomsky acknowledges the value of traditional grammars, he criticizes them on the grounds that they are inadequate in dealing with the regular syntactic processes, and says that they deal almost entirely with the exceptions and irregularities.<sup>3</sup>

The following list of terms used in the field of transformational grammar is not by any means complete, nor is it intended to be, but contains the terms most important to this project.



## Glossary

- Adjunction:** Adding on. An example of its use is in the formation of the contraction.
- Aspect:** A twofold property of verbals, consisting of a perfect form, which introduces have plus a following verb in the past participle form, and progressive form, which consists of be and a following verb having the suffix ing. So, aspect may be either perfect or progressive or both.
- Auxiliary:** The first in order of the pre-verbs, sometimes called helping verbs. They are used to express distinctions of tense, aspect, copula, mood, and emphasis.
- Constituents:** The words or clusters of words into which a sentence can be subdivided naturally and logically.
- Copula:** A copulative or linking verb. The linking verbs include the forms of the verb be and others such as seem, appear, become, taste, smell.
- Deep Structure:** An abstract structure one assumes on the basis of the meaning of a sentence and its syntax.<sup>4</sup>
- Deletion:** A process used in transformations which takes out items in a sentence when their retention would be redundant or otherwise unnecessary.
- Feature:** A distinguishable element of the meaning of a word, for example, common or proper. The values of

binary semantic features can be symbolized by plus or minus.<sup>5</sup> If we have the word house, we list under it the features which designate its own peculiar properties, (+ noun), (+ common), (+ singular), etc.

**Intermediate Structure:** A stage of development effected by a transformation that takes place between the deep structure and the surface structure. If more than one transformation is necessary, an intermediate structure will be generated by each transformation until the surface structure is reached.

**Lexicon:** The body of units which enter into syntactic combination in sentences.<sup>6</sup>

**Modal:** A pre-verb or helping verb which exerts some force of modification upon the main verb. These include will, would, shall, should, may, might, can, could, must, and ought.

**Phrase Structure Rules:** The rules of transformational grammar that specify what constituents make up a given grammatical category and in what order.<sup>7</sup>

**Segment:** A cluster of lexical and syntactic features which describe a unit within a sentence. The following is an example of a segment:



**Transformational Rules:** The formulas which rearrange, delete, adjoin, etc. elements in a derivational string and effect the stages of development from the deep structure to the surface structure.<sup>9</sup>

**Tree diagram:** The arrangement of sentence constituents using branching lines to indicate their relationship in a sentence.

### Preceding Studies of the Auxiliary

Otto Jespersen, the famed Danish grammarian, states that auxiliaries are used in forming negative sentences and that need and dare, like the other modals: can, could, will, would, shall, should, may, might, must, and ought, when used thus, do not add s in the third person singular of the present tense, for example:

He need not go now.

Jespersen also notes the use of the auxiliary in interrogative constructions and sets up a formula for a sentence containing a verb phrase with the auxiliary divided from the main verb by the subject:

v      S      V

as in: Are the boys going?

He also discusses the auxiliary in the passive voice and assigns it an object in the following sentence type:

King Charles had his head cut off.

Jespersen calls the copula a "link verb" and gives much more emphasis to the constructions that follow it, (adjectives, pronouns, substantives, adverbs, and preposition groups) which he calls predicatives, than he does

to the linking verb itself.<sup>10</sup>

The structural linguist, W. Nelson Francis, calls the auxiliary a verb determiner and says that it may be used as one means of identifying verbs just as articles and demonstrative adjectives precede and may be used to identify nouns. He also points out the fact that the auxiliary may appear as a full verb by itself. He divides auxiliaries into four groups on the basis of the form of the main verb with which they appear:

- a. Auxiliaries appearing with the base form of the word
- b. Auxiliaries appearing with the present participle
- c. Auxiliaries appearing with the past participle
- d. Auxiliaries appearing with the infinitive form of the verb 11

This writer also discusses what he calls the be Passive construction and the get Passive, and in connection with the modal auxiliaries, Francis thinks the large variety of forms in the language permit very fine distinctions of meaning.<sup>12</sup> As this paper shows, the modal forms also make for ambiguity and variant interpretations.

Noam Chomsky uses a number of symbols in presenting his theory, so, for the convenience of the reader, I will explain below those which might affect this discussion of the auxiliary:

N P, noun phrase

V P, verb phrase

N, noun

Aux, auxiliary

V, verb

C, verb affixes or modal

M, modal

en, past participle affix

S, third person singular verb affix

Past, past affix

Adj, adjective

SA, structural analysis

SC, structural change

X, a minimal element, for example, N P, V P

(     ), optional elements

#, word boundary<sup>13</sup>

Chomsky's basic phrase structure rule for the auxiliary is Aux ---->C (M) (have + en) (be + ing). This rule would apply, for example, to the verb phrase of the sentence

He could have been waiting.

The transformational rule is

S A: X -- Af -- V -- Y

S C:  $x_1 - x_2 - x_3 - x_4 \longrightarrow$   
 $x_1 \quad x_3 \quad x_2 \quad x_4$

which applies to the sentence in the following manner:

He C (M)

Insert could for C (M):

He could (have + en) (be + ing) wait

Apply T Af:  $x_1 \quad x_2 \quad x_3$

After substituting could for C (M), the auxiliary transformation is applied to input a to derive output b, which then serves as the input to derive c.

S C:  $x_1 \quad x_2 \quad x_3 \quad x_4 \longrightarrow$

- a. He could have + en be + ing wait
- b. He could have been ing wait

S C:  $x_1 \quad x_3 \quad x_2 \quad x_4$

b. He could have be + en + ing wait

c. He could have been wait + ing



For negation the following options are possible:

S A:	N P -	C - V	...
	N P -	C + M -	- ...
	N P -	C + have -	- ...
	N P -	C + be	- ...

S C:	$x_1$	$x_2$	$x_3$	----->
	$x_1$	$x_2$ + n't	$x_3$	-

The structural change negates the affirmative constructions of the options given above as shown in the example sentences:

John can go. -----> John can't go.

John has come. -----> John hasn't come.

John had been there. -----> John hadn't been there.

For interrogative structures Chomsky has these rules:

S A:	N P -	C - V	...
	N P -	C + M	- ...
	N P -	C + have	- ...
	N P -	C + be	- ...

S C:	$x_1$	$x_2$	$x_3$	----->
	$x_2$	$x_1$	$x_3$	

The structural change moves the auxiliary to the head of the sentence to change the declarative structures into interrogatives as shown below:

John can run. -----> Can John run?

The people have gone. -----> Have the people gone?

Kilroy was here. -----> Was Kilroy here?

For the do transformation, which inserts a form of to do in question and negative situations, Chomsky has the following rules:

S A: # - Af

S C:  $x_1 - x_2$  ----->  $x_1 - \underline{do} + x_2$

Example:

They laughed. -----> Did they laugh? ----->

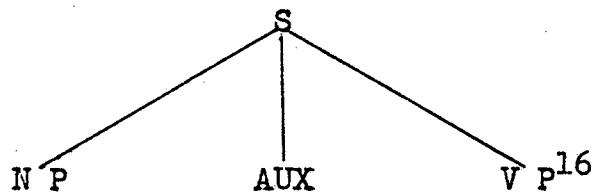
They did not laugh.<sup>14</sup>

According to the system presented by Roderick A. Jacobs and Peter S. Rosenbaum in their English Transformational Grammar, segments appear in deep structures as creations of the segment structure rules with their feature content further specified by lexical items whose features are added to those specified earlier by the segment structure rules.<sup>15</sup> These writers assume that every sentence consists of three major constituents,

the noun phrase, the auxiliary, and the verb phrase, as described by the phrase structure rule

$$S \text{ ----} \rightarrow \text{ N P \quad AUX \quad V P}$$

and illustrated by the following tree diagram:



## FOOTNOTES

<sup>1</sup>Noam Chomsky, Aspects of the Theory of Syntax (Cambridge, 1965), p. 1-26.

<sup>2</sup>Owen Thomas, "Generative Grammar," A Linguistic Reader, ed. by Graham Wilson (New York, 1967), pp. 194-201.

<sup>3</sup>Chomsky, Aspects, p. 5.

<sup>4</sup>Roderick A. Jacobs and Peter S. Rosenbaum, English Transformational Grammar (Waltham, Massachusetts, 1968), p. 21.

<sup>5</sup>D. Terence Langendoen, The Study of Syntax (New York, 1969), p. 155.

<sup>6</sup>Ibid., p. 152.

<sup>7</sup>Ibid., p. 149.

<sup>8</sup>Ibid., p. 155.

<sup>9</sup>Thomas, p. 60.

<sup>10</sup>Otto Jespersen, Essentials of English Grammar (New York, 1933), pp. 48-298.

<sup>11</sup>W. Nelson Francis, The Structure of American English (New York, 1958), pp. 294-295.

<sup>12</sup>Ibid., pp. 333-336.

<sup>13</sup>Noam Chomsky, "Appendix 1," Syntactic Structures (The Hague, 1964), p. 111.

<sup>14</sup>Chomsky, Syntactic Structures, pp. 111-113.

<sup>15</sup>Jacobs and Rosenbaum, p. 81.

<sup>16</sup>Ibid., p. 44.

