

ENGLISH SENTENCE PATTERNS AND SENTENCE ANALYSIS IN AMERICAN STRUCTURAL LINGUISTICS

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PREFACE

My previous paper in the Journal of the Faculty of Textile Science and Technology, Shinshu University (No. 33, Series D, Arts, No. 5, Dec. 1962) dealt with the nature of language and the teaching and learning of a foreign language based upon American structural linguistics. It was a general view of American structural linguistics and a detailed elucidation of its basic principles.

This paper will deal with English sentence patterns and sentence analysis based upon American structural linguistics. It is a problem of the structure of English and at the same time a problem connected with being able to produce and respond to the signals of structural meaning.

From the point of view of American structural linguistics, "grammar is the particular system of devices which a language uses to signal one of its

various layers of meaning—structural meaning” (Charles C. Fries). English sentence patterns are the frames or molds in which English words must be grasped. To develop such a set of habits in English sentences will eventually be to have efficient reading ability.

I think, therefore, it is very important for English teaching and learning to identify the patterns of form and arrangement by which the “words” are put together. I owe this paper for the most important part to *the Structure of English* by Charles C. Fries (Longmans, Green and Company, London, 1959).

CHAPTER I. A GENERAL VIEW OF AMERICAN STRUCTURAL LINGUISTICS

I. The Gist of American Structural Linguistics

Structural linguistics is a science. Structural linguistics, like other sciences, seeks to describe what is observable. It does not prescribe what should be. But teaching is not a science, for the teacher must select, choose, decide what to teach, and in what sequence. James Sledd has said that the linguist provides the description on which wise prescription is based. The framework of linguistics gives one a perspective on language as a whole, as a system, thus eliminating the feeling that was unavoidable in the old approach—that of having a proliferation of facts about language, sometimes connected, sometimes not.

Structural linguistics can be applied to any language, not just English. It analyzes a language into significant sounds, the pattern of sounds we call words, and the patterns of words we call phrases, clauses, and sentences. Linguists are in agreement about a number of basic tenets.

- (1) Speech is language. Speech is the primary symbolization of reality. Writing symbolizes speech and is a secondary symbolization.
- (2) Language changes. Change cannot be termed either good or bad. It is the very nature of language. Speech changes all the time. Writing tends not to change.
- (3) Correctness in speech is relative to time, place, circumstance, and other features of the environment.
- (4) The native speaker of a language, however ignorant, knows the grammar, that is, the sound structure, the forms of the words, and the syntactic arrangements of that language.
- (5) There is no universal grammar. Each language must be analyzed separately according to its own system.

Structural linguistics has clarified the confusion between acquiring a skill—learning to speak, read, and write a language—and learning a language about language, that is, consciously learning the rules and regulations of a language. It has contributed greatly to our understanding of the nature of language. Language is part of one’s social heredity. It is acquired. All people have language. From the view of the linguist, all languages are adequate. The linguist does not apply the word *primitive* to languages; all languages are linguistically fully developed.

In studying the system of a language, linguists study three interlocking levels: phonology, morphology, and syntax. Phonology includes both phonetics and phonemics. Phonetics furnishes the raw data of phonemic analysis. A phoneme is defined as a sound signal unit consisting of one or more members which are phonetically similar and in complementary distribution. According to the analysis of English made by George Trager and Henry Lee Smith (*An Outline of English Structure*), English has forty-five phonemes. These are divided into segmental phonemes: twenty-four consonants and nine vowels; and the supra-segmental phonemes: four stresses, four pitches, and four junctures. A knowledge of the phonology of English is directly applicable to teaching English pronunciation, intonation, and rhythm. The best textbooks on pronunciation are firmly based upon such knowledge.

The morpheme is the smallest meaningful linguistic unit. The word *bat* has two consonants and one vowel which are meaningless in themselves. But the whole form does have a meaning. *Bat* is a morpheme which is also a word. In the word *unkindness* there are three morphemes, the prefix *un-*, the base *kind*, and the suffix *-ness*. Syntax is the descriptive analysis of forms larger than single words. Its basic concepts include the notions of controlled substitution, syntactic classes, immediate constituents, and syntactic constructions.

It is needless to say that such knowledge should make the difficult job of teaching English more successful.

2. Linguistic Structures in English and Japanese

In teaching and learning English, there is the difficulty arising from the great difference in linguistic structure between English and Japanese. To cite a few examples, English has a stress-timed rhythm, while Japanese has a syllable-timed rhythm. In other words, in English, stressed syllables recur at approximately regular intervals so that the more unstressed syllables there are between stressed syllables, the more rapidly these unstressed syllables are pronounced. In Japanese, on the other hand, each syllable has an approximately equal duration so that the length of an utterance is proportionate to the number of the syllables it contains. This means that the Japanese listening to English have great difficulty in recognizing unstressed syllables sandwiched between stressed syllables and that they carry over their syllable-timed rhythm into the English they speak.

Again the syllabic structure of Japanese is very different from that of English. The typical syllable in Japanese consists of a vowel preceded by a consonant, as in *ka*, *pa*, *te*, etc.; there is no syllable ending with a consonant such as *ak*, *ag*, *et*, etc. Naturally the Japanese are apt to add some unnecessary prop vowel after the syllable-final consonant and say, for example, *eighto* instead of *eight*. *Citron* in English is a two-syllable word, but when borrowed by Japanese, it is pronounced as a four-syllable word: *sitoron* (The final *n* constitutes one syllable.). The difficulty that the Japanese experience in distinguishing between *l* and *r* sounds is very well-known. *Rice* and *right* are most probably mispronounced. *lice* and *light* respectively though they think to

say them correctly.

Divergencies of grammar are more complex and intricate. Lexical discrepancies are almost infinite. In fact, it can be said that any English word (except probably highly technical ones) and its so-called Japanese equivalent never cover the exactly identical area of meaning. *Hand* in English corresponds to the Japanese *te* when it refers to a part of the human body, but the Japanese never say "*te* of a clock or a watch;" they use *hari* ("needle") instead. This word *needle*, in turn, refers to pine leaves, but *hari* never does. Similar cases can be multiplied infinitely.

One of the fundamental tenets of the modern methods of teaching a foreign language is that the best results can be obtained from making a careful comparison of the structure of the student's mother tongue and that of the foreign language to be taught with a view to discovering trouble spots and arranging the teaching materials accordingly. This kind of contrastive study is especially necessary and important. The comparison of the sound systems of English and Japanese is almost complete. What awaits us is that of the grammatical structures of the two languages, and this is extremely difficult because the complex divergencies are involved.

CHAPTER II. STRUCTURAL PATTERNS OF ENGLISH SENTENCES

If certain utterances are all regularly followed by a particular type of response then there must be something in the formal arrangement of these utterances that elicits this type of response. If, for example, some utterances are immediately and regularly followed by "action" responses and others by "oral" responses then there must be some basic contrastive difference in the formal arrangements of these two groups of utterances. It is these contrastive differences in the formal arrangements of the various groups of utterances that constitute the basic structural patterns of English sentences. It is these contrastive differences in the formal arrangements of the various groups of utterances that signal, as one structural meaning, the kind of utterance, and serve to stimulate the particular responses that regularly follow each kind of utterance. The child, in beginning to speak his native language, learns very early to respond to these contrastive differences—which signal that such an utterance as *is your mother home* is a "question" seeking an oral response, that another, *give Jack the ball* is a "request" seeking "action," and that another, *Jack is sick and cannot come over to play today*, is a "statement" to which the appropriate response is attention until the utterance ceases.

The patterns of the contrastive differences that signal these various types of utterances is described in this chapter. It is sometimes assumed that distinctive intonation curves serve to identify each of the types of sentences—that the voice rises at the ends of "questions" and falls at the ends of "statements," and that "commands" have a special "tone of voice." As Kenneth L. Pike points out in his book *The Intonation of American English* p. 163 (Ann Arbor: University of Michigan Press, 1945), such a simple correlation be-

tween primary intonation contours and the chief types of sentences does not exist. It is true that every sentence structural pattern always includes one of the significant intonation contours. Attention here is centered upon the devices and patterns of structure other than intonation. One cannot, however, have utterances without their intonation contours. We can, nevertheless, find contrastive patterns of form and arrangement of other structural items within the same primary intonation contours. Descriptions, therefore, are attempted to clarify the distinctive contrasts of pattern that mark the various kinds of sentences, not apart from, but within the various primary intonation contours. In all instances in which contrasts of form and arrangement are described, it is to be assumed, unless specially stated otherwise, that the essential intonation contours are of the same patterns. The descriptions here of the basic structural patterns of sentences will be primarily in terms of the selection of the parts of speech set forth by Charles C. Fries and of the distinctive formal arrangements of these parts of speech.

