A study guide was prepared for student use in a seventh-grade language curriculum. Background information about language purpose and structure were presented with discussions of English sentence structures, English grammar, and symbols of linguistic significance. Appropriate exercises were included to afford practice with 12 phrase structure rules and their linguistic symbols. An accompanying guide was prepared for teachers (ED 010 1461).
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GRAMMATICALITY

Importance of Language.
Have you ever thought about what your life would be like if there were no language? There would of course be no books, no television, no movies. How would you, without language, invite your friends to your house for a party? How would you tell them when to come? Could your mother bake a cake without language? Would there be any notion of measurement? Would anyone have been able to invent the automobile, not to mention our space satellites? Can you think of any of the things we do or have--those that animals do not do or have--which would come about without language?

Since language is such an important part of us, and so vital to the kind of lives we live, it is interesting to study how it works. And that is what we do when we study the grammar of a language. We try to find the rules that explain why we make sentences in a certain way. So far we know how to put the sentences together and how to make sentences we have never heard before, and even how to understand sentences we may never have seen before, but we don't know how to talk about them.

The Grammar of the Language.
The knowledge we have which enables us to make the sentences of our language is called the grammar of the language. And we say a language has "grammaticality", which means it can be explained by a grammar.

Now you may have heard about something called grammar. Maybe you have even studied a subject which your teachers called grammar. Many young people your age have the notion that grammar is something you have to study so that you know how to speak correctly. If perhaps you feel that you don't know very much about it, the following exercises should prove to you that you actually do know a great deal about the grammar of English. You use it every day.

You Are a Walking Grammar.
Look at the following groups of words. Some of them are grammatical English sentences. Some are not. Which ones would you call grammatical? On your paper write E after the numbers of the grammatical English sentences, and non-E after those you consider nongrammatical.

1. John lost his report card.
2. Cats the birds stalk.
3. The story interesting to me was.
4. The story was difficult for me.
5. Jeremy couldn't finishing the exam.
6. Margaret couldn't find his pen.
7. This music sounds good.
8. At him has she the pillow thrown.
9. The jack-knife that I took on the camping trip.
10. The apple sour tastes.
11. Where have you been?
12. It was a beautiful quietly.
13. These memory stand out in my mind.

What sentences did you select as acceptable grammatical English sentences?

You were able to select these sentences because you are a speaker of English. Any native speaker of English could select them. As a matter of fact, you were able to recognize English sentences long before you started to school, though you probably weren't aware of it. You certainly were able to make up and use English sentences, and you did it without even thinking about it. And today, even though you have not had any training in what makes a sentence and might have trouble trying to tell someone what a sentence is, you do make sentences whenever you talk.

We have within us something which makes it possible for us to turn out sentences in our language. We might say we have in our minds a sentence-making machine with which we can put the proper words together in the proper order so that they come out English sentences. The grammatical process which we have built into us might be thought of as a machine into which the various elements of the language go. They pass through the machine (the grammatical process) and come out acceptable English sentences.

Language of the child's environment. \(\rightarrow\) The grammatical process \(\rightarrow\) The child's knowledge of grammar as shown by the sentences he uses.

Because native speakers have this built-in ability, we say they have an intuitive knowledge of their native language, which means that they are able to use it without being taught.

**Exercise 1:**
To prove to yourself that you have this kind of built-in knowledge, see if you can put the following groups of words together to make English sentences.
1. around the old corner the limped man
2. the fat sat smugly *oad pad on his
3. his class could the new not boy find
4. vitamins you gives spinach
5. rocket air off the in went the
6. first Oswald finished was
7. permission you gave to go she

You knew how to put these words together to make English sentences without thinking of any rules. But a person who speaks a language other than English, say a 7th grader in France, could not have produced English sentences from the groups of words. Nor could you make a French sentence out of the following groups, though your French counterpart could:

parlent vitement hommes les garcons aux
moi les livres donnez plait s'il vous

Some Aspects of Language.
What are some of the things we can observe about language? Perhaps one thing we can do is to find out something about its limits. In a preceding exercise, you discovered that you can produce English sentences out of a group of English words. Do you realize that it is also possible to construct many different sentences out of a limited group of words?

Exercise 2:
Following are some groups of words. See how many different English sentences you can construct out of each group. You may use all the words or select various combinations. You may use the same word more than once in each sentence if you need to.

1. man, dog, house, street, and, in, on, with, ran, kicked, the, from
2. ball, through, went, hit, and, the, boy, window, which
3. notebook, write, brought, to, in, Carolyn, school, front, the, a, is, of
4. thinking, is, are, class, the, boy, in, of, about, Napoleon
5. campfire, out, put, in, for, scouts, the, was, by, quickly
6. alligators, buy, the, for, found, the, boys, food, were, by
7. subject, of, is, the, a, seventh, class, studies, grade, book, astronomy, about
8. mug, broke, on, cat, pushed, and, fell, it, the floor
9. which, after, the, cat, mice, ran, around, yellow, was
10. you, whom, like, friend, a nice is, someone
11. money, the, him, bank, gave, George, to, for, yesterday
12. birds, frightened, scarecrow, the, it, which, on, sat
13. turned, out, the, which, machines, he, information, them, gave
You see that because you have had experience using your language for some twelve years you are able to create many sentences from a limited number of words. You needn't even have used these sentences before. Perhaps you would now agree that there is no limit to the number of sentences that can be produced by the words of our language. Practice with a limited number of sentences of the language gives you a knowledge of how the language works for an infinite number of sentences—just as practice with a limited number of multiplication problems gives you the knowledge to work an infinite number of problems.

Its Relation to Meaning.

Another aspect of our language, of course, is that it is used to convey meaning. People usually feel that a sentence isn't grammatical if it doesn't mean something. Let us try to decide if this is really true.

Exercise 3:
Look at the following sentences. Do some of them look like grammatical English sentences? On your paper label the ones which you feel are grammatical English sentences with E.

1. The woozles whiple in the blanton.
2. Careless spotted dreams wish cautio'sly.
3. Fragments quickly the knots tie.
4. The popples were gathered into the strangful trexes.
5. Spreely the introlls flathoring to me.
6. The chacos to the smat kalted.
7. Very simberly the frumbifs pordulated five whizzes through an oonboon.

Some of these sentences were composed of nonsense words, words which don't really exist in English, but even with these words it is possible to detect a difference between an English and non-English sentence. Would you say then that what makes a sentence is or is not the meaning?

Exercise 4:
See if you can construct sentences by assigning these nonsense words to any position you think correct. You may add connecting words such as of, in, to, and, etc., and words like the, a, an, which we will call determiners.

<table>
<thead>
<tr>
<th>blantly</th>
<th>frumsit</th>
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<tbody>
<tr>
<td>faberous</td>
<td>bockitize</td>
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<tr>
<td>chindles</td>
<td>leedows</td>
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<td>schmonz</td>
<td>simously</td>
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<tr>
<td>todded</td>
<td>quinful</td>
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</tbody>
</table>

How did you decide where to place the nonsense words in a sentence?

Relation to Truth.

And now consider the following sentences.

1. The fish in the top hats refused to cast their vote.
2. Queen Elizabeth pitched a no-hit game for the New York Yankees.
Are these sentences true? Are they sensible? Would you say that a group of words does or does not have to be true to be considered an English sentence?

Exercise 5:
Can you find any kind of meaning in any of the following groups of words? On your paper write M after the number of any group which conveys some meaning. Place E after the numbers of those which are also grammatical English sentences.

1. Queen Elizabeth the throne rules.
2. The fish almost biting never.
3. In America every children must to go to school.
4. Happily sings this boy the song.
5. The opera stunning the boy sang.
6. The story is found in the anthology.
7. Have you a parking permit?
8. Seventy pounds was weighed by the boy.
10. Elizabeth the man's head cut off.
11. The pyramid became finished.
12. Need you a parking permit.

You probably labeled all of the groups of words M but only part of them E. This indicates that meaning isn't what determines the grammaticality of the sentence, since you can have meaning without having a grammatical utterance and a grammatical utterance without meaning.

REMEMBER

1. Some grammatical sentences are meaningless, nonsensical or untrue.

2. Some groups of words convey a kind of meaning, but still are not grammatical English sentences.

   What conclusions can we draw? If it isn't the meaning, or the truth, that determines whether an English utterance is a grammatical sentence, then what is it?

3. A sentence has something that makes it an acceptable English sentence. We call this quality grammaticality.

   The grammar of English explains grammaticality. Our task in this course will be to find out what makes up this grammar, what it is we are doing when we turn out English sentences, and to understand this process.
THE ENGLISH SENTENCE

If we want to understand what an English sentence really is and how it is put together, we must examine the various parts of the sentence and see how they are related. We will start by looking at very simple English sentences. When you first learned how to multiply you began with very simple problems. From these simple problems you were able to understand how the multiplication process works. And with this understanding you were able to proceed to more complex problems. In the same way, in the study of the English language we must begin with the most simple sentences. When we understand how these simple sentences work, we can proceed to more complex sentences.

The simple sentences we shall be working with are sometimes called kernel sentences. All the sentences of the language are either kernel sentences or are derived from kernel sentences; that is, they grow out of the kernels. So when we look at kernel sentences we are looking at the basic sentences of our language. You won't often find kernel sentences among the sentences that you hear or the ones you actually speak. Most of your sentences are more complex. Kernel sentences often resemble the sentences a very young child might use. A three-year old might say "The car runs." "The car runs fast." "The car is black." You would probably say "The big black car is running fast down the street." But the utterances of the three-year old have all the necessary parts of an English sentence. They are kernel sentences.

Exercise 1:
Look at the following groups of words. Do you recognize them as sentences of English? Notice that they have been divided by a vertical line. Now take a piece of paper or a ruler and cover the first part of each group to the left of the vertical line. Ask yourself if the part to the right is a sentence? Now cover the part of each group to the right of the line and see if what remains is a sentence. Now look at both parts of each group together and see if you have a sentence.

For example:
The teakettle | whistled
The teakettle | This (is, is not) a sentence.
whistled This (is, is not) a sentence.
The teakettle | whistled. This (is, is not) a sentence.
From your examination of these sentences it should be obvious that there are two essential parts in an English sentence. Did you notice that the division between the two essential parts does not necessarily come in the middle? Sometimes one part is much longer than the other.

The Symbols of Linguistics.

In mathematics you use certain symbols like + or - or ÷ to indicate the relation between numbers or to indicate a process. Linguists, or people studying and talking about language, also have a set of symbols. They call the part of the sentence to the left of the vertical line the noun phrase and use the symbol NP to indicate it. The part to the right they call the verb phrase and use the symbol VP to indicate it. Linguists have borrowed the plus symbol (+) from mathematics and use it as the mathematicians do to indicate that two or more elements can be added and that the whole can be written as the sum of its parts. Hence, 4 can be written as 2 + 2. Another symbol used in linguistics is -- which means "is rewritten as." By making use of these linguistic symbols we can say that a sentence is rewritten as a noun phrase plus a verb phrase:

Rule (1) Sentence --- NP + VP
Notice that we have made a string of linguistic symbols which stand for the sentence. When talking about the sentence "The teakettle whistled" we can say Sentence → the teakettle + whistled. We say this is a string. We will find that as we identify more and more elements of the English sentence we will be breaking NP and VP into parts, thus making our strings longer and longer.

Notice that some of the sentences in Exercise 1 are more complicated than our sample sentences but that they still have the two essential parts, the noun phrase and the verb phrase, which have been expanded. Let us see how we might expand the noun phrase part of the sentence The teakettle whistled.

The red teakettle               \whistled.
The big red teakettle           \whistled.
The big red teakettle with the crooked handle \whistled.
The big red teakettle which I bought \whistled.

And here are some ways we can expand the verb phrase:

The teakettle \whistled merrily.
The teakettle \whistled very merrily.
The teakettle \whistled very merrily in the kitchen.

And we expand both parts at the same time:

The big red teakettle which I bought \whistled merrily in the kitchen.

All of the words which we have added to the sentence have been added either to the noun phrase or the verb phrase. They make the sentence more interesting but don't change the basic structure.

Exercise 2:
Indicate what the NP and the VP are for the sentences in Exercise 1 by attaching the symbols to them in this way:

Sentence → NP + VP
The teakettle + whistled

Exercise 3:
Here are some groups of words. Some are noun phrases, some are verb phrases. The noun phrases, of course, are those you can place on the left of the vertical line. Select the noun phrases and place them in one column on your paper. Then match with them the appropriate verb phrases to form sentences.
the rabbit
isn't used anymore
the man on the horse
the old white lighthouse
is very spooky
the spark plugs on the car
stirred the bubbling caldron
a lovely bouquet of flowers
burned out
sat on the teacher's desk
is called Mrs. Red
the Hallowe'en goblin
rode all night
the witches in the play
that crazy kid
the fat orange mouse
has no batteries
disappeared around the corner
will break his neck
my little transistor radio

Exercise 4:
Here are some noun phrases. See if you can
think of verb phrases to go with them to make an
English sentence. Write the complete sentence on
your paper, putting a + between the NP and the
VP.

1. My closest neighbor +
2. His favorite book +
3. The school on the hill +
4. The bell in the tower +
5. The yellow brick road +
6. A cart full of popcorn balls +
7. The crooked man with the crooked cat +
8. A big ship in a bottle +
9. The walleyed vireo +
10. Fat black cats. +

And here are some verb phrases. Provide ap-
propriate noun phrases to go with them to make
English sentences. Write the sentence on your
paper. Place a + between the NP and VP.