## CHAPTER II

### THE PERFECT, THE PROGRESSIVE, THE INTERROGATIVE, THE NEGATIVE, AND THE CONTRACTION

The following sentence

Hasn't he been waiting?

makes a complex analysis, because it has undergone from its deep structure to its surface structure the transformations for agreement, perfect and progressive aspect, interrogation, negation, and contraction. Since agreement between subject and verb is one of the basic requirements of grammaticalness, I will explain this transformation first, so the reader will understand how the matter of concord is handled throughout the paper. The generation of the correct verb form or forms will necessitate taking the features for number and person from the noun segment and copying them onto the verbal segment. In the example

the soprano sings

the segment structures would have the following features:

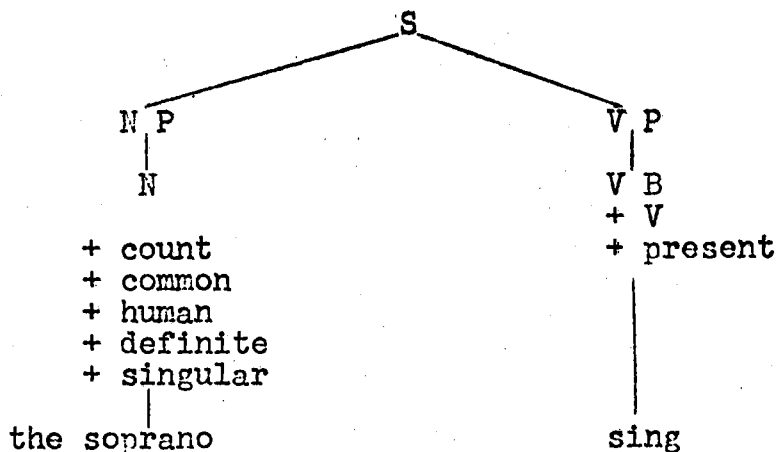


Figure 1.

Which would produce the ungrammatical string

the soprano sing

However, if we take the features for number and person from the noun segment and copy them onto the verbal segment, concord between subject and verb has been effected. The correct verb is produced as the next diagram shows, and the sentence becomes a grammatical string:

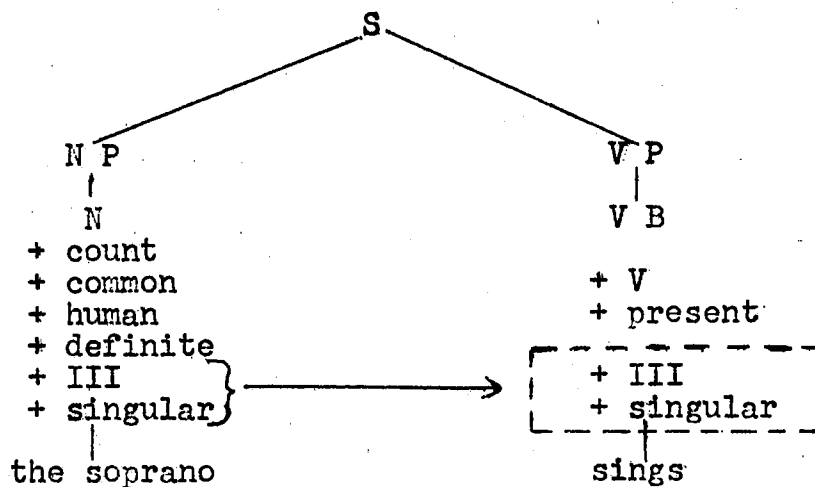


Figure 2.

The reader should be informed that the conventions of capitalization and punctuation are graphophonemic, (concerned with the mechanics of writing) rather than syntactical matters.

Our initial sentence

Hasn't he been waiting?

derives from the deep structure following:

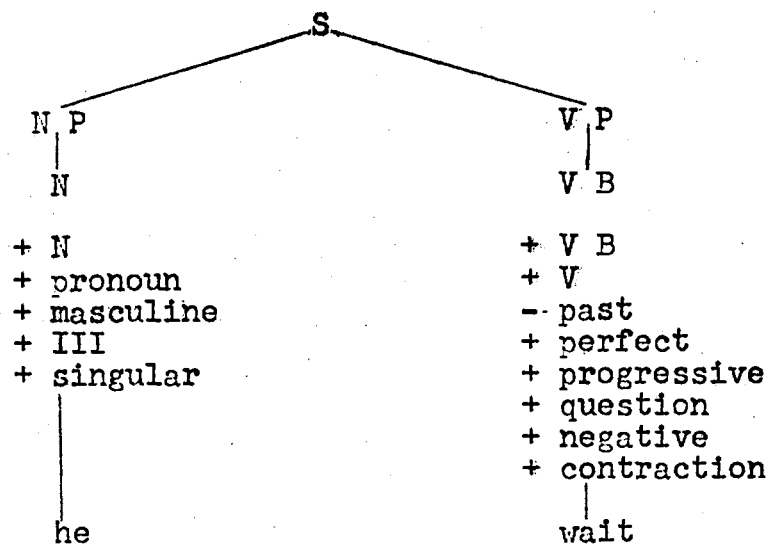


Figure 3.

## Step One

The agreement transformation requires that we take from the noun segment the features required for agreement and add them to the verbal segment. The verbal segment will then appear thus:



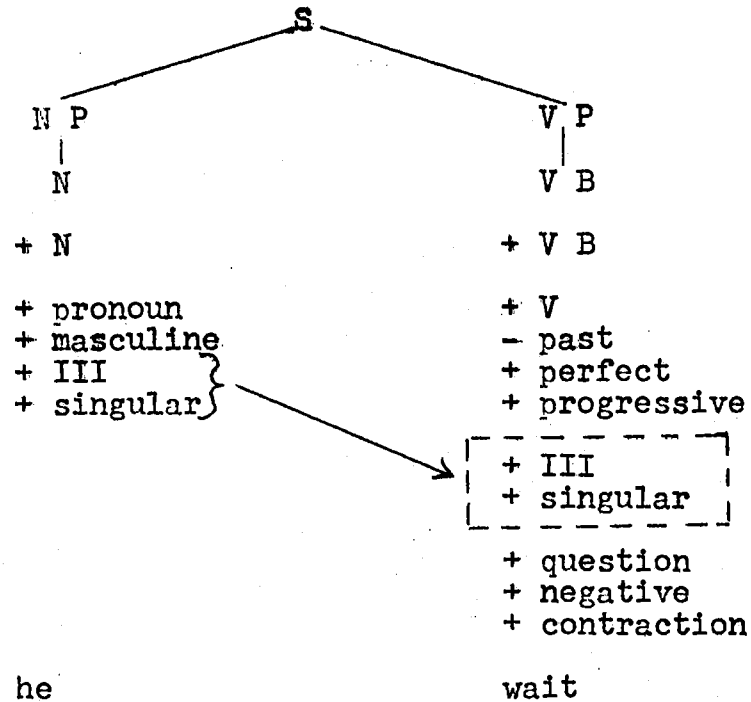


Figure 4.

The transformations must apply in the order given.

#### Step Two

The perfect transformation now applies to create the perfect segment immediately to the right of the noun segment, but still under the domination of the verb phrase. The perfect consists of two parts, a form of have and an inflection, -en, -ed, or other past participle ending. The features it requires are taken from the verbal segment:



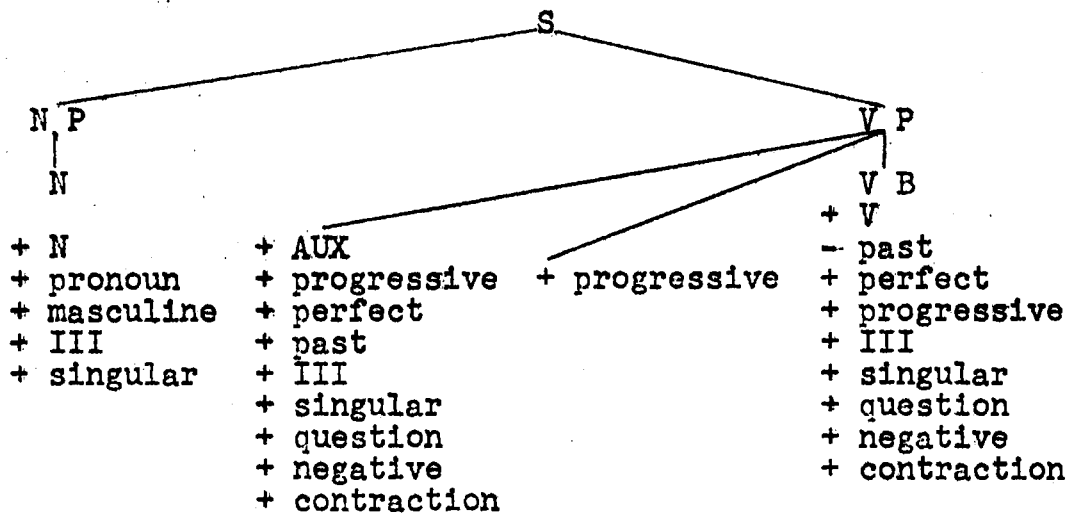


Figure 6.

Step Three B

To account for the ing suffix required by the progressive verb form, the progressive segment now projects the features for it onto the main verb segment as shown below. These features are (+ participle) and (- past):

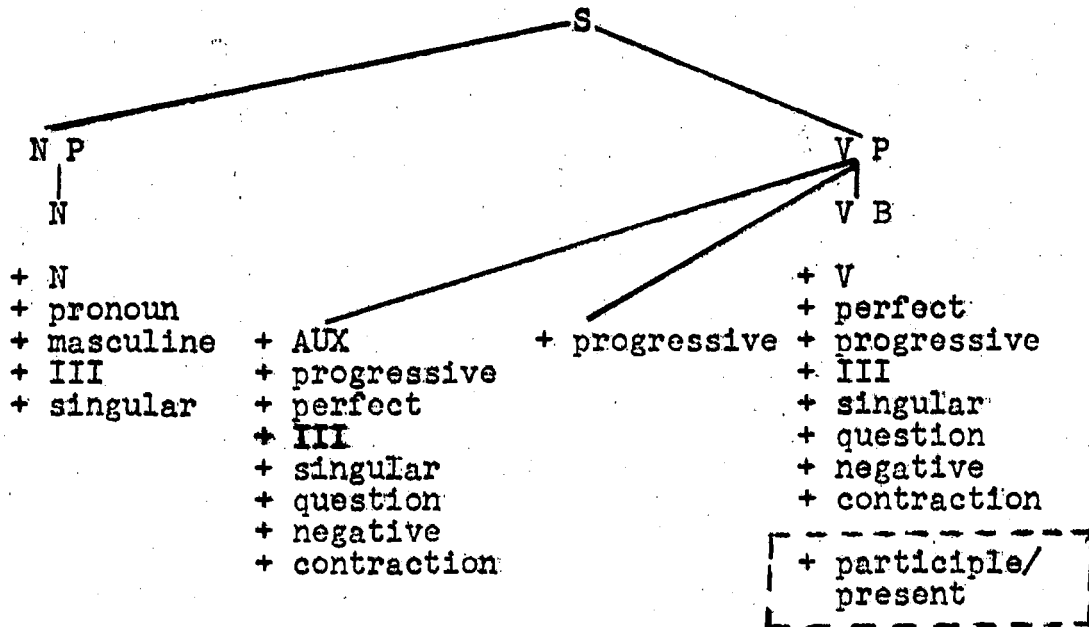


Figure 7.

