ED 010 178   12-29-65   24   (REV)
TEACHER'S MANUAL FOR PHRASE STRUCTURE RULES 13-18—LANGUAGE
CURRICULUM I.
KITZHABER, ALBERT
P0R60280 UNIVERSITY OF OREGON, EUGENE
CRP-H-149-19
BR-5-0266-19
-       -65
EDRS PRICE   MF-$0.09   HC-$1.68   42P.

*TEACHING GUIDES, *CURRICULUM GUIDES, LANGUAGE INSTRUCTION,
SEVENTH GRADE, *STRUCTURAL ANALYSIS, *ENGLISH CURRICULUM, *GRAMMAR,
EUGENE, OREGON, PROJECT ENGLISH, NEW GRAMMAR

A GUIDE WAS PREPARED FOR TEACHING PHRASE STRUCTURE RULES IN A
SEVENTH-GRADE LANGUAGE CURRICULUM. THE GUIDE INCORPORATED DISCOVERY
TECHNIQUES TO TEACH PHRASE STRUCTURE RULES AND SYMBOLS. IN ADDITION
TO 12 PHRASE STRUCTURE RULES DISCUSSED EARLIER (ED 010 146), AN
ACCOMPANYING GUIDE WAS PREPARED FOR STUDENT USE (ED 010 147). A
REVIEW ON THE 18 PHRASE STRUCTURE RULES WAS ALSO PREPARED (ED 010
152). (MN)

OREGON CURRICULUM STUDY CENTER

TEACHER'S MANUAL
for
PHRASE STRUCTURE RULES 13-18

Language Curriculum I

OREGON CURRICULUM STUDY CENTER

TEACHER'S MANUAL

(PHRASE STRUCTURE RULES 13-18)

Language Curriculum I

THE NOUN PHRASE

Your students may wonder why they did not examine the subject NP before the VP because of the subject's initial position in a kernel sentence. Our "discovery" method of analysis prompts us to divide each kernel sentence into two parts, NP and VP. If a student developed the NP rules first, he could become confused by the frequent appearance of other Noun Phrases in the sentence (actually within the part he would be calling the VP.) Furthermore if we reverse the order of the rules, we would be forced to reconsider NP rules again as we develop the VP. Our order of rules, we believe, reduces confusion and eliminates needless duplication.

$$\text{RULE (13):} \quad NP \longrightarrow T + N + N^o$$

Further examination would reveal that the determiner (T) could be subdivided into various smaller groups, so that we could distinguish between the uses of the definite determiner (the), the indefinite (a, an, and some), and the special use of the as a generic determiner, where it would refer to the use of the in sentences like "The horse is a powerful animal.", and the use of a zero determiner as in sentences like "Horses are four-legged mammals." and "Love of money is the root of all evil." A chart might show this differentiation:

	definite	indefinite	generic
sing	the	a/an	the
plur	the	some	Ø
N_m	the	some	Ø

Yet this division would still not account for the zero determiner with proper nouns. Further consideration of this problem will be dealt with in expansion of the noun phrase rules, especially in later years.

Exercise 1: Page 1

1. The boy/slept.
2. The house/burned down.
3. The cat/climbed the tree.
4. A monkey/threw the banana.
5. A jeep/ goes everywhere.
6. An apple/rolled away.
7. Some books/were left here.
8. The idea/pleases me.
9. These people/have built a swimming pool.
10. The smoke/rose slowly.
11. That school/ is my alma mater.

T	N
the	boy
the	house
the	cat

a	monkey
a	jeep
an	apple
some	books
the	idea
these	people
the	smoke
that	school

As your students consider determiners in this unit, they might wish to add them to their lexicons. You may need to point out that the essential noun phrase (subject) of a kernel sentence includes only the determiner plus noun (T + N). Words added to expand the subject are not allowed as optional elements in a kernel sentence; in other words, when the simple noun phrase (subject) is expanded the sentence becomes a transformation.

Exercise 2: Page 2

Answers will vary but responses might be similar to these:

1. The boy ran quickly.
2. The man gave them some money.
3. A teacher lost the book.
4. This man is our father.
5. The lady borrowed two eggs.
6. Some children knocked on the door.
7. That noise makes me angry.
8. These sentences are hard to understand.
9. The teachers are our friends.
10. The crate contains oranges.
11. An apple fell from the tree.
12. Those fences were burned down.
13. That story surprised me.
14. This machine spreads the blacktop.
#15. Some dirt lies on the floor.

Some students might possibly give a singular noun for the subject in Sentence 6. Either a singular noun (boy) or a plural noun (children) would be all right. Because of the singular verb "lies" in Sentence 15 the subject must be either singular (if it is a countable noun) or a non-countable noun. Some students might want to write the following: "Some girl lies on the floor." Others may choose to write, "Some sugar lies on the floor."

Exercise 3: Page 2

Again answers should vary, but each blank must have an appropriate determiner. Possible answers would be

1. A fish grabbed the worm.
          or
   The fish grabbed the worm.

2. <u>The</u> woman washed the dishes.
      or
   <u>A</u> woman washed the dishes.

3. <u>The</u> bell rang in the distance.
      or
   <u>A</u> bell rang in the distance.

4. <u>Some</u> people came to see the car.
      or
   <u>The</u> people came to see the car.

5. <u>The</u> airplane circled above the fog.
      or
   <u>An</u> airplane circled above the fog.

3. <u>A</u> deer hit the car.
        or
   <u>The</u> deer hit the car.
        or
   <u>Some</u> deer hit the car.

#(As "deer" is both singular and plural <u>a</u>, <u>the</u>, and <u>some</u> should be acceptable.)

7. <u>Some</u> children stepped in the wet cement.
      or
   <u>The</u> children stepped in the wet cement.

8. <u>This</u> book belongs to me.
      or
   <u>That</u> book belongs to me.
      or
   <u>The</u> book belongs to me.

9. <u>The</u> pictures came from the art gallery.
      or
   <u>These</u> pictures came from the art gallery.
      or
   <u>Some</u> pictures came from the art gallery.
      or
   <u>Those</u> pictures came from the art gallery.

10. <u>Some</u> parts are difficult.
       or
   <u>Those</u> parts are difficult.
       or
   <u>These</u> parts are difficult.
       or
   <u>The</u> parts are difficult.

Page 2 (Other Noun Phrases found in the sentences.)

Students should have no trouble spotting several Noun Phrases in addition to the essential subject NP. (Although the NP in Sentences 3, 5, 7, and 9 is part of an adverbial of location, your students would not need to know this in order to recognize the NP.)

1. the worm
2. the dishes
3. the distance (in the distance is locative. See Rule (11).)
4. the car (This NP is actually the object of the infinitive.)
5. the fog (above the fog is locative.)
3. the car
7. the cement (in the cement is locative. You might remind students that the presence of "wet" keeps this from being a kernel sentence.)
3. me (Because this NP is actually a pronoun it may be difficult for most students to see and you will probably not want to force it at this point. Students are introduced to pronouns later on page 3.)
9. the gallery (Again, the word "art" has expanded the NP.) In the art gallery is locative.)
10. (Difficult is a predicate adjective. See Rule (11).)

Exercise 4: Pages 2-3

A.
```
      T  N        T  N T  N
1. The men gave the girl a present.
```

```
   T  N          T   N
2. Some people called on the Smiths.
```

```
   T  N       T  N
3. The shirt was on the line.
```

```
   T   N              T   N
4. This candidate will answer the question.
```

```
   T  N     T  N
5. A cloud hid the sun.
```

```
    T  N         T  N
6. Those skis belong to the club.
```

```
   T  N          T  N
7. The boy is wearing a coat.
```

```
   T   N
3. An orange would taste good.
```

```
   T  N           T   N  T   N
9. The nurse will take these children to the hospital.
```

10. T   N   T   N
The <u>child</u> is <u>a</u> <u>genius</u>.

B. 1. T   N   T   N   T   N
<u>This</u> <u>report</u> will shed <u>some</u> <u>light</u> on <u>the</u> <u>problem</u>.

2. T   N   T N   T   N
<u>Those</u> <u>quarters</u> are <u>a</u> <u>part</u> of <u>that</u> <u>collection</u>.

3. T   N   T   N   T N
<u>Some</u> <u>men</u> climb <u>this</u> <u>mountain</u> without <u>a</u> <u>rest</u>.

4. T   N   T   N
<u>These</u> <u>binoculars</u> make <u>that</u> <u>ship</u> seem close.

5. T   N   T   N
<u>This</u> <u>tunnel</u> makes <u>an</u> <u>escape</u> possible.

6. T N   T N   T   N
<u>A</u> <u>part</u> of <u>that</u> <u>land</u> will need <u>some</u> <u>water</u>.

\# 7. T   N   T   N   N
<u>An</u> <u>elephant</u> can do <u>that</u> <u>work</u> without <u>help</u>.

\#In this sentence students encounter the noun <u>help</u> which seems to have
no determiner. Perceptive students should see that because they can
inject a determiner (such as <u>some</u>) help is really a noun. This may
lead to speculation about the "missing" determiner.

Exercise 5: Page 3
Several of the sentences in this exercise show students that the NP
is not always a simple construction. Sentences 3, 5, 7, 9, 10, 11,
13, 14, and 15 have one or more Noun Phrases which lack determiners.
Sentence 2 has the adjective <u>large</u> embedded within the NP. Sentence
3 also contains the adjective <u>large</u> but, in addition, it has no determiner.
Sentence 10 has an adjective (interesting) embedded within the NP. Sen-
tences 2 and 10 offer you an opportunity to discuss the alternate forms
<u>a</u> and <u>an</u> and to indicate that the form which is used is determined by whether
or not the word immediately following begins with a vowel or a consonant.
You can point out that although <u>an</u> is the form commonly used with <u>animal</u>,
the fact that <u>large</u> intervenes makes <u>a</u> acceptable. The reverse is, of
course, true in 10. Because <u>interesting</u> starts with a vowel it becomes
necessary to use <u>an</u>. A comparison of sentences within this exercise
(for example, Sentences 1, 2, and 3) should help students gain insight
into the possiblities and perplexities of the NP.

    1. <u>The</u> <u>horses</u> ran away.
\# 2. <u>The</u> <u>horse</u> is <u>a</u> (large) <u>animal</u>.
\# 3. <u>Horses</u> are (large) <u>animals</u>.
    4. <u>These</u> <u>people</u> will be gone tomorrow. (tomorrow is an adverbial
                                                      of time)

5. People are funny.
6. The boy is a drummer.
7. Jerry is a drummer.
8. The movie will be here tomorrow.
9. It will be here tomorrow.
#10. Mathematics is an (interesting) subject.
#11. Magic is (his) hobby.
12. The rice is cooking.
13. Rice grows in Indonesia.
14. Tom carried the ball.
15. He carried the ball.
16. The boy carried the ball.

(A comparison of the subject NP in Sentences 14, 15, and 16 might pave the way for students' acceptance of the "empty" determiner with Tom and He. You may need to emphasize the notion that the students' built-in grammar enables him to make this choice.)

Exercise 6: Page 4
Answers may vary within limits. Sentences 1, 4, 5, 8, 9, 10, and 14 need an appropriate determiner (usually the). Sentences 2, 3, 6, 7, 11, 12, and 13 do not require a determiner. Eventually we will want to show that the possessive pronoun our is a determiner which is the result of a transformation. You will not want to even mention this now and may want to require your students to limit themselves to the ones we have mentioned. However, some may see that it really acts like a determiner and they should not be marked wrong. Sentence 7 presents two possibilities: students might use the determiner the in speaking of a particular piece of gold (The gold) or omit the determiner when specifying an undetermined quantity (Gold).

Exercise 7: Pages 5 and 6
A. Sentences 3, 4, 5, 7, 8, 10, 12, 13, and 14 do not require determiners. Although 5, 7, 8, 12, and 14 may have them. Answers should be similar to this:

1. The Chinese are a noble people.
2. This hat is more becoming than that one.
3. _∅_ China is an ancient country.
4. _∅_ You won't miss me.
5. _∅_ Blood was smeared on the steps.
6. _A_ Korean enrolled in school this fall.
7. _∅_ Koreans are often talented people.
8. _∅_ Koreans live in a divided country.
9. The mammoth is extinct.
10. _∅_ Mammoths lived in North America.
11. _A_ truck ran off the highway.
12. _∅_ Trucks are larger than station wagons.
13. _∅_ Marie graduated at mid-term.
14. _∅_ School is out for the summer.
15. This school won the tournament in debate.
     That

B. Sentence 6 is probably the only one in the group which absolutely requires a determiner. Several of the others might take determiners but do not require them. Several of the sentences permit a choice of determiners.

1. <u>Some</u> plants require more light.
   <u>These</u>
   <u>Those</u>   (It is not clear what it is that plants require more
   <u>All</u>   light than. The word "more" indicates that a com-
   <u>Ø</u>   parison is being made; however, the sentence does
   <u>The</u>   not actually say this. It might be a statement that
      <u>some</u> plants require more light than do others; it
      might be a statement that <u>these</u> or <u>those</u> plants re-
      quire more light than they are getting (this is the
      most logical explanation); or it might be merely a
      statement that <u>the</u> (particular) plants require more
      light than they are getting.)
2. <u>Ø</u> Courage is hard to measure.
3. <u>The</u> settlers replaced the Indians.
   (Students might want to write "Settlers replaced the Indians."
   You could point out that there is a certain parallel structure in
   "The settlers . . . the Indians." "Settlers replaced   ±
   the Indians" is not necessarily incorrect however.)
4. <u>The</u> rules make the game interesting.
5. <u>Ø</u> Marble was used for the mantel.
6. <u>The</u> marble was an agate.
7. <u>Ø</u> People seldom learn from experience.
8. <u>The</u> people moved away.   ("People" without a determiner might be
        or   acceptable. One could say "People moved
   Some people moved away.   away" meaning an undetermined number
        or   of people.)
   <u>Ø</u> People moved away
9. <u>Ø</u> Clarinda fell from the horse.
10. <u>Ø</u> Mathematics is my favorite subject.

<u>The Pronoun: Page 6</u>

This simple exercise serves to introduce pronouns as a kind of noun. The true complexity of the pronoun structure will need be to be resolved later.

1. <u>The boys</u> ran away from home.
2. <u>They</u> ran away from home.
3. <u>An elk</u> jumped the fence.
4. <u>It</u> jumped the fence.

5. <u>The</u> president made a speech.
6. <u>He</u> made a speech.
7. <u>Margaret</u> is the chairman.
8. <u>She</u> is the chairman.
9. <u>You</u> will never catch up.
10. <u>I</u> lost my permit.
11. <u>We</u> will go on Friday.
12. <u>This rain</u> will last all day.
13. <u>This</u> will last all day.

14. <u>These</u> <u>papers</u> have been checked.
15. <u>These</u> have been checked.
16. <u>That</u> Buick is beautiful.
17. <u>That</u> is beautiful.

The questions and discussion at the bottom of page 6 should help students see the two uses of <u>this</u> (as determiner in Sentence 12, but as the <u>NP</u> in Sentence 13); the two uses of <u>these</u> (as determiner in Sentence 14, but as <u>NP</u> in Sentence 15); and the two uses of <u>that</u> (as determiner in Sentence 16, but as <u>N</u> in Sentence 17). Most students will agree that no determiner appears with the pronoun.

<u>Number in Nouns</u>:   <u>Page 7</u>

    1. boy   boys

    2. egg   eggs

    3. man   men

    4. arrow   arrows

    5. oriole   orioles
       tree   trees

<u>Page 7</u>

In discussing the paragraph at the bottom of page 7, you may need to remind students that in Rules (7) and (8) we noted that the number of the noun in the essential <u>NP</u> (the subject) usually controls the number of the noun used after the verbs <u>Be</u> and <u>Vlnk</u>. Other verbs do not impose this restriction on number.