1. What Signals Basic Sentences of Statement, Question, and Request

In the great mass of utterances the kind of sentence, whether question, or request, or statement, is signalled by special contrastive patterns in the arrangement of only two of these parts of speech—Class 1 and Class 2 words.

A comparison of the following sentences will serve to bring out certain basic features of the contrastive arrangements of these two form-classes.

(A)

1. The leader is here
2. Is the leader here

(B)

1. The leaders are here
2. Are the leaders here

(End punctuation is omitted here in the hope that the omission of these graphic signs will help stress the fact that all examples are to be grasped orally. We are concerned only with speech signals, not with written signs. For each of these sentences, also, the same 2-4 intonation contour is assumed at the end. This intonation pattern is very common even in questions of the "yes" and "no" variety.)

The first sentence of each group, *the leader is here* and *the leaders are here*, is responded to as statements of fact, not questions seeking information, nor requests for action. The second sentence of each group is responded to as questions. The first and the second sentences in group (A), the statement and the question, contain exactly the same words, but in a slightly different order. The first and the second sentences in group (B), also a statement and a question, contain the same words, but in slightly different order. In addition, a comparison of the sentences of group (A) with those of group (B) will reveal the fact that in the first and second sentences there is a correlation of the forms of the Class 1 and Class 2 words. In group (A) the Class 1 word *leader*, without an "s" ending, is used with the Class 2 word *is*. In group (B) the Class 1 word *leaders*, with an "s" ending, is used with the Class 2 word *are*. In other words, in these two sentences the Class 1 words are "tied" to the Class 2 words by a certain concordance of forms: "The leader *is* here" as compared with "The leaders *are* here," and "*Is* the leader here" as com-

pared with "Are the leaders here."

The following additional sentences, which are responded as requests, must now be added to the two groups for comparison.

(A)

3. Be the leader here

(B)

3. Be the leaders here

These sentences differ significantly from those compared above in the fact that the same form of the Class 2 word, *be*, is used whether the following Class 1 word has an "s" ending or not.

In other words the basic contrastive patterns for these three kinds of sentences in Modern English can be expressed by the following formulas:

1. Class 1 \leftrightarrow Class 2 ("tied" by a certain correspondence or concordance of forms) signals a *statement*.

2. Class 2 \leftrightarrow Class 1 ("tied") signals a question.

3. Class 2 (in the simple unchanging form of this part of speech; alone, or followed by a Class 1 word *not* "tied" by a correspondence or correlation of forms) signals a *request*.

That these patterns of form and arrangement do constitute in Modern English the signals of the kind of utterance is supported also by the fact that ambiguity with respect to the kind of utterance results in those infrequent situations (of minimum utterances) in which the details of both form and order happen to be the same for two different kinds of utterance. For example, the utterance *ship sails today* (which might appear in a telegram) is ambiguous as it stands because of no clear part-of-speech markers. As they stand, the words *ship sails today* could be either a statement or a request, because no markers are present in this utterance by which to determine the part of speech, the functioning class, to which the words *ship* and *sails* are to be assigned. The formal arrangement, as it stands, fits both that of statement and that of request. These words *ship sails* could be Class 1 \leftrightarrow Class 2 "tied" by the concordance of no "s" on a singular Class 1 word *ship* with an "s" on a following Class 2 word *sails*—the pattern of a statement. The word *ship* could also be of Class 2 in the simple unchanging form of that part of speech, followed by a Class 1 word, *sails*, in the plural—the pattern of a request. The marker *the* with the word *ship*, as in *the ship sails today*, would make the arrangement unambiguously a statement. The same marker *the* with the word *sails* would make the arrangement unambiguously a request. The signalling of the kind of sentence in each case is a matter not of the meanings of the words, nor of a vague "context," but solely of the contrastive patterns of the arrangement of the Class 1 and Class 2 words.

In the following sentences the signals are clear.

1. The *man has* paid

2. *Has* the *man* paid

3. *Have* the *man* paid

The first is Class 1 \leftrightarrow Class 2 (tied), signalling a statement. The second is Class 2 \leftrightarrow Class 1 (tied), signalling a question. The third is Class 2 (*not* tied to the Class 1 word following), signalling a request.

With the plural *men*, however, the situation is different.

The men have paid

Have the men paid

The men have paid is clearly a statement with Class 1 \leftrightarrow Class 2 (tied). But the form *have* is both the corresponding form for a plural Class 1 word (*men* in contrast with *man*) and also the simple unchanging form. As a result, the utterance *have the men paid* is ambiguous. As it stands (with the common 2-4 intonation curve) it can be either a question or a request. Ambiguity concerning the kind of utterance will necessarily arise wherever the details of both form and order happen to be the same for two different kinds of utterance.

Other examples of similar ambiguity are the following:

Have the boys come Have the boys run a race

Usually, however, formal differences prevent such ambiguities.

Have they paid Have them paid

Have they come Have them come

Have they run a race Have them run a race

Have the men done the work Have the men do the work

Have the boys walked Have the boys walk

Have the workers been prompt Have the workers be prompt

Basic formulas for the sentence patterns of present-day English can then be set up as the following:

Class 1 \leftrightarrow Class 2 = statement

Class 2 \leftrightarrow Class 1 = question

Class 2 (Class 1) = request

2. Complications in Present-day English

Although the basic structural arrangements to signal these particular kinds of sentences—questions, requests, and statements—are these simple formulas, there are in present-day English some complications to be described and some special situations to be listed to make the analysis here complete enough to be fully useful.

(a) Sentences in which the arrangement Class 2 \leftrightarrow Class 1 signalling a question is attained by means other than a simple "reversal"

(1) In present-day English, the special Class 2 word *be* in its various forms *am, is, are, was, were* is the only word of this part of speech that always operates in a simple contrast or reversal to signal a question.

"*Were the teachers there*" with the usual 2-4 intonation signals a question in contrast with "*The teachers were there*" with the same intonation. For all other Class 2 words the function word *do* is employed to obtain the reversal that signals a question. For example "*Does he go to the school here*" signals a question in contrast with "*He goes to the school here.*" The word *does* is the bearer of the formal concordance characteristics of the Class 2 word as contrasted with a "*Do they go to school here.*" In such a sentence as "*Did she meet him overseas*" the word *did* carries the tense form of the Class 2 word as contrasted with "*She met him overseas.*" This word *do* with its various forms *does, did* in this use has no meaning apart from the fact that it fills the position of the Class 2 word in this contrastive pattern of the question sentence. This *does* has no lexical meaning whatever, nor does it convey any

special "attitude" toward the action represented by the word *go*, as would such words as *can*, *must*, *might*, or *should*. This particular use of *do* as a function word to fill the contrastive pattern of question sentences began in Early Modern English (fifteenth-century) and only gradually displaced the simple reversal formerly used with other verbs than *be*, as in the following examples:

Comes he with good report (Shakspere)

Had they no money (Digby Plays)

Came Christe to make the worlde moare blynde (Tyndale)

In present-day English one Class 2 word other than *be*, the word *have* (in its various forms), still appears in simple reversal, but in much restricted use.

The arrangement "*Have* you this particular style in stock" appears as well as the more frequent "*Do* you have this particular style in stock." The preterit form *had* appears even less frequently in simple reversal than the present form *have*. Such expressions as the following from the sixteenth century are not likely to occur in present-day English.

Had ever man such a frende (Ralph Roister Doister)

Had you no need of food

The following are the usual forms of present-day English:

Did man ever have such a friend

Didn't you have any need of food

(2) Although the reversal of the relative significant positions of the Class 1 and Class 2 words to signal questions is accomplished very frequently by the use of the function word *do* to fill the pattern, this *do* is not usually used when such "attitude" signalling words as *may*, *can*, *must*, *might*, *could*, *would*, *should* appear with the Class 2 word.

Nor is *do* used when *will*, *shall*, as expressions of future, and *have* as an expression of completed action, are added to the Class 2 word. In all these instances these words themselves are used to accomplish the reversal, as in the following:

Would Tuesday be possible *Can you* come over soon

Should we organize another section *Could we* call

you tonight *Shall I* introduce him or will he be introduced

by somebody else *Will you* talk to Miss N—about it

and let me know *May I* speak with—please

Must I always do what B— wants

This use of the function words with Class 2 words to make the contrastive arrangement to signal questions is limited, except for the forms of the word *be*, to those of the particular list given above—that is, to those of subgroups (a) and (b) in the function words of Group B. (Charles C. Fries has set off fifteen separate groups, from A to O in the alphabetical order, in the sixth chapter entitled "Function Words" in his book *The Structure of English*, 1957.)