Step Three C

To account for the -en part of the perfect aspect, a suffix placement transformation derives the features, (+ participle) and (+ past) in the progressive segment from the feature (+ perfect) in the auxiliary segment:

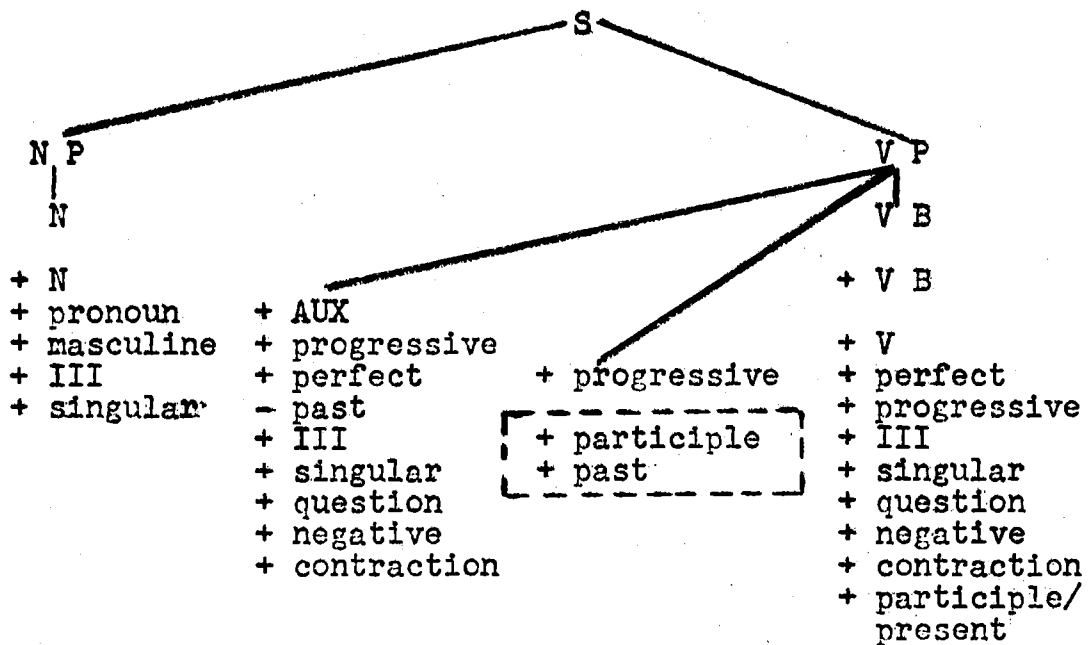


Figure 8.

## Step Four

Apply the interrogative transformation. This operation brings the perfect auxiliary has to the front of the sentence and leaves the participle been to the right of the subject noun.

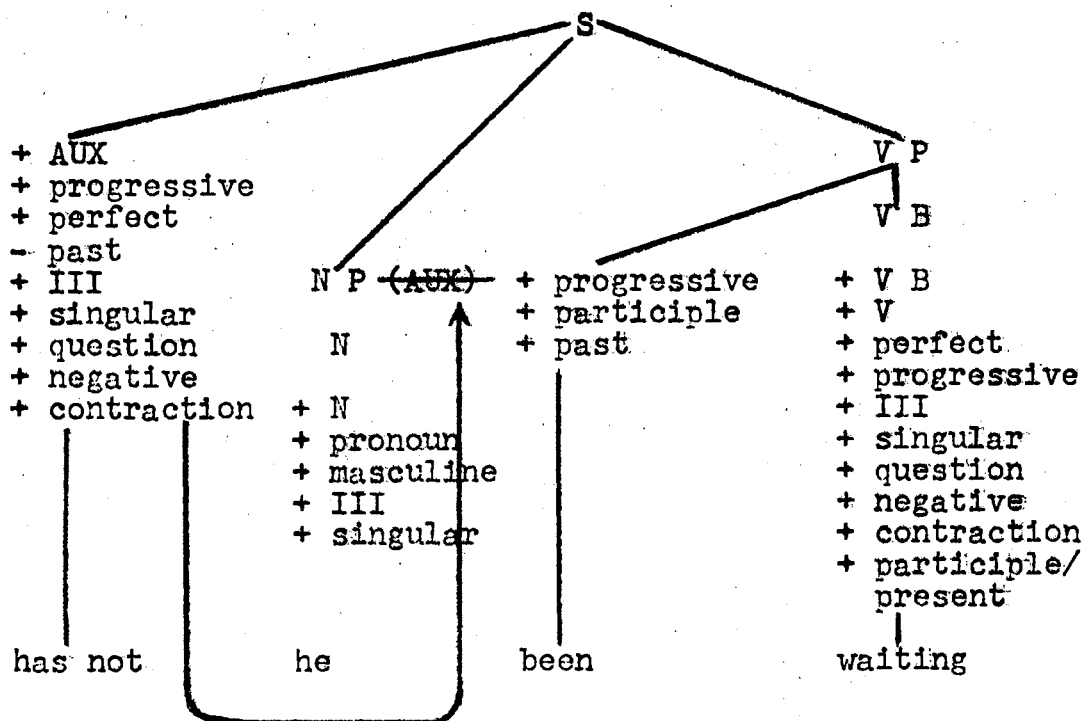


Figure 9.

## Step Five

Apply the negative transformation. Negation could occur in either of two places, and this would have to be shown in the ordering of the features on the verbal segment. If the negative particle should occur near the beginning of the sentence, as shown below,

A. Has not he been waiting?

the ordering would be (question) (negative).

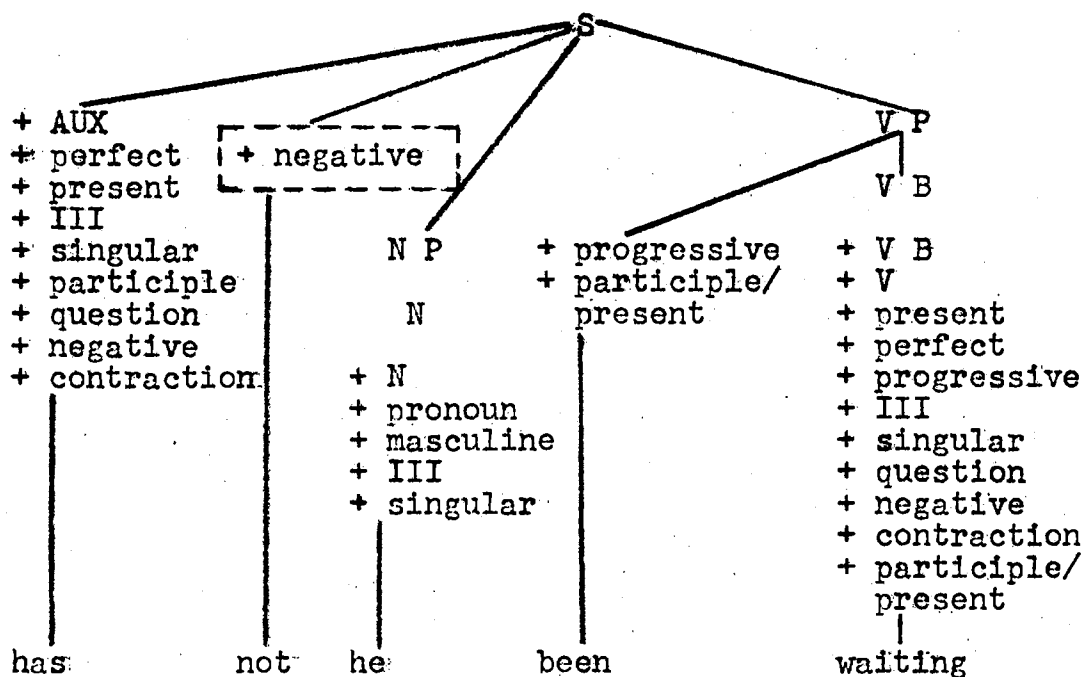


Figure 10.

### Step Six

To derive the informal contracted negative form, as specified in our example sentence, we apply the contraction transformation. This contracts the negative constituent from not to n't and joins it to the verb to make hasn't, as illustrated:

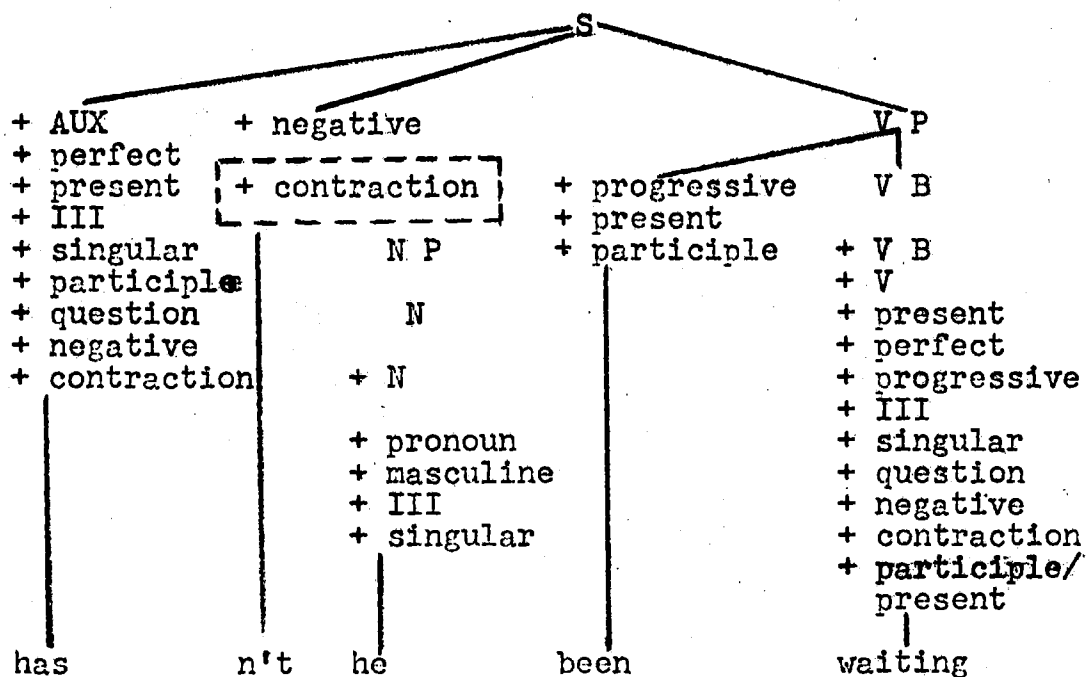


Figure 11.