<u>Exercise 8</u>:   <u>Page 8</u>

    1. The <u>canary</u> escaped.
       The canary $T + N + N^o \longrightarrow$ the + canary + one $\rightarrow$ the canary

    2. A <u>beatnik</u> sang on <u>the corner</u>.
       A beatnik $T + N + N^o \longrightarrow$ a + beatnik + one $\longrightarrow$ a beatnik
       the corner $T + N + N^o \longrightarrow$ the + corner + one $\rightarrow$ the corner

    3. The <u>singers</u> pleased the <u>audience</u>.
       The singers $T + N + N^o \longrightarrow$ the + singer + more than one $\longrightarrow$
                             the singers
       the audience $T + N + N^o \longrightarrow$ the + audience + one $\longrightarrow$
                             the audience

4. **This boy** is **a boxer.**
   This boy   T + N + N^O ——→ this + boy + one ——→ this boy
   a boxer   T + N + N^O ——→ a + boxer + one ——→ a boxer

5. **These terriers** belong to **Mary.**
   These terriers   T + N + N^O ——→ these + terrier + more than one
                                           ——→ these terriers

   Mary   T + N + N^O ——→ ∅ + Mary + one ——→ Mary

6. **The children** are at **the movie.**
   The children   T + N + N^O ——→ the + child + more than one ——→ the children

   the movie   T + N + N^O ——→ the + movie + one ——→ the movie

7. **The giant** hid in **the cupboard.**
   The giant   T + N + N^O ——→ the + giant + one ——→ the giant
   the cupboard   T + N + N^O ——→ the + cupboard + one ——→ the cupboard

8. **The students** were running in **the hallway.**
   The students   T + N + N^O ——→ the + student + more than one ——→ the students
   the hallway   T + N + N^O ——→ the + hallway + one ——→ the hallway

9. **That plane** stood on **the runway.**
   That plane   T + N + N^O ——→ that + plane + one ——→ that plane

   the runway   T + N + N^O ——→ the + runway + one ——→ the runway

10. **The women** formed **a club**
    The women   T + N + N^O ——→ the + woman + more than one ——→ the women
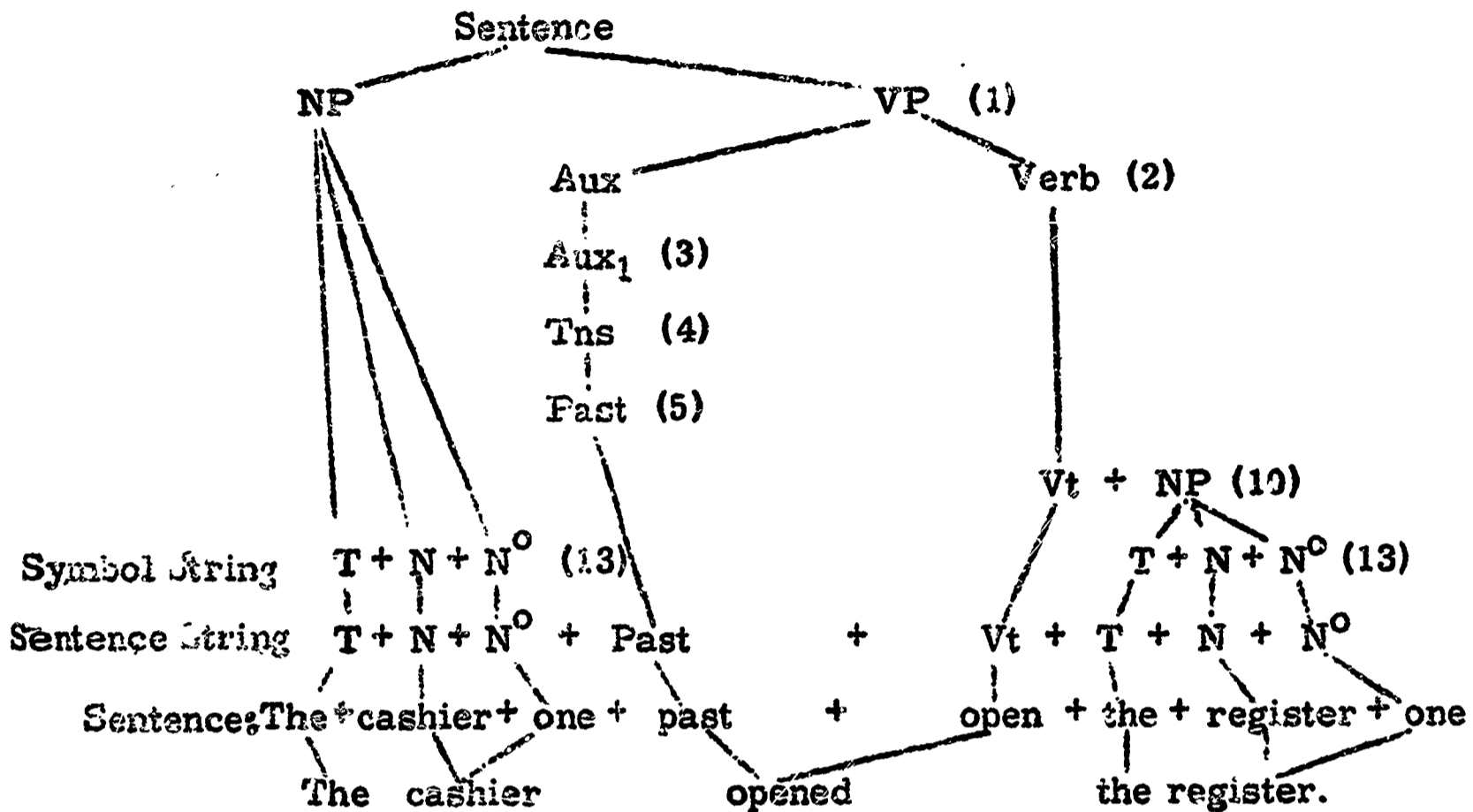   a club   T + N + N^O ——→ a + club + one ——→ a club

NOTE: Please change the number of Exercise **7** to **9** on page 8

Exercise 9: Pages 8-10

A. You will notice that the diagram on page 9 bypasses the verb classes and moves directly from Verb to Vin. However, if your students have difficulty seeing this, they should take the Verb through each step.

1. The cashier opened the register.

Sentence

NP   VP (1)

Aux   Verb (2)

Aux_1 (3)

Tns (4)

Past (5)

$Vt + NP$ (10)

Symbol String $T + N + N^O$ (13) $T + N + N^O$ (13)

Sentence String $T + N + N^O + Past$ + $Vt + T + N + N^O$

Sentence: The + cashier + one + past   +   open + the + register + one

The   cashier   opened   the register.

2. Mortimer has run eagerly.

Sentence

NP   VP (1)

Aux   Verb (2)

(3) Aux_1 Aux_2

(4) Tns

(5) Pres

have + en (3)

$Vin + Man$ (10)

$Adj + ly$ (12)

(13) $T + N + N^O$

$T + N + N^O + pres + have + en + Vin + Adj + ly$

$\emptyset$ + Mortimer + one + pres + have + en + run + eager + ly

Mortimer   has   run   eagerly.

3. Evil will befall him.

Sentence

NP — VP (1)

Aux — Verb (2)

Aux₁ (3)

(4) Tns   M

(5) Pres #

Vmid + NP (8)

T + N + N° (13)

T + N + N°

T + N + N° + pres + M + Vmid + T + N + N°

∅ + evil + one + pres + will + befall + ∅ + him + one
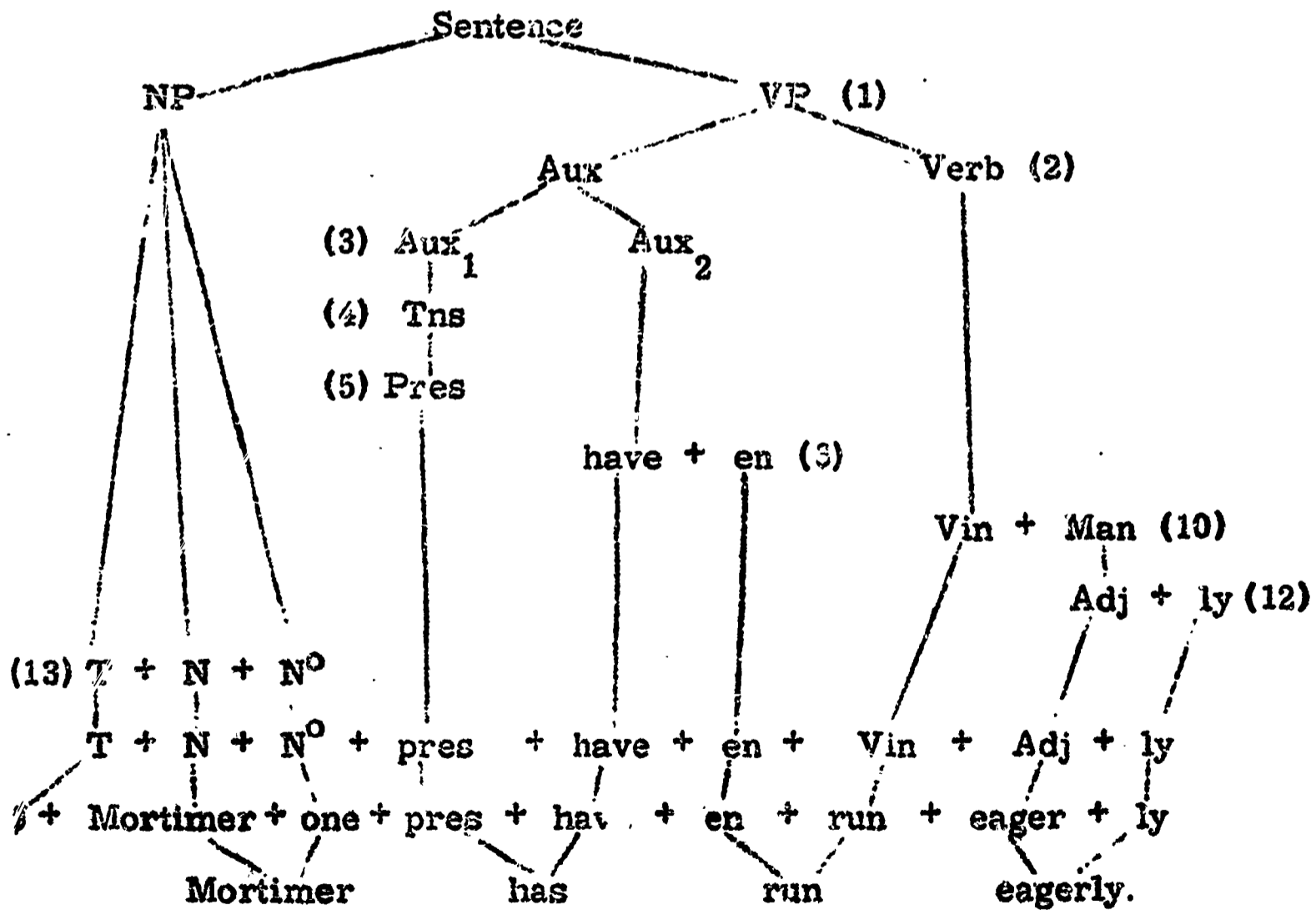
Evil   will   befall   him.

4. The thief was a crow.

Sentence

NP — VP (1)

Aux — Verb (2)

(3) Aux₁

(4) Tns

(5) Past

Be + Pr (7)

NP (11)

T + N + N° (13)

(13) T + N + N°

T + N + N°

T + N + N°

The + thief + one + past + Be + T + N + N°

The + thief + one + past + be + a + crow + one
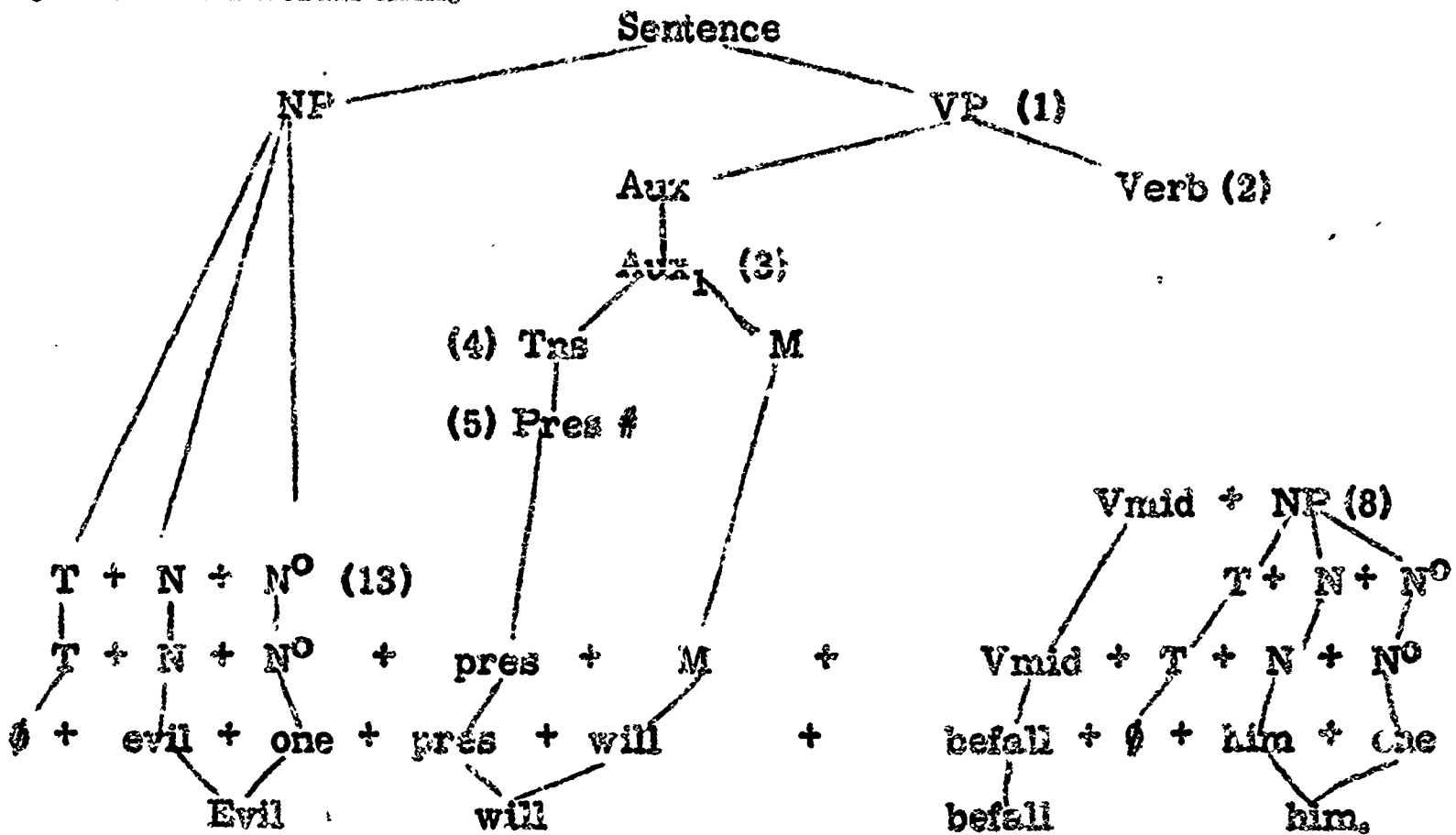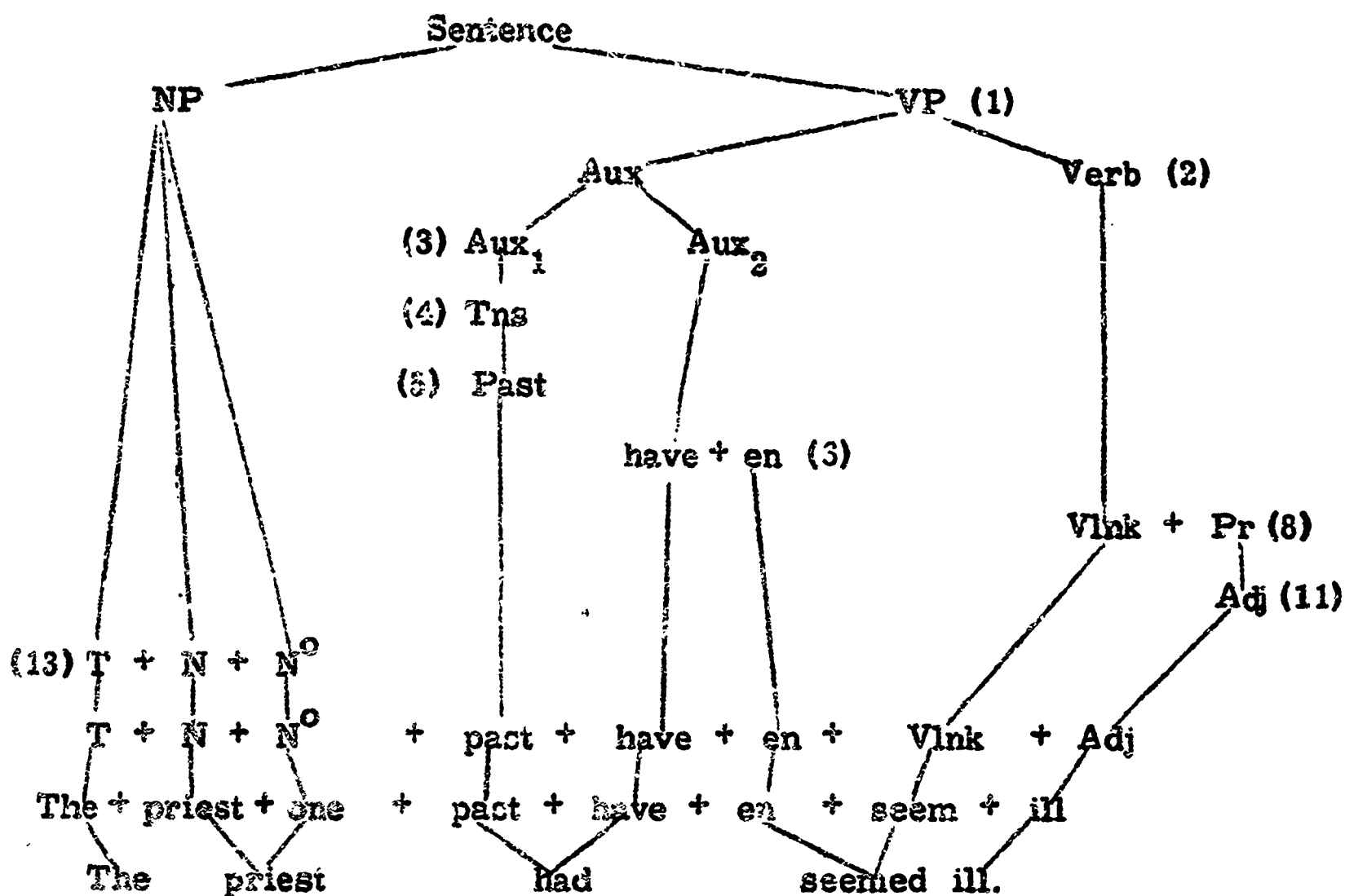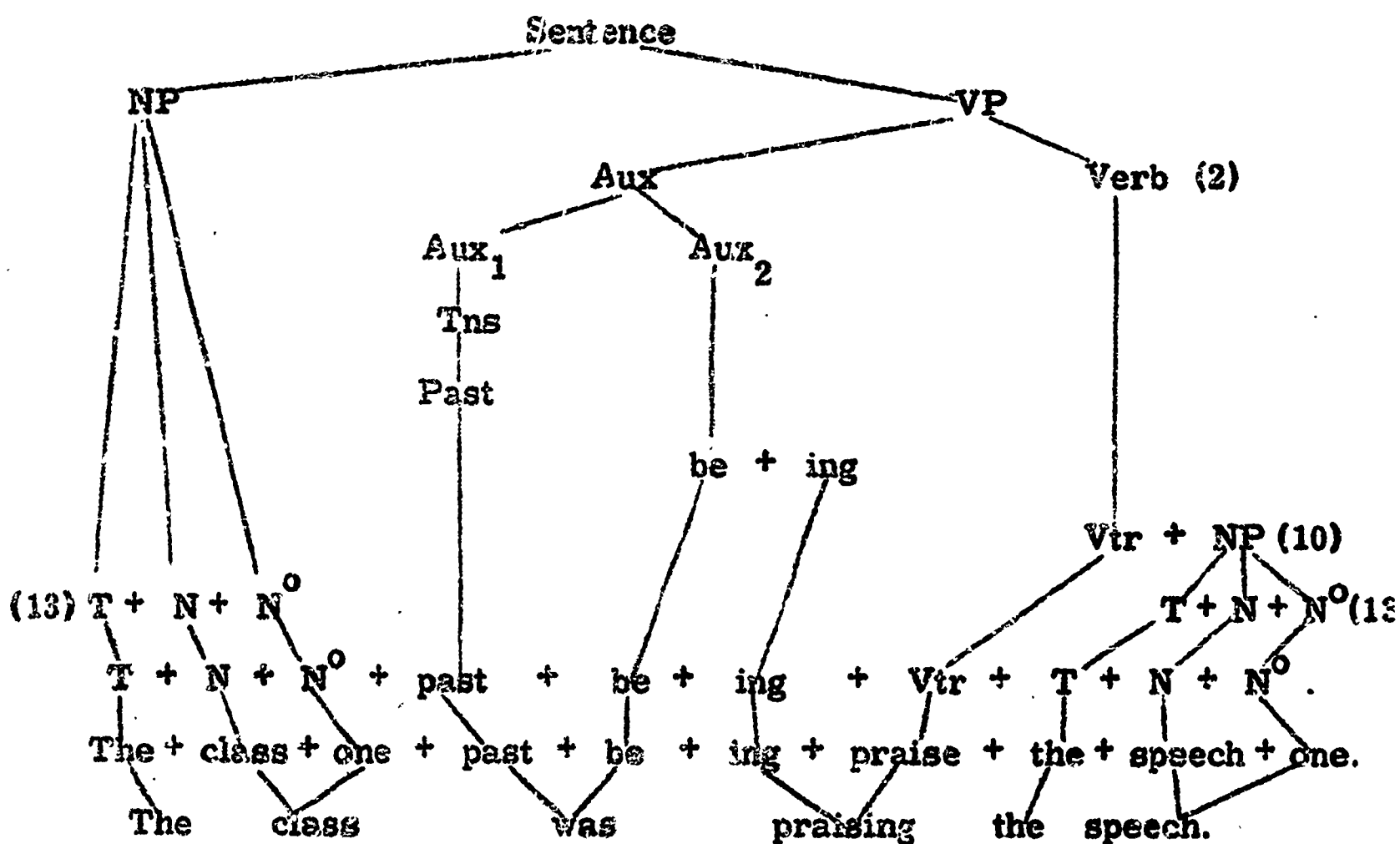
The   thief   was   a   crow.
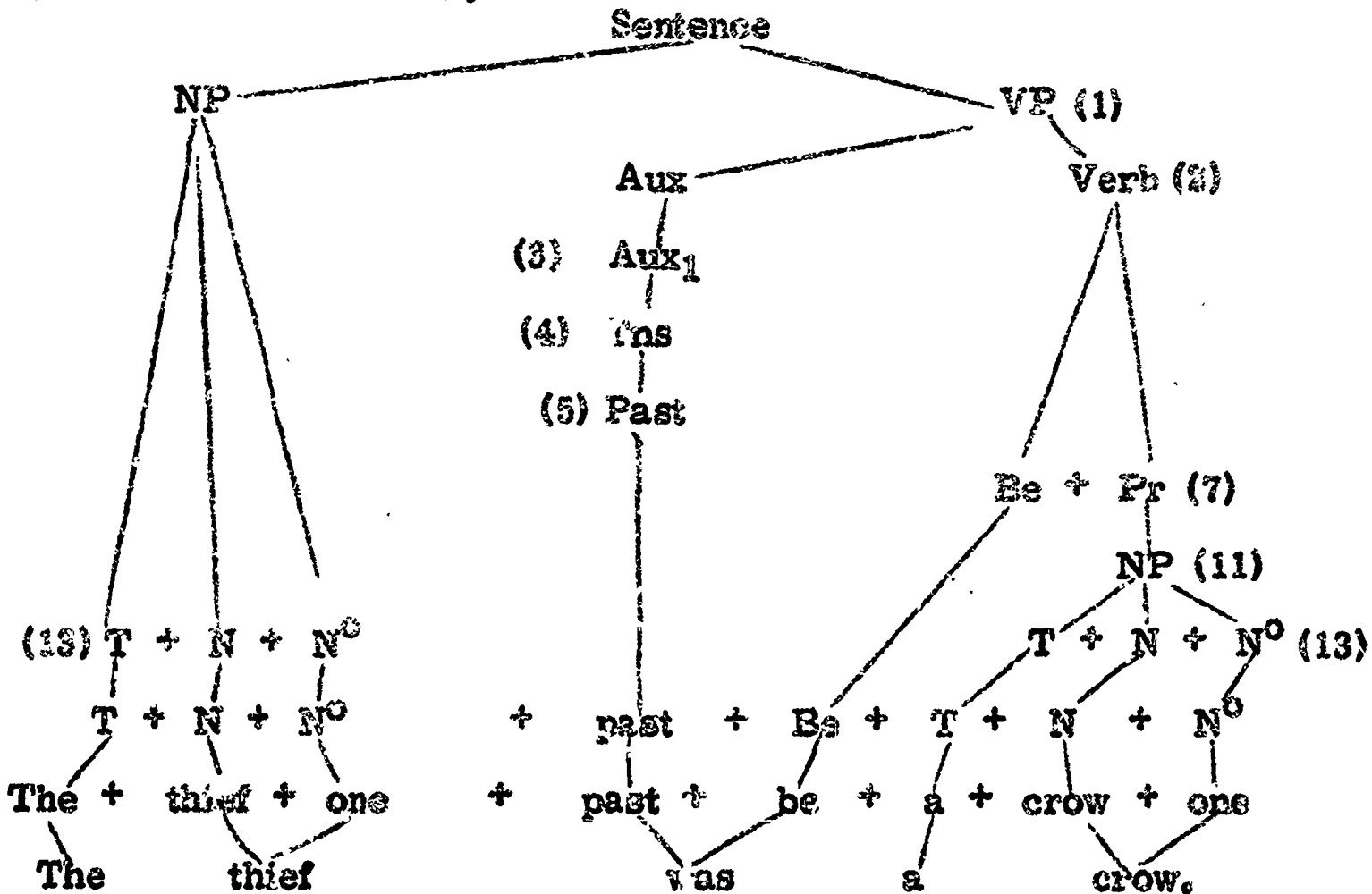
#We realize that inconsistencies exist in our use of capitals in this manual and perhaps in the Student Version too, although we have tried to eliminate them there. You will probably want to use lower case for past and pres. In general, terminal symbols appear with lower case letters.