1. + found the ball where he had left it.
2. + ran in circles.
3. + never gave up.
4. + made a terrible mistake.
5. + fell in the trash heap.
6. + cut a hole in the wall.
7. + is a good actor.
8. + whistled in the dark.
9. + played very cleverly.
10. + gave John the mumps.
Exercise 5:
Here is a group of kernel sentences. Write each one on your paper and place a + between the noun phrase and the verb phrase. Then rewrite each sentence to see in how many ways you can expand the noun phrase and the verb phrase in the same way that we expanded "The teakettle whistled."

1. The baby cries.
2. The children play.
3. The man lands the fish.
4. The girl writes.
5. The clown kicks the mules.
6. The child sleeps.
7. The boys find the dog.
8. The butler closes the door.
9. The maid breaks the cup.
10. The fish leaps.

Exercise 6:
The following exercise is the reverse of the one you have just finished. You are given a number of sentences whose NP and VP have been greatly expanded. Copy each sentence on your paper, placing a plus (+) between the VP part of the sentence and the NP part.
Then try to cross out all the words and phrases which you feel aren't essential. That is eliminate everything you can and still have a grammatical English sentence. When you are through, write your simplified sentence on the line beneath.

A. 1. The soccer player broke the library window.
2. The angry player left the field unexpectedly.
3. The man with the cart is the mailman.
4. The man who is pushing the cart is the mailman.
5. The friendly kittens next door climbed the thorny tree.
6. The swaying dancers looked sleepy.
7. The door of the gym is open.
8. The limping man is a good carpenter.
9. The student with the highest score wins a radio.
10. The ninety-nine bottles fell down.
11. The bottles hanging on the wall fell down.
12. The bottles which are hanging on the wall will fall down.

B. 1. Harold slept in the soft hay until morning.
2. After dinner the gypsy band moved the colorful wagons.
3. The beautiful girl softly sang a Spanish lullaby.
4. The person who sees this has some dangerous information.
5. The table at the back of the room has a display of rare fossils.
6. The fish he caught weighed a pound after being cleaned.
7. The street in front of the school is slippery this morning.
8. Just plain water is the best cleaner for most things.
9. The old-fashioned trolley finally stopped when someone pulled the emergency cord.
10. A dirty tramp with a cane knocked loudly on the door.
11. A dirty tramp who had a cane knocked loudly on the Smiths' back door.

C. 1. A shaggy dog watched the long line of people.
2. The huge polar bear from Alaska rattled the iron bars of the cage.
3. A slumber party is a sleepless gathering.
4. The box holding the jewels fell from the deck into the muddy stream.
5. The box holding the jewels which the burglar had taken fell into the muddy stream.
6. The part I liked came last in the program.
7. This book about Chief Joseph included a history of the Nez Perce Indians.
8. The sabres hanging behind the counter have probably been there a long time.
9. The detective known for his great mind is the famous Sherlock Holmes.
10. Birds of all sorts flew to the refuge along the lake.
11. The key to the filing cabinet is in the room where we had lunch.
12. The lawyer's request for more time bothered the judge immediately.
13. Only the very hardest workers will finish the latest assignment by tomorrow.
14. The man had walked a mile every day.
THE VERB AND ITS AUXILIARIES

In our lessons on grammaticality and the kernel sentence, we learned that sentences are not arranged by chance; there is a definite order that words must follow. For instance, we saw that in English kernel sentences the Verb Phrase follows the Noun Phrase. As we look more closely at the Verb Phrase we might ask: 'Do the words that make up the Verb Phrase follow a definite order, and what is that order?' Study these sentences:

NP          VP
1. The man drives the car.
2. The man drove the car.
3. The man is driving the car.
4. The man has driven the car.
5. The man has been driving the car.
6. The man may drive the car.
7. The man should have been driving the car.
8. The man could be driving the car.

You notice that the sentences are all different and yet parts of them are alike. What parts are the same in all of the sentences? What parts change? The part that changes is called the Verb. Every Verb Phrase has a Verb.

Exercise 1:
List the verbs in the following sentences. To help you test whether or not you have really picked out the verb, see if you can change it into other forms as we did with the verb drive in the sentences above.

1. The fox howled at the moon.
2. Tom painted the fence.
3. The man in the cave saw daylight.
4. A tattered flag flew from the flagpole.
5. The ship sank without a survivor.
6. Some hoodlums painted the front steps green.
7. All along the highway the bluebells were opening.
8. Those cars are the best on the market.
9. The monster with the purple eyes looked frightful.
10. His transistor radio cost more than mine.

Now let's look at the eight verbs in the sentences at the top of the page. All of them involve a form of the verb drive. Notice how many forms drive has (drives, drove, driven, driving). Not all verbs have so many different spellings and pronunciations for their many forms, but you will find that all verbs change in orderly ways. Our job now is to work out a system to describe the forms that the verbs of our language take.

Linguists use the word auxiliary (Aux) to talk about the various forms a root verb may take. We will see that there
are several types of auxiliaries which attach to a root verb to show its form. The root verb is the basic form of any verb; it is the verb form to which we may always add ing. It changes to take on other forms, either by a change in its own spelling or by the addition of other words, or both. It is, in one sense, the name of the verb. For instance, see is the root verb which has such forms as saw, sees, seeing, had seen, has been seen, is seeing, etc.

Sometimes the root verb is called the lexical verb, which means that it is the word under which all the various forms are listed in the dictionary. If you look up saw, for instance, you will find that it is a form of see. If you look up see, however, you will find that all the forms of see are listed after it, which means that see is the root of the other forms. In our sentences on page one, the root, or lexical, verb is drive.

Exercise 2:
Find the root verbs of

A. 1. sang 3. had 5. spoken
   2. called 7. sit 9. burnt
   3. made 8. chosen 10. lied
   4. fishing
   5. spoken

B. 1. went 6. am 8. set 10. were
   2. lain 7. drunk 9. swum
   3. bought
   4. forgotten
   5. woke

Because every verb in every sentence takes a definite form, linguists say that every verb has one or more auxiliaries. The auxiliary has to do with the form. To show this we re-write Verb Phrase as Auxiliary plus the Verb. Expressed in linguistic symbols this is:

Rule (2) VP ---+ Aux + Verb

KINDS OF AUXILIARIES

We will now try to find out what the various kinds of auxiliaries are. Examine these two groups of sentences to see how they are different.

A
The cow eats grass.
The sand looks wet.
The boys stand together.

B
The cow ate grass.
The sand looked wet.
The boys stood together.

What is the difference between the sentences in Column A and those in column B? What words in these sentences express the difference? The difference between present
and past is called tense and is shown by the form of the verbs in these sentences. All verbs have a form for present and a form for past. In Column A, then, we have the present tense of the verbs eat, look, and stand. In Column B we have the past tense of the verbs eat, look, and stand.

Tense is one kind of auxiliary. It describes whether a verb has its present form or its past form. Every Verb Phrase has this kind of auxiliary, which we will call Auxiliary1. It is as much a part of the verb of the sentence as the color of your eyes is a part of you.

In addition to this kind of auxiliary which every sentence must have, sometimes the verb in a sentence will change its form by adding words. (See sentences 3-3 on p. 12). These added words make up a different kind of auxiliary which we will call Auxiliary2. This kind of auxiliary may occur in a sentence or it may not. It isn't essential; it is optional. We will use the symbols Aux1 and (Aux2) to refer to these two kinds of auxiliaries. The parentheses mean that the second kind is optional. When we use linguistic symbols to write the rule that says there are two kinds of auxiliaries we write:

```
| Rule (3) | Aux ---→ Aux1 (Aux2) |
```

**TENSE**

We learned in the previous section that Aux1 means tense. The symbol for tense is Tns. We can therefore rewrite it in this way:

```
| Rule (4) | Aux1 ---→ Tns |
```

Notice that Rule (4) simply rewrites or explains Aux1 from Rule (3).

We found that the verb in every sentence has tense. We can show this relationship by saying verb = tense + root.

**Exercise 3:**
Make three columns on your paper. In the first column list the verb that appears in each sentence; in the second column list its tense; in the third column give the root form of the verb. Link the columns as the example shows:

**Example:** Mother bought a new dress.

```
verb = tense + root
bought = past + buy
```

1. John had only a dollar.
2. The balloon goes straight up.
3. The rock collection took second prize.
5. The poor squirrel lost his hold.
6. This girl collects spices.
7. His new clothes looked expensive.
8. Douglas is my brother.
9. The beavers caused great trouble.
10. Twenty soldiers volunteered for duty.

Recognizing Tense:
How can we tell whether a verb is past or present? Because we are natural speakers of English, we use the past or present forms without thinking about them. Perhaps if we do think about them we can find out what are the distinguishing characteristics between the two. Are the following verbs past or present? How did you know?

<table>
<thead>
<tr>
<th>Verb</th>
<th>Past Tense</th>
<th>Present Tense</th>
</tr>
</thead>
<tbody>
<tr>
<td>sing</td>
<td>had</td>
<td>were</td>
</tr>
<tr>
<td>ran</td>
<td>write</td>
<td>have</td>
</tr>
<tr>
<td>followed</td>
<td>saw</td>
<td>are</td>
</tr>
</tbody>
</table>

Past Tense

Exercise 4:
Give the past tense form of these verbs:

A. 1. paint
2. trample
3. start
4. solve
5. rule
6. dream
7. scatter
8. look
9. obey
10. pitch

B. 1. turn
2. act
3. dine
4. try
5. survey
6. hum
7. laugh
8. travel
9. stir
10. wrap

How did you form the past tense of all these verbs? Most English verbs form their past in this way. They are called regular verbs.

Exercise 5:
What is the past tense of the following verbs?

A. 1. throw
2. choose
3. strike
4. freeze
5. sell
6. have
7. do
8. bring
9. swing
10. break

B. 1. eat
2. go
3. lie
4. hit
5. catch
6. shine
7. buy
8. fight
9. shake
10. be

How was the past tense of the verbs in Exercise 5 formed? In many English verbs, the root undergoes a spelling change to form the past tense. Can you think of others? These are called irregular verbs.
Sign of the Present

Exercise 6:
The present tense form of most verbs is usually the same as the root verb, but in one case a small change occurs. What happens when the present tense form of English verbs is used with "he," "she" or "it"? Try placing the following verbs in the blank space of the following sentence. (Change their form to make them fit, but keep them present tense.)

He__________now.

catch  sleep  write
sweep  cut  drive
eat  sing  run
drink

The s or es, which you added when the verb was used with "he," "she," or "it" is a sign of present tense.

The Branching Diagram

It is sometimes helpful in trying to understand how sentences are put together to draw a diagram of them. Linguists make what is called a branching diagram to show how sentences begin with a noun phrase and a verb phrase and how the other parts branch off from these two main parts.

If we make a branching diagram using the symbols that we have learned about so far, and, then if we bring the symbols down to form a string of symbols representing Sentence, our diagram would look like this:

```
Symbol string: NP + Tns + (Aux2) + Verb
```

We can apply this kind of diagram to the sentences of the language. Of course, since we have so far learned only a few of the very basic elements of the English sentence we will be able to make a diagram for only the simplest sentences. As we progress, our branching diagram, and therefore our string of symbols, will become longer. Remember that the string of symbols underlies the sentences of the language and show their structure.

Let us make a branching diagram for "The boy won a prize."
The numbers stand for the rules which we are applying in making the diagram.

Sentence

NP

VP

Aux
Verb + a prize

Aux1

Tns

The boy + Past + win + a prize.

The boy

won

a prize.

Why doesn't the diagram for this particular sentence include Aux 2?

Exercise 7:
In this way make branching diagrams and write the strings for these sentences. (There are some words we won't know what to do with at this time. Just add them in their proper order as we did a prize above.)

A. 1. Sarah drives the car.
2. The hamster was a pet.
3. A balloon rose into the sky.
4. Some boys built the sign.
5. The car has a dent.

B. 1. The club chose a motto.
2. The books are here.
3. The tide is rising now.
4. Henry had buried the clothes.
5. The sergeant gave an order.

C. 1. Nails were in the tire.
2. The ducks fly in formation.
3. The sun went down.
4. The kitten was crying in the garage.
5. We are trying this system.
PAST AND PRESENT

For several rules we have been talking about tense. We know that tense means the difference between the past form and the present form. We have discovered the various ways of forming past and we have talked about a sign of the present. We have done exercises in which we showed that we understood that tense means past or present. But we haven't actually put this information into a rule. We are trying to describe everything that happens in the development of an English sentence. Therefore we do need to state as a rule something that we already know. And that is that tense means the present form or the past form of the verb. Making use of the linguistic symbols (Tns for tense, pres for present, and past for past) we can write our rule in this way:

\[
\text{Rule (5) Tns} \rightarrow \begin{cases} \text{pres} \\ \text{past} \end{cases}
\]

\{ \} is a symbol which means that we must choose one or the other of the symbols inside it, but not both. Therefore a verb can have the present form or its past form but not both.

AUXILIARIES (HAVE + EN) AND (BE + ING)

The Auxiliary (be + ing)

Our close look at a single verb, drive, showed us that something called tense helps the verb do its work. We said this was one kind of auxiliary, one that every verb has. Verbs have other helpers, or auxiliaries, which show themselves, not as changes in the verb, but as extra words working with the verb. How does each sentence in column B differ from its corresponding sentence in column A?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The gull sits on the post.</td>
<td>1. The gull is sitting on the post.</td>
</tr>
<tr>
<td>2. The waves sweep over the beach.</td>
<td>2. The waves are sweeping over the beach.</td>
</tr>
<tr>
<td>3. A red convertible roared down the road.</td>
<td>3. A red convertible was roaring down the road.</td>
</tr>
<tr>
<td>4. The captain stood on the deck.</td>
<td>4. The captain was standing on the deck.</td>
</tr>
<tr>
<td>5. Three neighbors shared the lawnmower.</td>
<td>5. Three neighbors were sharing the lawnmower.</td>
</tr>
</tbody>
</table>
6. I sing in the choir. 6. I am singing in the choir.