If the negative particle is near the main verb, however, as shown in the sentence

B. Has he not been waiting?

the ordering of transformations would be (negative) (question), since this would derive from the previously negated declarative

C. He has not been waiting.

It assumes the form of B when the interrogative transformation moves the auxiliary to the front of the sentence.



## CHAPTER III

### THE COPULA

The copula or linking verb is an important type of the auxiliary. The sentence

the lady was being sympathetic

contains one copula in past tense and one in present progressive form in its verb phrase. It has the following deep structure:

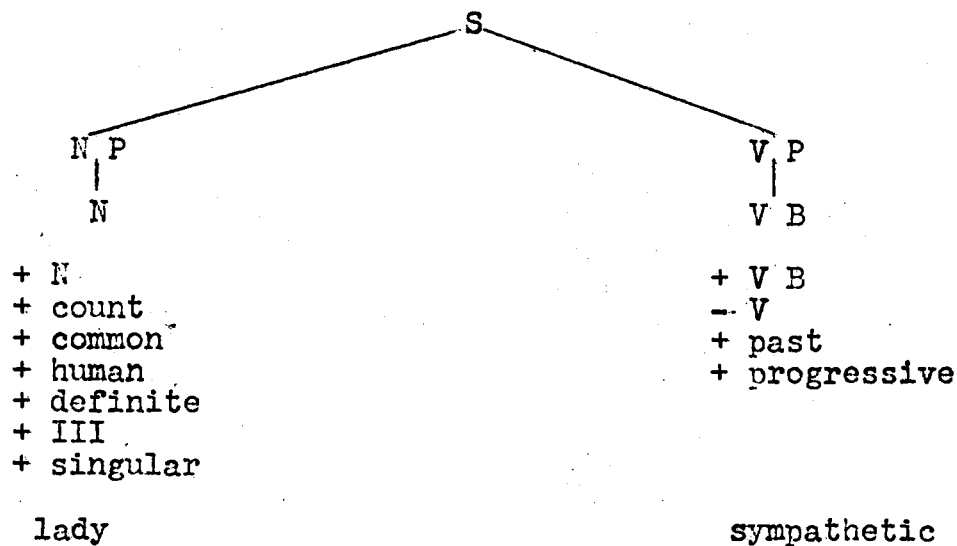


Figure 12.





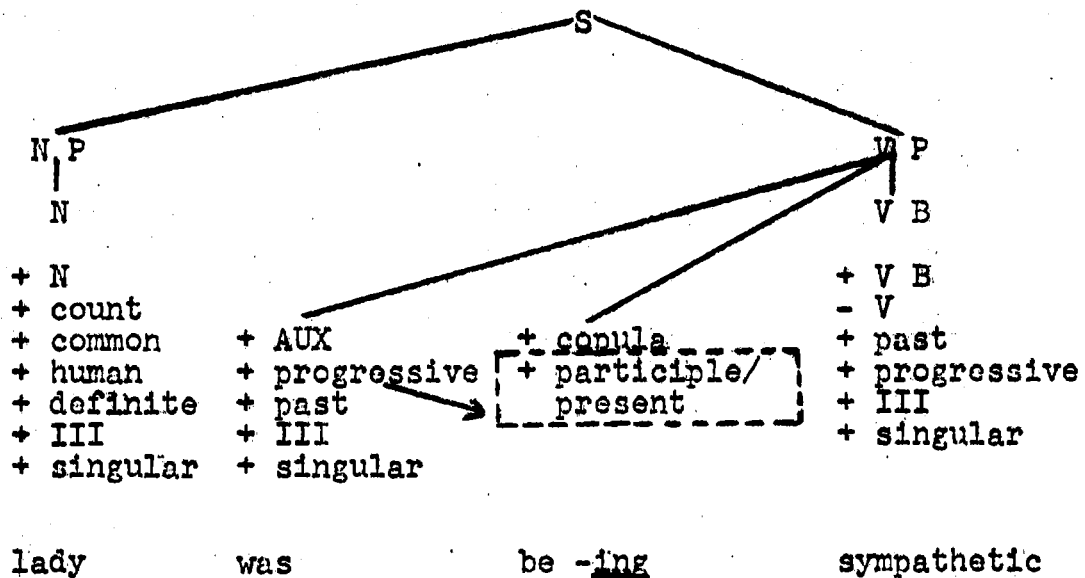


Figure 15.

In summation, the words of the surface structure sentence are derived as follows: The (- V) feature on the verbal segment signals the copula; the features (+ progressive), (+ past), (+ singular), and (+ III) generate was for the auxiliary segment and the copula has the present participle form being as shown.

## CHAPTER IV

### THE DO AUXILIARY

The derivation of the do auxiliary from a generative feature proceeds as in a simple and orderly manner. For the sentence,

Jane does sing

in which does indicates emphasis, specifications for the production of the auxiliary segment could appear on the main verbal segment as shown in the following structure. The agreement transformation has already been applied.

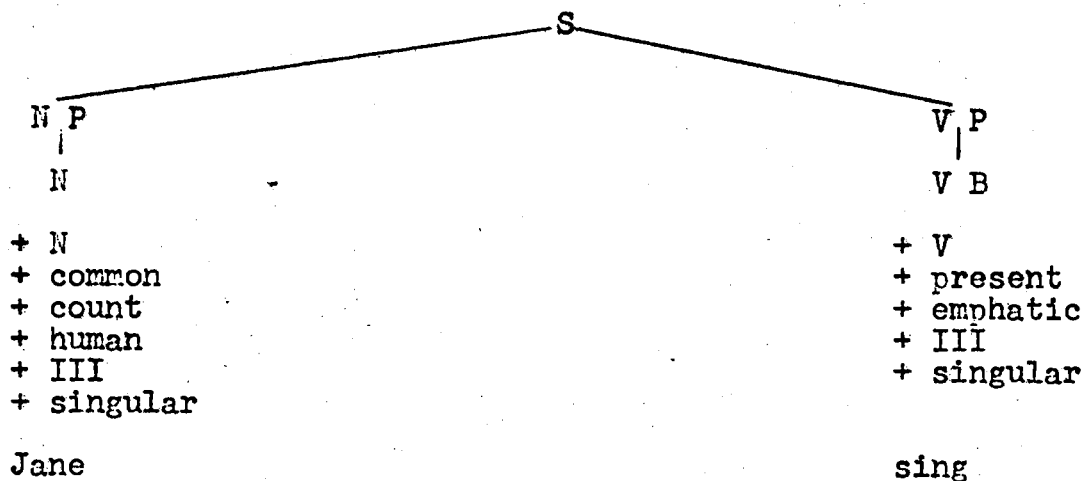


Figure 16.

## Step One

Develop the auxiliary segment under the domination of the verb phrase, thus:

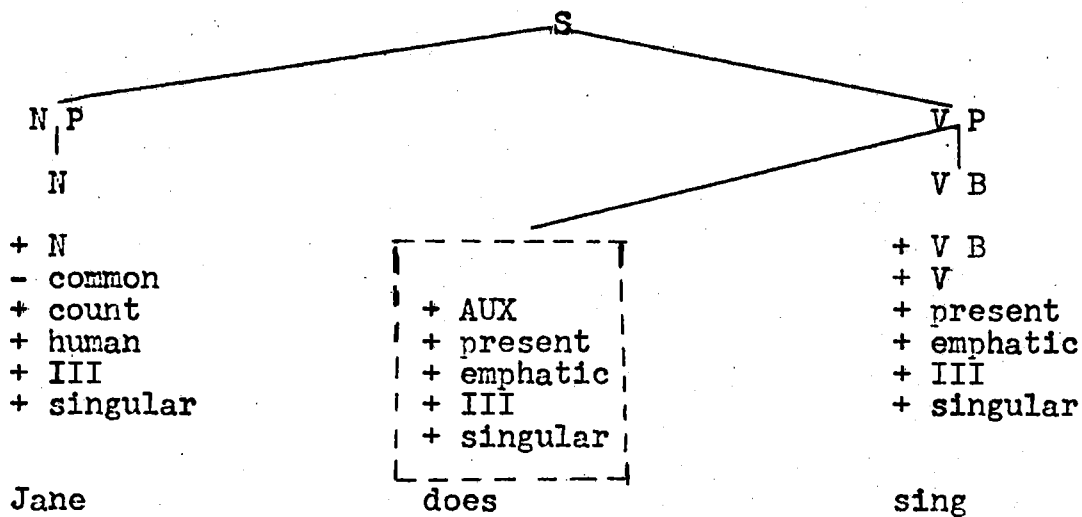


Figure 17.