5. The priest had seemed ill.

Sentence

NP   VP (1)

Aux   Verb (2)

(3) Aux_1 Aux_2

(4) Tns

(5) Past

have + en (3)

Vlnk + Pr (8)

Adj (11)

(13) $T + N + N^o$

$T + N + N^o$ + past + have + en + Vlnk + Adj

The + priest + one + past + have + en + seem + ill

The priest   had   seemed ill.

6. The class was praising the speech.

Sentence

NP   VP

Aux   Verb (2)

Aux_1 Aux_2

Tns

Past

be + ing

Vtr + NP (10)

(13) $T + N + N^o$ $T + N + N^o$ (13

$T + N + N^o$ + past + be + ing + Vtr + $T + N + N^o$.

The + class + one + past + be + ing + praise + the + speech + one.

The class   was   praising the speech.

7. Some dog has been barking.

Sentence

NP   VP (1)

Aux   Verb (2)

Aux₁   Aux₂ (3)

(4) Tns

(5) Pres

have + en   be + ing (9)   Vin (10)

(13) T + N + N°

T + N + N°   +   pres + have + en   +   be + ing   +   Vin

Some + dog + one   +   pres + have + en + be + ing + bark

Some   dog   has   been   barking.

○. She will astonish the group.

Sentence

NP   VP

Aux   Verb

Aux₁ (3)

Tns   M (4)

Vtr + NP

(5) Pres

(13) T + N + N°   T + N + N° (13)

T + N + N°   +   pres + M   +   Vtr + T + N + N°

∅ + she + one   +   pres + will + astonish + the + group + one
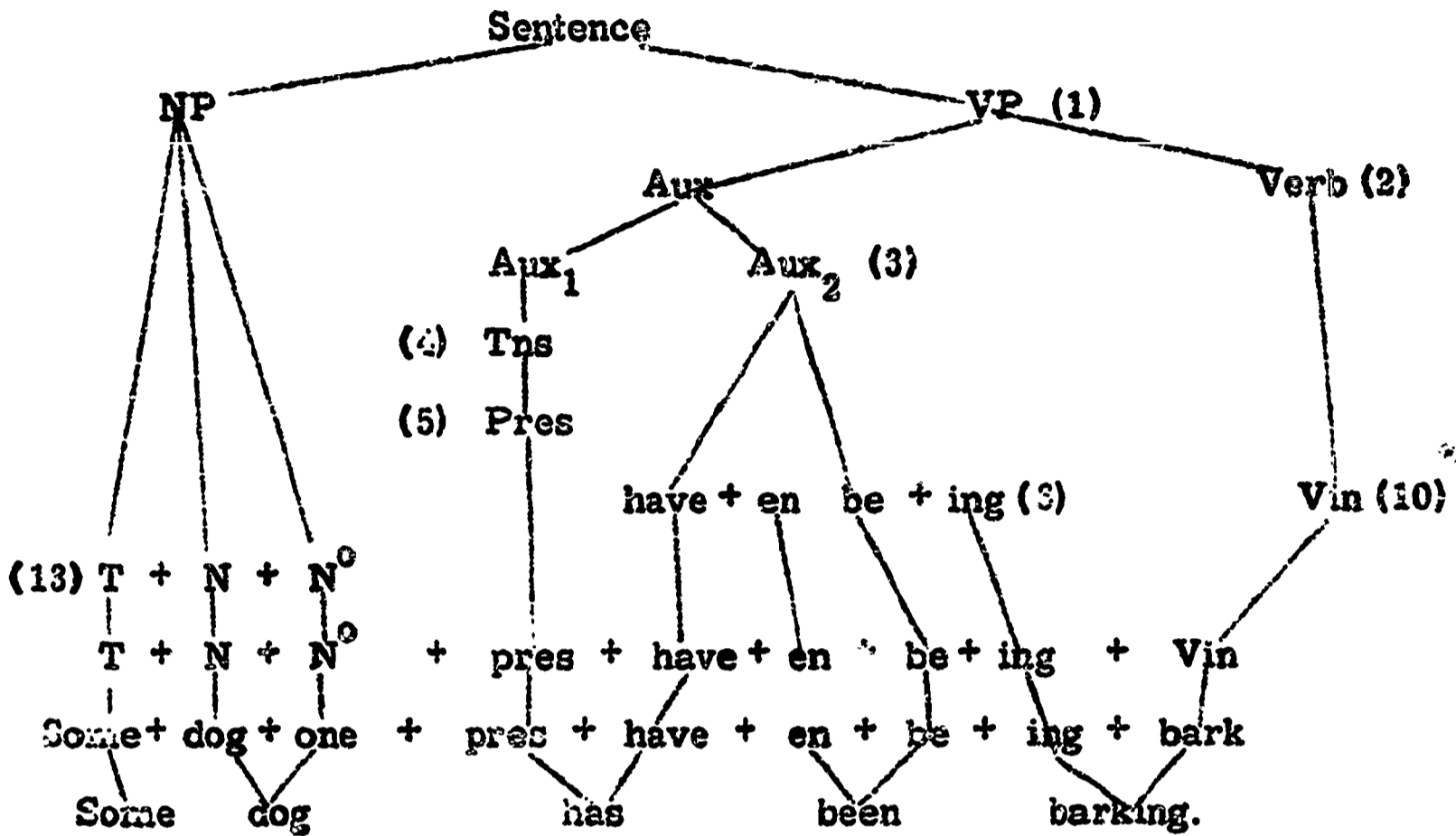
She   will   astonish   the   group.

9. Rice tastes good.

Sentence

NP   VP (1)

Aux   Verb (2)

Aux_1 (3)

Tns (4)

Pres (5)

Vlnk + Pr (8)

Adj (11)

(13) T + N + N^o

T + N + N^o + pres   +   Vlnk + Adj

∅ + Rice + one   + pres   +   taste + good

Rice   tastes   good.

10. Crickets have been chirping merrily.

Sentence

NP   VP

Aux   Verb (2)

Aux_1 Aux_2 (6)

(4) Tns

(5) Pres

have + en   be + ing (6)

Vin + Man (10)

Adj + ly (12)