Which words have been changed? What kind of words are they?

The verbs in B are just different forms of the verbs in A. What two things have happened to the verbs in A to change them to the verbs in B? What words have been added? These added words are forms of the auxiliary Be. In all of these sentences Be is used as an auxiliary or helping word.

Which of the forms of Be which were added in the sentences above are obviously in their present form? Which are past? Be is the most common and the most complicated verb in our language. One way in which it is complicated is that it has eight forms. You might want to learn them so that you can always recognize them.

be, is, are, am, was, were, been, being.

Another way in which Be is complicated is that sometimes it is a main verb and sometimes it is a helper or auxiliary verb. We will take a closer look at the verb Be used as a main verb later on. Right now let's examine the Be that is a helper, or auxiliary.

Exercise 8:
Identify the verbs in the following sentences and then rewrite the sentences by adding a form of Be as a helper to the verb.

Example: The tree leans over the highway.
The tree is leaning over the highway.

The dog shook himself.
The dog was shaking himself.

A. 1. The boy went to the circus.
   2. The miners look for their friends.
   3. The ship draws near to the dock.
   4. Dishwashers became more popular.
   5. Albert Schweitzer serves as a doctor.
   6. The survivors eat very slowly.
   7. The title of the film glittered in the night sky.
   8. This wind blows through my thin coat.
   9. The artist painted three murals.
  10. They studied Roman history.

B. 1. The doctor sang in the shower.
   2. Jack Sprat ate no fat.
   3. A sailor loves the sea.
   4. Ned washed the blackboards carefully.
   5. The students had a party.

C. Make branching diagrams for the sentences in B.
You may refer to Exercise 7 if you have forgotten how.
What kind of word shows the tense in the original sentences? What word, the verb or the helper, shows the tense of the rewritten sentences? The shift of tense from the verb to the helper is automatic. And something else happens automatically when we add a form of Be. What happens to the form of the original verb when a Be was added as an auxiliary?

We can always predict, then, that when a form of Be becomes a helper, this pattern will occur: the tense will attach to the auxiliary and the root verb will add ing. We can indicate this process by the following string of symbols:

\[ \text{VP} \rightarrow \text{tense} + \text{Be} + \text{ing} + \text{verb}. \]

(Tense will show in the Be form and ing will be added to the verb. Can you think of reasons why the symbols should be arranged in this order?) Let us add this string to the string of elements of the sentence which we know so far.

\[ \text{Sentence} \rightarrow \text{NP} + \text{VP} \rightarrow \text{tense} + \text{Be} + \text{ing} + \text{verb} \]

therefore: \[ \text{Sentence} \rightarrow \text{NP} + \text{tense} + \text{Be} + \text{ing} + \text{verb} \]

\textbf{Examples:}
\begin{itemize}
  \item \( \text{NP} + \text{pres} + \text{Be} + \text{ing} + \text{verb} \)
  \begin{itemize}
    \item \( \text{The boy} \) \( \rightarrow \text{is eating} \)
  \end{itemize}
  \item \( \text{NP} + \text{past} + \text{Be} + \text{ing} + \text{verb} \)
  \begin{itemize}
    \item \( \text{The ship} \) \( \rightarrow \text{was sinking} \)
  \end{itemize}
  \item \( \text{NP} + \text{pres} + \text{Be} + \text{ing} + \text{verb} \)
  \begin{itemize}
    \item \( \text{The bells} \) \( \rightarrow \text{are ringing} \)
  \end{itemize}
\end{itemize}

\textbf{Exercise 9:}
Write ten sentences of your own using the \((\text{Be} + \text{ing})\) elements. Remember that just as the tense indicator (present or past) affects the next element in the string, so does the \text{ing} \text{ indicator.}

\textbf{Exercise 10:}
Supply the verb forms these symbols refer to. These groups of words are not necessarily complete sentences.

\textbf{Example:} \( \text{The boy} + \text{pres} + \text{hun} \rightarrow \text{The boy hunts} \)

A. 1. \( \text{The story} + \text{pres} + \text{end} \rightarrow \)
    2. \( \text{They} + \text{past} + \text{sing} \rightarrow \)
3. The paper + past + come...=
4. The bridge + past + sag...=
5. We + past + have ...=
6. Some people + pres + seem...=
7. The roads + pres + be...=
8. Jesse + past + buy...=
9. The sea + pres + be + ing + rise...=
10. His mother + past + be + ing + call...=

E. 1. The visitors + past + leave...=
2. Sandy Koufax + pres + be + ing + pitch...=
3. The hairdresser + pres + know...=
4. Ron + past + do...=
5. The doctors + pres + be + ing + check...=
6. I + pres + be...=
7. Erosion + past + cause...=
8. Everyone + past + see...=
9. Newsmen + past + be + ing + say...=
10. The sun + past + be + ing + shine...=

C. 1. The customer + past + pay...=
2. Lucy + past + set...=
3. A guide + pres + be + ing + lead...=
4. You + pres + be + ing + look...=
5. The swimmers + past + dive...=
6. Mistakes + pres + teach...=
7. I + pres + be + ing + go...=
8. The tenant + past + be + ing + move...=
9. He + past + wear...=
10. The principal + past + be + ing + be + kind...=

Now we have discovered that one auxiliary which may be present is the auxiliary Be. Whenever it is present it consists of a form of Be plus ing which attaches to the main verb. We can show that Be is one kind of Auxiliary2 by these symbols:

\[
(Aux_2) \rightarrow (be + ing)
\]

(Remember that the parentheses mean that it may be present but that it doesn't have to be.)
How would the be + ing auxiliary appear in a branching diagram? Since it is one kind of Auxiliary₂, we must include the symbol Aux₂ in the diagram and show that be + ing branches off from it. The diagram for "Tom Sawyer was painting the fence." would look like this:

```
NP  
   ∴  
   /   
VP  
   /   
Aux  
   /  
Tns  
   / 
past  
   /  
be + ing  
   /  
paint + the fence
   /  
Tom Sawyer + past + be + ing + paint + the fence
   /  
Tom Sawyer + was + painting + the fence.
```

**Exercise 10 a:** Make branching diagrams for your rewritten sentences for B in Exercise 8 on page 19.

**The Auxiliary (have + en)**

So far we have examined two auxiliaries that influence the verb of the sentence: Aux₁ (which shows tense and is found in all verbs) and (be + ing), a kind of Aux₂, (which may or may not be found in the verb). The next helper we will consider is have. Like the verb Be, have can serve as the main verb in the sentence or may serve as an auxiliary. Here we will look at it only as an auxiliary.

Look at the following sentences. What is the difference between each sentence in A and its opposite one in B?
A
1. I studied my history lesson.
2. I walk to school every morning.
3. I played third base.
4. George sees his advisor today.
5. Thomas became president.

B
1. I had studied my history lesson.
2. I have walked to school every morning.
3. I had played third base.
4. George has seen his advisor today.
5. Thomas had become president.

What has happened to the verbs in A to change them to the verbs in B? What words have been added to the verbs in B? These words (has, have, had) are forms of the verb have, which is used as a helper or auxiliary.

Which forms of have are present tense? Which are past tense? Which forms of have are past? Which are present? Check your knowledge by looking at these sentences:

(Past or present?) Jackie is cold. Jackie has a cold.
(Past or present?) Jackie was cold. Jackie had a cold.
(Past or present?) I am sorry. You have a cold.
(Past or present?) I was sorry. You had a cold.
(Past or present?) They are noisy. They have been noisy.
(Past or present?) They were noisy. They had been noisy.

Exercise 11:
Identify the verbs in the following sentences and then rewrite the sentences by adding a form of have as a helper to the verb. (Be careful to add have or has if the tense is present, had if past.)

Example: The cat chased the ball.

The cat had chased the ball.

1. John wrote a letter to his father.
2. Team captains shook hands.
3. Parts of the decoration fell off.
4. The water freezes in the pipes.
5. The mayor drove across the new bridge first.

Something quite noticeable happens to the main verb when have is added as a helper. Just as Be used as an auxiliary changed the verb to an ing form, have used as an auxiliary changes the verb to a special form. Linguists call this the en form. In your rewritten sentences in Exercise 11, which word shows tense? We can say, then, that when have is used as an auxiliary, the tense moves to the have form and the main verb is changed to an en form.
The en form: When linguists refer to the en form of the verb, they mean the form the verb takes after have, had or has. (Most verbs of our language end in ed in this form; but we adopt en as a cover symbol for the verb form used with have because the symbol ed is used by linguists to show past tense.)

Example:

<table>
<thead>
<tr>
<th>Root verb</th>
<th>have + en + verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>call</td>
<td>have called</td>
</tr>
<tr>
<td>type</td>
<td>have typed</td>
</tr>
<tr>
<td>talk</td>
<td>have talked</td>
</tr>
<tr>
<td>act</td>
<td>have acted</td>
</tr>
<tr>
<td>study</td>
<td>have studied</td>
</tr>
<tr>
<td>dance</td>
<td>have danced</td>
</tr>
</tbody>
</table>

Some English verbs change the form of the verb considerably in the en form.

Example:

<table>
<thead>
<tr>
<th>Root verb</th>
<th>have + en + verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>think</td>
<td>have thought</td>
</tr>
<tr>
<td>find</td>
<td>have found</td>
</tr>
<tr>
<td>stand</td>
<td>have stood</td>
</tr>
<tr>
<td>sing</td>
<td>have sung</td>
</tr>
</tbody>
</table>

And some English words end in en after have, had, or has.

Example:

<table>
<thead>
<tr>
<th>Root verb</th>
<th>have + en + verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>freeze</td>
<td>have frozen</td>
</tr>
<tr>
<td>speak</td>
<td>have spoken</td>
</tr>
<tr>
<td>fall</td>
<td>have fallen</td>
</tr>
<tr>
<td>break</td>
<td>have broken</td>
</tr>
</tbody>
</table>

Can you think of others in each category?

Linguists have simply taken the en ending which is found on some verbs and made a symbol of it to mean the form any verb takes after have, has, or had. Sometimes it is known as the past participle form, but it is probably simpler to call it the en form. In case you don't know what the en form of a verb is, ask yourself what form of the verb you would put in the following blank:

I have__________.

Your built-in knowledge as a native speaker should help you out. And your teacher will show you how to find out what the en form of the verb is in the dictionary.

Exercise 12:
What is the en form of these verbs?

A. 1. play  2. seem  3. use  4. say  5. run  6. ride  7. knock  8. strike
The auxiliary have is written have + en and fits into our string of symbols as follows:

Sentence \( \rightarrow \) NP + VP

Sentence \( \rightarrow \) NP + tense + have + en + verb

Example: NP + pres + have + en + speak

\[ \text{The principal has spoken.} \]

What we have learned here is that when a form of have is used as a helper, the verb following takes on an en form. Since this is an optional auxiliary we write:

\[ \text{Aux}_2 \rightarrow \text{(have + en)} \]

Remember that the tense attaches to the auxiliary and the en to the following verb.

Exercise 13:
Copy each sentence on your paper and supply the proper verb form to fit the symbols in parentheses. Write the string of symbols above each sentence and identify the word in the sentence produced by that symbol.

Example: pres + have + en + finish

\[ \text{I have finished my work.} \]

A. 1. Susan ________ with her mother.
    (past + have + en + arrive)

2. We ________ very hard.
   (past + have + en + work)

3. A snake ________ onto the rock.
   (past + have + en + crawl)
4. The rescuers supplied.
   (past have en drop)

5. Fog the valley.
   (pres have en cover)

6. The boys to finish the work.
   (pres have en hurry)

7. Mr. Grimes in the garden.
   (pres have en appear.)

8. Time swiftly.
   (pres have en pass)

9. She her mind again.
   (past have en change)

10. The audience the joke before
     (past have en hear)

   P. 1. The bell before we arrived.
       (past have en ring)

2. He for a cup of sugar.
   (pres have en come)

3. Two newspapers conflicting reports.
   (past have en give)

   (pres have en lose)