GROUP A	CLASS I	GROUP B				CLASS 2
		(a)	(b)	(c)	(d)	
The	students	<i>may</i>	<i>have</i>	<i>had to</i>	<i>get</i>	moving
		<i>might</i>			<i>keep</i>	
		<i>would</i>				
		<i>must</i>				
		<i>should, etc.</i>			<i>get</i>	moved

The function words in subgroups (c) and (d) use the regular question arrangement making function word *do*.

Does he have to go tonight *Didn't they get going*
before eight *Did they get married in Canada*

(b) Sentences with the basic contrastive Class 1 ↔ Class 2 arrangement which are not statements

(1) Sometimes one of a small group of function words (those of Group I) provides the distinctive signal of a question.

In the following examples the arrangement of the Class 1 and Class 2 words is clearly that of a statement.

Class 1	Class 2	Class 1	Class 2
The man	came	He	came
The others	came	Another	came

In the sentence, "*Who came*", the arrangement of the form-classes is exactly the same as that of the four examples above, but the structural meaning is different. *Who came*, in spite of the arrangement which usually signals a statement, is a question—the kind of utterance that regularly elicits a particular kind of oral response. The arrangement signal is superseded by the function-word signal, *who*. Examples of the special function words that thus signal questions are the following:

Who will be responsible for sending out the notices	Which of these came with your subscription	Which will be more convenient
What has to be included in that tracks	What books are available	Whose car made those were advertised —
		How many services

In each of these sentences it is not the order and form of the Class 1 and Class 2 words that signal the fact that the utterances are questions, but solely the particular words *who*, *which*, *what*, *how many*—words which are interrogative function words. It should be noted here, however, that these words operate as interrogative function words only in structures that are free utterances; that is, those that have one of the intonation curves that contrast with the 3-2-3 pattern that signals a continuation.

(Question) Which will be more convenient

(Statement) Which will be more convenient remains to be seen

The following pairs of sentences will illustrate this contrast in structural meaning.

- (Question) Who will be responsible for sending out the notices
- (Statement) Who will be responsible for sending out the notices we don't know
- (Question) What has to be included in that
- (Statement) What has to be included in that is not specified
- (Question) How many services were advertised
- (Statement) How many services were advertised is now a matter of dispute

These words *who, which, what, how many*, together with the words *when, where, why*, also appear before the arrangements of Class 1 and Class 2 words, that are in themselves questions:

	CLASS 2	CLASS 1	
<i>Who</i>	are	they	leaving it for
<i>Which</i>	will	they	be likely to take
<i>What</i>	did	you	do the night before
<i>How</i>	will	they	go
<i>When</i>	will	he	return
<i>Where</i>	does	he	come from
<i>Why</i>	are	they	reducing the price now

Here these words *who, which, what, how, when, where, why* are not the sole signal of the question utterance; the order of the rest of the sentence to which they are attached provides the question signal. This conclusion seems to be supported by the fact that in all the instances of this sort in which these words introduce similar expressions that are not questions the order arrangement is that of statement rather than that which is basic for questions. The intonation difference is the same as that described above.

Compare for example the pairs of sentences following.

Question			Statement		
Class 2	Class 1		Class 1	Class 2	
Who	<i>are they</i>	leaving it for	Who	<i>they are</i>	leaving it for we don't know
Which	<i>will they</i>	be likely to do	Which	<i>they will</i>	be likely to do is anyone's guess
What	<i>did you</i>	do the night before	What	<i>you did</i>	the night before caused the trouble
How	<i>will they</i>	go	How	<i>they will</i>	go they didn't say
When	<i>will he</i>	return	When	<i>he will</i>	return is the important question
Where	<i>does he</i>	come from	Where	<i>he comes</i>	from no one knows
Why	<i>are they</i>	reducing the price	Why	<i>they are</i>	reducing the price does not matter

Each of these words, however, *who, which, what, how, when, where, why*, often constitutes the whole of a response utterance, and then the single word signals a question. In these instances, it is the function word itself that gives the signal of the question, not the intonation pattern. Both rising and falling pitch sequences occur with these single words; both are questions. The situations, however, in which the rising intonation occurs differ clearly from those in which the falling intonation occurs. The rising pitch sequence occurs in those situations in which the question seeks a repetition of a portion of the utterance immediately preceding. The falling pitch sequence occurs in those situations in which the question seeks additional information. Compare, for example, in some detail, the following pairs of quotations that contain the same function words.

Mr. B—thinks we ought to get the money in hand first and then go after — — —

Who Mr. B—

We'd like to have someone to say a word at the beginning to welcome the group

Who We thought you or Dr. —might do it

We thought the house over on Miller the best we have looked at so far

Which The one over on Miller Road

We went out this morning and looked at that housing project

Which The one over near the high-school athletic field

Do they have a car

What I said do they have a car

There may be arrangements just a little outside of the city that are possible

What Oh, a lake cottage that could be insulated

We can find just the same examples concerning *how, when, where, why*.

(2) In some situations, very few in the materials examined by Fries, a repetition of a whole or a part of a statement sentence is uttered by another speaker, usually immediately after the statement has been made.

This repetition contains the same word-order pattern as the statement of which it is a partial echo, but, by means of a contrast of the intonation or pitch sequence at the end, it becomes a question.

R—usually wrote his own speeches

He wrote his own speeches

F—has lost interest for the work is too hard for him

The work is too hard for him

Not all rising intonations signal questions and not all questions have rising

intonations; but an echo of a statement utterance, an echo which has a rising sentence ending curve, becomes a question by the special intonation contrast thus set up.

Sometimes there is no utterance of which the sentence with a rising intonation is an echo. The following example, with the words *you* and *want*, represents the common form of this type of question.

You want to go to the movies I can't tonight

(c) Sentences with the basic contrastive Class 2 \leftrightarrow Class 1 arrangement which are not questions

There are some special situations in which utterances with the word-order arrangement which usually signals a question, Class 2 \leftrightarrow Class 1, are not questions, but statements. These sentences, however, have special features that mark them and set them apart from those in which the word-order arrangement regularly signals a question. There are five kinds.

(1) One type of sentence in which the "reversal" of the Class 1 and Class 2 words does not signal a question is that in which one of a very few Class 4 words appears initially.

Class 4	Class 2	Class 1	
<i>Seldom</i>	is	she	ready on time
<i>Rarely</i>	do	we	eat before seven.
<i>Here</i>	are	the typewriters	now
<i>Not once</i>	did	we	find the papers disturbed
Not often	does	he	come home before six
<i>Never</i>	have	we	had any reason to question her honesty
<i>Not always</i>	have	they	been so inarticulate

Most of the instances that occur with this type of "reversal" have Class 4 words with negatives. Without the negatives the Class 4 words are followed by the usual arrangement of Class 1 and Class 2 words.

Once we found the papers disturbed *Often* he comes home before six
The Class 4 words given in the quotations above are not always followed by the "reversal" shown there. Examples are the following:

Here he comes now *Here* he is just coming in *Rarely* we leave
before Thursday

The second member of a sentence consisting of two statements in the negative sometimes has the same kind of "reversal."

The letter does not show his attitude as clearly *as do the words* he used
in the meeting

The motion was not clear to start with *nor did the amendments* make it
any more understandable

(2) The most frequent type of sentence in which the "reversal" of the Class 1 and Class 2 words does not signal a question is that in which the function word *there* occurs initially.

This word *there* is not the Class 4 word with a "place" meaning, for the two words pattern very differently in English structures and can both be

used in the same minimum sentence.

Class 2 \leftrightarrow Class 1
There is a guard there
There are guards there

The two words can even appear side by side at the opening of a sentence. The first *there* is always the Class 4 word, and many other Class words can occur in this position.

Class	Function	Class	Class	Class
4	Word	2	1	
There	<i>there</i>	are	few	children of your boy's age
There	<i>there</i>	is	no city	sewer
Here	<i>there</i>	is	one	
Upstairs	<i>there</i>	are	two	baths

In such sentences as these the first *there*, the Class 4 word, receives a marked stress; the function word *there* is never a stressed word in the sentence.

There, the function word, has a very limited range of use. It occurs primarily with the forms of *be*, very seldom with any other Class 2 words. Practically the only other Class 2 word used with this function word *there* is the word *come* in the expression *there comes a time*.

There comes a time when it is useless to struggle

There comes a time when patience ceases to be a virtue

With *there*, function word, the Class 1 word following the *is*, *are*, *was*, *were* practically always has a determiner such as *a*, *no*, *two*, *every*, *some*, *few*, *many*, but very seldom one such as the following: *the*, *this*, *that*, *my*. Compare the following pairs of examples:

(Function word) *There* is a man that often goes through our back lot

(Class 4) *There* is the man that often goes through our back lot

(Function word) *There* is a can that I've looked for many times

(Class 4) *There* is the can that I've looked for many times

That this *there*, function word, is only a structure filling word, patterning quite differently from the Class 4 words that appear with the Class 2 \leftrightarrow Class 1 arrangements seems to be supported by the fact that it becomes the unit "reversed" when questions are formed of these expressions.