(13) T + N + N^o

T + N + N^o + pres + have + en + be + ing + Vin + Adj + ly

∅ + Crickets + more than + pres + have + en + be + ing + chirp + merry + ly
one
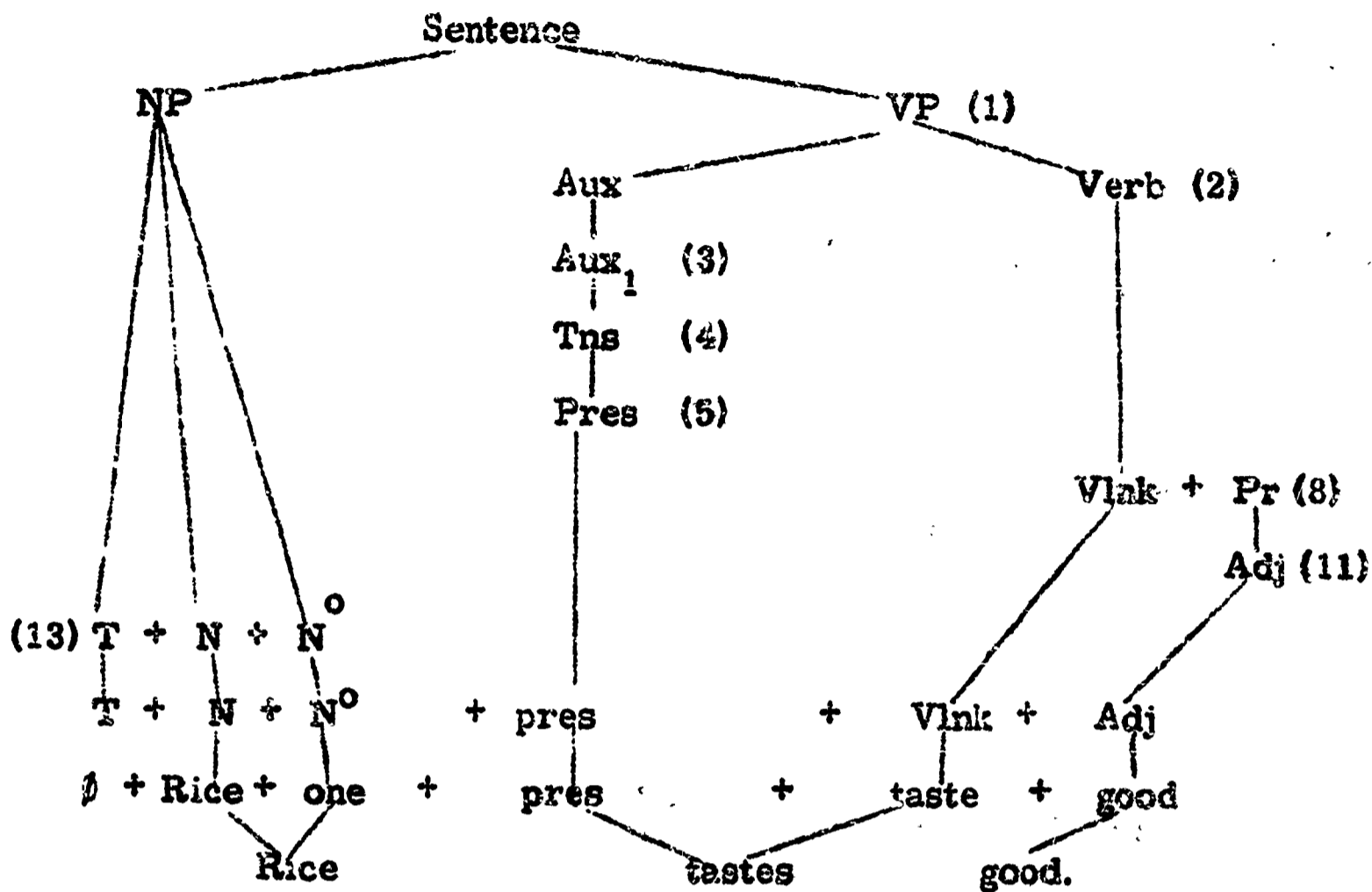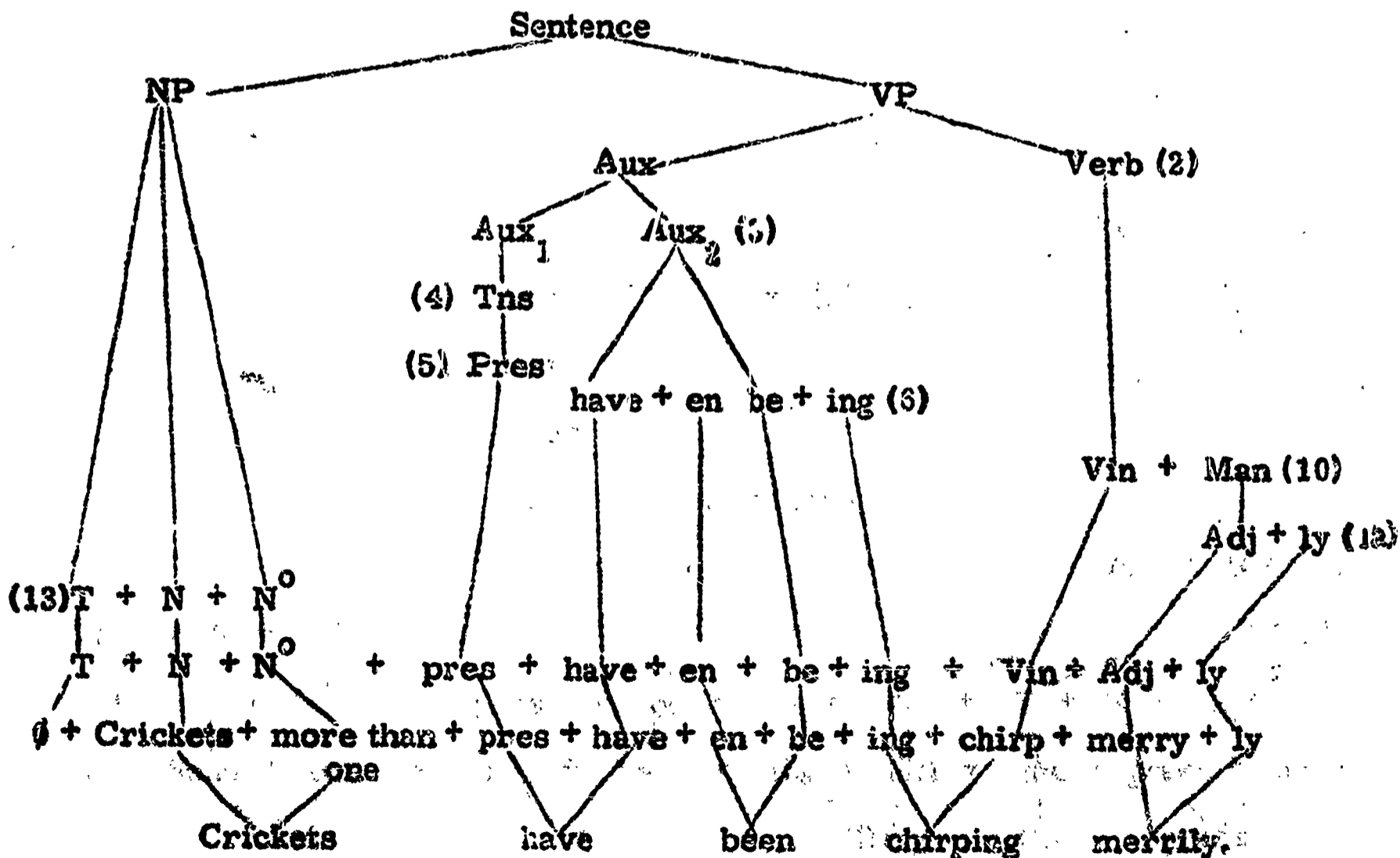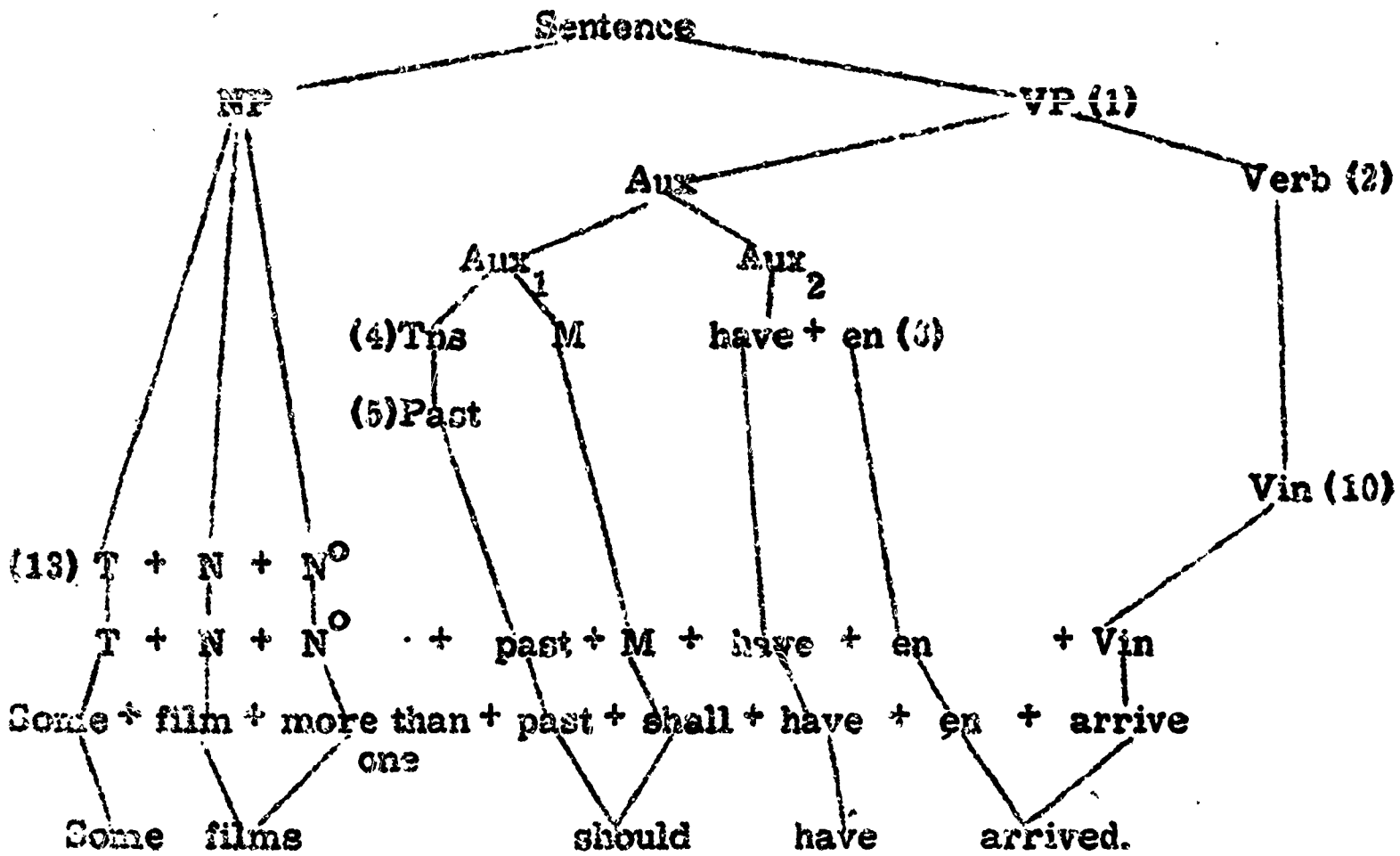
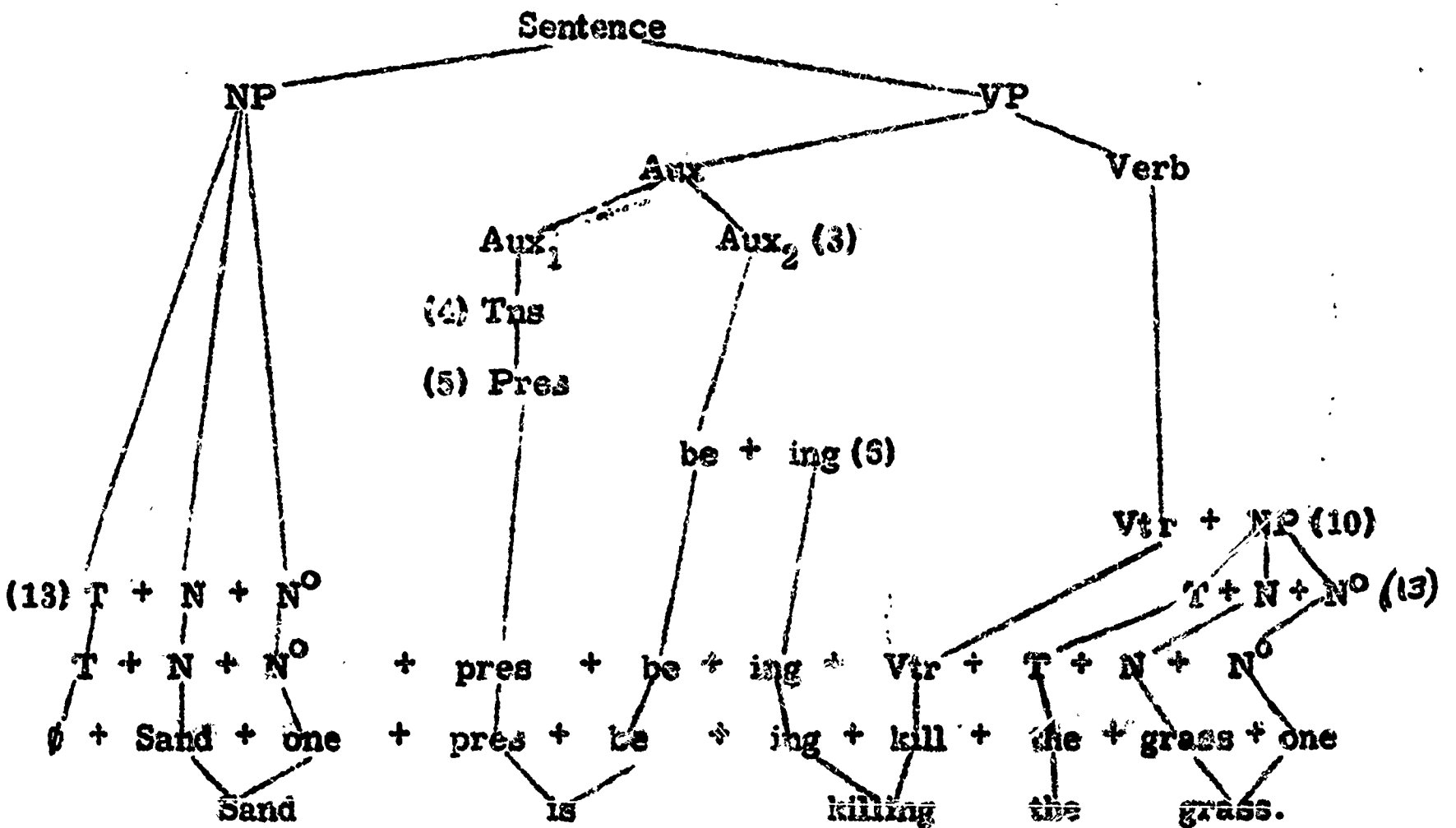Crickets   have   been   chirping   merrily.

Exercise 9: Page 9

B. Because Sentence 5 is a transformation (passive construction) students will not be able to diagram it at this time.
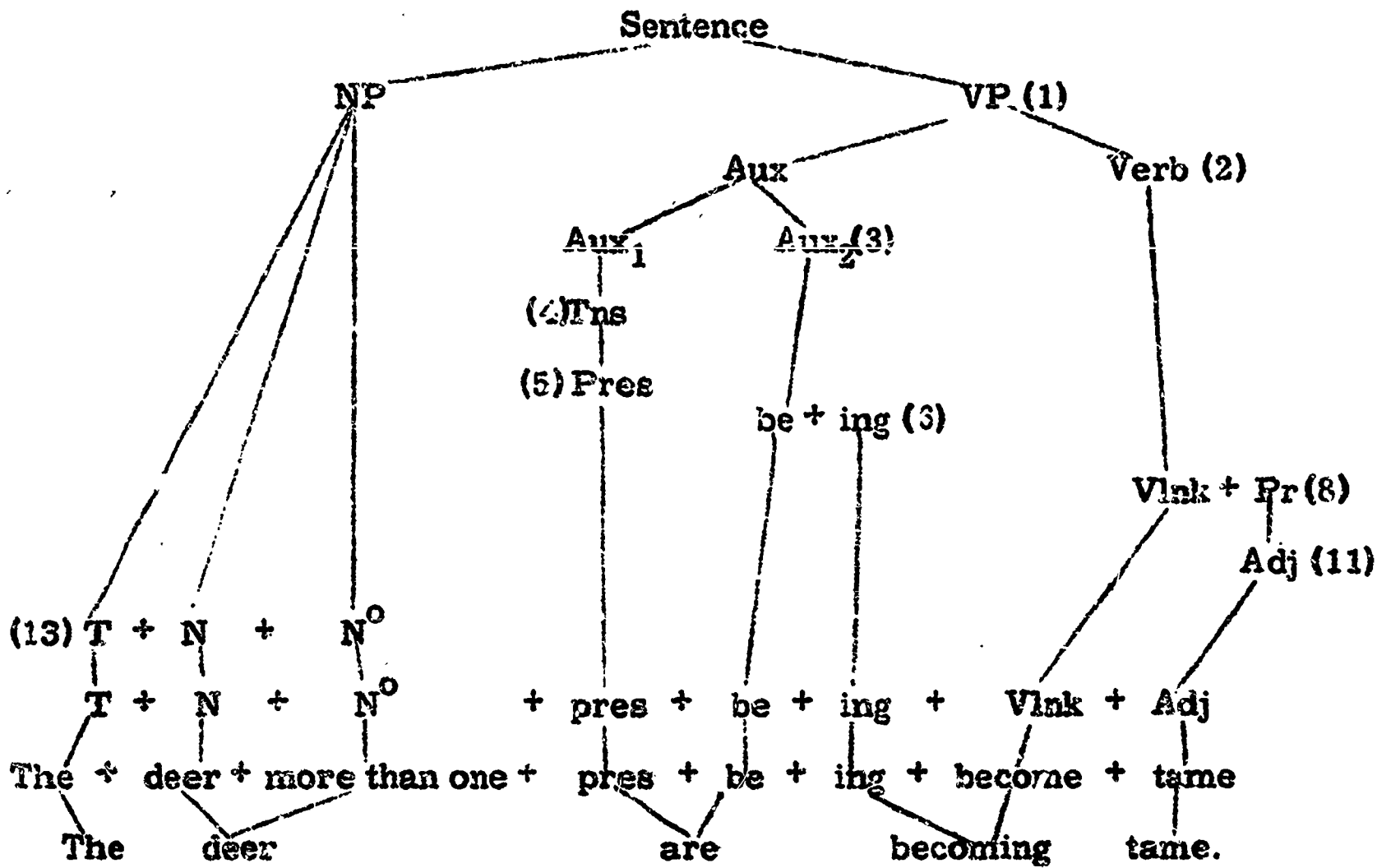
1. Some films should have arrived.

2. Sand is killing the grass.

3. The deer are becoming tame.

Sentence
NP
VP (1)
Aux
Verb (2)
Aux₁
Aux₂ (3)
(4) Tns
(5) Pres
be + ing (3)
Vlnk + Pr (8)
Adj (11)

(13) T + N + Nᵒ

T + N + Nᵒ + pres + be + ing + Vlnk + Adj

The + deer + more than one + pres + be + ing + become + tame

The   deer   are   becoming   tame.

4. That bus would be late.

Sentence
NP
VP (1)
Aux
Verb (2)
Aux₁ (3)
Tns
M (4)
Past (5)
Be + Pr (7)
Adj (11)