5. You a good paper.
   (pres have en write)

6. A bird the ring.
   (past have en take)

7. The doctors all they can.
   (pres have en do)

8. Many runners the race.
   (past have en begin)

9. We here before.
   (pres have en be)

10. Steve no help.
    (pres have en have)

   C. 1. An awning on the sidewalk.
       (pres have en fall)
2. The medicine good results.
   (past + have + en + have)

3. The barge sink
   (pres + have + en + sink)

4. Dr. Jekyll the mixture.
   (past + have + en + drink)

5. Weeds a nuisance.
   (pres + have + en + be)

6. They these away.
   (pres + have + en + be + ing + throw)

In the branching diagram have + en branches off from Aux₂ just as be + ing did. The diagram for "Tom Sawyer had painted the fence." would look like this:

```
NP  Sentence
   /   VP
  /     /   
/     Aux   Verb + the fence
/   Aux₁   (2)
/     Tns   (3)
/     past  (4)
/     have + en  (5)
/     Tom Sawyer + past + have + en + paint + the fence  (6)
/     Tom Sawyer had painted the fence

Exercise 13a:
Make branching diagrams for sentences 1-5 in A of Exercise 13 on page 25.

Now we have found two types of Auxiliary₂—(have + en) and (be + ing).

Look at the following sentences:

1. The bird built a nest.
2. The bird was building a nest.
3. The bird had built a nest.
4. The bird had been building a nest.
5. The robber ran.
6. The robber was running.
7. The robber had run.
8. The robber had been running.
9. The beach boys surf every day.
10. The beach boys are surfing every day.
11. The beach boys have surfed every day.
12. The beach boys have been surfing every day.
13. The pond freezes in January.
14. The pond is freezing in January.
15. The pond has frozen in January.
16. The pond has been freezing in January.
17. George drinks water.
18. George is drinking water.
19. George has drunk water.
20. George has been drinking water.

Which of the sentences have the Be + ing auxiliary? Which ones have the have + en auxiliary? Do any sentences have both? When both auxiliaries occur, what order are they in? Would it be possible to reverse the order?

For instance: The boy + past + have + en + be + ing + eat

The boy had been eating.

Could we reverse the order?

The boy + past + be + ing + have + en + eat

The boy was having eaten.

What conclusions can you draw about the order they must occur in when both are used in a sentence?

Since both Be + ing and have + en are optional auxiliaries (they don't occur in all sentences), and since have + en comes first when they are both present we can write our rule in this way:

Rule (6) Aux2 ----> (have + en) (be + ing)

(Notice that this rule combines all the information we have learned about Aux2)

How do you think you would diagram a sentence which has both a be + ing and a have + en auxiliary? Look at the following diagram of sentence 20 on page 28.
THE MODAL AUXILIARY

We have one more kind of auxiliary or helper to look at before we finish talking about auxiliaries. We have saved it until the end of our discussion because it is a rather special kind of auxiliary. Look at the following pairs of sentences.

1. You write.
   You may write.

2. He whistles.
   He can whistle.

   Joe must study.

4. I eat.
   I shall eat.

5. The traveler has stopped.
   The traveler should have stopped.

6. I have been dreaming.
   I might have been dreaming.

7. The pitcher was silver.
   The pitcher could have been silver.

8. That spoils his plans.
   That would spoil his plans.

9. That is enough firewood.
   That should be enough firewood.

How does the second sentence in each pair differ from the first? In each case a helper has been added to the verb in the first sentence to make the new form of the verb in the second sentence. List the words that have been added in the nine pairs of sentences to make the new forms of the verbs. These helpers, or auxiliaries, are called Modal Auxiliaries. The modals are...
not main verbs. You remember that have and Be are main verbs as well as auxiliary verbs. But the modals can never stand alone in the verb phrase as the main verb. They are always helpers. In sentences 1, 2, 3, and 8 on the preceding page, the modals are the only auxiliaries. In sentences 5 and 7 the modals assist the auxiliary have. What does the modal assist in the second sentence of 9? What in the second sentence of 6?

Write sentences of your own in which you use each of the modals you listed above. Where do the modals come in the verb strings of the sentences above and in your own sentences? The first thing to notice about modals, then, is that they always come first in the verb string.

We have already learned that when the auxiliaries (have + en) and (Be + ing) are added to a verb, the tense form attaches to the auxiliary coming first in the phrase. (In "The boy had stuffed the squirrel" had shows tense. In "The girl was dancing in the ballet" was shows the tense). Look at the sentence on the preceding page which contain modals. Can you tell which word shows the tense? Again it is the first word in the string, this time the modal, which carries the tense. That is the second thing to remember about modals.

If the modal is to indicate tense, you will need to know which modals show past and which present. These are the modal auxiliaries according to tense. Notice that not all of them have a past tense form.

| present: shall will can may must |
| past: should would could might |

We can indicate a modal in the Verb Phrase by the following string of symbols:

```
VP----( tense + M + verb. )
```

And a sentence "The child should understand," will be described by substituting into these symbols in this way:

```
NP + past + shall + understand

The child should understand.
```

Linguists use the symbol M to stand for modals. They say that it is part of Aux. However, unlike the other part of Aux, it may or may not be found in a sentence. If we want to add M to our 4th rule we can write:

```
Rule (4) Aux ----> Tns (M)
```

Remember that the parentheses mean that the modal is optional. It is found in some sentences but not in all. Tense, however, is in every sentence.
When we diagram sentences which contain modals we will, of course, add the symbol M to the diagram. Where will it appear in the diagram? Study the following diagram of "Amos may have gone."

Exercise 14 a:
Make branching diagrams for the second sentence in each pair of sentences 1-5 on page 29.
Exercise 14:
Underline the complete verb (auxiliaries + verb) in each of the following sentences. Above each verb write the string of symbols which explains it.

Example: The robe will rub against the bumper.

A. 1. Jerry must study harder.
    2. The show will begin at nine o'clock.
    3. You may look at the display.
    4. Frank should get the information.
    5. His brother might play the trumpet.
    6. The neighbors can go with us.
    7. No one could see it.
    8. A touchdown would win the game.
    9. A goat must have stopped the train.
   10. The pilot will be watching the weather.

B. 1. The pattern must fit the material.
    2. The prisoner could have written the note.
    3. He should be reading in his room.
    4. The Trojans must have accepted the horse.
    5. A kind word would have helped a great deal.
    6. The test will be easy.
    7. The men should have been wearing heavy clothes.
    8. John's demonstration might have been better.
    9. The water can be coming from springs.
   10. Dinner should have taken less time.

Exercise 15--Review:
Copy these sentences and underline the complete verb in each. Then above each sentence write the string of symbols which forms the complete verb (auxiliaries + verb.)

Examples:

Pres + be + ing + fly
The birds are flying east.

Pres + have + en + go
The visitors have gone.
A. 1. Lightning flashed.
2. The rally starts next week.
3. The girls had driven fifty miles.
4. The scouts were swimming in the lake.
5. Herman has injured his foot.
6. Our neighbors moved away.
7. These weights are sinking the boat.
8. The steak should taste good.
9. Only our friends have been taking us seriously.
10. You may have heard the talk.

B. 1. Mother has seen Mrs. Macy.
2. Trout should be hiding here.
3. Crater Lake has been attracting large crowds.
4. Ulysses must have said something wrong.
5. Great men have been giving time to this problem.
6. I would have done it differently.
7. Kevin could have been collecting grasshoppers.
8. The basket has been sitting there since Thursday.
9. Most of the group had had the measles.
10. Jack has been our fire tender.
11. Robby may have been sleeping all day.
12. The new puppies are causing much trouble.

Exercise 16--Review:
Compose sentences which contain these verb combinations:

A. 1. pres + do
2. past + speak
3. pres + have + en + break
4. past + be + ing + clean
5. pres + M + think
6. pres + be
7. pres + be + ing + buy
8. past + have + en + begin
9. past + M + be + ing + write
10. pres + have + en + march

B. 1. past + be + ing + ride
2. pres + M + go
3. past + M + have + en + swim
4. pres + have + en + be + ing + take
5. pres + M + be + ing + catch
6. past + have + en + have
7. pres + M + have + en + come
8. past + see
9. past + M + have + en + be + ing + read
10. pres + have + en + be + ing + raise.

C. Construct strings of symbols for the verbs in the introductory sentences on page
What we have learned about auxiliaries:

1. The English Verb Phrase has two kinds of Auxiliaries.

2. One kind (Aux₁) must be present in every sentence.

3. The reason Aux₁ is always present is that it includes Tense which is found attached to the verb in every sentence.

4. Auxiliary₁ may also include a modal (M)

5. Auxiliar y₂ includes have + en and be + ing which are optional. They are possible in English sentences but do not need to be there.

6. Have + en makes the verb following take its en form.

7. Be + ing makes the verb following take its ing form.

8. When all of the auxiliaries are present in a sentence they occur in this order: Tns + M + have + en + be + ing.
THE VERB BE

We have learned that the auxiliary Be helps other verbs form sentences. Now let us look at Be as a main or regular verb. Can you remember what the forms of the auxiliary Be were? They will be the same for the verb Be.

If you look closely at the Be forms in the sentences below, you may discover why grammarians say that Be is two distinctly different words: (1) an auxiliary, and (2) a main verb. In which group do you find the auxiliary Be?

Group A
1. The clown is riding an elephant now.
2. He has been entertaining the children.
3. The circus will be leaving tonight.

Group B
1. Karl is my best friend.
2. My sister has been a nurse.
3. Chipmunks will be her pets.

Why is the Be in Group B not the auxiliary?

Read the sentences in Group B again. What do we call the part that comes before the Verb Phrase? Do you detect a special relationship between the Noun Phrase part of the sentence and the part of the sentence that follows the verb? We can show this relationship by replacing the Be form with an equal sign (=). What relation is there between the word before the equal sign and the word after it?

1. Karl = friend
2. sister = nurse
3. chipmunks = pet

Exercise 1:
A. Identify the words of equal value in each of these sentences by substituting an equal sign for each Be form.

1. Jonathan is our quarterback.
2. Mr. Grimes was the mayor.
3. The boys were rivals.
4. Lou's aunts are snake charmers.
5. I am the school librarian.
6. Those marbles are beauties.
7. The mayor will be the judge.
8. Caterpillars have been pests.
9. My cousins were being firefighters.
10. Tomatoes must be vegetables.
B. Replace the verbs in these sentences with an equal sign.

1. Tom shot two elephants.
2. The girl loves watermelon.
3. A witch requires special brooms.
4. The minister ate snails for lunch.
5. Rosa collected several tumbleweeds.
6. The cat gobbled two canaries hurriedly.

Compare your two sets of answers. What can you conclude about replacing the Be of exercise A with = ? What about replacing the verbs of exercise B with = ? In which group does the equal sign not fit well? Why?

Exercise 2:
Replace the verbs in these sentences with an equal sign. In which ones does = not fit well?

1. The castle was a museum.
2. Bill emptied the tank.
3. His home is the briar patch.
4. The lookout has seen a whale.
5. Seaweed clogged the propeller.
6. Marsha's horse is a Clydesdale.
7. His allowance had been a dollar.
8. General Lee praised Traveler.
9. The king must have been a tyrant.
10. A farmer was burning the straw.

We should notice something else that goes on when Be connects words that are equal. Words that mean "one" are said to be singular; words that mean "more than one" are said to be plural. This change in word form to indicate reference to "one" or "more than one" is called number. Such distinctions are already familiar to you.

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>boy</td>
<td>boys</td>
</tr>
<tr>
<td>child</td>
<td>children</td>
</tr>
<tr>
<td>mouse</td>
<td>mice</td>
</tr>
<tr>
<td>memory</td>
<td>memories</td>
</tr>
<tr>
<td>donkey</td>
<td>donkeys</td>
</tr>
</tbody>
</table>

Exercise 3:
Look again at your answers in Exercise 1. Circle the plural words. In which sentence are both words plural? Are there any sentences that have only one plural word?

Example:
1. Elizabeth II is the queen.
   Elizabeth = queen.
2. The crocodiles munched their lunch leisurely.
   crocodiles = lunch.

What is true about the number of the words to the left and right of the verb Be? If the NP is singular in number, the word after the equal sign is also singular. Because the NP in Sentences 1, 2, and 5 means one, the word that equals the NP means one.

Are the sets of words in B equal? What agreement in number is there between them? In B is it possible to change the numbers of one of the words to the left or right of the verb without changing the other? Could we, for instance, say "Tom shot one elephant" or "The girls love watermelon"? Since they are not equal, the number of the NP has no control over the number of the word after the verb. Sometimes they have the same number; sometimes they don't. As we have seen, the verb Be often relates words of equal value. When this occurs, the number of the NP controls the number of the word following the verb.

Let's look at some other sentences which have forms of the verb Be. In the following, are the words after the verb = to the NP? Is there any relationship?

1. The old witch is ugly.
2. Oregon's sunsets are beautiful.
3. Jerry's puppy was lonesome.

In these sentences what is the relation of the part of the sentence after the verb to the part before the verb (the NP)? Let's move the last of the sentence into the noun phrase to see what happens. Thus

1. The old witch is ugly.
   becomes
   The ugly old witch is ugly.

2. Oregon's sunsets are beautiful.
   becomes
   Oregon's beautiful sunsets are beautiful.

3. Jerry's puppy was lonesome.
   What does this sentence become?

Jerry's _______ puppy was ________.

True, we wouldn't speak or write such sentences, but by doing this we have shown a special relationship between the noun phrase and certain words used after verb Be. How is the word after the verb Be related to the NP? These words are called adjectives.

Exercise 4:
Underline the adjective found after the verb Be.
Then rewrite the sentences, putting the adjective found after the verb Be into the NP part of the sentence. Write it also in its usual position after verb Be as we did above.
1. The weather is perfect.
2. The kitten's fur was thick.
3. The foreign student has been unhappy.
4. His hands are cold.
5. The milk is sour.
6. My tonsils were swollen.
7. Trimble's feet are frostbitten.
8. The fudge cake was delicious.
9. The house was there.

By now we have found that sometimes the verb Be is followed by a word that equals the NP. We have also found that sometimes the verb Be is followed by a word (adjective) that tells something about the NP.

A further look shows us that this remarkable verb serves a third purpose. Consider these sentences:

1. Her mother is inside.
2. Several people are here.
3. The boss was out.

Does the word following the verb Be equal the subject? Can it be added to the noun phrase as we did with adjectives? Our tests show the difference:

1. Her mother is inside.
   mother = inside
   Her inside mother is inside.

2. Several people are here.
   people = here
   Several here people are here.

3. The boss was out.
   boss = out
   The out boss was out.

Still we could not usually accept "Her mother is," "Several people are," or "The boss was" as finished or completed sentences. We cannot discard such words as inside, here, and out when they follow the verb Be. What do they tell us about the subject? They complete the sentence by telling us the location of the subject. Linguists call this special kind of word a locative adverb and include it as the third part of the group of words used after the verb Be. Locative means location. For the present we shall label all these special words used after forms of Be as predicate words. The verb Be requires a predicate word to follow it. We use the symbol Pr to indicate the several kinds of words that can be predicate words. Our string of symbols to illustrate Be + Pr would be as follows:

NP + pres + Be + Pr

The sweater is scarlet.
Exercise 5:
A. Write five sentences using a Be form to join words of equal value.
B. Write five sentences containing a Be form followed by an adjective.
C. Write five sentences containing a Be form followed by a locative adverb.
D. Underline the Pr in each of the sentences you have composed.
E. Write five sentences using Be as an auxiliary. How does Be as auxiliary differ from Be as the main verb?

Exercise 6:
Construct the strings of symbols that underlie the following sentences:

Example: NP + past + have + en + Be + Pr
The mousetrap had been useful.

1. Bruno was lucky.
2. The children were outside.
3. I am the representative.
4. Miss Biggs has been a meteorologist.
5. The chimps were being talkative.
6. Porpoises are fun.
7. The boy must have been a problem.
8. Tommy had been a ventriloquist.
9. Nancy should be the chairman.
10. The cat might be away.

In earlier exercises we established that a sentence consists of two essential parts: NP + VP. We also know that in our language sentences follow a normal word order of NP + VP. What happens to the verb when a sentence is stated as a question that asks for a yes or no answer?

The girl seems unhappy.
Does the girl seem unhappy?
Three changes occur:

1. We added the verb *does*, which acts as an auxiliary.
2. We changed the verb form from *seems* to *seem*.

   The girl does seem unhappy.

3. We placed part of the verb (*does*) before the NP.

   Does the girl seem unhappy?

Now consider the verb *be* in similar sentences. Turn the following sentences into questions that ask for a yes or no answer.

The girl is unhappy.
The girl is an aunt.
The girl is out.

What simple change indicates the shift from statement to question? This process is called inversion. *Be* is the only verb that can form a question without adding an auxiliary.

Exercise 7:
To see how other *be* forms can invert, transform these sentences into questions by writing the verb first in the sentence.

Example:

Freddy is her teddy bear.
Is Freddy her teddy bear?

When *be* has an auxiliary form with it, what do you do to make the inversion?

Example:

If has been cold.
Has it been cold?

1. I am your best friend.
2. Ronald is a superior student.
3. You are the lucky winner.
4. Mother was unhappy.
5. The apples were bright red.
6. The math tests have been difficult this year.
7. He is being a nuisance.
8. You will be sorry.
9. The accident was a calamity.
10. He has been inside.

Early in our study we learned that every kernel sentence can be divided into a NP and a VP. To show this we wrote Rule 1 in symbols:

(1) Sentence \[\rightarrow\] NP + VP
Next we analyzed verb phrases (VP) and found that the verb in every sentence has an auxiliary. Rule 2 indicates this by dividing the VP into Aux + Verb:

\[(2) \text{VP} \rightarrow \text{Aux} + \text{Verb}\]

In Rules 3-6 we analyzed Aux and discovered the various kinds of auxiliaries. In this section we have begun to find out what is included in Verb.

Because the verb Be has special qualities that make it different from other verbs, we have emphasized the characteristics that set Be apart from other verbs. What are they? At this point we can say that every VP contains either a Be verb or another verb. In Rule (7) we need to indicate that the verb in a kernel sentence must be one or the other: a Be verb or another verb. The sentences we have considered have shown that a kernel sentence cannot have both a Be verb and another main verb. To show that the verb in a sentence must be one or the other, we use the symbol \{ \}. We must remember, too, that a Be verb always has a Predicate (Pr). Rule (7) automatically becomes

\[(7) \text{Verb} \rightarrow \{\text{Be + Pr}\} \]

Notice that we have shortened our symbol for verb to Vrb. We do this to show that we have taken the Be verb out for special consideration, so Vrb doesn't include as many verbs as did the symbol Verb in Rule 2.

Examine Rules (1), (2), (3), (4), (5), (6) again. Do you see a pattern in what we have been doing? We have formed each new rule by rewriting part of the preceding rule. Rule 2 developed when we expanded the VP in Rule (1) into auxiliary and verb (Aux + Verb.) We then proceeded to expand the different parts of the Aux. Aux became Aux1 (which became Tns), and Aux2 which was expanded to include have + en) and (be + ing.) Tns was expanded to pres and past. In the next step we expanded verb in Rule (7) and divided it into Be and other verbs (Vrb). Here we talked mostly about Be and then wrote Rule (7). Can you predict which part of Rule (7) will be expanded in Rule (8)?

Let's see now how we can put this same information into a branching diagram to show that each new step simply reconsiders and explains some part of a rule that has gone before.

See following page.
1. Sentence: The child sneezed.

Sentence String: The child + past + sneeze.

2. Sentence: The guerrillas were heroes.

Sentence String: The guerrillas + past + be + heroes.
3. Sentence: The postmaster is outside.

Sentence

NP --VP

<table>
<thead>
<tr>
<th>Aux</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sentence String: The postmaster + pres + be + outside.

4. Sentence: The man was singing.

Sentence

NP --VP

<table>
<thead>
<tr>
<th>Aux</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sentence String: The man + past + be + ing + sing

Exercise 8:
Construct branching diagrams for the following sentences:

A. 1. Animals are clever.
2. The oranges were green.
3. Mr. Biggs is an aristocrat.
4. The child had forgotten.
5. He was learning.
6. The teachers have been ill.
7. The detective has been inside.
8. A lumberjack objected.
9. The policeman might understand.
10. You could go.

B. 1. The menu was French.
2. Scotch tape is useful.
3. The bird looked sick.
4. The cowboys have been marking the boundary.
5. Some waves were froth-covered.
6. A St. Bernard had followed the boy.

C. 1. The flags were fluttering.
2. The gymnasts had been experts.
3. The umpire could have been Mrs. Stuart.
4. Those trees are maples.
5. Lights brightened the street.
6. Few have discovered the answer.
7. The ball might be upstairs.
8. The battle must have been raging.
9. Mary Ann is shelling peas.
10. The mechanic should have been careful.

What we have learned about Be:

1. Be can appear in 8 forms: be, is, are, was, were, am, been, being.
2. Be can be either an auxiliary or a main verb.
3. If it is an auxiliary it appears with ing which is added to the verb following.
4. If it is the main verb it must be followed by a predicate word which we symbolized by Pr.
5. It is the only verb that can invert without an auxiliary to form a question.
THE LINING VERB

So far in our analysis of the verb phrase we have talked about auxiliaries and Be. We have separated Be from all other verbs. Remember that Rule 7 gave us a choice; a kernel sentence must contain verb Be + Pr or another verb (Vrb) but never both. Now we are ready to consider another subset of verbs. As we have learned, Be has special qualities that set it apart. Perhaps other verbs may share some of these special characteristics.

Substitute a Be form for the verbs in these sentences.

1. Jim Bridger became a scout.
2. Jim Bridger a scout.

2. Honey tastes sweet.
   Honey sweet.

3. The boy turned red.
   The boy red.

Sentence 1 now might read:
   Jim Bridger was a scout.

Now replace was with an equal sign:
   Jim Bridger = a scout.

In this sentence the verb became connects or links words of equal value just as Be sometimes does. Can you replace Be in Sentences 2 and 3 with an equal sign?

   Honey is sweet.
   Honey = sweet.

   The boy was red.
   The boy = red.

Because the NP preceding the verb and the word following the verb are not equal, this test doesn't work for Sentences 2 and 3. Remember, however, that Pr does not always equal NP. What other relationship may exist between the NP preceding Be and a Pr following Be? Recall the way we examined other words used after Be.

   Honey tastes sweet. (Original sentence)
   (Honey is sweet.) (Be substitution)
   The sweet honey tastes sweet.

   The boy turned red.
   (The boy was red.)
   The red boy was red.
Again these sentences are not the kind we speak, but by moving the word found after the verb to a place before the NP we determine if there is a relationship between the NP and the word used after the verb. In these sentences the verbs *tastes* and *turned* have adjectives used after them just as *Be* often does. We proved this by discovering that they could be moved to a position before the NP. Like *Be*, then, these verbs may have a noun or adjective used as a Pr.

Look at these sentences:

1. Nathan remained behind.
2. The truant stayed at home.

**What is the NP in each sentence?**

**Can you replace the verbs in these sentences with Be?**

In Sentence 1 what is the relation of the word following the verb to the NP?

\[
\text{NP } + \text{ past } + \text{ remain } + ?
\]

Nathan remained behind

What name did we give words of this kind in our study of *Be*? Such words complete a sentence by telling us the location of NP (subject). They are like the third kind of Pr which follows *Be* verbs. What are they called? We see then that the verbs we have looked at in this unit (become, taste, turn, remain, stay) are like *Be* in being followed by a predicate word. Remember that a predicate word is related to the NP before the verb.

**Exercise 1:**
Rewrite each of the following sentences, substituting *Be* for the verb. If there is a Pr following the verb, underline it. Remember, not all words following verbs are predicates.

Test them in the way we tested the three kinds. State whether each is a noun, adjective, or adverb.

**Example:**

The natives became fat.

The natives were fat.  (adjective)

1. The iron smelled hot.
2. The cat smelled a rat.
3. Everyone seems ready.
4. The harmonica sounded flat.
5. The soldier turned rebellious.
6. The soldier turned the corner.
7. Charlie grew antagonistic.
8. Washington remained President for two terms.
9. Your answer seems correct.
10. The child stayed sullen.
11. Abraham Lincoln became a martyr.
12. The new dress became her.
13. The milk tasted sour.
14. The waiter tasted the soup.
15. His reply rang true.
16. Mr. Jessup rang the bell.
17. The principal got a raise.
18. The principal got angry.
19. The crowd remained outside.
20. Freddie felt uncomfortable.
22. The babysitter appeared miserable.
23. Freddie felt his way carefully.

Does a Be substitution fit into all of the sentences? Into which ones doesn’t it fit? Why does a Be fit in Sentence 1 but not in 2? The verb smelled in Sentence 1 connects or links an adjective to a NP just as Be does. Why then is smelled not a connecting or linking verb in Sentence 2? Obviously, the NP before the verb and the word used after the verb are not equal, nor do they refer to the same thing. Which other verbs in these sentences are followed by Pr in one sentence but not in the other? Some verbs have two uses; they may have a Pr or not, depending on what goes on in the sentence. Sentences 13 and 14 illustrate this. Which of these contains a linking verb followed by Pr? Why is soup in Sentence 14 not a Pr? Why is tasted not a linking verb, then, in Sentence 14?

A limited number of verbs must have a Pr. Do any of the verbs in Exercise 1 always take a Pr? Look closely at Sentences 3, 8, 9, 10, 19, 21, 22, and 24. When Pr appears in a sentence, with a verb other than Be, the verb used to connect the NP with the Pr is called a linking verb, which we symbolize as Vlnk. Which verbs in the sentences above are linking verbs?

Exercise 2:
Use each of the verbs listed below in two sentences. The first sentence in each pair that you write should contain a linking verb. Underline Pr in your sentences.

Example: taste
The candy tastes bitter.
A good cook tastes her concoctions.

smell get sound grow turn feel look

You notice that linking verbs, as well as the verb Be, require a Pr.

Look again at the sentences in Exercise 1. In which of these could you replace the linking verb with an equal sign?
Rewrite sentences 8 and 11 in Exercise 1, making the Pr plural in number. Are your rewritten sentences grammatical English sentences? Recall that when Be connects words of equal value, the number of NP controls the number of Pr. The same is true of linking verbs. If the NP preceding a linking verb is singular in number, as in Sentences 8 and 11, Pr must also be singular.

We have found how linking verbs resemble Be. Do they differ in any way? Without adding auxiliaries transform the following sentences into questions by writing the verb before the NP. Underline the Pr.

1. The situation became impossible.
2. The situation was impossible.
3. Henry is co-captain.
4. Henry remained co-captain.
5. The room sounded empty.
6. The men looked fit.
7. The bakery smelled fragrant.
8. You are a clown.
9. The players were tired.
10. The termites stayed inside.

Do all the sentences invert into grammatical English sentences? Would you expect Sentences 2, 3, 8, and 9 to be grammatically correct when changed into questions? Why? What is the difference between the verbs of those that do and those that don't? We find again that the verb Be inverts properly into questions by simply reversing the normal word order and appearing before NP. A close look at Sentences 1 and 2 will show the difference between linking verbs and Be. Each of the ten sentences above contains a Pr; yet only the sentences with Be can invert into questions without adding an auxiliary. We can say then that (a) linking verbs are like Be in requiring a Pr, but (b) they are different from Be because they cannot form questions without adding an auxiliary. Because they are like Be in one way but different in another, we classify linking verbs as separate from all other verbs.

Our string of symbols to illustrate a sentence with Link + Pr looks like this:

```
NP + past + become + Pr
```

**Exercise 3:**
Construct similar strings of symbols for the sentences in Exercise 2.

The formation of a rule which adds linking verbs to our branching diagram becomes our next concern. Let's apply our preceding rules to the following sentence and then formulate Rule 8:
The milk tasted sour.

1. What are the NP and VP of the above sentence?
2. How did we write Rule 1 to show this?
3. What part of the sentence received special study in Rule 2?
4. How did we write Rule 2 to show that every verb has an auxiliary? Remember the first two rules are automatic and obligatory, that is, the analysis of every sentence must go through Rules 1 and 2.

In the next four steps we found two kinds of auxiliaries. One kind includes tense which is part of every verb. The other includes the helping verbs have and be, which may or may not be present in the form a verb takes. We also discovered a special kind of auxiliary called modal. Finally we phrased a rule which defined tense as being either past or present. Then we were ready to talk about the Verb itself. In the seventh step of our diagram two things happened. We shaved off and studied a special kind of verb called be. We found that we must make a choice. If a kernel sentence has be it will not have other verbs. This fact was stated in Rule 7 which broke Verb into two classes.

5. What are they?
6. Which verb in Rule 7 must be followed by Pr?
7. What symbol did we use to show that a kernel sentence must have either be or Vrb but never both? Now look at the rules below:

\[
\text{Sentence} \rightarrow \text{NP} + \text{VP} \quad (1) \\
\text{VP} \rightarrow \text{Aux} + \text{Verb} \quad (2) \\
\text{Verb} \rightarrow \begin{cases} 
\text{Be} + \text{Pr} \\
\text{Vrb}
\end{cases} \quad (7)
\]

8. Which verb in Rule 7 did we consider in detail?
9. Which verb in Rule 7 needs further study?
10. Which part of Rule 7 will we be rewriting in Rule 8?
11. Why did we shorten the symbol for Verb, as used in Rule 2, to Vrb in Rule 7?
12. What subset of Vrb have we been dealing with in this section?
13. When we find a linking verb in a sentence, what do we automatically expect to find after it?
14. What part of Rule 7 will you rewrite in Rule 8?

Now, using symbols, put your answers to these questions in the form of a rule. Let \text{link} stand for linking verb. Check the rule you have written with your teacher.
Applying Rules 1 and 2, the branching diagram for our sentence looks like this:

The milk tasted sour.