There is much more chance over there

Is there much more chance over there

There are two nursery schools here

Are there two nursery schools here

On the other hand the *there* (Class 4) in questions never appears in this position:

(Class 4) *There* are the books that I want

Are the books *there* that I want

The "reversal" Class 2 \leftrightarrow Class 1 which does not signal a question appears many times in conversation.

(3) Another type of sentence in which the Class 2 \leftrightarrow Class 1 arrangement does not signal a question occurs less frequently, but here again there are formal features to distinguish this arrangement from that of questions.

The following are examples:

Should they come tomorrow it would be difficult to find them room
Were they all here we should have a quorum

In these, the intonation curve at the end of the particular structural unit in which the "reversal" occurs marks the nonquestion. The nonquestion ends with a 3-2-3- nonfinal intonation; the question, with either the common 3-2-4 pitch sequence or a rising 3-2 sequence.

(Nonquestion) Should they come totomorrow it would ...

(Question) Should they come totomorrow

(Question) Should they come totomorrow

(Nonquestion) Were they all here we should have a quorum

(Question) Were they all here

(Question) Were they all here

In the instances above, the intonation curve provides the only clue to distinguish a nonquestion from a question. With sentences in which the singular form of the Class 1 word appears, however, another formal feature distinguishes the nonquestion from the question.

(Nonquestion) *Were he* here we could proceed

(Question) *Was he* here

(4) Intonation alone marks another type of Class 2←→Class 1 arrangement as a nonquestion.

In these, the contrastive high pitch extends over several syllables before the final drop and the vowels are often considerably lengthened.

Nonquestion	Question
<u>Was he</u> mad	Was he <u>mad</u>
Was <u>he</u> mad	Was <u>he</u> mad
Will <u>he</u> be surprised	Will he be <u>surprised</u>
Is <u>that</u> ever good	Is that <u>e</u> ver good
Will <u>we</u> tell him	Will we <u>tell</u> him

(5) Polite formulas that precede request sentences often have the Class 2←→Class 1 arrangement that usually signals a question.

These polite formulas with the form of questions are sometimes mistaken and responded to as questions, with oral responses rather than with actions, and then the request is repeated or the distinguishing word *please* is used. Sometimes the uncertainty concerning the nature of the utterance shows itself in such a question as "Are you asking me or telling me?" The word *please* provides a clear mark of the request.

Polite formula		
Class 2	Class 1	Request
<i>Will</i>	<i>you</i> (please)	take down this message for him
<i>Would</i>	<i>you</i> (please)	read and grade as many of the bluebooks as you can before Monday noon

3. Structural Relationship of Answers to Questions

The sentence patterns thus far discussed here are primarily those that can occur in the utterances that start conversations, in "situation utterance units." Some of the examples have come from the "sequence utterances," but these have, with few exceptions, been sentence patterns like those that appeared at the start of conversations. They contained certain sequence signals which have been ignored in these discussions. The few exceptions have been the echoes and the single-word questions. In addition, there remain the "response utterance units" that differed completely from any sentence patterns found among the "situation utterance units"—from those sentences found at the beginnings of conversations. Among these, the oral responses elicited by questions—the "answers" to questions—constitute almost the whole of the material.

Answers to questions may consist of practically any linguistic form of the language. These answers constitute "complete" utterance units in that they stand alone. They are marked off by a change of speaker. Although they are independent in the sense that they are not included in a larger structure by means of any grammatical device, their own structural arrangements have significance with reference to the questions that elicited them. In other words, the question itself is part of the frame in which the answer as an utterance operates.

In attempting to classify "situation utterance units" they were grouped in accord with the responses they elicited regularly. Here the answers to questions can be classified in accord with certain features of the questions to which they are responses.

(a) **For all questions in which the signal of the question is the "reversal" of the basic Class 1 and Class 2 words, the answer usually contains the forms *yes* or *no*.**

A few alternative but equivalent forms occur, like *certainly*, *probably*, *decidedly*, *absolutely*, *surely*, or *certainly not*, *decidedly not*, *absolutely not*, *surely not*. The *yes* or *no* may be supplemented by one of these alternative forms or by such a word as *indeed*. Most frequently the supplementary material consists of a short statement utterance using substitute forms, as *yes it is*, *no it isn't*, *yes I certainly will*, *no he mustn't*. Answers of this kind occur with all "reversal" questions, no matter how the "reversal," is accomplished, whether by simple "reversal" as in the case of questions with *be* forms, or by *do*, or by such function words as *can*, *must*, *should*, *have*, etc. Such answers are not used, however, with questions which employ the function words of Group I: *who*, *which*, *what*, *whose*, *how*, *when*, *where*, *why*. Examples of the answers that are elicited by "reversal" questions are the following:

Answer	Question that elicited the answer
No he's not right now	<i>Is Mr. L— there</i>
No nothing at all	<i>Is there anything very important coming up Monday</i>
Yes but not completely	<i>Did I report back to you the other day</i>
Yes I hope so	<i>Do you think you could make it next summer</i>
O.K. I'll do that	<i>Will you write him about that too</i>
Certainly not	<i>Would that make any difference to you</i>
Probably	<i>Do you think we could make the change</i>
Oh no	<i>Is it catching</i>
Yes right away	<i>Could you bring it over tonight</i>
Yes it is they're closed	<i>Is it too late now</i>
No not tonight	<i>Will you have any time tonight</i>

In questions of this sort a negative function word does not make a negative situation. The negative appears in those situations in which an affirmative seems to be expected. The question *don't you like to dance* assumes an affirmative situation, in contrast with the question without the negative, *do you like to dance*, which is entirely without commitment concerning any expected situation. In present-day English the form of these questions whether with a negative function word or not, makes no difference in the answer. Answers to all of these questions address themselves to the fact, not to the negative or non-negative form of the question.

Answer	Question that elicited the answer
Yes it was	<i>Wasn't your price eight hundred and fifty</i>
Yes for a little while	<i>Didn't it work at all</i>
No where	<i>Didn't I tell you where</i>
Certainly	<i>Can't we get them excused a bit early</i>
No I'm afraid not	<i>Won't it be possible to change</i>
Well I can	<i>Wouldn't you like to come alone</i>
Maybe	<i>Couldn't he do it tomorrow</i>
Yes but he wants help	<i>Doesn't he know where to take it</i>
No not yet	<i>Don't you think we had better call</i>
	Dr. H—

- (b) For questions with the function words *who, which, whbt, whose, how, where, when, why*, the answers may consist of practically any linguistic form of the single form-class fitting the particular type of question.

(1) For questions that use the function words *who, whose, which, what* (except *what*, or more rarely *which*, with *do* as a Class 2 word) the answers usually contain a Class 1 word alone or a Class 1 word with *be*, or *do*, or with any of the function words in (a), (b), or (c) of Group B.

Answer	Question that elicited the answer
Nothing at all	<i>What is there for him for the rest of the year</i>
Those unsightly wires	<i>What annoys you so much back there</i>
Dr. H—and his wife	<i>Who are you expecting</i>

My husband and B——	<i>Who</i> did you say just came in
The same one we had before	<i>Which</i> room did they give us
Oh a much better one	<i>What'll</i> we get in exchange
The one for Miss L——	<i>What</i> service is that
B——did	<i>Who</i> took those last sets of books to the post office
Ours I think	<i>Whose</i> is the little table in the store-room on the second floor

(2) For questions with *what* (or more rarely *which*) with *do* as the Class 2 word the answers frequently consist of any other Class 2 word (other than *be*) alone or with following "objects" or "modifiers."

Answer	Question that elicited the answer
Oh just sitting here drinking coffee and talking about their childhood days	<i>What</i> have A——and R—— been <i>doing</i> all evening
Throw them out	<i>What</i> shall we <i>do</i> with the stuff in the old files
Try to get leave for a year	<i>Which</i> did he finally decide to <i>do</i>
Get in touch with Dr. H——	<i>What</i> do you think we ought to <i>do</i> now
Come alone	<i>What'll</i> I <i>do</i> if they can't arrange it

The answers to questions of this kind furnish perhaps the clearest demonstration of the need for considering the structure of the answer in connection with that of the question that elicited it. Taken alone the answer in the above, *try to get leave for a year*, has the structural arrangement of a request. It is only when one views the question itself as an essential part of the frame in which the answer as an utterance operates that he has sufficient material to respond accurately to the structural signal. Answers to questions of this kind are clearly separable from request forms whenever the question contains signals of a past time. They overlap with request signals and are ambiguous whenever the question contains signals of a future time, as in the above last example. One who overhears only one end of a telephone conversation will frequently be misled by responding to the structural signals of answers alone without knowing the questions to which they are responses, and, more important still, without knowing whether the utterance is preceded by a question and is thus a "response utterance."