(13) T + N + Nᵒ

T + N + Nᵒ + past + M + be + adj

That + bus + one + past + will + be + late
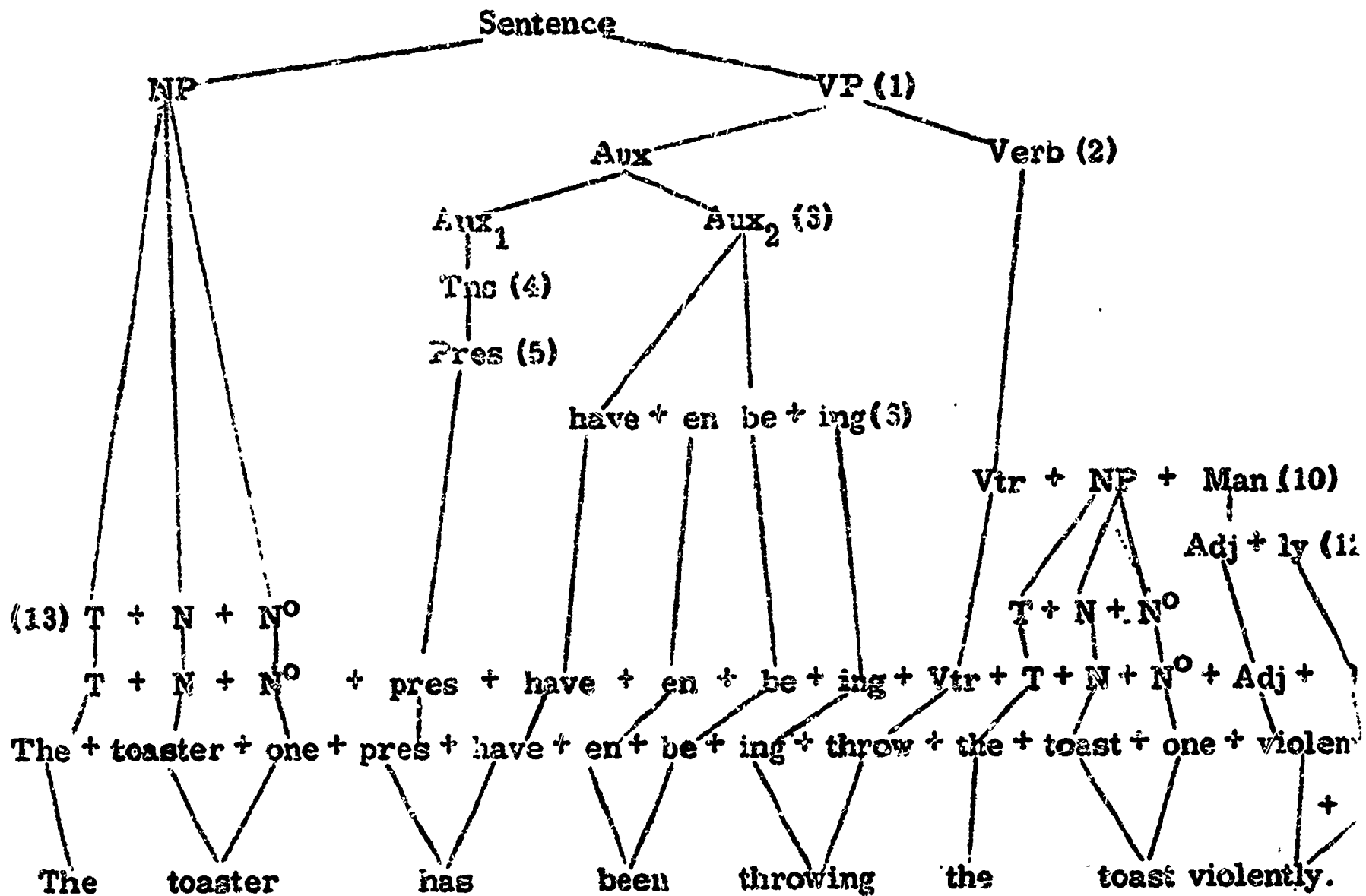
That   bus   would   be late.
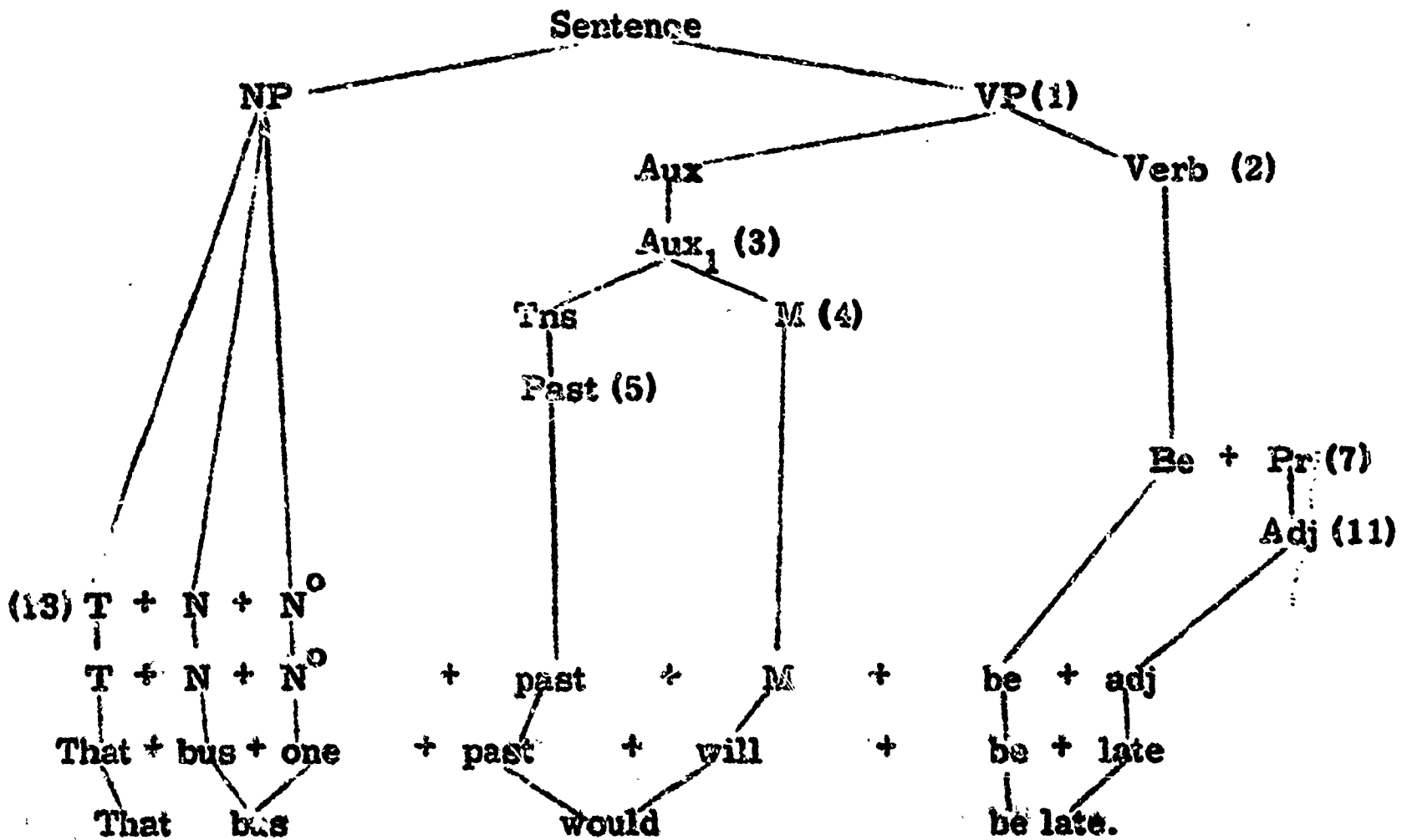
5. Omit this sentence because it is a transform.

6. The toaster has been throwing the toast violently.

Sentence

NP — VP (1)

Aux — Verb (2)

Aux_1 — Aux_2 (3)

Tns (4)

Pres (5)

have + en be + ing (3)

Vtr + NP + Man (10)

Adj + ly (12)

(13) T + N + N^O

$T + N + N^O$

T + N + N^O + pres + have + en + be + ing + Vtr + T + N + N^O + Adj +

The + toaster + one + pres + have + en + be + ing + throw + the + toast + one + violen
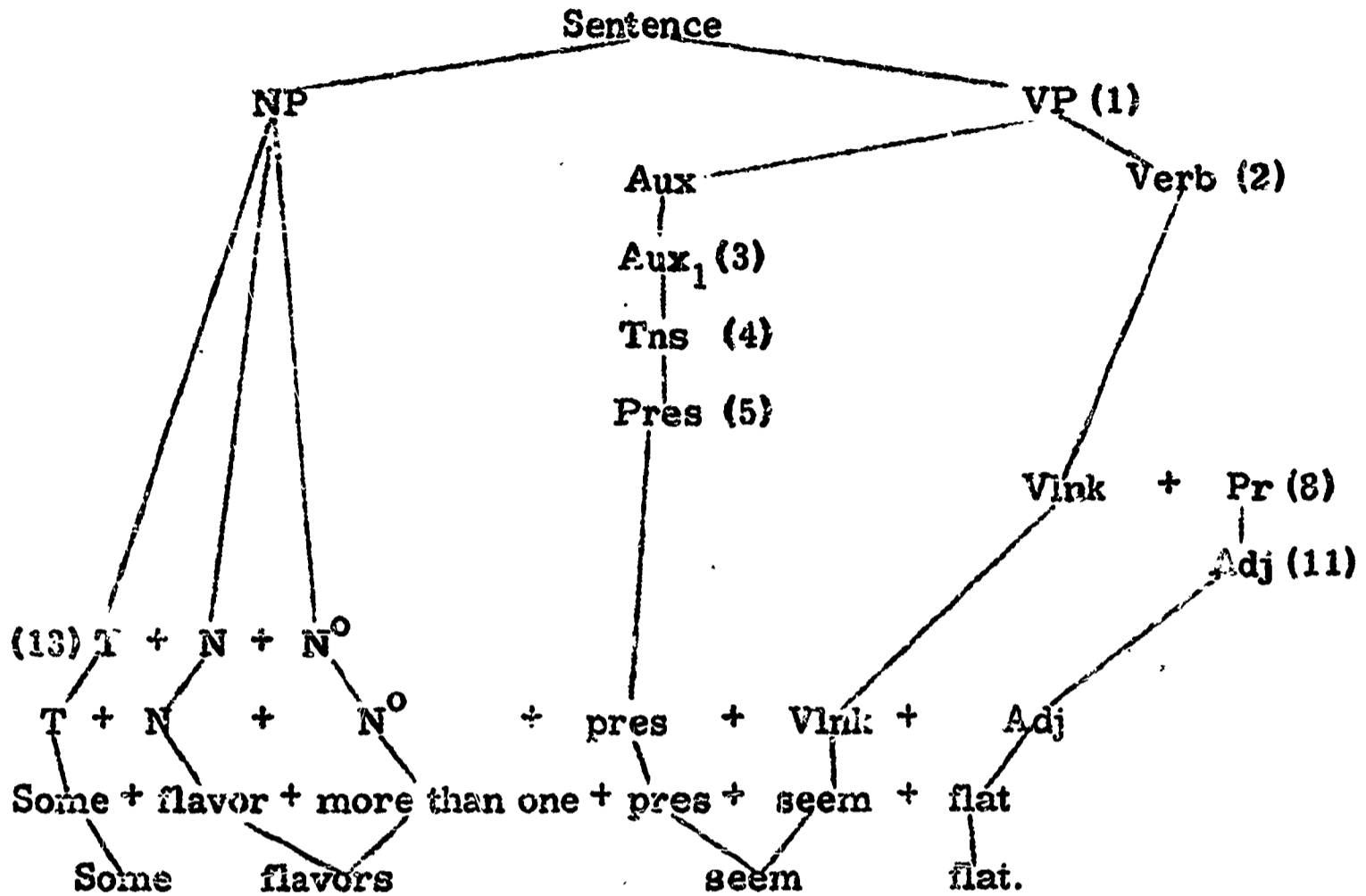
The   toaster   has   been   throwing   the   toast violently.

7. They will have breakfast on the launch. (This sentence contains a locative element which students have not yet studied. For now it can simply be added after Vmid + NP)

Sentence

NP — VP

Aux — Verb (2)

Aux_1 (3)

Tns — M(4)

Pres (5)

(9) Vmid + NP + on the launch

T + N + N^O (13)

(13) T + N + N^O

$T + N + N^O$. + pres + M + Vmid + T + N + N^O + on the launch.

∅ + they + more than one + pres + will + have + ∅ + breakfast + one + on the launch

They   will   have   breakfast   on the launch.

8. Some flavors seem flat.

Sentence

NP   VP (1)

Aux   Verb (2)

Aux_1 (3)

Tns (4)

Pres (5)

Vlnk + Pr (8)

Adj (11)

(13) T + N + N^O

T + N + N^O ÷ pres + Vlnk + Adj

Some + flavor + more than one + pres ÷ seem + flat
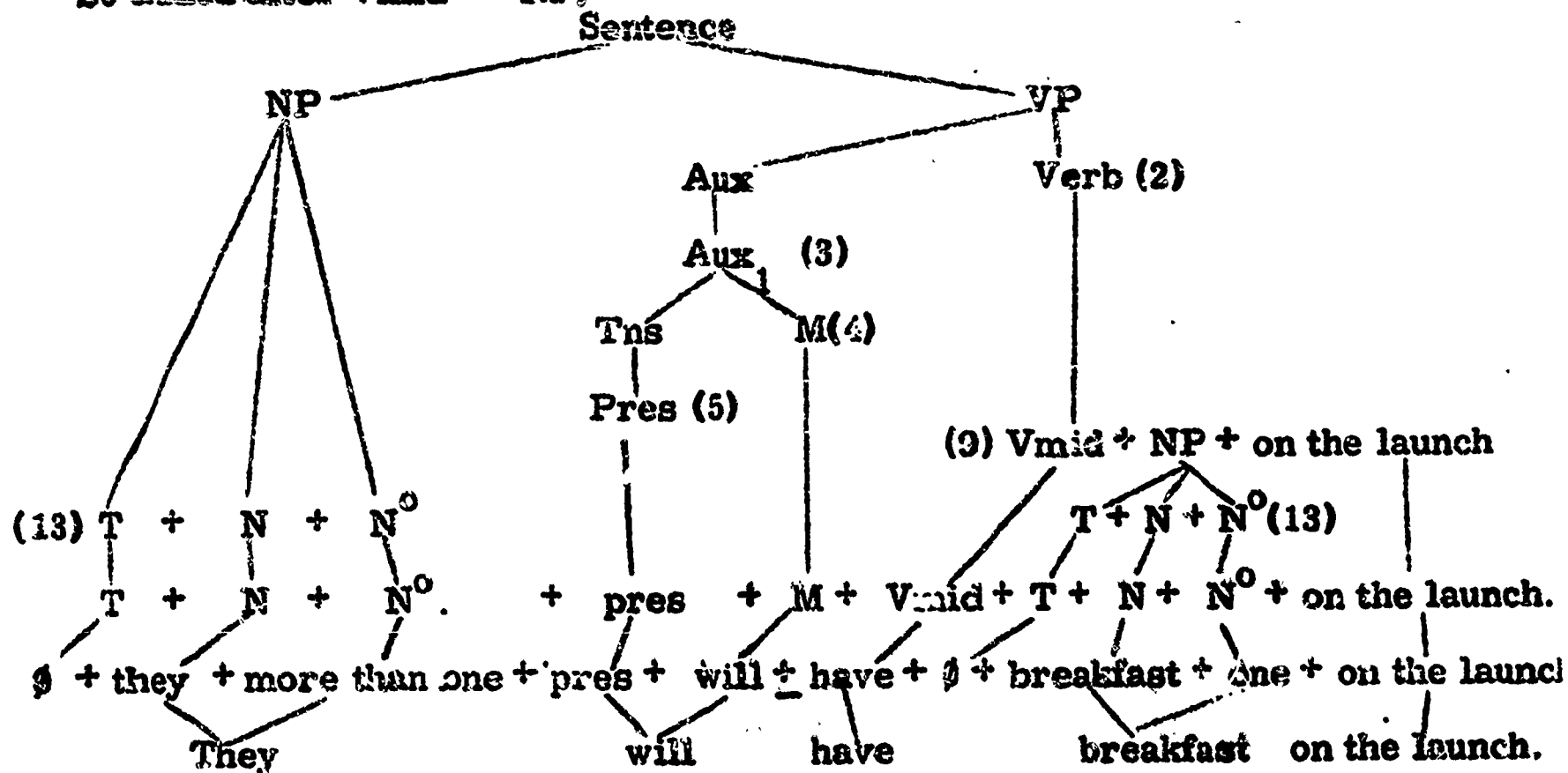
Some   flavors   seem   flat.

9. Pandora might have been feeling curious.

Sentence

NP   VP (1)

Aux   Verb

Aux_1 Aux_2 (3)

(4)Tns   M

(5) Past

have + en   be + ing (6)

Vlnk ÷ Pr (0)

Adj

(13) T + N + N^O

T + N + N^O + past + M + have + en + be + ing + Vlnk + adj

t + Pandora + one + past + may + have + en + be + ing ÷ feel + curious

Pandora   might   have   been   feeling   curious.
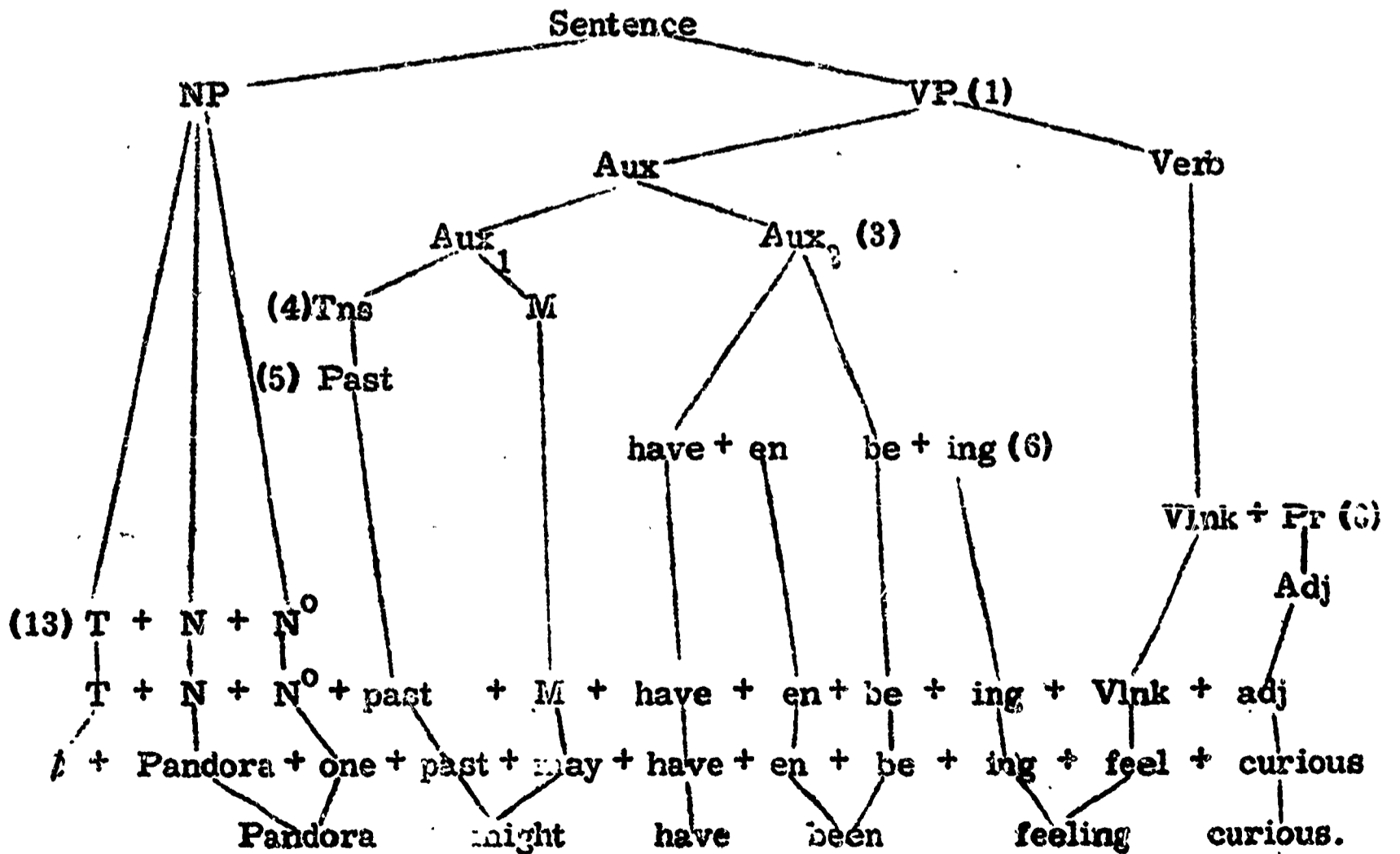
10. Turpentine has been dripping steadily.