We can negate the preceding sentence in the following manner:

## Step One

The feature (+ negative), which would be included in the main verbal segment, is then copied onto the auxiliary segment as a part of its development:

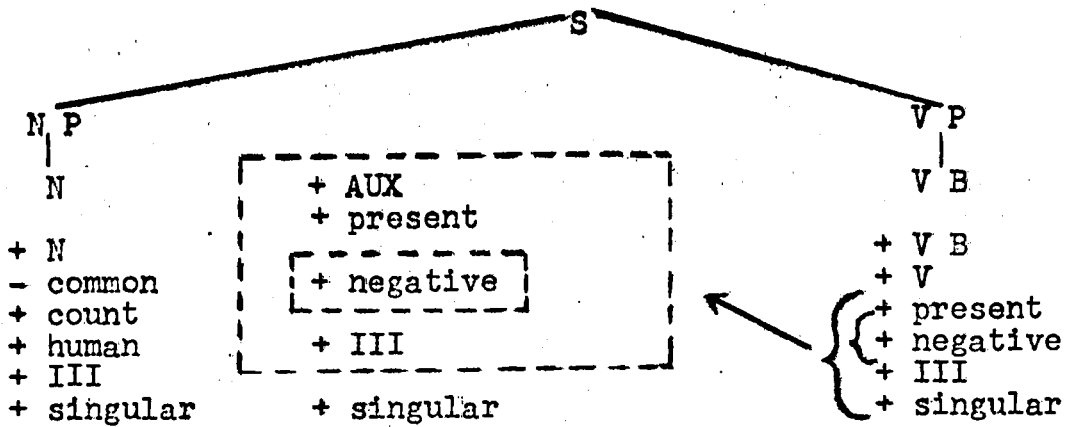


Figure 18.

Step Two

After the auxiliary segment is developed, the negative segment transformation authorizes the placement of the negative element to the right of the auxiliary as the next diagram shows:

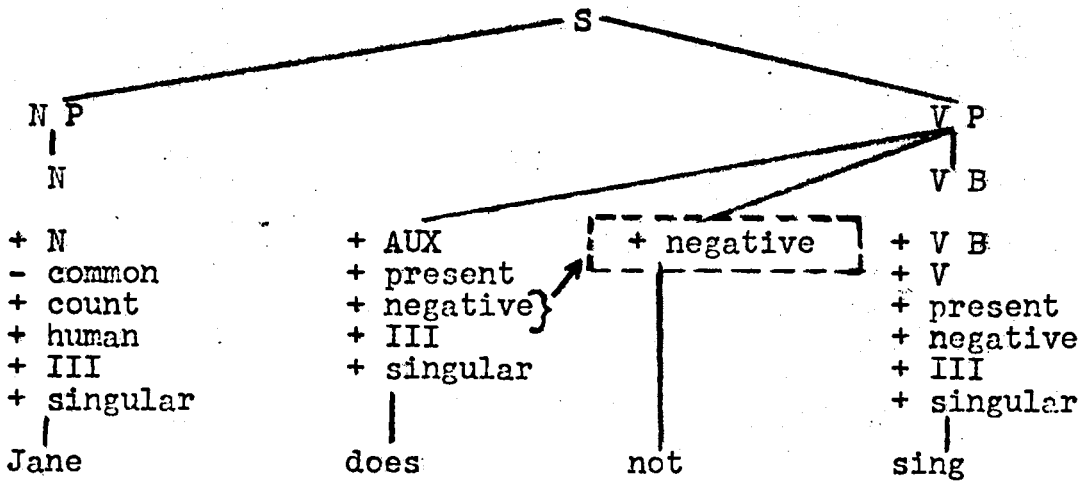


Figure 19.

To make the sentence into an interrogative structure, the feature (+ question) would be added to the main segment and carried over onto the auxiliary segment after it is created:

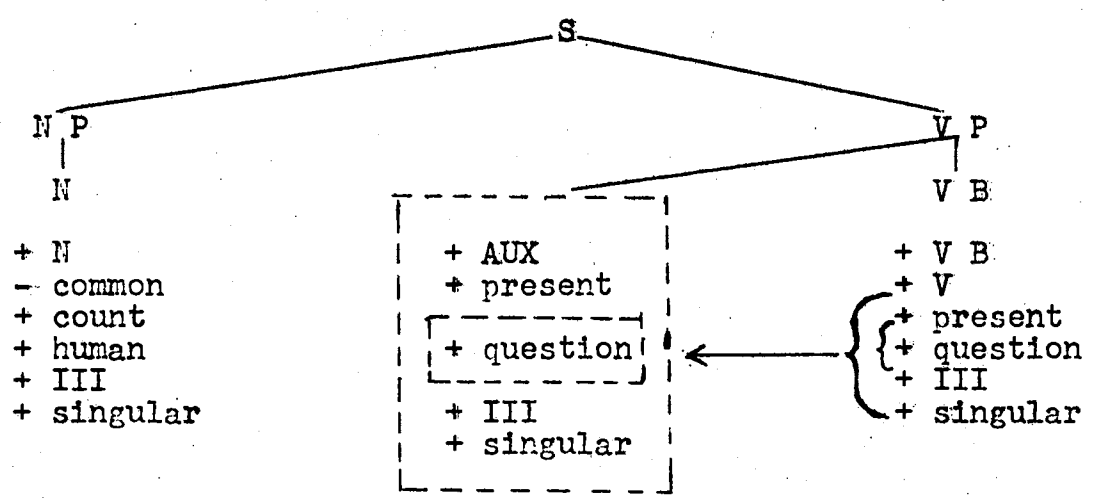


Figure 20.

Then the interrogative transformation would move the auxiliary segment to the front of the sentence, thus:

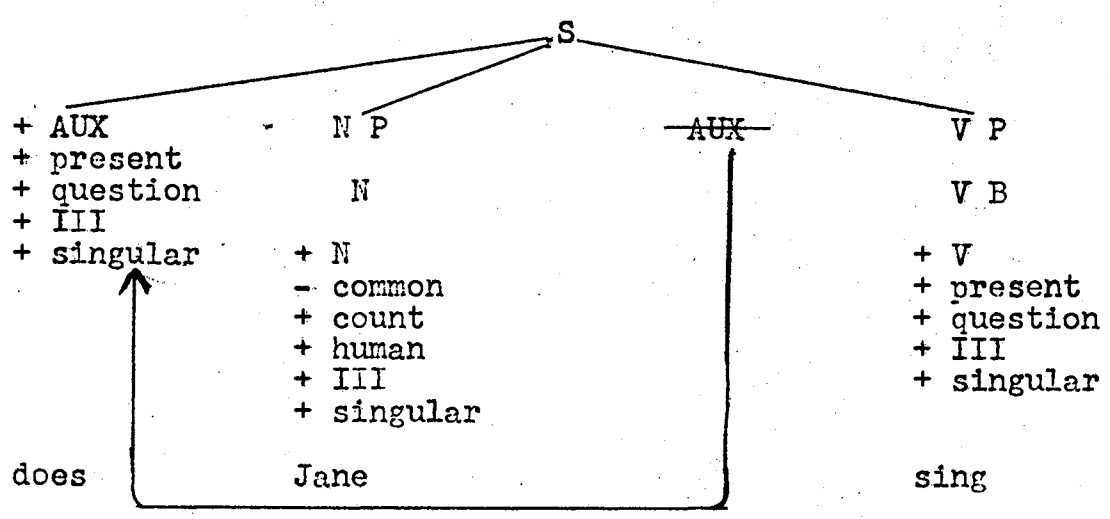


Figure 21.



For the derivation of the do auxiliary, certain conditions must exist. The main verbal (+ V B) segment must bear any of the features (+ emphatic), (+ negative), or (+ question). The (+ V B) segment must also be (- progressive), (- perfect), and (+ V); otherwise, do cannot be derived.

## CHAPTER V

### THE MODAL AUXILIARY

Considerable ambiguity and semantic overlapping exists among the modal auxiliaries. Most grammar texts tend to assign a general definition of giving or granting of permission to may, while can always refers to some form of possibility. Can denotes power or ability to do something: the child can talk. May refers to probability, permission, and possibility also: the student may (possibility or probability) play football Friday if the doctor says he may (permission). On the colloquial level may and can are used as synonyms: can I speak to you for a minute? asks permission. And to a child, the distinction between the semantic differentiation is usually beyond his comprehension. He may ask: can I go? even though he has been instructed to use the more prestigious may. In his viewpoint he can (is able to) go, if his parents will let him (permission).<sup>17</sup>

Funk and Wagnall's New Standard Dictionary of the English Language (1963) defines can as meaning 1. to have physical, moral, or intellectual ability to.

2. to have the skill or knowledge to. 3. to be able under the existing conditions to. 4. to have the capacity to. 5. to be competent or permitted to. The last definition covers the overlapping of meaning of may and can.

Consider the ambiguity of the sentence

You may go to England.

The sentence has the following possible interpretations:

1. You may go to England. that is, I give you permission to go.
2. You may go to England! meaning you have the opportunity to go.
3. You may go to England. meaning that your going is a possibility, although not an absolute certainty.

The intended meaning would depend largely upon contextual factors and/or intonation.

May is often used contingently 1. in substantive clauses, preceded by that; as, I fear that he may have met disaster. 2. in conditional clauses; as, we care not about the cost, so the child may live. 3. in concessive clauses; as, you may possess the ability to do the task, for all I know. 4. in clauses giving a purpose; as, he labors hard that we may have the necessities of life. 5. in exclamatory clauses expressing a blessing, desire, or wish; as, may God bless you; may your fondest dreams come true. May is also used contin-

gently to indicate chance; as, come what may we must proceed, or it is used to soften the bluntness of a direct question; as, what may your trade be? and, as mentioned earlier, it is used as a synonym for can. In the following sentence, either of these modal forms might appear: struggle as hard as you may (or can) it will avail you nothing.

May used as a legal term can go even beyond the force of can and take on the value of must, as imposing obligation, as the following quote by Pinckney on the Missouri Question, recorded in American Oratory shows: "New states may be admitted by the Congress into this Union." But even here "it is objected that the word imparts power...a right to decide, a discretion to grant or refuse."<sup>18</sup>

Might, the historical past tense form of may is used in conversation to state dissatisfaction for omission, neglect, or failure to do some duty or act of courtesy; as, they might at least have informed us.

Paz R. Dorotheo assigns the following uses to could, the traditional past tense of can:

1. permission or informal request  
Could I have the book tomorrow?
2. past ability  
At the age of fourteen, she could drive a car.