(3) For questions with *how* and *what* in a limited type of arrangements such as the following the answers may be any Class 3 word, alone or with the expansions possible with that form-class.

Class 1	
How does (did)——	look (appear, feel, smell, taste, sound)
How was ——	
How did ——	turn out
What is (was) ——	like
Answer	Question that elicited the answer
Very nice really	<i>How</i> is <i>it</i> out there

Oh fair	<i>How are you</i>
Simply wonderful	<i>What was the weather like in P—R—</i>
Pretty good	<i>How does it look after all that work</i>
Excellent it was one of the best we've had	<i>How did the banquet turn out</i>

(4) For questions using *how* with *many*, *much*, *far*, *long*, etc., the answers may be simply single words of number, amount, measure, etc., or these words with possible expansions.

Answer	Question that elicited the answer
About a hundred and eighty	<i>How many</i> were there this time
Frankly very little	<i>How much</i> interest is there in it
Ninety-five cents each	<i>How much</i> will they charge
About two miles	<i>How far</i> is it from the campus
Just fifteen feet	<i>How long</i> a boat is it

(5) For questions with the function words *when*, *where*, and *how*(manner), the answers may consist solely of a Class 4 word of the same subgroup, or of word-groups with the function words of Group F or Group J.

Answer	Question that elicited the answer
Tomorrow	<i>When</i> do they have to have the reservations at the office
Right now	<i>When</i> could you see me
Thursday afternoon	<i>When</i> is the service
Oh quite late	<i>When</i> did he get home
After he has his dinner	<i>When</i> would be the best time to call him
Home	<i>Where</i> is your brief case now
Down to State Street	<i>Where</i> did you take him
At —North Ingalls	<i>Where</i> are you now

(6) For questions with the function words *why* and *how* (means) the answers usually consist not of single words but of word-groups with the function words of Group F or Group J.

Answer	Question that elicited the answer
Mostly because the salary really isn't very good	<i>Why</i> did he decide against the —offer
Because we're awfully short of help right now	<i>Why</i> can't we do both sets together
Because of the talk he's working on for tonight	<i>Why</i> didn't he come in today
Because of a change in his schedule	<i>Why</i> did he drop out
Only by quitting everything else	<i>How</i> can you get them out in time
By bus	<i>How</i> do they expect them to go

Unlike the questions signalled by a "reversal," in which a negative function word signals an expected affirmative situation, a negative in questions with these function words *who*, *which*, *what*, *whose*, *how*, *when*, *where*, *why* produces a negative situation as it does in statements. The answers to these questions, therefore, do not, in their form, disregard the negative in the ques-

tions.

As one attempts to survey and describe the structural patterns of English sentences he cannot escape the necessity of separating sharply the utterances that are used to stimulate various types of responses from those utterances that are themselves the oral responses regularly elicited by certain structural arrangements. The structural meanings in answers to questions cannot be grasped from the formal arrangements in the answer utterances alone. The question itself, the preceding utterance that elicits the answer response, is an essential part of the linguistic frame through which the answer response signals its structural meanings. For one who is listening in on a conversation it is necessary to hear the question itself if he is to understand the structural meanings in the answer response.

For the other free utterance units in English, sentences other than answers to questions, the structural signals are in the formal arrangements of the functioning units within the sentence itself. For these, the signals of the kind of sentence are, basically, contrasting arrangements of Class 1 and Class 2 words. Intonation contrasts are a part of these signals, but they do not often furnish the sole distinguishing feature of the kind of sentence. Certain function words, however, do play an important part in signalling the kind of utterances called questions.

CHAPTER III. SENTENCE ANALYSIS

Speech acts that are language always consist of lexical items in some kind of structure. The view that children begin to talk with words only, not in structure (the so-called "naming" things stage), and that they later put these words into structures, rests upon an inadequate understanding of the features of structure. For the baby, the process that results in "talking" begins just as soon as he learns (not consciously of course) that vocal noises make things happen. "Talking," as distinct from babbling, and as distinct from the mere imitative production of such sound sequences as *da-da*, *ma-ma*, *ba-by*, aims to produce results—to elicit the co-operative responses of others. The predictable responses to language that constitute social co-operation come not from lexical items alone, words as words, but from structural frames with words as content. It is not the lexical item *come*—the word alone—that will elicit from one's friend the response of a motion of approach. It is the form *come* as contrasted with the forms *came* and *comes*; it is this form, *come*, with a 2-4 intonation as contrasted with a 3-2 intonation; it is this form *come* as belonging to a distinct functioning class, and as fitting the pattern of one type of English utterance—it is these structural features in which the lexical item *come* is placed that elicit the action response. Any other lexical item of the same class given these same structural features would also elicit an action response.

Hereupon the structural features of English—the formal features that operate as the signals of structural meanings—are significant only as they are contrastive items in a structural pattern. The structural patterns of English are composed of units and have the contrastive features and the form

and the arrangement of these units, which constitute the pattern itself. The units make up the structural patterns, the constituents of these patterns, are not words as lexical items, words as meaning units, but words as parts of speech. The basic units of each structure are either parts of speech (form-classes) alone, or parts of speech and function words. The significant contrastive features of the structural patterns are matters of (1) the selection of the part of speech units, (2) the forms of these items, (3) the arrangements of position, and (4) the intonation or sequences of pitch.

I. Immediate Constituents and Layers of Structure

Here it is necessary to see the various structural patterns not simply as separate parts within the practical utterances of conversation but rather as operating together to form the complete utterances. It is not enough to list all the units of all the structural patterns that occur in an utterance and to describe their contrastive features. If one is to arrive at the complete structural meaning of any utterance he must in some way determine how the separate constituents are to be grouped.

In many other matters there is a similar problem. In simple mathematics the grouping of the items makes considerable difference. What, for example, is the answer to the following mathematical problem given orally?

"Five plus four times six minus three." Here there are four numbers as constituents 5, 4, 6, and 3—and three operations—addition, multiplication, subtraction. The answer will vary with each different grouping of the constituent items; that is, there will be a different answer whenever the "immediate constituents" of each operation differ. To this particular mathematical problem there may be four different answers:

$$(5+4)(6-3) = 27$$

$$5+4(6-3) = 17$$

$$5+(4 \times 6) - 3 = 26$$

$$[(5+4) \times 6] - 3 = 51$$

Even in a simple mathematical problem with only four constituents there must be a clear understanding of the structural grouping of the items—an agreement as to the immediate constituents of each operation—before there can be agreement concerning the correct answer. In the written statements of such problems the structural groupings are usually indicated by parentheses. In oral statements of these problems the structural groupings are usually shown by intonation and pause.

It is not only in the statement of mathematical problems that a grasp of the structural grouping of the items is necessary to a clear understanding. Descriptions of processes—the recipe for a cake, for example—must indicate not simply the constituents, the ingredients, and the operations, but also the "layers" of the operations, the "immediate" constituents of each operation.

Many books explaining games like football or baseball are of no use to those who do not already know how to play the game, because the authors have ignored the principle of "immediate" constituents. The following portion

of a description of the game of baseball, a description designed for those who know nothing about the game, will serve as an illustration.

Baseball is played with a bat and a ball on a level field at one end of which is a square, or "diamond" 90 feet on a side. One point of this square is home place and the sides of the playing field extend at least 250 feet from the point of the square which is "home plate." The other three points of the 90-foot square are the three bases—first, second, and third in counterclockwise order. There are nine players on each team. One team is in the "field" while the other team is "at bat."

The bat is made of wood not more than 42 inches long (usually not more than 36 inches) and not over $2\frac{3}{4}$ inches in diameter at the thickest part. The "home plate" is five-sided, 17 inches wide across the front, and $6\frac{1}{2}$ inches long on each of the two sides adjacent to the 17-inch front edge. From these two $6\frac{1}{2}$ -inch sides two twelve inch sides meet in a point at the back of the center of the plate. Each of the three bases is 15 inches square.

The "catcher" stands behind "home plate." The "pitcher" stands at a spot on a direct line from home plate to second base. In addition to these two players there are a "first baseman," a "second baseman," and a "third baseman," who stand near their respective "bases." A "shortstop" covers the area between second and third base. The "right fielder" covers the area beyond first base, the "center fielder" the area beyond second base, the "left fielder" the area beyond third base. The nine members of the opposing team are the "batters" who take regular turns in batting. Each batter when he is "at bat" stands in a marked space on either side of the home plate.