Sentence

NP — VP (1)

Aux — Verb (2)

Aux$_1$ — Aux$_2$ (3)

(4) Tns

(5) Pres

have + en   be + ing

Vin + Man (10)

Adj + ly (12)

(13) T + N + N^o

T + N + N^o + pres + have + en + be + ing + Vin + adj + ly

$\emptyset$ + turpentine + one + pres + have + en + be + ing + drip + steady + ly

Turp_tine   has   been   dripping   steadily.
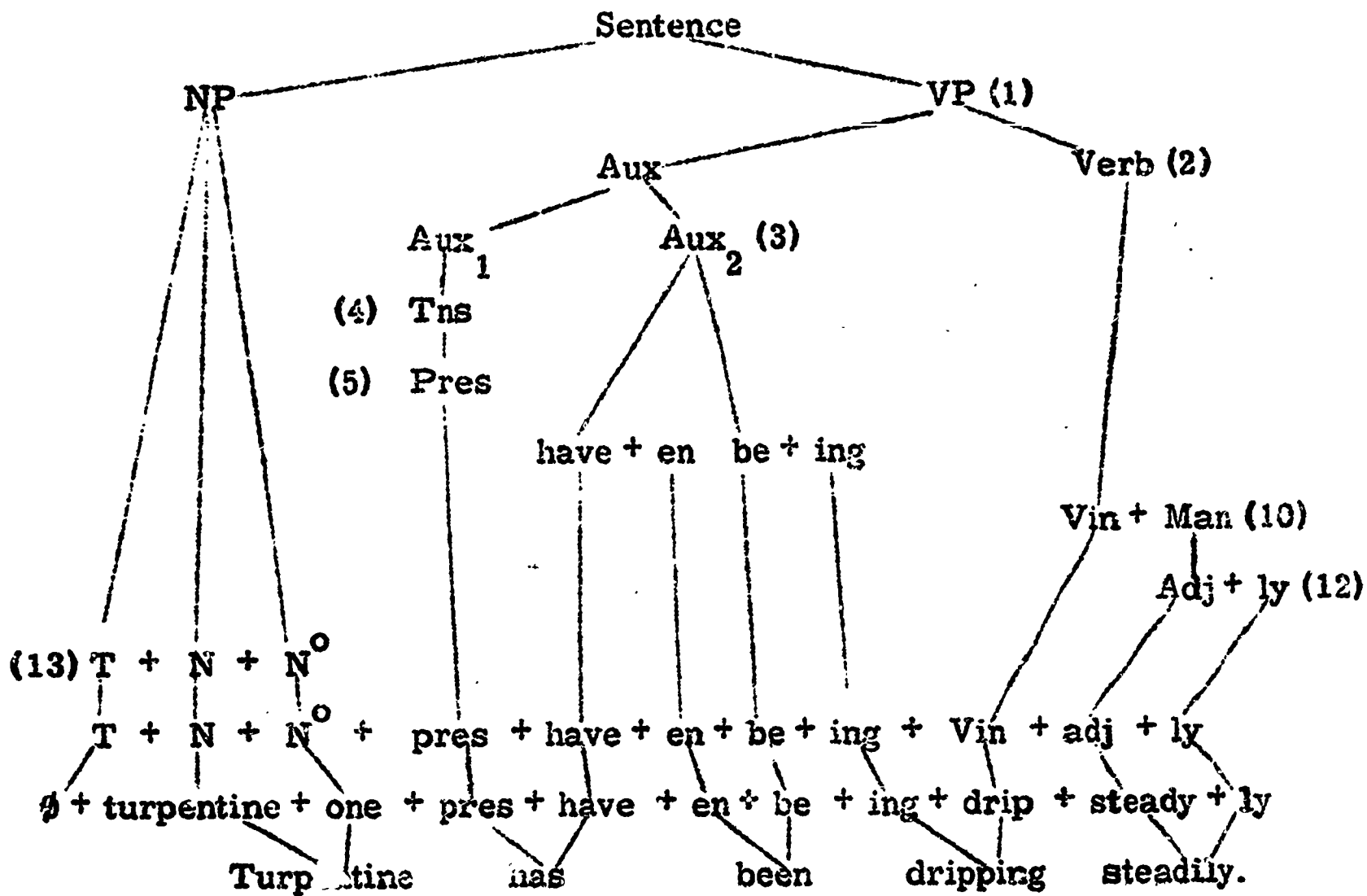
Exercise 9: Pages 9-10

Please correct two typographical errors on page 10:
#3 - Vtr + T + N + N^o
#4 - Vtr + T + N + N^o

C. Answers will vary but might be similar to these:

1. The children have been naughty.
2. A runner yelled hoarsely.
3. An assassin might shoot the policeman.
4. The waves may be undermining the dock.
5. Jack had a cold.
6. Some pupils may have been late.
7. The night had seemed short.
8. The winds were whipping the sails angrily.
9. The people have been becoming careless.
10. Some teacher may have been watching carefully.

NOTE CONCERNING SOME PROBLEMS WITH THE NOUN PHRASE

The classification of nouns presents certain problems which you should be aware of, especially if you have a class of extremely bright students. There is a great deal of cross classification in the noun classes which does not occur in the verb classes. For instance, we say that nouns will be either mass nouns or count nouns. Then we subdivide count nouns into animate or inanimate nouns. But some of your students will soon discover that mass nouns could also be called inanimate nouns. And it is true to say that inanimate nouns are also non-human, though the rules don't indicate this fact. Actually most nouns have characteristics of more than one class. Many students will not be bothered by this (and if they aren't you may not want to mention it). But some will. The important thing for you to remember is that the rules as they are written are not wrong. They simply do not reveal all of the facts about the nouns of the language. Their very complexities can, however, be a fascinating subject for class discussion. A chart which lists the characteristics and provides a way to assign the pertinent ones to various nouns of the language might be a useful way to show what is involved.

	Mass	count	inanimate	animate	non-human	human
blood	+		+		+	
dog		+		+	+	
car		+	+		+	
steno-grapher		+		+		+

By working out such a chart, you might lead your students to arrive at a more revealing classification than we now have. For instance, one class might include mass nouns which are also inanimate and non-human. Another would include animate human nouns, etc.

RULE (14): COUNTABLE AND MASS NOUNS

$$(14) \quad N \rightarrow \left\{ \begin{matrix} N_{cnt} \\ N_m \end{matrix} \right\}$$
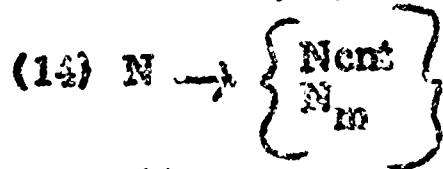
Page 11

If your students have difficulty classifying count and mass nouns, you might suggest that they use the additional test of trying to place the indefinite determiner a or an before a count noun. (Mass nouns do not accept a or an nor can they be made plural.) Conceivably, the same noun form might be a count noun in one sentence but a mass noun in another.

Frame #1 (Countable)	Frame #2 (Mass)
"How many_____(s) are there?"	"How much_____ is there?"

rainbow	sky
stove	rice
fish	blood
lure	gold
coed	iron
phone	smoke
dog	leisure
prospector	
hill	
Idaho	
railing	
room	
student	
Mary	
glasses (glass)	
table	

Exercise 1: Page 11
Answers will vary. A compiled list should be added to the students' lexicon.

Exercise 2: Page 12
Some nouns labeled below might be classified differently in other contexts (for example, food. Food is a Ncnt in the context, "He liked many different foods." which of course means different kinds of food").
Truth is a noun which fits into either category, depending on context.

A. 1.   Ncnt   Nm (Much indicates that the noun following
    Teenagers eat much food.   will be mass.)

2.   Nm
The milk turned sour.

3. Ncnt   Nm   Nm
I drink coffee without cream.

4.   Ncnt
The fields were green.

5.   Nent   Nent   (Proper nouns tend to be Nent.)
Claribel cried in her handkerchief.

6.   Nent   Nin
The men counted the money secretly.

7.   Nin   Nent
The ice on the pond went out.

8.   Nent   Nent   Nent
Dr. Whiteman pulled a tooth for me.

9.   Nent   Nent
The mouse escaped through the hole.   (escaped is misspelled in the Student Version)

10.   Nent   Nent
The cat climbed under the hood.

B. 1.   Nm   Nm
The rain washed away the soil.

2.   Nent   Nm
Are you telling the truth?

3. Nent   Nent
She had to sit in the corner.

          Nent   Nm
4. Fill the bucket with coal.

5.   Nm   Nent
His acting in the play was good.

6.   Nm   Nent
Space is the (new) frontier.

7.   Nent   Nent   Nent   Nm
The writer left a space between the lines of poetry.
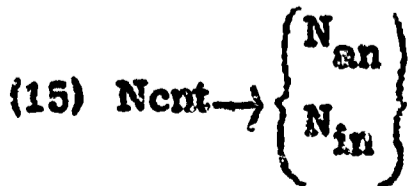
8.   Nent   Nm
The Scots showed great courage.

9.   Nent   Nm   Nm
Father shattered the silence with his snoring.

#10.   Nent   Nent Nm   Nm
Krakatoa blew a cubic mile of earth into the air.
#(Krakatoa is the name of an island.)

RULE (15): ANIMATE AND INANIMATE NOUNS

(15) Nent $\longrightarrow \left\{ \begin{array}{c} N_{an} \\ N_{in} \end{array} \right\}$

Page 13

A speaker of English would not use Sentences 1, 2, 3, 4, 5, and 9 except in a poetic way. (Students might enjoy finding and discussing poetic exceptions.)

/Acceptable (animate)	Unacceptable (inanimate)
baby	book
man	table
George Washington	chair
bear	road
	star
	bridge

Exercise 1: Page 13

Students' answers will vary. Again compiled lists of Nan and Nin should be added to their lexicons.

Page 14 (The first word in the parentheses in the paragraph in the middle of page 14 should be sleep). The nouns used as objects in the acceptable sentences (1, 4, 5, and 7) and all animate. Another test for animate nouns is that Nan would fit the frame NP + terrify + _____. Exercise 2 on page 14 reenforces this notion. #

Exercise 3: Page 14

animate nouns	inanimate nouns
boy	game
horse	rocket
butterfly	desk
policeman	bell
teacher	sky
otter	cactus
seal	car
electrician	fence
child	tree
George	
beatnik	
elephant	

RULE (16): HUMAN AND NONHUMAN NOUNS

$$(16) \quad Nan \longrightarrow \left\{ \begin{array}{c} N_{hum} \\ N_{non} \end{array} \right\}$$

It would be significant here to point out that poetry achieves a good deal of its linguistic effect by violating rules that in the normal spoken language account for the distribution of the various noun types. Personification after all is nothing more than putting a non-human noun into a context normally occupied by a human noun. Students could find examples from their literature assignments to support this.

#In the revised Student Version we have added a new test--whether or not the word always requires an it substitution. This is a more formal test and probably for that reason, more valid. The nouns in the sentences at the beginning of the section for which only an it substitution is possible are book, table, chair, road, star and bridge. The students should discover that these are also the ones he found were inanimate by the test with the verb sleep. Thus the formal distinction enforces the semantic distinction.

Exercise 1: Page 15

While all subjects in this exercise are Nan, Sentences 1, 2, 5, 8, and 13 require a <u>what</u> substitution.

		question word
1.	horse (Nan)	What
2.	butterfly (Nan)	What
3.	she (Nan)	Who
4.	policeman (Nan)	Who
5.	otter (Nan)	What
6.	They (Nan)	Who
7.	beatnik (Nan)	Who
8.	seal (Nan)	What
9.	He (Nan)	Who
10.	electrician (Nan)	Who
11.	child (Nan)	Who
12.	student (Nan)	Who
13.	elephant (Nan)	What
14.	We (Nan)	Who
15.	George (Nan)	Who

Exercise 2: Page 15

replaced by who	replaced by what
she	horse
policeman	butterfly
They	otter
beatnik	seal
He	elephant
electrician	
child	
student	
We	
George	

Page 16

Nhum may be replaced by <u>who</u>, Nnon are replaced by <u>what</u>. (One interesting exception occurs when people speak of <u>their own</u> pets. Our own pets generally seem to become <u>who.</u>)

Exercise 3: Page 16

Mexican (Nhum) who	mouse (Nnon) what
choirboy (Nhum) who	she (Nhum) who#
cobbler (Nhum) who	hamster (Nnon) what
custodian (Nhum) who	gentleman (Nhum) who
Peter (Nhum) who	Spaniel (Nnon) what#
wolf (Nnon) what	it (Nnon) what
banker (Nhum) who	
lizard (Nnon) what	

#(Possible exceptions, depending on context. We sometimes use "she" with "ship" as its antecedent.)

Exercise 4: Page 13

| inanimate nouns	animate nouns
ride	hitchhiker (Nhum)
egg	weasel (Nnon)
house	friends (Nhum)
firecracker	children (Nhum)
door	He (Nhum)
fire	Koala (Nnon)
house	sophomore (Nhum)
tree	president (Nhum)
picnic	snake (Nnon)
fun	
path	

Review: Page 17

Mass nouns answer the question "how much," count nouns answer "how many." The determiners a and an do not occur with Nm.
Animate nouns can be used as the subjects of verbs like sleep or the objects of verbs like terrify and astonish. But inanimate nouns can be replaced only
Human nouns may be replaced by who, nonhuman by what, by it, never by he or she.

Exercise 5: Pages 17-18

This assignment furnishes practice in applying the rules of analysis to NP and should show students the orderly sequence established in a definitive study of nouns. They should come to recognize which NP rules are obligatory for all nouns and which are obligatory for some nouns. (That is, while all nouns are either count or mass, only Ncnt are subdivided into Nan or Nin. And in turn, only Nan may then be divided into human and nonhuman nouns.)

A. 1. The clown rode a bicycle.

   N   N

   (14) Ncnt   Ncnt (14)
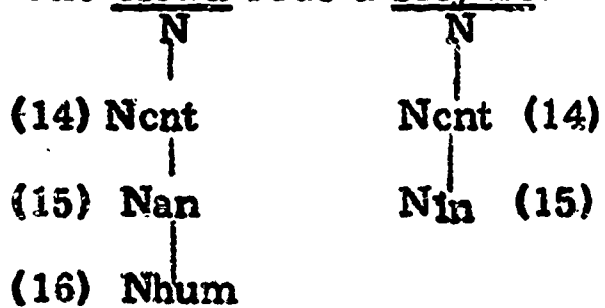
   (15) Nan   Nin (15)

   (16) Nhum

2. The milk spilled on the floor.

   N   N

   (14) Nm   Ncnt (14)

                    Nin (15)

3. A <u>coconut</u> fell on the <u>pygmy</u>.

       N   N

  (14) Ncnt   Ncnt (14)

  (15) Nin   Nan   (15)

                          Nhum (16)

4. The <u>farmers</u> took their <u>pigs</u> to <u>market</u>.

       N   N   N

  (14) Ncnt   (14) Ncnt   Ncnt (14)

  (15) Nan   (15) Nan   Nin (15)

  (16) Nhum   (16) Nnon

5. <u>Freddy</u> filled his <u>pen</u> with <u>ink</u>.

      N   N   N

  (14)Ncnt   (14)Ncnt   Nm (14)

  (15)Nan   (15)Nin

  (16)Nhum

6. <u>We</u> gave our <u>dog</u> a sleeping <u>pill</u>.

    N   N   N

  (14)Ncnt   (14)Ncnt   Ncnt (14)

  (15)Nan   (15) Nan   Nin (15)

  (16)Nhum   (16)Nnon

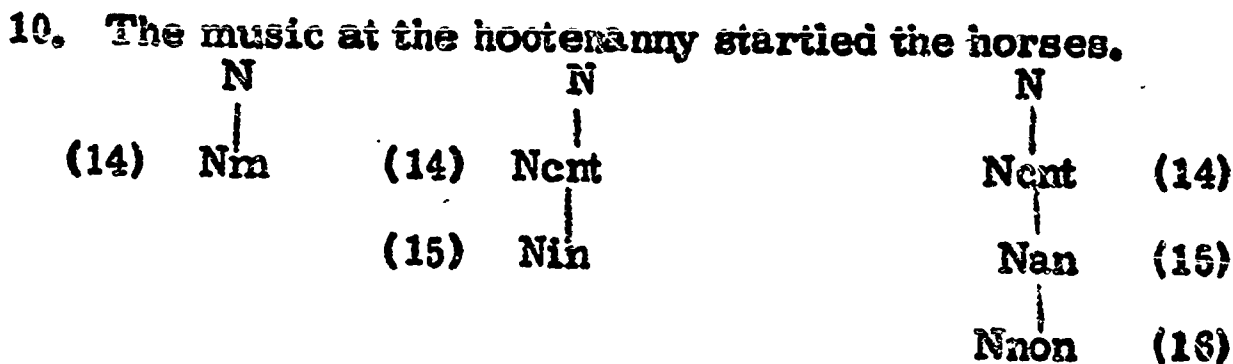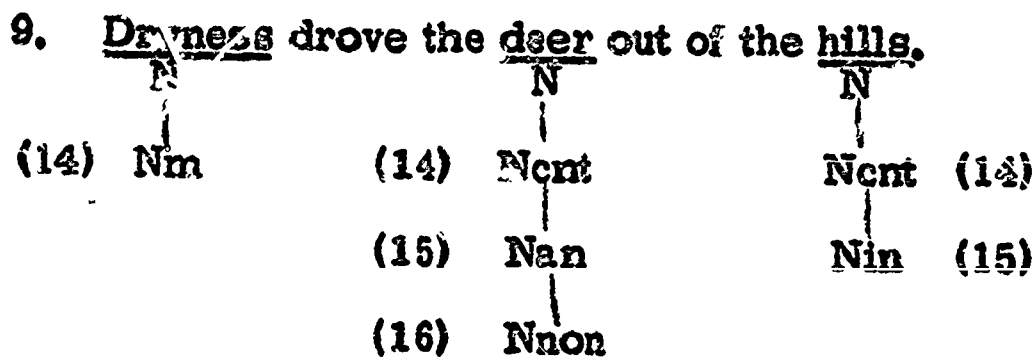7. The <u>statue</u> resembles a <u>shark</u>.