```
Sentence
  NP
    VP (1)
      Aux Verb (2)
```

We will now apply Rules (3) to (6). Since tense is the only auxiliary present in this sentence we will not use Rule (6). Our diagram then looks like this:

The milk tasted sour.

```
Sentence
  NP
    VP (1)
      Aux Verb (2)
        Aux1 (3)
          Tns (4)
            Past (5)
```

Now let's consider an additional sentence.

1. The milk tasted sour.
2. The milk was sour.

Sentence 2 simply substitutes Be for taste. Decide which of the two diagrams below illustrates Sentence 1 and which shows Sentence 2.

```
Sentence
  NP
    VP (+)
      Aux + Verb
        Aux1 (3)
          Tns (4)
            Past (5)
```

```
Sentence
  NP
    VP
      Aux + Verb
        Aux1 (3)
          Tns (4)
            Past (5)
            Be + Pr (7)
```
With the correct diagram we can bring down the string of elements which produce the sentence.

The milk was sour.

But when we try to reconstruct Sentence 1 we find the verb is not *be* but another set of verbs (*Vrb*). To show this, we have shaven off part of *Vrb* and called this subset a linking verb. Why is it a linking verb? As we apply Rule 8 to Sentence 1 our diagram becomes:

See following page.
Look again at the sentences below (taken from preceding exercises.)
1. The iron smelled hot.
2. The cat smelled a rat.
3. Everyone seems ready.
4. Everyone is ready.
5. The waiter tasted the soup.

Now answer these questions:
1. Which sentence contains Be + Pr?
2. Which sentences contain linking verbs?
3. What automatically follows a linking verb?
4. Do any of the above sentences lack a Pr?
5. Do some of the sentences have neither Be nor Vlnk?
6. What must you add to the Rule 3, that you have written to indicate that we still have additional verbs to consider?
7. Remember that in writing Rule 7 we shortened our symbol Verb to Vrb to show that Vrb is a subset of Verb. What is the logical symbol to use then in Rule 8 to signify the verbs remaining after we have pared off from Verb the auxiliaries (Aux), Be, and linking (Vlnk) for special study?
8. How do you show in Rule 8 that Vrb (being rewritten from Rule 7) becomes either Vlnk or another verb, but not both?

Rule 8  \[ \text{Vrb} \rightarrow \{ \text{Vlnk} + \text{Pr} \} \cup \{ \text{Vb} \} \]
Exercise 4:
After your teacher checks your completed statement of Rule 8, construct branching diagrams for the five sentences on the preceding page.

Exercise 5:
Construct strings of symbols for these sentences.

Example:

\[
\begin{array}{c}
\text{NP} + \text{pres} + \text{Be} + \text{Pr} \\
\text{The scarf is unusual.}
\end{array}
\]

\[
\begin{array}{c}
\text{NP} + \text{pres} + \text{have} + \text{en} + \text{Vlnk} + \text{Pr} \\
\text{The lieutenant has become a captain.}
\end{array}
\]

\[
\begin{array}{c}
\text{NP} + \text{past} + \text{be} + \text{ing} + \text{Vb} \\
\text{Lucy was going.}
\end{array}
\]

\[
\begin{array}{c}
\text{NP} + \text{pres} + \text{Vb} + \text{a headache} \\
\text{Mother has a headache.}
\end{array}
\]

A. 1. The grass was bluish.
2. An apple became wormy.
3. Felix has been upstairs.
4. The general must be sleeping.
5. America had been exporting iron.
6. These buildings will remain dormitories.
7. The parents are proud.
8. Richard was being a gentleman.
9. The rooms must have smelled musty.
10. The waitress will get the water.

B. 1. The sentences might be becoming difficult.
2. Henry was having a party.
3. The motor had been vibrating.
4. The Saracens would have been the victors.
5. Steve has been feeling groggy.
6. The lion seemed gentle.
7. The princess was looking radiant.
8. Fremont has been growing impatient.
9. This soil should grow wheat.
10. Someone was looking.
11. The static is getting worse.
12. Grandfather will get a pension.
13. The film would have become popular.
14. Judas must have been feeling ashamed.
What we have learned about $V_{\text{link}}$:

1. The linking verb is a class of verbs which are followed by predicates, just as the verb $\text{Be}$ is.

2. The predicate following a linking verb may be either an NP, an adjective, or a locative adverb.

   Examples: The man became president. (NP)  
   The man seemed happy (Adj)  
   The man remained at home. (Locative adverb)

3. We can test for linking verbs by trying to substitute a form of $\text{Be}$ or an $=$ sign for the verb.

4. Linking verbs differ from $\text{Be}$ in not being able to form a question by simple inversion.
Exercise 1:
Write the following sentences labeling NP1 + Vb + NP2 and then transform them into the passive, again labeling the parts.

Example: NP1 + Vb + NP2
NP2 + Vb + NP1
The truck hit the mailbox.  The mailbox was hit by the truck

A. 1. The secretary typed the letter.
2. Sammy played the guitar.
3. Twelve men guard the palace.
4. The custodians emptied the pool.
5. Rick carries Marsha's books.
6. Snow blocked the entrance.
7. The waterfall drowned out our voices.
8. Some people will believe you.
9. The girl forgot the library book.
10. The wrecking crew demolished the building.
11. The counterfeaters must have printed these bills.
12. Ninth graders should set an example.

B. 1. The gypsies were telling fortunes.
2. The witness raised a question.
3. Father could have used the paddle.
4. Aunt Mary was watching television.
5. A map should show the boundaries.
6. The fire might be killing the animals.
7. Erosion must be destroying the land.
8. The boys had been swapping pencils.
9. Elephants could have pulled the wagons.
10. Someone should have forwarded the letter.
11. Some doctors prescribe aspirin.
12. The Flea Market may sell antiques.

Here is another group of sentences made up of NP1 + Vb + NP2. When you make them passive does the result sound grammatical to you?

1. Andy had a cold.
2. The coat costs ten dollars.
3. The bell weighs seventy pounds.
4. Bob resembles his father.
5. This book lacks a cover.
6. That act takes courage.
7. A red sunset means fair weather.
8. Haste makes waste.

Certainly it is possible to arrange the words in the passive order but most people feel that the results are not grammatical. In other words, we say
Exercise 1:
Write the following sentences labeling \( \text{NP}^1 + \text{Vb} + \text{NP}^2 \)
and then transform them into the passive, again labeling
the parts.

Example: \( \text{NP}^1 + \text{Vb} + \text{NP}^2 \)
\[ \text{The truck hit the mailbox.} \]
\[ \text{The mailbox was hit by the truck} \]

A. 1. The secretary typed the letter.
2. Sammy played the guitar.
3. Twelve men guard the palace.
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Certainly it is possible to arrange the words in the passive order but most people feel that the results are not grammatical. In other words, we say
"Andy had a cold," but not "A cold was had by Andy."

We will call those verbs which appear in the NP1 + Vb + NP2 arrangement and which cannot be made passive the mid verbs, (Vmid). How can you state a rule that shows that Vb are either Vmid or other verbs? What would be a logical symbol for the verbs left after the mid verbs are taken out? How would you show that Vmid is always followed by a NP? What sign do we use to show that something must be either one thing or something else, not both?

```
Rule 9 Vb → {Vmid + NP} → {V (Man)}
```

In our branching diagram the mid verb appears as a branch of Vb?

---

Exercise 2:
List the verbs in these sentences, label each Vmid or V and be able to explain why your label applies.

1. The fugitives eluded the soldiers.
2. George has red hair.
3. Beethoven composed nine symphonies.
4. Her speech lacked polish.
5. The team needed seven more points.
6. This battleship weighs 45,000 tons.
7. Tom weighed the potatoes.
8. Orville mixed the ingredients.
9. The boy resembles his brother.
10. Smoke means fire.
11. Good fortune befell the islanders.
12. The witness answered the question.
13. Sally dominated the conversation.
14. Tony must have caught the biggest fish.
15. The wind damaged the apartment building.

Mid verbs are different from the other verbs in another way. Using the first sentence in the exercise above, let's select a word that will help to explain the manner in which (how) the verb action took place. For example: "The fugitives eluded the soldiers quickly." Quickly answers the question
"In what manner did the fugitives elude the soldiers?" Words that answer the question "in what manner" are called manner adverbs. Such adverbs can be applied to some of the sentences in the exercise. To which ones? In the sentences where a manner adverb wouldn't fit, notice what you labeled the verb. They were probably labeled \texttt{Vmid}. List as many mid verbs as you can.

\begin{center}
\textbf{REMEMBER}
\end{center}

How can you tell whether a verb in a sentence is a mid verb?

1. \textbf{Check to be sure it is not a Be or linking verb.}

2. Mid verbs exist only in sentences containing a noun phrase after the verb: \[ \text{NP}^1 + \text{Vb} + \text{NP}^2 \]

3. The mid verb cannot be made passive.

4. The mid verb does not usually take a manner adverb.

\textbf{Exercise 3:}
Reduce the following sentences to strings. In case of doubt construct a branching diagram to show how the strings were generated.

For example:

\begin{center}
\textbf{NP} + \text{past} + \text{Vlink} + \text{Pr}
\end{center}

These ducks remained calm.

or (in case of doubt)

\begin{center}
\begin{tikzpicture}
\node {Sentence} child {node {NP} child {node {Aux} child {node {Vb} child {node {Aux_1} child {node {Tns} child {node {past} child {node {Vrb} child {node {Vlink} child {node {Pr} child {node {past} child {node {Vlink} child {node {Pr} child {node {The ducks} child {node {remained} child {node {calm.}}}}}}}}}}}}}}}}}
\end{tikzpicture}
\end{center}
A. 1. A dog has been our mascot.
2. The speaker was becoming hoarse.
3. A boat must have been the home.
4. The water tasted metallic.
5. Vivian would have felt terrible.
6. The story should have suspense.
7. The contest has lasted an hour.
8. Ivan will become a scientist.
10. The villain resembled a weasel.
11. The basketball team had been lacking spirit.
12. My dog may become angry.
13. Sally has been a girl scout.
14. This bridge will cost two million dollars.
15. Your idea sounds good.

B. 1. The Boy Scouts lack a leader.
2. Mrs. Jason is the housekeeper.
3. Some people are taking a vacation.
4. The parade will be passing the corner.
5. The actors performed skillfully.
6. The teacher may have scrambled the answers.
7. Lake Louise seemed peaceful.
8. The principal means business.

Exercise 4:
Substitute appropriate words for the following strings.

Example: NP + past + become + Pr
The day became hot.

A. 1. NP + pres + Be + Pr.
2. NP + pres + M + Be + Pr.
3. NP + past + have + en + Be + ing + collect + NP2.
4. NP + pres + M + cost + NP2.
5. NP + past + have + en + Be + Pr.
6. NP + past + taste + Pr.
7. NP + pres + feel + Pr.
8. NP + past + feel + NP.
9. NP + pres + Be + ing + go.
10. NP + pres + have + en + have + NP.

Example: NP + past + M + Vmid + NP2
The story should have an ending.

B. 1. NP + pres + Be + Pr.
2. NP + past + Vlnk + Pr.
3. NP + past + have + en + Vlnk + Pr.
4. NP + pres + have + en + Be + Pr.
5. NP + pres + Vmid + NP2
6. NP + past + Be + ing + Be + Pr.
7. NP + pres + M + Vmid + NP^2.
8. NP + pres + have + en + Vmid + NP^2.
9. NP + past + M + Be + ing + Vlnk + Pr.
10. NP + pres + M + have + en + Be + ing + Vmid + NP^2.
TRACTIVE AND INTRANSITIVE VERBS

We have learned to identify the verb Be, Vlink, and Vmid. There remain, the largest verb categories in our language. In the following exercises your knowledge of the verbs we have already described will help you to understand verbs which we have not yet talked about.

Exercise 1:
Copy the following sentences and underline the verbs. Then list and label them Be, Vlink, Vmid, or Vtr:

Example: The swimmer waved his hand wildly.

<table>
<thead>
<tr>
<th>Verb</th>
<th>kind</th>
</tr>
</thead>
<tbody>
<tr>
<td>waved</td>
<td>V</td>
</tr>
</tbody>
</table>

1. Joe's face was tan.
2. The clerk closed the safe.
3. The crowd must have been wild.
4. The subjects bowed before the king.
5. The situation looks hopeless.
6. Snakes became a symbol of evil.
7. The cotton absorbed the water quickly.
8. Mr. Brown has my order.
9. The janitors have waxed the floors carefully.
10. Our meeting will attract many people.
11. The cloud resembles a camel.
12. Our chickens laid these eggs.
13. Mother is preparing dinners.
14. The ship tossed dangerously.
15. These boys will be waiting patiently.

Now look at those verbs which you have labeled V. Which of the V verbs are followed by NP2? (You will have to refer back to the sentences to answer this question.) Can the V verbs followed by NP2 undergo the passive transformation? Can they take a manner adverb? Such verbs are called transitive verbs (Vtr). In some ways they look like Vmid because they are followed by NP2 but they are unlike the Vmid in two ways: they can undergo the passive transformation and they can take manner adverbs. These are two ways to test for transitive verbs.

Exercise 2:
(a) Construct five kernel sentences containing transitive verbs and manner adverbs. (See sentences 7 and 9 above.)
(b) Transform the five sentences in (a) to the passive.

Exercise 3
(a) This group of sentences contains a variety of verb classes; list the verbs and classify as many as you can as Be, Vlink, Vmid, or Vtr.
(b) Select those which are transitive and transform them to the passive.
(c) If there are any verbs which do not fit one of the four categories, explain briefly why they do not.

1. War destroys men.
2. Tom read the message.
3. His father scolded him.
4. The audience became quiet.
5. The floor has been shaking violently.
6. The mistake cost a million dollars.
7. The snow fell quietly.
8. Ronald must have been collecting fossils.
9. The twins are identical.
10. We could see many colors.
11. The boys went home.
12. Several spectators had lost umbrellas.

(d) Analyze sentences 2, 4, 8, 9, on branching diagrams.

Example: War destroys men