The game begins when the pitcher throws the ball toward the home plate. The batter may or may not attempt to hit the ball with his bat. If he does not attempt to hit it and it passes over the plate at a height between his knees and his shoulders it is a "strike." If it passes outside the boundaries of the plate or below the knees or above the shoulders of the batter it is a "ball." If the batter attempts to hit the ball with his bat and misses it completely it is also a "strike." If the batter hits the ball and it drops to the ground outside the right or left boundaries of the playing field it is a "foul" but counts as a "strike" if the batter has not already had two "strikes" against him. If the batter has three strikes against him he is "out" and another batter takes his place "at bat." If the batter has four "balls" he proceeds to first base.

If the batter hits the ball and it is caught by a player of the opposing team before it touches the ground the batter is "out." If, however, the ball falls to the ground inside the playing field, then the batter must run to first base. If he reaches first base before the ball is thrown to the first baseman and before the first baseman having the ball in his possession touches the base with his foot, the "runner" is "safe." If the first baseman, having the ball in his possession, touches the base before the "runner" does, the "runner" is "out." If the "runner" overruns first base

after touching it with his foot he may return "safely" to the base if he turns to the right at the end of his running. If, however, he turns to the left and the first baseman tags him with the ball before he returns to the base he is "out." If he reaches first base "safely" and no "error" has been committed by the members of the opposing team he is credited with a "hit," a "single."

This description then goes on, giving the details of a "two-base hit," a "three-base hit," a "home run," a "sacrifice hit," an "infield fly," a "bunt," and a "stolen base." The author ends with a detailed statement of scoring and the number of "innings" that constitute a "game."

Readers who had never played baseball and who did not understand the game are said to have never been able to proceed beyond the fourth or fifth paragraph of this description without being completely confused. The difficulty with this description is not that it has too much detail, as one might suspect at first, nor that it does not proceed in an orderly fashion. The author of this description has tried to pursue a time sequence in the playing of the game, with explanations of each of the details as they are met in that sequence. The details are all constituents of the various patterns that make the game of baseball, but *there is no effort to grasp the structural relationship of these patterns in the whole system.* The author has not sought, he certainly has not displayed, the immediate constituents for each level of structure. An understanding of the game depends upon, consists of, really, *a grasp of the immediate constituents of each layer of structure.*

The begining of a description which is based upon a clear grasp of such immediate constituents is the following:

Baseball is a contest between two teams of nine players each, the winning of which is decided by the number of "runs" each team has made by the end of a legal game. A legal game of baseball usually consists of nine co-ordinate "innings" or nine turns "at bat" of each team. The team that is having one of its turns at bat is on the offensive; it is seeking to make "runs." Runs are made as follows.....

The team that is not "at bat" is "in the field." When it is in the field it is on the defensive; it is seeking to prevent the other team from making runs. Runs are prevented by making "outs" because when the defensive team in the field makes three outs the turn at bat of the other team ends. Outs are made as follows.....

This description attempts to keep the matters of each structural area of baseball together and distinctly separate from those of another structural area. "Runs," for example, belong to the "offensive" structures of the game, "outs" belong to the "defensive" structures. To attempt to describe "runs" and "outs" together so mixes the layers of structure that a reader, new to the game of baseball, never grasps this fundamental division and relation, throughout the various activities of the contest.

The significance of the principle of immediate constituents for understanding and for all levels of language use cannot be over-emphasized. Most of the failures of communication seem to be tied up, in one way or another, with

the problems of immediate constituents. In the matter of grasping the whole arrangement of the structural patterns in each of the sentences as complete units, it is essential that we keep each layer of structure separate and that we grasp the immediate constituents of each layer. Just as the native speakers of a language are practically always entirely unconscious of using any special devices to signal structural meanings in general, so sophisticated speakers often refuse to believe that formal devices signal structural groupings. In accord with the principles, we must assume that in each language some formal features attach to the various groupings of structural constituents, features that the speakers of the language learn to respond to and to produce. We must assume, however, that each language will have its own system of structural grouping, just as it has its own set of signals for structural meanings generally. If the history of English is typical, then we must assume also that the signals of structural grouping for any particular language may change over a period of years.

The task then of discovering the means used by any language to signal its structural groupings will differ with each language. Resources available in the study of one language will be lacking in others. The investigator will use all the resources in order to arrive at and test his conclusions concerning the descriptive facts. In English, the historical records of the language at earlier periods permit a comparison and contrast that will often point to significant structural features of the living language of today.

For example, the Modern English rendering of the Old English *an lytel sæs earm* must be rearranged to signal the structural grouping indicated in the Old English sentence. It cannot remain in the order *a little sea's arm* but must be changed to *a little arm of the sea*. The Old English *ealle para nytena frumcennedan* must be rendered in the rearranged form *all first born (offspring) of the animals*.

Even such a brief comparison of Old English structures of modification with their Modern English equivalents suggests tentative conclusions concerning the use of word order as a signal of the direction of modification and the differing positions of single words and of word groups like *of the sea* and *of the animals*.

In general, the basic procedure of arriving at and testing significant features of structural grouping has been that of systematic substitution with enough control of meaning to decide whether any two arrangements were the "same" or "different" —i. e., whether the "response" of the native speaker was the "same" or "different."

In present-day English, the word-order arrangements of the various form-classes furnish many of the significant contrasts which constitute the structural signals. It is the contrastive arrangement of Class 1 and Class 2 words for example that form the basic signals of the kind of utterance—a question, a request, or a report. These word-order contrasts are not matters of an absolute order of words as words, but an order of selected form-classes or parts of speech. In order then to grasp a word-order arrangement, it is first necessary to recognize the various form-classes. The first step then must

be the identification of these form-classes.

Some words—a few—must be learned as separate items that in themselves signal certain structural meanings. These “function words” must be recognized and identified with their particular structural signal. In English such a function word as *at* or *in* with a Class 1 word following will constitute a word group, and on one layer the group as a whole forms a single constituent.

In English a layer of structure has usually only two members. Each of these members may of course be composed of several units, but on any single layer the immediate constituents of the structure of that layer are usually only two. On the level of a whole utterance such as the following the immediate constituents are those indicated by the lines.

The recommending committee | approved his promotion

On the level of the following structures the immediate constituents are again those indicated by the lines.

the other things | of the monastery
 a little arm | of the sea
 approved | his promotion

In some structures the precise division to separate the two immediate constituents may seem doubtful. For many such instances the intonation furnishes the necessary marks.

the king of England's empire

The intonation pattern, in such an expression, would determine whether the two constituents are those marked in (1) or those in (2).

1. the king | of England's empire
2. the king of England's | empire

The precise division in the following structures is shown not by word order but by the correlation of certain word forms.

an examination of the students | which is thorough
 an examination | of the students who are here now
 the uniforms of the regiment | which are there
 the uniforms | of the regiment which is there

In the following examples, however, the forms of the words in the last group could correlate with either of the Class 1 words preceding, and therefore the structural grouping is ambiguous. With no other clues we cannot decide just what the immediate constituents of the structures are.

the requirements of the courses which are listed
 the dependents of the men who are members

the equipment of the class which is there

In English the arrangement of the modifiers of Class 1 words makes possible a mechanical marking of the various layers of structural grouping once the details of the function words, of the correlations of forms, and of the special intonation sequences have been noted. The direction of the modification is forward toward the Class 1 word for those units that precede, and backward toward the Class 1 word for those units that follow. In each case, the modification is cumulative, with the outer layer being the last of the modifiers following the Class 1 word.

an | oral | examination | of the students | which is thorough

The shifting of the position of modifiers thus produces a different alignment of the immediate constituents and thus a different structural grouping with a different structural meaning.

a good book | to read a heavy box | to lift
a book | good to read a box | too heavy | to lift

In English the arrangement of the modifiers of Class 2 words also makes possible a mechanical arrangement of the various layers of structural grouping, after the details of the function words, of the correlation of forms, and of the special intonation sequences have been noted. Again the modification is directional and cumulative. The outside layer here is the first of those that precede the Class 2 word.

always | happens | here | when we plan ahead

2. Procedure of Sentence Analysis by Layers of Structure

The result of the approach mentioned above has been a series of steps for the analysis of present-day English sentences that seem to reveal the immediate constituents of each structure in its proper structural layer and thus the relation of structure to structure. These procedural steps use formal contrasts for all matters except such particular items as function words. These steps are as follows:

(1) The first step is an identification of the parts of speech (classified by Fries) and the function words. This operation includes the noting of the inflectional forms and other similar formal features of the form-classes.