3. gentle doubt  
His excuse could be true.
4. conditional of can  
If you tried, you could speak.<sup>19</sup>

The past tense forms mentioned above introduce an unusual aspect of the modals, the phenomenon of syntactic tense. Traditionally, may, can, will, and shall are said to be present tense forms, and might, could, would, and should are considered their respective past tense forms. When we say these modals have syntactic tense, we mean that the actual form of the word is altered, and that this tense of the modal does not necessarily give the tense of the whole sentence. It does have some semantic significance, but its meaning is not expressly connected with time. The following sentence, for instance, contains a modal in past tense, but it does not suggest past action in the sentence at all:

Jane might come tomorrow.<sup>20</sup>

Can is the only modal in which temporal tense persists, and in some constructions can or could carries the force of temporal rather than syntactic tense; as:

We can go today

We could have gone yesterday

but also

We could go tomorrow

but not

We can have gone yesterday.

Syntactic tense might represent a certain importance between main and subordinate clauses in a sentence. Apparently projection rules exist that go from one clause to the next and require the use of one form or the other; as:

If the car were too fast, it would cause a wreck.

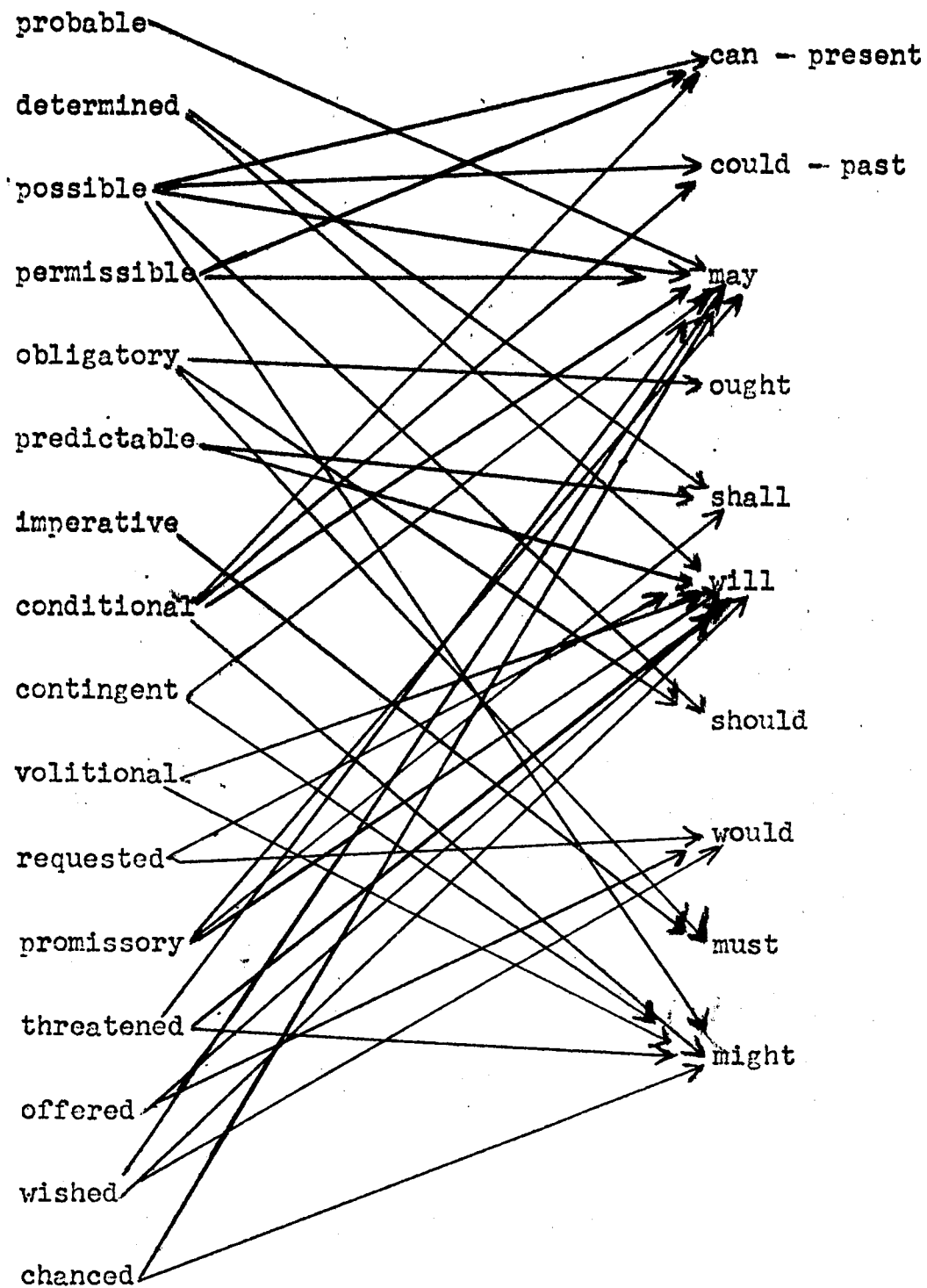
If the car is too fast, it will cause a wreck.

Otherwise, syntactic tense is just about an extinct feature of the language.

In the lexicon can and could might bear the features for tense, but shall, should, will, would, may, and might should be listed as separate items.

The preceding discussion of the difficulty may and can present to precise communication is representative of the modals as a group, with the exception of must. Its imperative force remains fairly constant, and ought carries much the same force of imperative obligation, but in a lesser degree. Consideration of will, would, shall, and should reveals much overlapping of their meaning also. The following chart shows why the modals frequently make for ambiguous and confused communication.

### Overlapping Semantics Among the Modals



In the deep structure a (+ modal) feature would indicate any of the qualities of modality; as, possible, permissible, imperative, etc.

In addition to ambiguity, another complication which frequently accompanies the use of modals is that of sentences, synonymous or very similar in meaning. Consider, for example, the sentences

- A. You can write books
  - B. It is possible for you  
to write books
- and
- C. For you to write books  
is possible

We can account for the synonymy of such structurally variant sentences by recognizing the fact that they arise from a common deep structure. The deep structure for sentence A (presuming that the agreement transformation has already been applied) could be understood as:



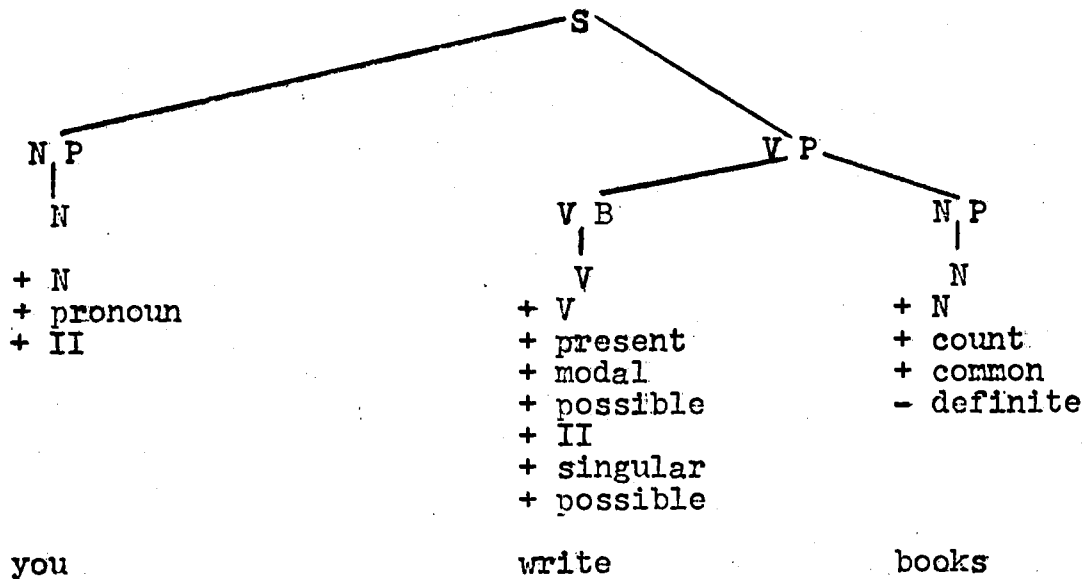


Figure 22.

The intermediate structure for sentence A would derive from the feature (+ possible) the auxiliary can as illustrated in the next diagram:

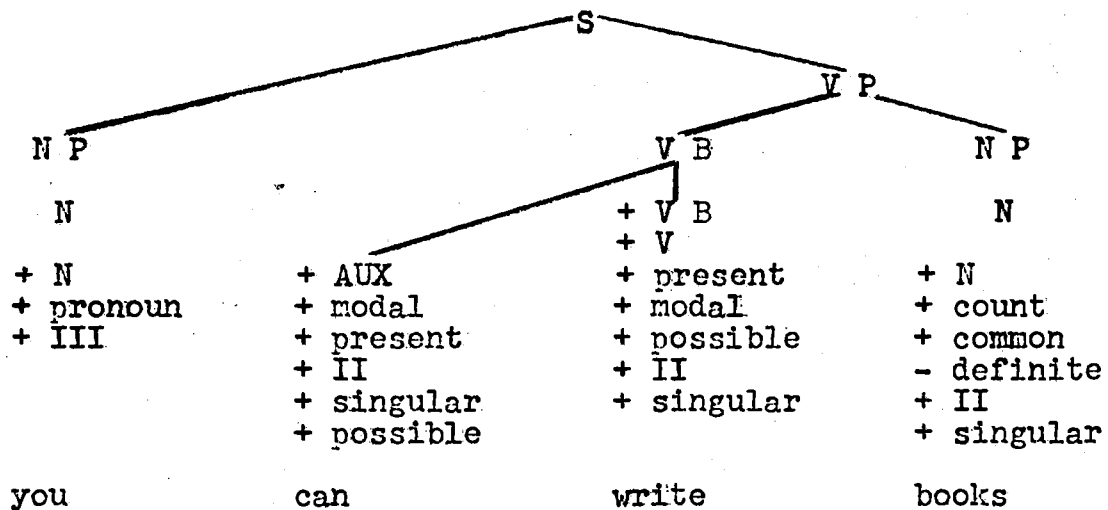


Figure 23.