```
NP  VP
  |   |   |
  |   | Aux
  |   | Aux
  |   | Tense
  |   | V
  |   | V
  |   | Vtr + NP
  |   | destroy + men.
```

Now we should be able to identify the verb Be, Vlink, Vmid and Vtr. What are we going to do with the verbs which do not fit into any of these categories? We will find that all these remaining verbs can be grouped together into a class which is called intransitive verbs. The symbol for such verbs is Vin. Like many words in our language, the intransitive verb can be described more by what it is not than by what it is. (For example, can you define such terms as unnatural or uncopular by being positive rather than negative?) You are already familiar with the characteristics of the other verb types, so that when you decide that a verb is intransitive, you know that

1. it is not Be; therefore it doesn't take a Pr.
2. it is not Vlink; therefore__________________
3. it is not Vmid; therefore__________________
4. it is not Vtr; therefore__________________
Look again at the verbs you were unable to identify in Exercise 2. We have just said such verbs are intransitive because they are not other types of verbs. Are these verbs followed by an NP like the mid and Vtr? Do they need to be followed by any other word? Look at 5 and 7. Can these verbs take a manner adverb? What are violently in sentence 5 and quietly in sentence 7? Try other manner adverbs in these sentences and in the other sentences containing intransitive verbs. We can say then that the one positive characteristic of Vin is that it can take a manner adverb. In this it is like transitive verbs.

We started our discussion of this section by saying that after we had identified Be, Vlnk, and Vmid, we still had the largest group of verbs in our language left to discuss. We used the symbol V to apply to this large group. Now we have found that the verbs in this large group will be either transitive or intransitive verbs. How can we use symbols to show that V will be either transitive or intransitive but not both? Remember that Vtr is always followed by a noun phrase and that Vin is not followed by a noun phrase. This will be our 10th phrase structure rule.

\[
\text{Rule (10)} \quad V \rightarrow \begin{cases} Vtr + NP \\ Vin \end{cases}
\]

We have now grouped all the verbs of our language in five basic classes. We can indicate all the various parts of the kernel sentence which we have discussed in a branching diagram which looks like this:

```
  Sentence
   / \      /      /     /
  NP  VP  Aux  Verb
     / \         / \      /   /
    Aux1 Aux2 Be + Pr Vrb
       / \             /     /
      Tense (M) (have + en) (be + ing)
      present  past

  Vlnk + Pr Vrb
  Vmid   V (Man)
  Vtr + NP Vin
```
For review see if you can remember what each term in the diagram stands for.

**Exercise 4:**
A. Construct kernel sentences for the following strings of symbols. Notice that the verbs have been supplied for you. In each pair one verb is used intransitively. Try to decide which one is intransitive and label it. Try to decide what the other verb in each pair is and label it.

**Example:**

```
NP + pres + play + NP2
The boy plays ball. (Vtr)

NP + pres + play + manner adverb
The children play hard. (Vin)
```

1. NP + pres + blow + manner adverb
   NP + past + blow + NP.

2. NP + past + fly + NP
   NP + past + fly + manner adverb

3. NP + pres + M + ring + NP
   NP + pres + M + ring + manner adverb

4. NP + pres + be + ing + sail + manner adverb
   NP + past + be + ing + sail + NP

5. NP + past + have + en + weigh + NP + manner adverb
   NP + pres + have + en + weigh + NP

6. NP + pres + hear + manner adverb
   NP + pres + hear + NP

B. The following verbs can be used as intransitives (Vin) and as some other kind (not always the same kind). Write two kernel sentences for each verb, one in which the verb is used intransitively and the other in which the verb is used another way. Label the verb in both sentences.

**Example:** The verb—grow