(2) The second step is the marking of the special ties that are signalled by a concordance of forms or by particular intonation contrasts.

(3) The third step is the identifying of the particular arrangement of the Class 1 and Class 2 words that signals the kind of sentence.

(4) The fourth step is the identifying of the particular arrangement of the Class 1 words (not in word-groups with function words) before and after the Class 2 word.

(5) The fifth step is the cutting off of any "sequence" signals that stand either at the beginning or at the end of the sentence. The relation of these sequence signals is to the sentence as a whole, not to any particular part.

(6) The sixth step is the cutting off of an included sentence that stands at the beginning of the utterance in which it is included. An included sentence in this position is related to the whole of the unit that follows.

(7) The seventh step is the cutting between the Class 1 word and the Class 2 word that form the basic arrangement of the sentence.

(8) The eighth step is the cuttings separating the various modifiers of the Class 1 word that is "subject." These cuttings can proceed mechanically in accord with the use of word order in present-day English. With multiple modifiers the modification is cumulative and directional. Postmodifiers are cut off first, beginning with the last one. Word groups as modifiers are treated on this level as whole units in relation to the head to which they are attached. The analysis of the arrangement within the group is of a different structural layer.

(9) The ninth step is the cuttings separating the various modifiers of the Class 2 word. These cuttings can also proceed mechanically in accord with the use of word order in present-day English. With multiple modifiers the modification here too is cumulative and directional. Premodifiers are cut off first. Postmodifiers are cut off next, beginning with the last. On this level, word-group modifiers are treated as whole units.

(10) The tenth step is the cuttings, following a similar procedure, within the word groups that have been treated as whole units on the level above.

For this type of analysis it is not necessary to know the lexical meanings of the words nor to know what the sentence is about. One must, however, in determining the structure of Class 1 words, either know whether the referent is the "same" or "different," or have another special list of Class 2 words. The following sentences will serve to illustrate the procedure here outlined:

(1) The identification of the parts of speech and function words and marking of any special intonation patterns

D	3	3	1 ^a	f	D	1 ^b	4	2	D	3	1 ^c	f	D	1 ^d	f	2	f	1 ^e
			—	F		—					—	F	+	J	+	F	—	
			it			it					it		he	he			it	

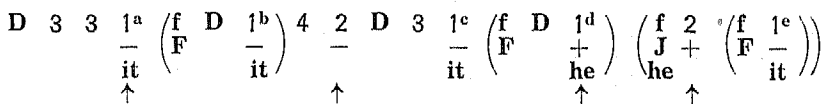
In these symbols the numbers 1, 2, 3, 4 represent the four parts of speech; D is any "determiner"; f represents a function word, and the capital letter F under the f is the particular group to which the function word belongs. The type of function word in each case here indicates the items that belong to the group it introduces. Other symbols:

1^a, 1^b, 1^c The letter exponents put on each Class 1 word indicate whether the "referents" of two Class 1 words are "the same" or "different." Words with the same exponent (1^a, 1^a) have the same "referent"; those for which the "referents" are different have different exponents (1^a, 1^b). The order of the letter exponents has no significance.

1^a, 1^b, 1^c The words under the number symbol for a Class 1 word
 he he/it it indicate the "substitute group" to which it belongs.

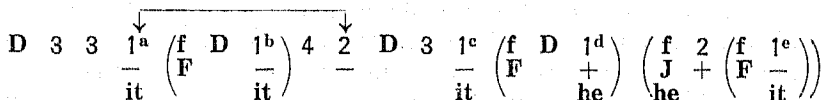
1, 2, 1, 2 The symbols -, +, ± under the figures for Class 1 or Class
 - - + ± 2 words represent "number" forms: - for singular, + for plural, ± for a form that could be either singular or plural.

(2) The marking of the special ties that are signalled by a concordance of forms and the groups that are tied by special function words



The Class 4 word is not tied to 1^b as a modifier by means of the special intonation that would be necessary. If such a special intonation feature were present it would have to be marked in the preceding step.

(3) The identifying of the particular arrangement of the Class 1 and the Class 2 words that signals the kind of sentence



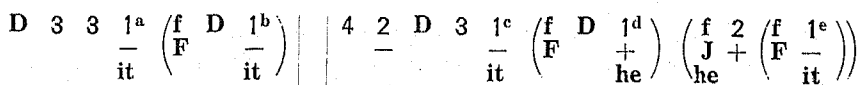
Here the arrangement is 1↔2 tied—a statement sentence.

(4) The identifying of the particular arrangement of the Class 1 words not in word-groups with function words, before and after the Class 2 word
 Here 1^a is "subject"; 1^c is "direct object."

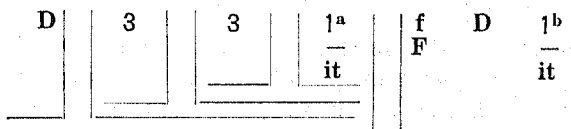
(5) and (6) Cutting off of "sequence" signals and included sentences

In this sentence there are no "sequence" signals at the beginning and end to be cut off, nor is there an included sentence at the beginning to be cut off.

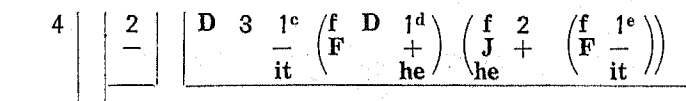
(7) The cut between the Class 1 word, with its premodifiers and its postmodifiers as one unit, and the Class 2 word, with its modifiers as the second of the units



(8) The cuttings separating the various modifiers of the "subject" Class 1 word



(9) The cuttings separating the various modifiers of the Class 2 word



(10) The cuttings within the word-groups that have been treated as

whole units

f F	D	1 ^b — it	
D	3	1 ^c — it	(f D 1 ^d) (f 2 (f 1 ^e)) F + he J + F — he it it
f F	D	1 ^d + he	f 2 (f 1 ^e) J + F — he it it
f J he	2 +	f 1 ^e F — it	

This particular sentence that has been here analyzed in accord with the procedure of these ten steps is the following. Many words can appear in each of the "positions" of this sentence, and the structural meanings are the same.

This particular social event of the season usually claims the full attention of the students who stay in town

The steps in the procedure are valid in so far as they represent the actual layers in the structural grouping within the utterances. The main features of that structural grouping show themselves as follows:

(1) On the top layer the immediate constituents consist of (a) the modifiers of the sentence as a whole and (b) the body of the sentence.

When K—was at the dinner last night	we talked a good deal about the house business
--	---

Before the regular students arrived	the L—cafeteria was a very comfortable place to lunch
--	--

(2) On the next layer the immediate constituents consist of (a) the Class 1 word with its modifiers and (b) the Class 2 word with its modifiers, the units that form the basic arrangement of the sentence.

The salary checks for the staff of the Institute	came from the payroll office this morning
---	--

(3) On the next layer are the modifiers of the Class 1 word and the modifiers of the Class 2 word. But these modifiers do not operate in a direct word by word relation to the head. In general the immediate constituents of a structure are only two in number. Sometimes there are several co-ordinate members of one of the constituents, but this situation is always specially signalled.

The	salary	checks	for	the	staff
-----	--------	--------	-----	-----	-------

The	most	well-known	faculty	member		
Came	from	the	payroll	office	this	morning

CHAPTER IV. ANALYSIS OF COMPLICATED ENGLISH SENTENCE INTO SIMPLE SENTENCE PATTERNS

In the preceding chapters I have described in theoretical and procedural detail as to what structural patterns of English sentences are and how sentence analysis is made. In order to form a clearer idea of English sentence patterns, I think it is better to enumerate the basic statement patterns based upon structural linguistics.

1. Basic Statement Patterns

Thurston Womack (Associate professor of Language Arts, San Francisco State College) gives the following seven basic statement patterns in his book *A Linguistic Approach to English*.

Pattern 1 N—————V (N=Noun, V=Verb)

Merton walks.
Horses walk.

A dash is put between the N and the V. The dash shows that the noun and the verb are "tied." "Tied" here is used to express the interdependence of the forms of subject and the verb. That is, Merton, being singular, dictates the form *walks* rather than *walk*. *Horses*, a plural subject, determines the form *walk* instead of *walks*. This relationship is also called subject-verb agreement.

Pattern 2 N—LV Adj. (LV=Linking Verb)

Merton is sick.
Horses are dangerous.

A noun is tied to a verb followed by an adjective. The two adjectives "sick" and "dangerous" are complements.

Pattern 3 N—LV N

Merton is chairman.
Horses are animals.

Here a noun is tied to a verb followed by a noun which refers to the same person or thing as the first noun. *Merton* and *chairman* refer to the same person. *Horses* and *animals* refer to the same thing. "Chairman" and "animals" belong to a complement. The symbol LV has been introduced to show this reference.