Sentence B will require a more complicated processing, and it arises from what is an actually deeper level of development:

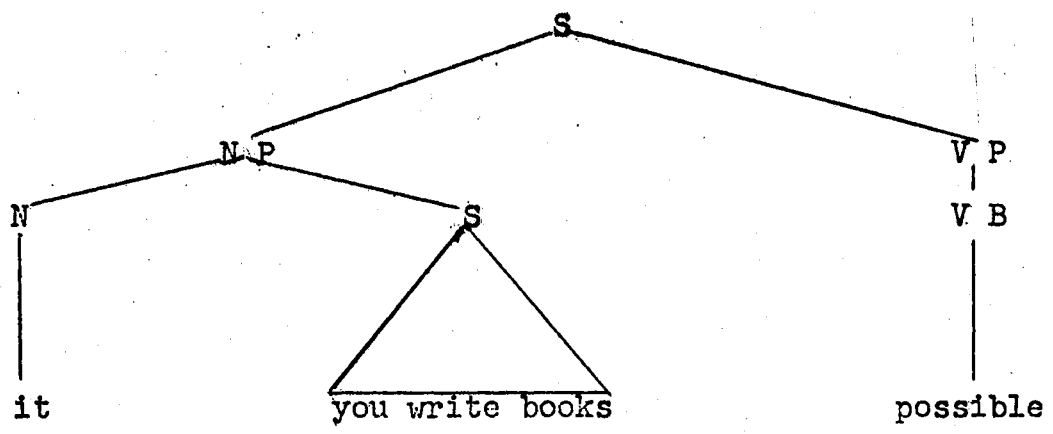


Figure 24.

Step One

Develop the copula segment. This is authorized by the (- V) verbal feature. The remaining features on the verbal segment define the copula specifically as a modal of possibility and give it the correct tense and number. The segment appears to the left of the verbal segment and under its domination:

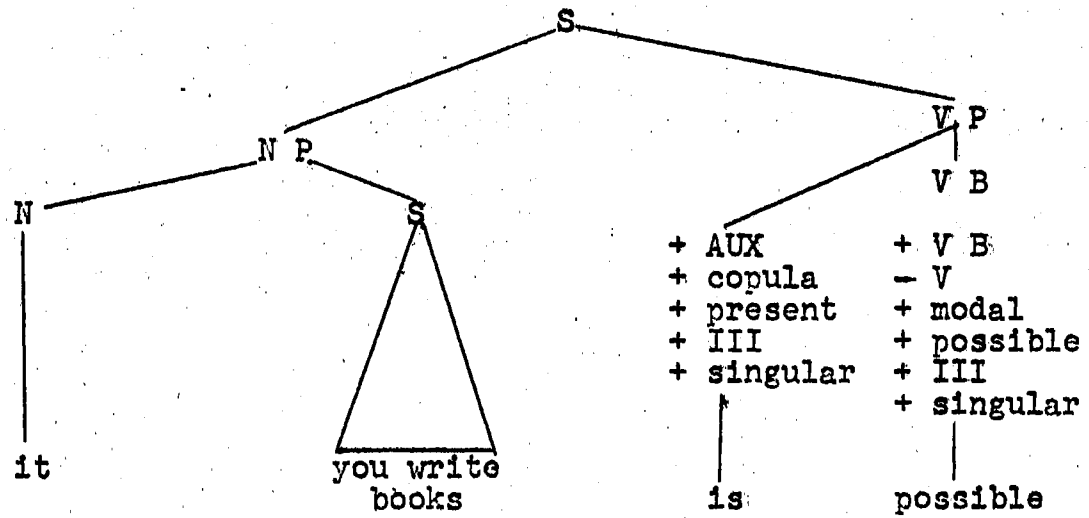


Figure 25.

Step Two

The infinitive complementizer transformation must be applied after the copula is generated to introduce for in front of the subject noun phrase of the embedded sentence and to in front of the verb phrase of the embedded sentence, as shown in the next diagram:

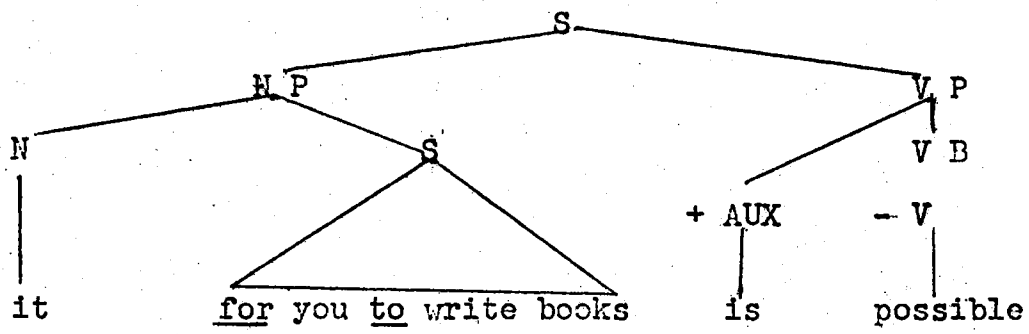


Figure 26.

Step Three

Since the extraposition transformation applies when the complement sentence follows the head noun of a noun phrase complement, we may now use this abstract apparatus to detach the embedded sentence from under the domination of the noun phrase of which it is a complement and move it to the end of the sentence to create sentence E, as shown:

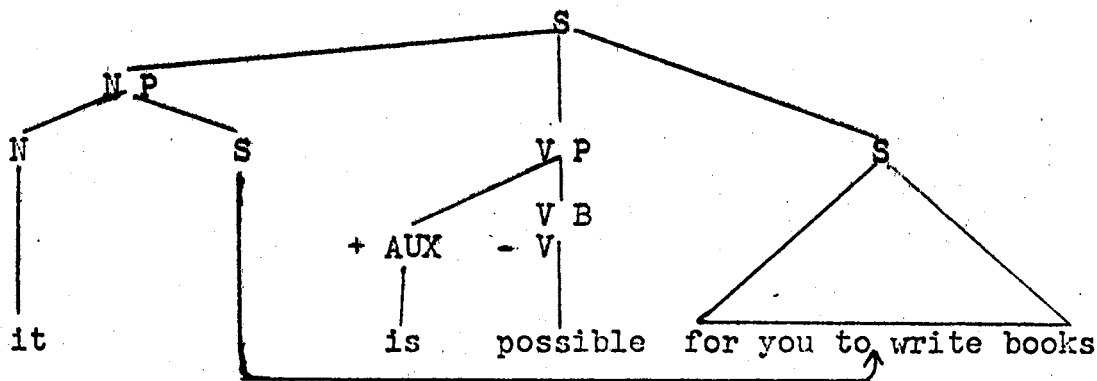


Figure 27.

The derivation of sentence C develops from the intermediate structure which precedes the foregoing surface structure.

Step One

Create the copula segment:

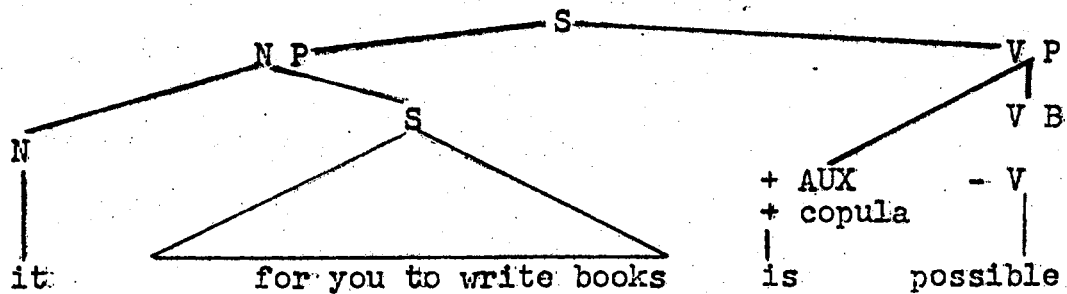


Figure 28.

Step Two

Employ the it deletion transformation, which applies whenever it appears immediately before its noun phrase complement. We then have sentence C.

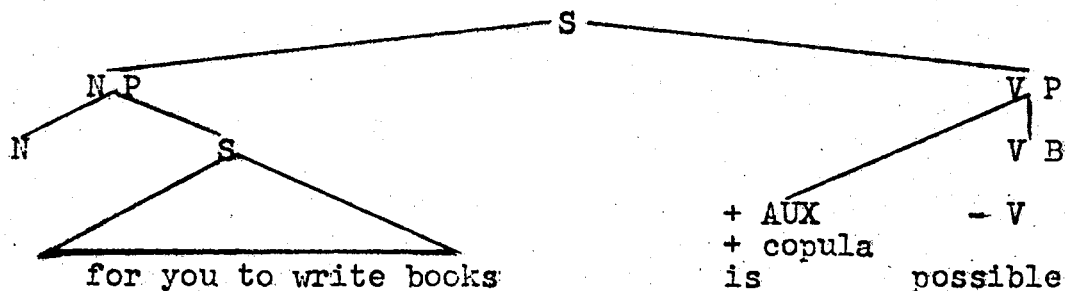


Figure 29.

Sentence A can also be derived from sentence B. Start with the intermediate structure of B as shown at the top of page 46, Figure 25.

Step One

Use the it replacement transformation, which operates in two stages. The first stage replaces the

pronoun head of the noun phrase complement with the subject of the complement sentence; that is, it becomes you. The diagram below shows this replacement:

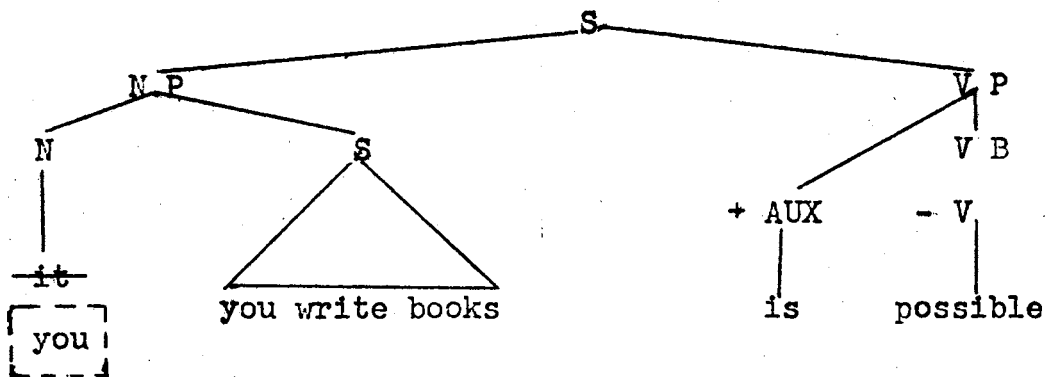


Figure 30.