```
The corn grew rapidly. (Vin)
Ted grew corn. (Vtr)
```

or Grandfather grew angry. (Vlnk)

1. drive 5. throw
2. roll 6. sing
3. plan 7. look
4. write 8. dance
Exercise for review:
A. Construct kernel sentences which correspond to the following strings of symbols: Notice that the verbs have been supplied for you.

Example: NP + pres + have + en + Vtr + NP

The bird has hit the window.

1. NP + pres + Vmid + NP
   cost

2. NP + past + Vin + manner adverb
   talk

3. NP + pres + M + VLink + Pr
   remain

4. NP + past + M + Vin
   run

5. NP + past + have + en + Vtr + NP
   make

6. NP + pres + be + ing + Vtr + NP
   smell

7. NP + pres + VLink + Pr
   smell

8. NP + past + M + have + en + Vtr + NP
   hear

9. NP + pres + M + have + en + be + ing + Vtr + manner adverb
   hear

10. NP + pres + have + en + Be + Pr
    Be

Exercise for review:
B. Construct kernel sentences which correspond to the following strings of symbols:
Examples: NP + pres + M + have + en + Vtr + NP²

The rocket must have missed the moon.

or

NP + past + M + have + en + Vtr + NP²

The skiers should have taken earmuffs.

1. NP + pres + Vmid + NP
2. NP + past + M + Vin
3. NP + past + M + Vlnk + Pr
4. NP + pres + M + Be + Pr
5. NP + past + Vin + manner adverb
6. NP + past + Be + ing + Vlnk + Pr
7. NP + pres + have + en + Be + Pr
8. NP + pres + M + have + en + Vtr + NP
9. NP + past + have + en + be + ing + Vtr + NP
10. NP + pres + Be + ing + Vtr + NP + manner adverb

What we have learned about transitive and intransitive verbs:

1. Transitive verbs are followed by an NP (which we have labeled NP²). The number of NP² doesn’t have to be the same as the number of the NP before the verb.

   Example: The boys broke the mirror.

2. Unlike mid verbs, transitive verbs can be made passive.

   Example: The boy broke the mirror.
   The mirror was broken by the boy.

3. Unlike mid verbs, transitive verbs can take a manner adverb.

4. Intransitive verbs are not followed by NP’s. Most intransitive verbs do not need to be followed by anything.

   Example: The rocket exploded.

5. Intransitive verbs can take manner adverbs.

   Example: The rocket exploded violently.
THE PREDICATE

Every kernel sentence consists of two essential parts. What are they? By now you have studied the rules of our grammar that deal mainly with the various kinds of verbs. You have identified five kinds of verbs. What are they? With our classification of verbs complete, we will now concentrate on some of the other parts of the sentence. First we will want to look at the elements besides the verbs which are found in the Verb Phrase part of the kernel sentence. First we will talk about the predicate, which we symbolized as $Pr$.

Exercise 1:
Consider the following sentences. Copy them on your paper and circle the numbers of the ones you would accept as complete English sentences. Underline each $Pr$.

1. The man is
2. Larry became a Democrat
3. The aspirin tasted
4. The rug feels
5. That would be
6. Winter seems
7. The sentence sounds
8. His answer rang true
9. The octopus grew larger
10. Guy stayed at home

What do some of these sentences lack? What two classes of verbs automatically select a $Pr$?

In Sentence 2 above, why did you identify Democrat as $Pr$? Why did you label became as VInk? Check these tests.

Larry became a Democrat.
Larry is a Democrat.
Larry = Democrat.

Because you can substitute either a Be form or an equal sign for became you know it is a linking verb. And because by definition linking verbs must be followed by a $Pr$, you can conclude that Democrat is a $Pr$. How would you prove that the verbs in Sentences 8, 9, and 10 are VInk?

Sentences 1, 3, 4, 5, 6, and 7 seem incomplete English sentences because they contain Be or VInk but lack $Pr$. Recall that in our previous study of $Pr$ we discovered that although Be and linking verbs always select $Pr$ they do not always select the same kind of $Pr$.

Look again at Sentences 2, 8, 9, and 10.

2. Larry became a Democrat
8. His answer rang true
9. The octopus grew larger
10. Guy stayed at home

At this point we must divide \( Pr \) into classes and give each subclass a label. In Sentence 2 we have noted that \( \text{Larry and Democrat} \) are equal. We know that the part of the sentence that precedes the \( VP \) is called \( NP \). Now we have a sentence in which the word following \( \text{Vlink} \) actually equals \( NP \).

\[
\text{Larry became a Democrat} \\
NP + \text{past} + \text{become} + Pr \\
NP = ?
\]

What is a logical label for this kind of \( Pr \)? Because \( \text{Democrat} \) (the word following \( \text{Vlink} \)) is equal to \( NP \) which precedes the verb, we call this \( Pr \) class \( NP \) also. Thus

\[
\text{Larry became a Democrat} \\
NP + \text{past} + \text{become} + Pr \\
NP = NP
\]

Could you classify \( Pr \) in Sentences 8, 9, and 10 as \( NP \)?

8. answer = true
9. octopus = larger
10. Guy = at home

As you may remember we learned in Rule 7 that \( Pr \) does not always equal the subject; therefore, \( Pr \) does not automatically become \( NP \). What other test did we use to determine the relationship between the \( Pr \) and the \( NP \) appearing before \( \text{Be and Vlink} \)? Try rewriting \( Pr \) before \( NP \) as we did in Rules 7 and 8.

The old witch is ugly.
The ugly old witch is ugly.

We called this kind of \( Pr \) an adjective, and now we label it \( Adj \). You can see that the \( NP \) before the verb and the adjective after the verb refer to the same thing. Can \( Pr \) in Sentences 8, 9, and 10 be classified as \( Adj \)?

Exercise 2:
A. Copy the following sentences. In the blanks fill in with the kind of \( Pr \) called for in the parentheses.

1. The scorpion is _________(Adj)
2. Boswell was _________(NP)
3. The baby appeared _________(Adj)
4. Our poodle had been.
5. The pool will be
6. The blanket will feel
7. The flowers are
8. Lyndon Johnson became
9. The cake looks
10. My friend was

B. Copy the following sentences and underline the Pr in each sentence. Classify each Pr by writing the proper symbol, NP or Adj, after the sentence.

1. The suitcase looked heavy.
2. The boys felt confident.
3. The audience remained quiet.
4. Benedict Arnold was a scoundrel.
5. The ship remained at anchor.
6. The mutterings had grown indistinct.
7. The deliveries were late.
8. Our ambassador is Henry Cabot Lodge.
10. Thomas Edison became an inventor.

Were you unable to classify any Pr in the B part of Exercise 2? When you analyzed Sentence 5 you found

The ship remained in the harbor.
The ship was in the harbor. (Test for VLink by substituting Be)

ship = in the harbor. (Test for NP)

The in the harbor ship was in the harbor. (Test for Adj)

By substituting Be we prove that remained is a linking verb; thus lay must have a Pr. Are NP (ship) and Pr (in the harbor) equal? Then Pr is not an NP. Can the Pr at anchor be written before the NP ship (The in the harbor ship)? Then we can not label the Pr an Adj. Would you accept "The ship lay" or "The ship was" as completed English sentences? In the harbor completes the sentence by telling the location of the subject. A simple test for this kind of Pr is to transform the sentence into a question by using where in place of Pr.

The ship remained in the harbor.
The ship was in the harbor. (Test for VLink by substituting Be)

Where was the ship

or

Where did the ship remain?
In the harbor answers the question where. We say it is an adverb of location and use Loc as the symbol to indicate this third subclass of Pr. Should any other Pr in exercise 2 be marked Loc? Should any Pr in Exercise 1 be classified Loc?

Now we are ready to write Rule 11. What have we been re-writing and expanding at this point? The symbol for Pr appeared first in Rule 7. What symbol is used to indicate "is rewritten as"? What three subclasses of Pr have we identified? What symbol must we use to show that when Be or Vlink selects Pr it automatically selects one of these three subclasses? Compare the rule you have written with the following:

\[ \text{Rule (11) Pr} \rightarrow \begin{cases} \text{Adj} \\ \text{Loc} \end{cases} \]

Study carefully the diagram for the following sentence.

Sentence: Joe Louis was a prizefighter.

Remember each new step expands only one part of a preceding rule.

1. What part of Rule 1 does Rule 2 expand?
2. How does Rule 3 expand Rule 2?
3. What does Rule 4 add to the diagram? (Notice that once we start expanding Aux1 in Rule 3, we automatically go to Rule 4 because it further explains Aux1.)
4. Why does our diagram for this sentence omit Rule 6 and go directly from Rule 5 to Rule 7?
5. Why does this diagram select Be + Pr?
6. Why do Rules 8, 9, and 10 not apply to this sentence?
7. What part of Rule 7 is expanded by Rule 11?

Exercise 3:
When you understand the above diagram thoroughly, construct branching diagrams for the sentences in
Exercise 2. Be prepared to explain to your classmates your reasons for your choice of each rule used in your diagrams.

Exercise 4:
Write sentences for the following strings of symbols.

A. 1. NP + past + Be + Pr
   2. NP + past + Vlnk + Pr
   3. NP + pres + have + en + Vtr + NP
   4. NP + past + Vin + manner adverb
   5. NP pres + be + ing + Vtr + NP
   6. NP + pres + Vmid + NP
   7. NP + past + have + en + Be + Pr
   8. NP + pres + have + en + Vlnk + Pr
   9. NP + pres + M + Vlnk + Pr
  10. NP + past + have + en + b? + ing + Vin

B. 1. NP + past + M + Vtr + NP
   2. NP + pres + Be + Pr
   3. NP + pres + have + en + Vlnk + manner adverb
   4. NP + past + be + ing + Vtr + NP
   5. NP + pres + Vlnk + Pr
   6. NP + past + Be + ing + Vtr + NP + manner adverb
   7. NP + past + M + have + en + Be + Pr
   8. NP + pres + M + be + ing + Vin
   9. NP + pres + M + Vlnk + Pr
  10. NP + past + M + have + en + be + ing + Vlnk + Pr

What we have learned:

1. Predicates follow the Be verb or linking verbs.
2. Predicates may be NP's, adjectives, or locative adverbs.
THE MANNER ADVERB

When we explored the nature of the mid verb (Vmid), we discovered that it could not be followed by a manner adverb. Later we learned that both transitive and intransitive verbs can take manner adverbs. For example we can't say:

(Vmid) The ticket cost fifty cents quickly or expensively or badly or carefully or quietly or loudly

But we can say:

(Vtr) The quarterback stopped the game slowly or reluctantly or angrily or independently or wisely or courageously

and

(Vin) Many people drive carefully or proudly or rapidly or recklessly or cautiously or intelligently

What is a manner adverb? How can we distinguish it from the other words in the sentence? Looking at our examples above, what would you say the lists of final words have in common? What question do these words answer in the sentence?

We have discovered in our three examples that we can ask a question beginning with "In what manner?" when the verb in the sentence is Vtr or Vin; that is, we can ask

In what manner did the quarterback stop the game?

or

In what manner do many people drive?

But we cannot ask a question beginning with "In what manner?" when the verb in the sentence is a Vmid; that is, we cannot ask, "In what manner did the ticket cost?"

Exercise 1:
Try putting the following 15 words into the frame sentences so that they will answer the question "In what manner?"

Mother spoke
or John writes his papers
or We ran
Did you find that all of the words would fit into one or another of the frames? Did you have to change any of the words so that they would fit into the frames? How did you change them? The words that you have just inserted into the frame sentences are called manner adverbs. We will use the symbol Man to refer to them. They have made it possible to convert the sentences into *In what manner* questions.

"Mother spoke quietly." converts to "In what manner did Mother speak?"
"John writes his papers slowly." converts to "In what manner does John write his papers?"

"We ran hard." converts to "In what manner did we run?"

Any word which makes this transformation to a "In what manner question possible is a manner adverb.

**Exercise 2:**
A. Copy the following sentences on your paper. Underline the manner adverbs and then convert the sentences into "In what manner" questions.

1. Jack broke the window deliberately.
2. The deer leaped swiftly.
3. Fenwick lit the bomb calmly.
4. The soprano sang beautifully.
5. The officer spoke harshly.
6. I did the problems correctly.
7. The streamliner runs fast.
8. Jane copied her paper neatly.
9. Henry did the job well.
10. The children played happily.

B. Construct five original sentences which include manner adverbs and convert each sentence to a *how* question.

There are other marks that distinguish some manner adverbs from other elements in the sentence. To single out the parts that make up a manner adverb let's go back to something you learned in connection with *Be* and *Vink*. At that time we worked with such frames as:

Sugar tastes__________
The grass smells__________
This board feels__________
Grasshoppers sound__________
The sky looks__________
What kind of words fit into the blanks? These words (adjectives) form the basis for most manner adverbs. When ly was removed from the words in our opening sentences, you found an adjective in every case. But in exercise 1 you discovered that three adjectives (those in 5, 12, and 14) did not have to be changed in order to fit the frame sentences. Therefore, linguists say that adverbs can often be indicated as adjective plus ly, but sometimes the ly is not present (as in well, hard, and fast.) We can say that ly can be rewritten as ly or nothing, depending on what it follows.

Here are some examples of adverbs which are rewritten as adjectives plus ly, and some that do not have the ly present.

We might use the mathematical symbol φ to indicate that the ly is absent.

<table>
<thead>
<tr>
<th>adjective</th>
<th>ly</th>
</tr>
</thead>
<tbody>
<tr>
<td>careful</td>
<td>ly</td>
</tr>
<tr>
<td>secret</td>
<td>ly</td>
</tr>
<tr>
<td>greedy</td>
<td>ly</td>
</tr>
<tr>
<td>straight</td>
<td>φ</td>
</tr>
<tr>
<td>hard</td>
<td>φ</td>
</tr>
</tbody>
</table>

We can say then that the manner adverb is rewritten as an adjective plus ly. This is our twelfth phrase structure rule.

<table>
<thead>
<tr>
<th>Rule (12)</th>
<th>Man</th>
<th>Adj + ly</th>
</tr>
</thead>
</table>

We must remember, of course, that not all words ending in ly are manner adverbs. The important test is whether they convert to a question asking "In what manner?"

Exercise 3:
On your paper list the manner adverbs from the following sentences and after each one give the adj + ly description. Remember that the manner adverb is the word that makes a how question possible. Remember also that sometimes the ly will be absent. (φ)

Example: The girl held the vase carefully.

<table>
<thead>
<tr>
<th>manner adverb</th>
<th>adj + ly</th>
</tr>
</thead>
<tbody>
<tr>
<td>carefully</td>
<td>careful + ly</td>
</tr>
</tbody>
</table>

1. Only John did his work properly.
2. Henry whipped the horses smartly.
3. The pioneers learned fast.
5. The officer stared hard at his men.

#hardly is not a manner adverb.
6. The trees were lovely in the snow.
7. The sun shone steadily above.
8. Sir Launcelot rode boldly toward the castle.
9. The bus was traveling in a westerly direction.
10. He does everything right.
11. Jim swims well.
12. Tom crossed the street swiftly.
13. The rats followed the piper willingly.
14. These candies should be loosely wrapped.
15. Grandfather spoke cheerfully to my dad.

Exercise 4:
Analyze sentences 1, 4, 11, 14, 15 of Exercise 3 on branching diagrams.

What we have learned:

1. Manner adverbs answer the question "In what manner."
2. They are found with transitive and intransitive verbs.
3. They are often formed by an adjective + ly.
What Have We Learned?  
(Review)

We have, so far, been looking only at the Verb Phrase part of the English sentence. We have seen how the Verb Phrases of English sentences grow out of the Verb Phrase part of kernel sentences. We say they are generated by the phrase structure rules. This process is really a matter of making selections. Some of the selections occur automatically.

For example: Once the Noun Phrase and the Verb Phrase, the two essential parts of a sentence, come together to form the sentence, Rule (1), the Verb Phrase automatically "selects" auxiliary. Because this happens, Verb Phrase is rewritten Aux + Verb. We expressed this idea in Rule (2) VP ----> Aux + Verb. You remember that the Aux says what form the verb will take, and since every verb has a definite form, Aux is present with every verb. We also learned that there are two kinds of auxiliaries—the kind always present (tense) and the kind sometimes present (M., have + en, be + ing).

Then we make other selections. For a verb we select either be, a linking verb (Vlnk), a midverb (Vmid), an intransitive (Vin) or a transitive (Vtr) verb. If we select be, it will automatically be followed by a predicate (Pr). If we select a mid verb, what will it be followed by? Whatever verb is selected decides the next step and those following. We say it generates the next step. This selection happens instantaneously in our minds, of course. It happens without our being aware of it; it happens whether we have a name for the various steps or not.

It is this generating process that eventually ends up in the strings which are translated into real-life sentences. Our mind is the generator. Psychologists think that this is the way we actually take in the words of the language and produce sentences. Though the process is instantaneous when it occurs in our minds, we must, so that we can talk about it, take up each step at a time and assign names to the parts we are talking about.
To check up on how much we know about the way a verb phrase is generated, let's trace the steps in the production of the sentence "The fox ate the grapes." To do this, we must apply all our rules, one by one, to the sentence. Refer back to the rules we have written whenever necessary.

1. We start with our first rule and say that the sentence starts with two essential parts—the noun phrase and the verb phrase.

2. What does Rule (2) say? We show that our verb phrase, like every verb phrase, has an auxiliary which attaches to the verb, giving it a form.

3. What does Rule (3) show us? Which one of the two parts of the auxiliary is present in every verb? In the sentence we are generating now, do we have both parts or only one? We show this by rewriting Aux as Aux1. Notice that we leave Aux2 out. Why?

4. What does Rule (4) say? Which part of Aux, is found in every verb? Does our verb here have a modal? Then we can rewrite Aux1 as tense, because that is all that it shows.

5. What does Rule (5) tell us? Which tense does our verb have? We show this on our diagram.

6. Do we need to deal with Rule (6) in this sentence? Why?

7. Now we are ready to talk about Verb. Is our verb eat a be verb? What does that leave us? We indicate this fact on the diagram.

8. We must now decide if eat is a linking verb or something else. How can you test it? If it is not a linking verb we know it is one of the remaining verbs which, in Rule (8), we called Vb.

9. What do we try to find out in our next step? What does Rule (9) tell us? Is ate a mid verb? How do you know? Then what is left?

10. What is our next step? How do we decide if eat is transitive or intransitive? Which is it? What must transitive verbs be followed by?

11. Does Rule (11) apply? Why?

12. Does Rule (12) apply? Why?

Now we are ready to bring down all the elements into a string of symbols.

Finally, we translate this string of elements into the sentence string which will give us "The fox ate the grapes."

In this exercise we have applied all the rules that we have so far learned about how a sentence is generated. Of course, we have been dealing with only the Verb Phrase part of the sentence. Now we are ready to look at the other part of the sentence.
Exercise for Review:
A. Using the sentence just discussed as an example, give the string of symbols for these sentences.

1. A jar has been catching the gasoline.
2. The conversation had become an argument.
3. The members may talk quietly.
4. This candy should cost a nickel.
5. The topping was gooey.

B. Reversing the procedure in Part A, write sentences of your own for these strings of symbols.

1. NP + pres + have + en + Vin
2. NP + past + M + be + ing + Vtr + NP
3. NP + past + Be + Pr
4. NP + pres + M + have + en + Vmid + NP
5. NP + past + be + ing + Vlnk + Pr

C. Make diagrams for the sentences you have written in B.

D. Give the string of symbols for each of the following.

1. Socrates had drunk the hemlock.
2. The swimmer might be having trouble.
3. His violin is a Stradivarius.
4. Ron has been working patiently.
5. The applause must have sounded good.

E. Write your own sentences for these strings.

1. NP + past + M + Vmid + NP
2. NP + pres + have + en + be + ing + Vin + Man
3. NP + past + M + have + en + Vlnk + Pr
The rules of the grammar which we have written so far look like this:

Rule (1) Sentence ----> NP + VP (Sentence must have a noun phrase and a verb phrase)

Rule (2) VP ----> Aux + Verb (The verb phrase must have auxiliary and verb)

Rule (3) Aux ----> Aux₁ (Aux₂) (There are two kinds of auxiliaries. One kind is optional)

Rule (4) Aux₁ ----> Tns (M) (Auxiliary₁ always has tense. It may have a modal)

Rule (5) Tns ----> \{pres\, \{past\} \} (Tense indicates whether a verb has its present form or its past form)

Rule (6) Aux₂ ----> (have + en) (be + ing) (Auxiliary₂ may contain have as a helping word or be as a helping word. Or it may contain both. If it contains have the verb following will take its en form. If it contains be, the verb following will take its ing form)

Rule (7) Verb ----> \{Be + Pr\} \{Vrb\} (The main verb of a sentence may be a form of the verb Be. If it is not Be it will be one of the other verbs of the language which we symbolize as Vrb)

Rule (8) Vrb ----> \{Vlnk + Pr\} \{Vb\} (Vrb may be rewritten as a linking verb. If it is not a linking verb it will be one of the verbs of the language which are left—symbolized as Vb)

Rule (9) Vb ----> \{Vmid\} \{V (Man)\} \{Vtr + NP\} (Vb contains mid verbs and the verbs that are left, which we call V. These verbs may appear with manner adverbs)

Rule (10) V ----> \{Vin\} \{NP\} \{Adj\} \{Loc\} (V will be either a transitive verb followed by a noun phrase or an intransitive verb)

Rule (11) Pr ----> \{Adj\} \{Loc\} (Predicate may be one of three things, a noun phrase, an adjective, or sometimes a locative adverb)

Rule (12) Man ----> Adj + ly (One way manner adverbs are formed is by an adjective plus ly)