       N   N

  (14) Ncnt   Ncnt (14)

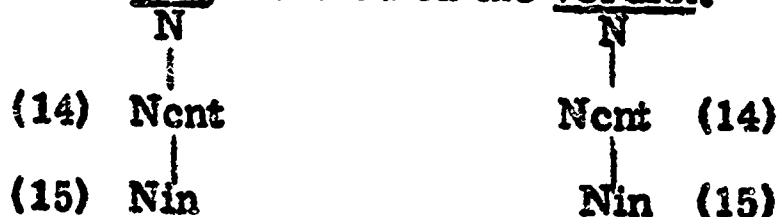 (15) Nin   Nan (15)

                       Nnon (16)

#8. The <u>chef</u> put <u>mayonnaise</u> in the <u>salad</u>.

      N   N   N

  (14) Ncnt   (14) Nm   Ncnt (14)

  (15) Nan   Nin (15)

  (16) Nhum

#(Salad may also be class'fied as Nm: "How much salad" or "How many salads." Students might like to explore both possibilities.)

9. Dryness drove the deer out of the hills.
    N   N   N

   (14) Nm   (14) Ncnt   Ncnt (14)

                    (15) Nan   Nin (15)

                    (16) Nnon

10. The music at the hootenanny startled the horses.
        N   N   N

   (14) Nm   (14) Ncnt   Ncnt (14)

                    (15) Nin   Nan   (15)
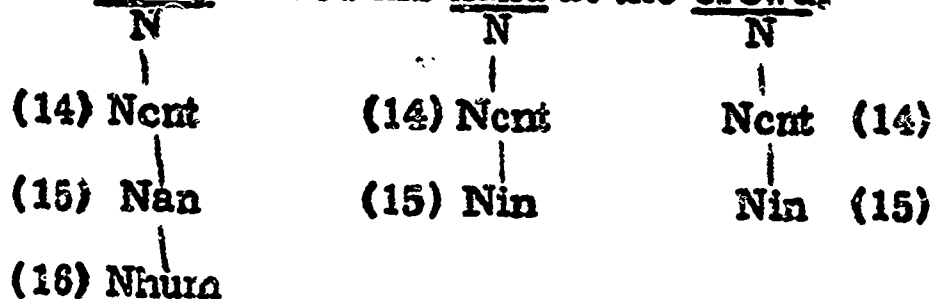
                                         Nnon (16)

B. Some of the nouns used here should challenge even your best students. Careful testing with the frames presented in the rules should be helpful.
   1. The jury decided on the verdict.
        N   N

   (14) Ncnt   Ncnt (14)

   (15) Nin   Nin (15)

   # 2. Casey waved his hand at the crowd.
        N   N   N

   (14) Ncnt   (14) Ncnt   Ncnt (14)

   (15) Nan   (15) Nin   Nin (15)

   (16) Nhum

#(Hand is inanimate because we could not say, "The lion terrified the hand.")

(Collective nouns present an interesting problem. We have a feeling that they should be human, but this is a purely semantic consideration because we can also have ". . .a crowd of . . .daffodils." Both jury and crowd fit the requirement of inanimate nouns-- ability to be replaced only by it. This is a good time to emphasize the difference between semantic and formal distinctions.)

   3. The patient received oxygen at the hospital.
        N   N   N

   (14) Ncnt   (14) Nm   Ncnt (14)

   (15) Nan   Nin (15)

   (16) Nhum
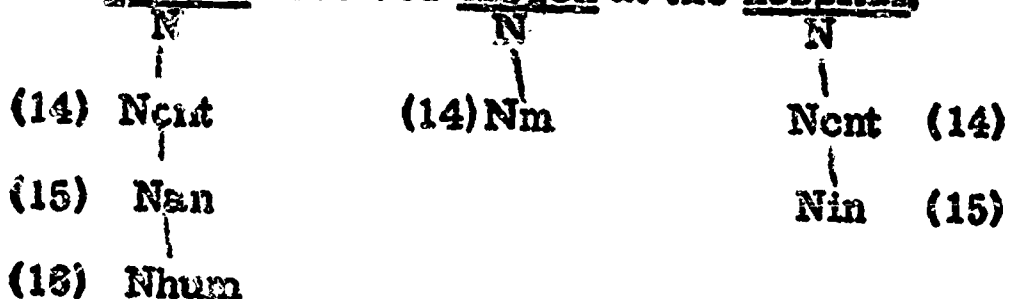
4. <u>Helicopters</u> carried <u>equipment</u> to the <u>seamen.</u>
      N   N   N

(14) Ncnt   (14) Nm   Ncnt (14)

(15) Nin   Nan   (15)

                                      Nhum (16)

5. <u>Fire</u> is the greatest <u>danger</u> to our <u>forests.</u>
    N   N   N

(14) Ncnt   (14) Ncnt   Ncnt (14)

(15) Nin   (15) Nin   Nin (15)

(In some senses, <u>fire</u> and <u>danger</u> might be considered mass nouns. However they both occur in the plural which indicates their countable nature.)

6. The <u>beavers</u> needed <u>time</u> to build a <u>dam.</u>
       N   N   N

(14) Ncnt   (14) Nm   Ncnt (14)

(15) Nan   Nin (15)

(16) Nnon

7.   <u>Light</u> filled the <u>room</u> from above.
        N   N

(14) Nm   (14) Ncnt

                (15) Nin

(Above is not a noun but part of an adverbial phrase with the object deleted.)

#(<u>Light</u> seems to qualify as a mass noun in this sentence because it fits the frame "How <u>much</u> light <u>is</u> there?" To fit "How many_____are there?" the sentence would need to be "The lights_filled the room.")

8. His <u>sleeping</u> was not disturbed by the <u>quacking</u> of the <u>ducks.</u>
       N   N   N

(14) Nm   (14) Nm   Ncnt (14)

(You may wish to skip this sentence. <u>Sleeping</u> and <u>quacking</u> are actually transforms from <u>He sleeps</u> and <u>Ducksquack.</u> They shouldn't be considered in the phrase structure rules. They can't be classified like regular nouns.)   Nan (15)

                                              Nnon (16)

9. <u>Mice</u> had been eating the <u>grain</u> in the <u>cellar.</u>
       N   N   N

(14) Ncnt   (14) Nm   Ncnt (14)

(15) Nan   Nin (15)

#(Your students will probably notice that the noun <u>grain</u> would be <u>Ncnt</u> in a sentence such as "Several different <u>grains</u> were stored in the tank." In this case we have the sense of "different kinds of grain.")

10. His <u>enthusiasm</u> made <u>everyone</u> want to wash <u>dishes</u>.

$$\text{N} \qquad\qquad \text{N} \qquad\qquad \text{N}$$

(14) Nm	(14) Ncnt	Ncnt (14)
	(15) Nan	Nin (15)
	(16) Nhum	
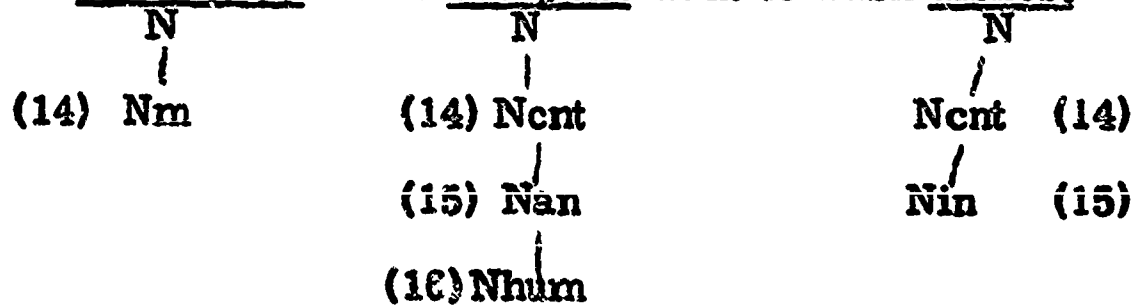
RULE (17): NUMBERS OF MASS NOUNS

$$(17) \quad \text{N}^{\text{o}} \longrightarrow \text{sing in the context } \text{N}_{\text{m}} + \underline{\qquad\qquad\qquad\qquad}$$

or

$$\text{N}_{\text{m}} + \text{N}^{\text{o}} \longrightarrow \text{N}_{\text{m}} + \text{sing}$$

This rule is simple but of basic importance, for it is the only example of a context-sensitive rule in the first-year grammar. But since the development in the following grades will depend largely on rules of this type, it is important that students understand clearly the difference between (17) and all other rules of this grammar.

(See paragraph 4, p. 19 in <u>Phrase Structure Rules, 13-18</u>, Student Version.)

Page 19

Some <u>nouns</u> will appear in several categories. We should probably think of them as two different nouns when this happens.

Exercise 1: Page 19

1.	are	6.	are
2.	is	7.	are
3.	is	8.	is
4.	are	9.	is
5.	is	10.	is

Page 20

Additional information about subject-verb agreement appears in the student

usage handbook. If your students have a problem in using the standard forms of subject-verb agreement, this might be the logical time for them to explore standard usage rather carefully.

Exercise 2: Page 20

Although this exercise was designed to emphasize that while Ncnt may be either singular or plural, Il... must be singular, it also provides a review of verb classes and other NP rules. Several nouns used in B lack determiners.

A. 1. T + Nm + one + pres + M + Be + adj

The   cereal   will   be cold.

2. T + N + one + pres + have + en + be + ing + Vin

The   army   has   been   retreating.

3. T + Nm + one + pres + be + ing + Vin + adj + ly

Ø   Corn   is   popping   cheerily.

4. T + Nm + one + past + be + ing + Vlnk + adj

The   heat   was   becoming   unbearable.

5. T + Nhum + more than one + pres + have + en + Vtr + T + Nhum + more t

The   boys   have   challenged the   girls.

B. 1. T + Nm + one + pres + have + en + be + ing + Vin + adj +

Ø   Time   has   been   passing   quick

2. T + Nnon + more than one + past + be + ing + Vtr + T + Nnon + more one

The   sheep   were following the   dogs.

3. T + Nm + one + pres + Vmid + T + Nin + one

The   radium   weighs   an   ounce.

4. T + Nin + one + pres + have + en + be + ing + Vlnk + adj

This   herd   has   been   looking   sick.

5. T + Nm + one + pres + have + en + Be + T + Nin + one

Ø   Pride   has   been   a   weakness.

RULE (18): SINGULAR AND PLURAL

$$(18) \quad N^o \longrightarrow \begin{Bmatrix} \text{sing} \\ \text{plur} \end{Bmatrix}$$

Notice the economy of statement that is achieved by placing the context-sensitive rule in a position before the context-free rule. If we were to reverse the order of the rules we would find the complications increased. We can perhaps see the difference in complication if we put what the two rules are saying into prose: The order (17)-(18) gives us a statement like 'Number becomes singular if the noun preceding it is a mass noun: otherwise number can be either singular or plural.' The order (18)-(17) gives us a statement like 'Number becomes singular or plural unless the noun preceding number is a mass noun, in which case number can only become singular.' Ideally, context-sensitive rules will precede the more general context-free rules.

Exercise 1: Page 21

At present our rules do not allow for a close analysis of <u>most</u> in Sentence 6. (Words like <u>most</u>, <u>few</u>, <u>some</u>, etc will probably be classified as predeterminers in the subsequent exploration of determiners.) For this reason you might justifiably ask students to omit "most of" in Sentence 6.

1.   plur   sing
The <u>locusts</u> in the <u>tree</u> sang shrilly.

2.   plur
The <u>floors</u> had been waxed.

3.   sing   plur
The <u>box</u> was full of <u>tests</u>.

4.   plur   plur   sing
The <u>men</u> wouldn't put their <u>cars</u> in the <u>garage</u>.

5.   sing   sing   sing
<u>Cream</u> comes to the <u>top</u> of <u>milk</u>.

6.   plur   sing
The <u>robbers</u> escaped with the <u>money</u>.

7.   sing   sing   sing
The <u>cement</u> for the <u>patio</u> is in the <u>wheelbarrow</u>.

8.   sing   sing
A <u>guest</u> knocked at the <u>door</u>.

9.   plur   sing
<u>People</u> are coming for <u>dinner</u>.

10. sing   sing   sing
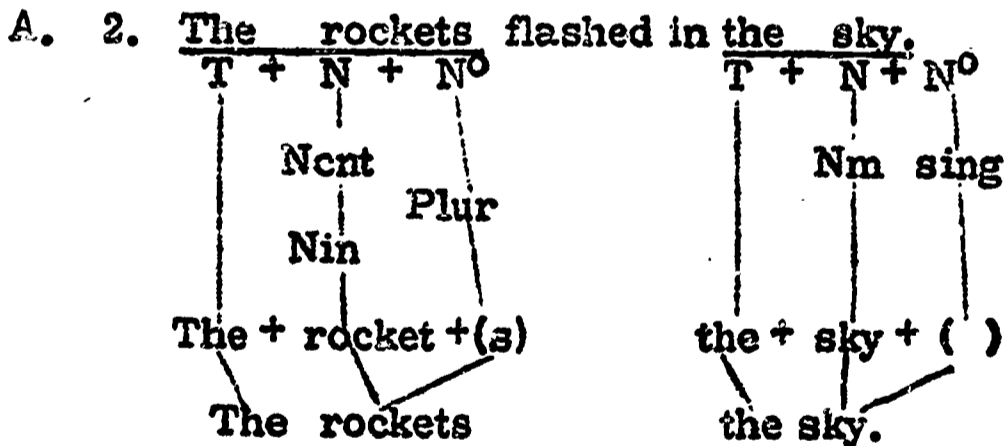<u>He</u> will never finish the <u>exam</u> on <u>time</u>.

Exercise 2: Pages 21-22

#A. 1. triangle - triangles   #(There is a section on forming
     2. girl - girls   plurals in the Usage Manual.)
     3. goose - geese
     4. fly - flies
     5. bird - birds
     6. child - children
     7. cell - cells
     8. verb - verbs
     9. milk - (no plural form)
     10. pencil - pencils

B. 1. school - schools
     2. valley - valleys
     3. town - towns
     4. editor - editors
     5. woman - women
     6. cooky or cookie - cookies
     7. mouse - mice
     8. horse - horses
     9. pie - pies
     10. cake - cakes

Exercise 3: Pages 22-23

You may need to remind students that sometimes $T \rightarrow \emptyset$. (See Sentences 3, 5, and 10 in A.)

A. 2. The rockets flashed in the sky.

$T + N + N^o$ $T + N + N^o$

Ncnt   Nm   sing

       Plur

Nin

The + rocket + (s)   the + sky + ( )

    The rockets   the sky.

(NOTE:
It proved confusing to use (s) and ( ) as the sign of plural and singular. Ask your students to simply bring down plur or sing into the string as in the example in their text. Otherwise they should appear the way they do here.)