The second stage effects an extraposition of the noun phrase complement, detaching it from underneath the noun phrase which dominates it and reattaching it under the domination of the  $S_1$  as the next diagram shows:

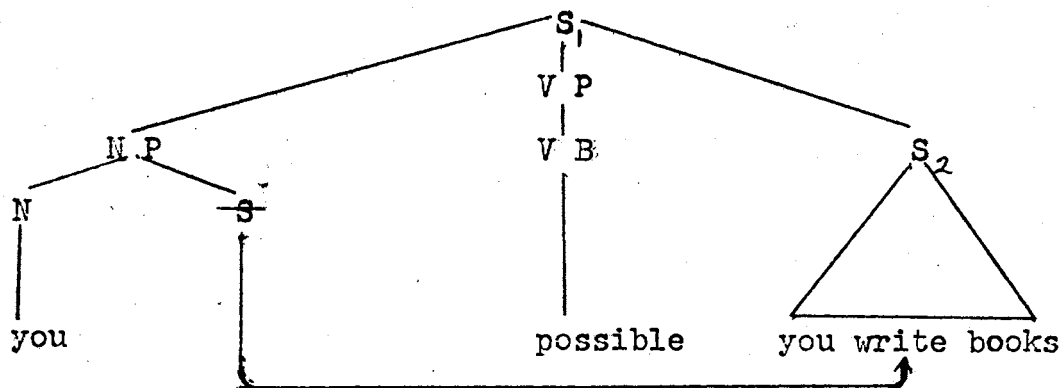


Figure 31.

### Step Two

Identical phrase deletion is applied to delete the

subject noun of the complement sentence. This transformation applies whenever the two identical phrases are under the domination of the same S node:

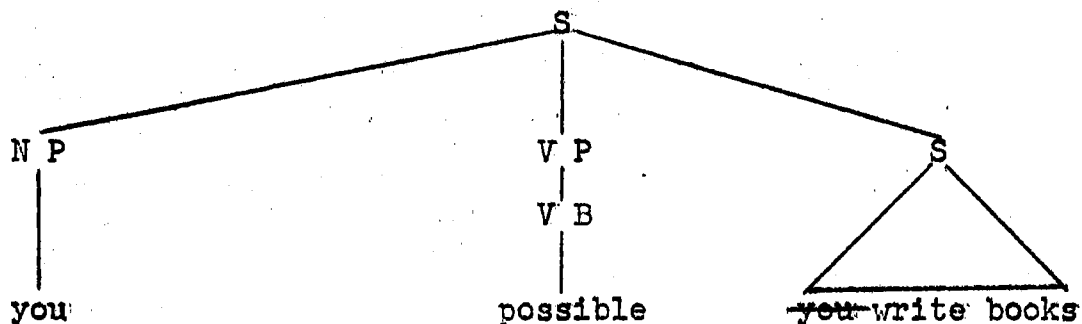


Figure 32.

### Step Three

We now place on the verbal segment the features appropriate to generate the desired auxiliary; these are + modal and + possible, as illustrated by the diagram following:

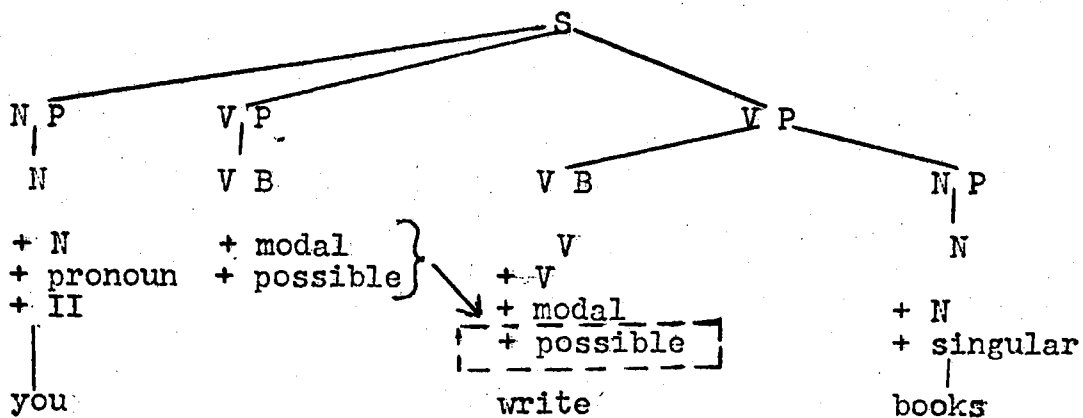


Figure 33.

## Step Four

The next stage would be the structure with which we started for sentence A, page 44, Figure 22. Its final development proceeds from there.

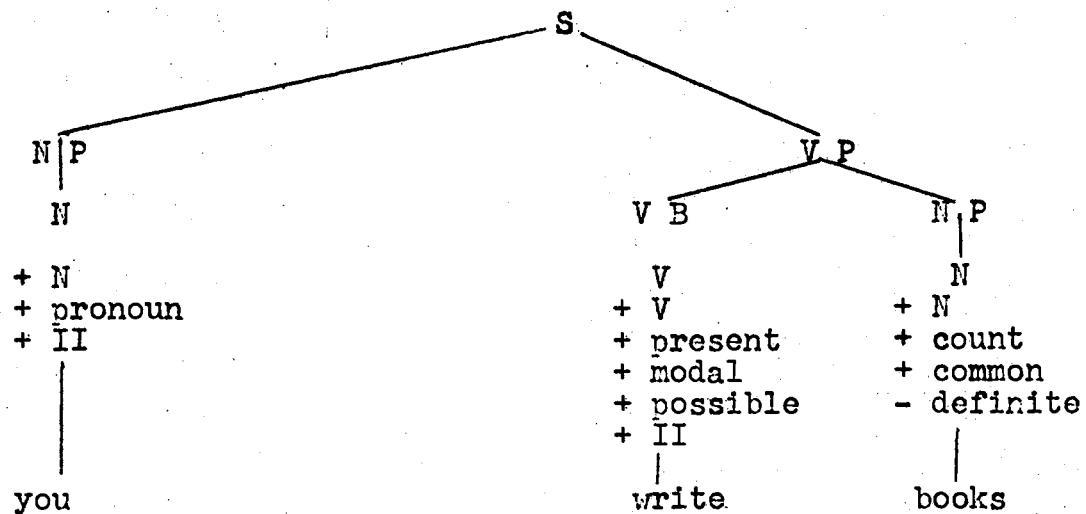


Figure 34.

Modals are marked in the lexicon with the feature + modal and any of the subsidiary features, (+ possible), (+ permissible), or (+ imperative), etc. which are derived from lexical items inserted in the frame (+ V), (- V). From these, the modal auxiliaries may be generated in the manner originally proposed for sentence A.



FOOTNOTES

17"Can," The American College Dictionary (New York, 1966), pp. 173-174.

18"May," Funk and Wagnall's New Standard Dictionary of the English Language (New York, 1963), p. 1563.

19Paz R. Dorotheo, A Bilingual Structural Analysis (Cebu City, Phillipines, 1966), p. 15.

20Jacobs and Rosenbaum, p. 121.

## CHAPTER VI

### CONCLUSION

The initial predication of the writer was that all elements needed to derive the auxiliary segment could be placed on the verbal segment in the deep structure. The auxiliary transformation results from any one of the following features: + perfect, + emphatic, + modal, + progressive, - V, + negative, and + question. The auxiliary transformation occurs only when any of these features are present. When they are not present, no auxiliary transformation is required. Jacobs and Rosenbaum put the auxiliary constituent into every sentence whether it is used or not. If the sentence does not require an auxiliary in its surface structure, an intermediate transformation must be used to delete the unnecessary element. This makes for a more complicated account of English grammar.

We can now formulate segment structure rules for verbal segments. In the example sentences, feature specifications include the following:

For the sentence,

1. Hasn't he been waiting?

+ V B, + V, + perfect, + negative, + progressive.

For the sentence with the modal,

2. It is possible for you to write books.

+ V B, - V, + modal.

For the sentence with the do auxiliary,

3. Jane does sing.

+ V B, + V, + emphatic.

The formulas above show only positive segment structure features (except for - V); all others are presumed negative. A synthesis of all of the foregoing features produces the following rule:

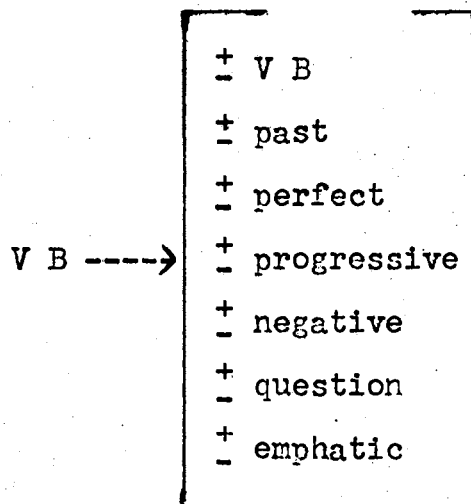


Figure 35.

A verbal segment then has to be analyzed as to whether it is positive or negative as to these features in the deep structure. The features + modal, + possible are not included in the segment structure rule, since they are provided from the lexical item possible in a

sentence such as: It is possible for you to write books.

This study has been an attempt to describe the transformational derivation of the auxiliary from the verb in deep sentence structure. We have considered the auxiliary in two ways--as an independent element in the deep structure (Jacobs and Rosenbaum's method) and as a derivation of the main verb in the deep structure. The latter process derives the element only when it is required; it obviates the need for any consideration of the auxiliary when the surface structure does not use this element. Therefore, it appears that the English auxiliary is most clearly and simply understood in terms of the latter method.

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