3. That car is covered with tar.

$T + N + N^o$ $T + N + N^o$

Ncnt   Nm
        sing   sing

Nin

That + car + ( ) $\emptyset$ + tar + ( )

    That car   tar
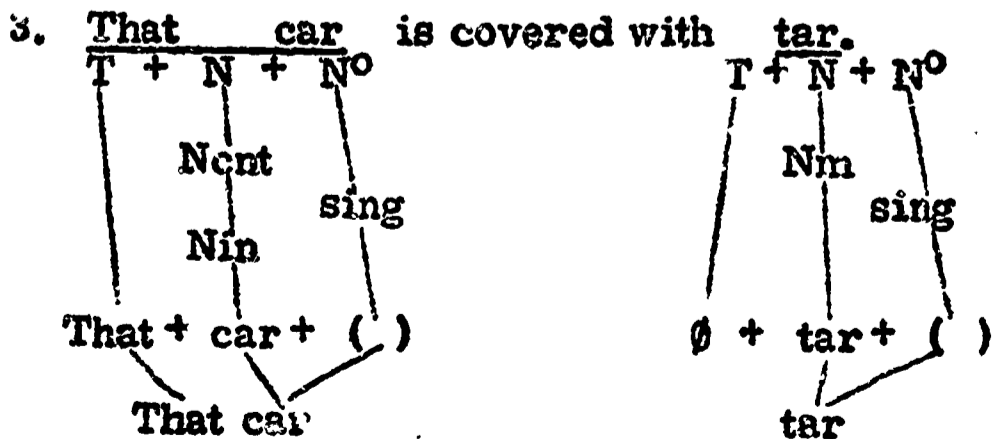
4. <u>The   girl</u>   played with   <u>the   puppies.</u>

$\overline{T + N + N^O}$ $\overline{T + N + N^O}$

Ncnt   Ncnt

     sing   plur

Nan   Nan

Nhum   Nnon

The + girl + ( )   the + puppy + (s)

    The girl   the puppies
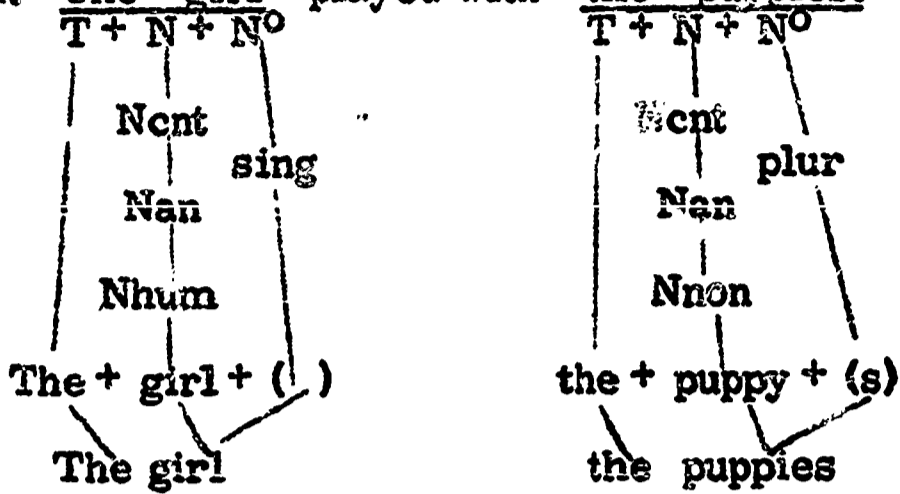
5. <u>Silver</u>   will never turn to   <u>gold.</u>

$\overline{T + N + N^O}$ $\overline{T + N + N^O}$

Nm   Nm

     sing   sing

$\emptyset$ + Silver + ( ) $\emptyset$ + gold + ( )

    Silver   gold
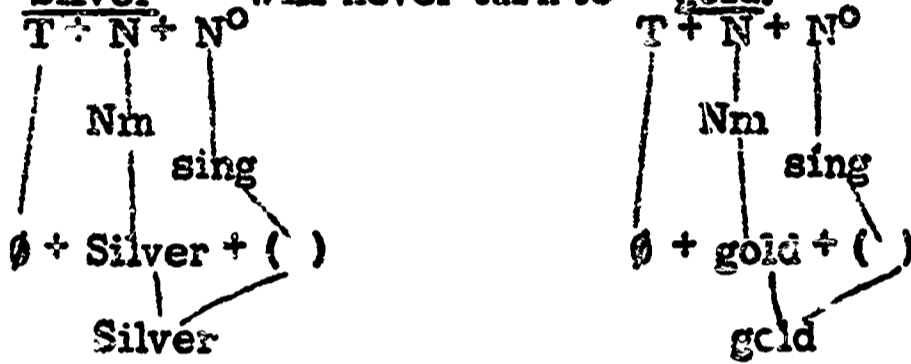
6. <u>A   frog</u>   croaked in   <u>the   swamp.</u>

$\overline{T + N + N^O}$ $\overline{T + N + N^O}$

Ncnt   Ncnt

     sing   sing

Nan   Nin

Nnon

A + frog + ( )   the + swamp + ( )

  A   frog   the   swamp.
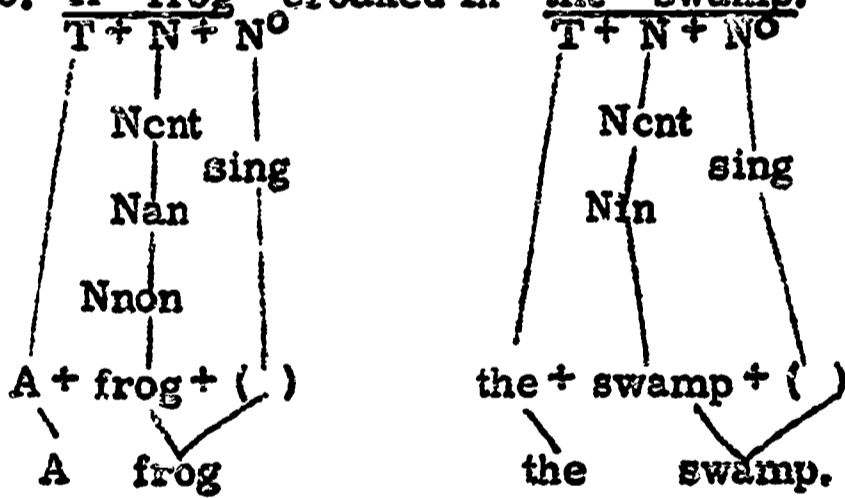
7. <u>The astronauts</u>   were standing by   <u>the   tower.</u>

$\overline{T + N + N^O}$ $\overline{T + N + N^O}$

Ncnt   Ncnt

     plur

Nan   Nin

Nhum

The + astronauts + (s)   the + tower + ( )

  The   astronauts   the   tower

3. The rhododendrons will soon bloom on the coast.

```
T + N + Nᵒ                                    T + N + Nᵒ
     Ncnt                                          Ncnt
            plur                                          sing
     Nin                                          Nin
The + rhododendron + (s)                      the + coast + ( )
     The    rhododendrons                         the    coast
```

9. The posse was looking for the camp.

```
T + N + Nᵒ                                    T + N + Nᵒ
     Ncnt                                          Ncnt
            sing                                          sing
     Nan                                          Nin
     Nhum
The + posse + ( )                             the + camp + ( )
     The    posse                                 the    camp
```

10. Scheherazade told the Sultan stories of love.

```
T + N + Nᵒ              T + N + Nᵒ              T + N + Nᵒ              T + N + Nᵒ
     Ncnt                    Ncnt                    Ncnt                    Nm
            sing                    sing                    plur                    sin
     Nan                    Nan                    Nin
     Nhum                   Nhum
∅ + Scheherazade + ( )  the + Sultan + ()     ∅ + stories + (s)      ∅ + love + ( )
     Scheherazade             the    Sultan              stories                love
```
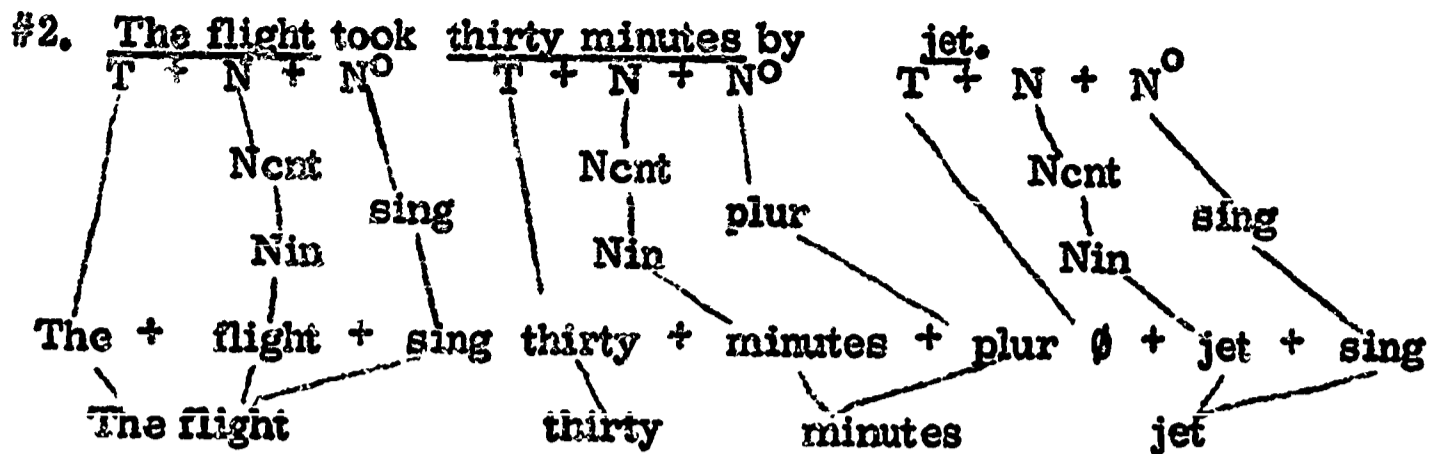
B. 1. Beauty is in the eye of the beholder.

```
T + N + Nᵒ              T + N + Nᵒ              T + N + Nᵒ
     Nm                      Ncnt                    Ncnt
            sing                    sing                    sing
                             Nin                     Nan
                                                     Nhum
∅ + Beauty + ( )        the + eye + ( )         the + beholder + ( )
     Beauty                  the   eye               the    beholder
```

#2. The flight took thirty minutes by jet.

$T + N + N^o$ $T + N + N^o$ $T + N + N^o$

Ncnt   Ncnt   Ncnt

sing   plur   sing

Nin   Nin   Nin

The + flight + sing   thirty + minutes + plur   ∅ + jet + sing

The flight   thirty   minutes   jet

#(At his point students may treat thirty as T.)

3. The crew is adding turpentine to the fire.

$T + N + N^o$ $T + N + N^o$ $T + N + N^o$

Ncnt   Nm   Ncnt

Nan   sing   sing   Nin   sing

Nnon

The + crew + sing   ∅ + turpentine + sing   the + fire + sing

The crew   turpentine   the fire

4. Deer cross the pasture for food.

$T + N + N^o$ $T + N + N^o$ $T + N + N^o$

Ncnt   Ncnt   Nm

Nan   plur   sing   sing

Nnon   Nin

∅ + Deer + plur   the + pasture + sing   ∅ + food + sing

Deer   the   pasture   food

5. Thinking separates men from beasts.

$T + N + N^o$ $T + N + N^o$ $T + N + N^o$

Nm   Ncnt   Ncnt

sing   plur   plur

Nan   Nan

Nhum   Nnon

∅ + thinking + sing   ∅ + man + plur   ∅ + beast + plur

Thinking   men   beasts

(Again, we have a gerund (thinking) which is the result of a transformation and hence should not be considered in the phrase structure. You may want to skip it.)

C. Students will not be able at this time to generate the <u>Loc</u> elements in
Sentences 1 and 5. (<u>Loc</u> will be added in the expansion of phrase
structure rules.)

1. T + Nhum + sing + past + Vin + down the slope + adj + ly

   The   skier   slid   down the slope   smoothly.

2. T + Nin + plur + pres + have + en + Vlnk + adj

   The   redwoods   have   grown   gigantic.

3. T + Nnon + sing + pres + have + en + be + ing + Vtr + T + Nin +

   The   hamster   has   been   chewing   the   cag

4. T + Nm + sing + pres + have + en + be + ing + Vin + adj + ly

   ø   Water   has   been   dripping   slowly.

#5. T + Nhum + plur + pres + M + be + ing + Vin + to school + adj +

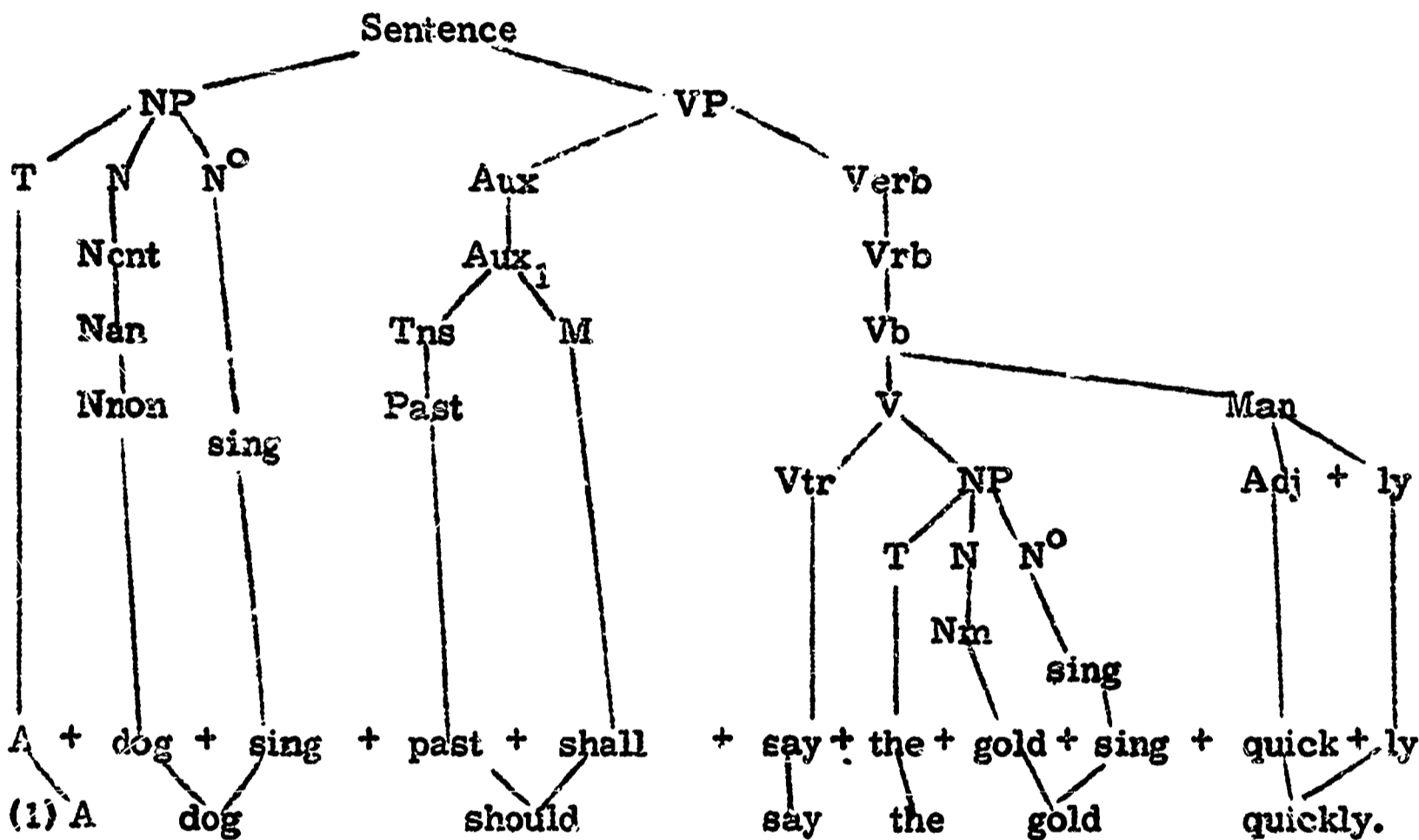   The   freshmen   will   be   going   to school relucta

SUMMING UP

Before proceeding to the transformational part of the grammar, your class
should build or add to the lexicon. A good many words that satisfy the con-
ditions for membership in the separate terminal categories should be added
to those already mentioned in the various exercises and lessons.* (Original
sentences composed by students might be a good source of items.) Building
up the lexicon will serve a number of purposes:

(1) Only through frequent application of the conditions under which a
given verb, say, can be assigned to a verb category will the infor-
mation in the rules about English be firmly implanted in the minds
of the students. Without a complete understanding of the basis for
making any given rule, the rule is useless.

(2) Finding that a given word must be placed in several categories
(depending on what conditions it can or cannot satisfy)
will reveal that grammatical contrasts and differences often underlie
those which are semantic: for example, <u>look</u> as <u>Vlnk</u> in "He looked
unhappy.", but as <u>Vin</u> in "He looked quickly." (Thus the semantic
ambiguity of "He looked hard.")

(3) A lexicon of some significant size will insure more variety and interest in Exercise 3, pages 26-27.

After the lexicon has been built up, the students should proceed to the mechanical generation of sentences. In concert or individually they should run through the rules taking arbitrary choices wherever a choice is offered, skipping rules whose left members do not appear in the strings they are getting out. All terminal lexical symbols should be converted into words and the resulting sentences should be examined by the class. The adequacy and inadequacy of the sentences should give some measure of the adequacies and inadequacies of the present grammar. For instance, consider the following randomly generated sentence:

```
                        Sentence
             NP                        VP
        T    N    N°        Aux              Verb
          Ncnt         Aux₁                Vrb
          Nan      Tns      M              Vb
          Nnon    Past                      V              Man
                  sing                Vtr    NP        Adj + ly
                                          T  N  N°
                                            Nm
                                              sing
A  +  dog  +  sing  +  past  +  shall  +  say + the + gold + sing + quick + ly
(1) A       dog              should         say    the     gold       quickly.
```

Now certainly this sentence is foolish, and nonsensical. But just as certainly, it is (in some sense of the word) grammatical: in terms of the brief grammar we have presented the students with, it is as grammatical as the quite ordinary

(2) A dog should chew a bone quietly.

We might want to say that (1) is grammatical but semantically peculiar. And this would be a precise and correct statement at this level of the grammar's development. But as we develop the grammar through the grades we shall see the world of semantics ever fleeing before us, for newer and more powerful and more precise (context-sensitive) phrase structure rules will allow the grammar to occupy a good deal of the linguistic territory normally accorded semantics.

Of course, as has been mentioned above from time to time, clearly ungrammatical sentences can result from the grammar as it now stands because

of some important restraints not having been built into it. We have already
discussed nonsentences like

(3) The boy is the students.

The difficulty here is certainly of a different order from that in (1), for a
primary rule of English grammar is violated in (3)--that of agreement.
Probably few sentences of this kind will result from student generation:
they will be intuitively corrected along the way. But if such sentences and
questions about them do come up, you might say that a (transformational)
rule will be developed in a later stage of the grammar to insure the necessary
agreement of NP's across Be and Vlnk. No other clearly ungrammatical
sentence type should result from the rules. Note, however, that a good
part of turning a terminal string into an English sentence is left to the
student's intuitive understanding of how to interpret past, sing, plur, etc.
We have left these concepts completely unformalized at this stage in the
grammar's development. Since the handling of these matters is so auto-
matic (what speaker of English beyond his very earliest years doesn't know
that man + plur ─→ men?), few problems should develop here. (However,
there is opportunity here to emphasize again the socially preferred past
and past participle forms of verbs like go, run, drink, etc.)

Exercise 1: Page 25

A student's list should look like this: pres, past, have + en, be + ing, M
Be, Vlnk, Vmid, Vtr, Vin, Adj, Loc, ly, T, Nm, Nin, Nhum, Nnon, sing,
and plur. Because pres, past, en, ing, ly, sing, and plur don't become
words of the language, they are called grammatical symbols.

Exercise 2: Page 26

Students should be encouraged to expand their lexicons as much as possible.

Exercise 3: Page 26

Students should have fun doing this exercise which culminates their study
of the eighteen basic phrase structure rules. To make this assignment
most rewarding, you may want to advise them to "stay out" of the generating
as much as possible. That is, encourage them to let their grammar really
do the work with a minimum of manipulation on their part.