Pattern 4 N—V N

Merton likes strawberries.
Horses like hay.

In this pattern the noun and verb are again followed by a noun. The second

noun, however, does not refer to the same person or thing as the first noun. The verb in Pattern 3 was called a linking verb; The verb in Pattern 4 is a non-linking verb.

Pattern 5 N—OV N N

Merton called Chris a rat.

Horses consider hay a delicacy.

In this pattern two nouns follow the verb. The symbol OV is used to stand for verbs like *call*, *consider*, which are followed by two nouns referring to the same person or thing. The second noun is called an objective complement.

Pattern 6 N—V N N

Merton gave Chris a book.

People feed horses hay.

The two nouns which follow the verb in this pattern refer to different persons or things. If the word order of the last two nouns is changed, the structure word *to* occurs before the last noun: Merton gave a book *to* Chris.

Pattern 7 there V———N Adv.

There is snow outside.

There are some trees outside.

This basic pattern uses the structure word *there*. *There* is followed by a verb, usually a form of *be* like *is/ are, was/ were*.

Besides these seven basic statement patterns there are two somewhat less common statement patterns. In the first pattern the auxiliary precedes the noun:

Adv.	A———N	V	(A=Auxiliary)
Little	did	I	expect to see you.
Never	has	she	spoken a harsh word to her husband.
Seldom	does the teacher		tell a joke in class.

The second pattern is inverted, that is, the verb precedes the noun:

Adv.	V———N
Seldom	was the teacher in his office.
Down	came the rain with increasing intensity.

All the basic sentence patterns can be expanded into more complicated constructions. Let us see how this can be done with Pattern 1:

N———V
Horses walk.
Horses walk slowly.
The horses walk slowly.
The big horses walk very slowly.
The big horses are walking very slowly.
The big horses are still walking very slowly.
The big horses in the street are still walking very slowly.

All of these sentences are basically the same pattern: *Horses walk*. The other patterns can be expanded in the same way.

Next, we also find English sentence patterns in *English Sentence Patterns* by Robert Lado and Charles C. Fries (The University of Michigan Press, Ann Arbor, U. S. A.) The lessons are linguistically graded to teach students to

speak and understand English sentences. These lessons begin with simple but important patterns (I-X), build up cumulatively through intermediate patterns (XI-XX), and proceed into advanced patterns (XXI-XXXV). There are so many sentence patterns in each of them that I cannot enumerate them here. I am sure, however, that oral mastery of these sentence patterns will make a student learning English as a foreign language improve in the four skills of hearing, speaking, reading, and writing.

2. Complicated English Sentence and its Analysis

The following sentence is a long complicated one from *An American Tragedy* by Theodore Dreiser (Horace Liverright, New York, Two Volumes in One, Fourth Printing, August, 1931,), from Chapter XLI, Book Two (p.17). It is so intricate that Japanese university students of English find it difficult to understand it in reading.

“And it was in this mood that five days later, and after Roberta had written to her parents that she was coming home for two weeks at least, to get a dress or two made and to rest a little, because she was not feeling very well, that Clyde saw her off for her home in Biltz, riding with her as far as Fonda.”

First, on the layer of the whole sentence the two immediate constituents are divided like this:

And it was in this mood | | that five days later, and......

Next, it is analyzed into the following simpler sentences with the layers of structure divided.

- (1) It was in this mood | | that five days later Clyde saw her off for her home in Biltz.
- (2) It was in this mood | | that after Roberta had written to her parents that she was coming home for two weeks at least, (that) Clyde saw her off for her home in Biltz.
- (3) Roberta had written to her parents | | that she was coming home for two weeks at least.
- (4) She was coming home for two weeks at least, | | to rest a little, because she was not feeling very well.
- (5) Clyde saw her off for her home in Biltz, | | riding with her as far as Fonda.

Next, picking out familiar sentence patterns as they are,

- (1) Five days later | | Clyde saw her off for her home in Biltz.
- (2) Roberta had written | | to her parents.
- (3) She was coming home | | for two weeks at least.
- (4) She | | was not feeling very well.
- (5) In this mood | | Clyde saw her off for her home in Biltz.

Lastly, the simplest ones are obtained from the above.

- (1) It was in this mood.

- (2) Roberta had written.
 (3) She was coming home.
 (4) Clyde saw her off.

Remarks: Three *that's*, *after*, *because* are function words in the original sentence. *To get a dress made* and *as far as Fonda* are important clusters.

The following sentence is from the same page of the same book and is much more complicated. Japanese students will find it more difficult to grasp the context, and thus lose interest in reading such a novel.

"But in so far as he was concerned, and since he had really no definite or workable idea, it seemed important to him that only silence, *silence* was the great and all essential thing now, so that, even under the impending edge of the knife of disaster, he might be able to think more, and more, and more, without being compelled to do anything, and without momentarily being tortured by the thought that Roberta, in some nervous or moody or frantic state, would say or do something which, assuming that he should hit upon some helpful thought or plan in connection with Sondra, would prevent him from executing it."

Similarly, first on the layer of the whole sentence the two immediate constituents are divided like this:

—no definite or workable idea, | | it seemed important—

It is analyzed into the following simpler sentences with the layers of structure divided.

- (1) In so far as he was concerned, | | it seemed important to him that (only silence), silence was the great and all essential thing now.
 (2) Since he had really no definite or workable idea, | | it seemed important to him that (only silence), silence was the great and all essential thing now.
 (3) (only silence), silence was the great and all essential thing now, | | so that, (even under the impending edge of the knife of disaster,) he might be able to think more, (and more, and more).
 (4) Even under the impending edge of the knife of disaster, | | he might be able to think more, (and more, and more,) without being compelled to do anything.
 (5) He might be able to think more, (and more, and more,) | | without momentarily being tortured by the thought.
 (6) Roberta, (in some nervous or moody or frantic state.) would say or do something | | which, (assuming that he should hit upon some helpful thought or plan in connection with Sondra,) would prevent him executing it.

Next, picking out sentence patterns as they are,

- (1) It seemed important to him | | that silence was the great and essential thing.
 (2) He | | had really no definite or workable idea.
 (3) He might be able to think more | | without being compelled to do anything.

(4) Roberta would say or do something | which would prevent him from executing it.

(5) He | should hit upon some helpful thought or plan.

Lastly, the simplest ones are obtained from the above.

- (1) It seemed important to him.
- (2) Silence was the great and essential thing.
- (3) He might be able to think more.
- (4) Roberta would say or do something.
- (5) Something would prevent him from executing it.

Remarks: The thought *that Roberta would say or do something* is a structure of "modification" in which the head word is "the thought."

I have analyzed the original sentences by the introduction of *immediate constituents* and *layers of structure* which are described in Chapter 111, and reduced them to simpler sentence patterns. It is quite easy to divide into further immediate constituents and layers. A complicated English sentence, however complicated and intricate it may seem, is composed of simple sentence patterns from the point of view of the structure of English, and it is obvious that their mastery together with the usage of *function words* is absolutely necessary to become proficient in English.

CHAPTER V. CONCLUSION

1. On English Grammar

The use and value of grammar has been vigorously discussed over the last half century. In the schools, ever since the end of the eighteenth century when English first became a subject of study, grammar has consisted of two different sets of activities. Both, however, have the same general aim: "The one end of grammar is to speak correctly."

One set of activities attempted to develop "correct speaking and writing" by the direct approach of rules to be memorized, and examples to be corrected in accordance with the rules. This set of activities, although often still called "grammar," has acquired a separate name, "usage," which occurs frequently in the phrase, "grammar and usage." The other set of activities attempted the more indirect approach of developing a correct use of language by the method of sentence analysis, often using "diagramming" and "parsing." This other set of activities has acquired the special name, "formal grammar."

The traditional grammar in the sense of "rules for correct usage" has been challenged frequently during the last fifty years. This challenge of the grammar of "usage" consisted not only of the controlled experiments which demonstrated that "knowledge of rules" had very little relation to "habits of language practice," but also of the historical evidence that most of the rules themselves were unsound linguistically. This challenge of the traditional grammar of "usage" has been successful. In the grammar of "usage" the last twenty-five years have seen a tremendous change in attitude.

In the set of activities called "formal grammar" no such progress has

been made. The usefulness of the materials and of the study of "formal grammar" has been challenged and many have insisted that school programs should eliminate as much as possible of this type of grammar. But the defenders of "formal grammar" seem to be just as numerous and as articulate as those who would cast it out. The most often expressed compromise position seems to be that which agrees in retaining in the schools a certain minimum of "formal grammar." Specifically, those who hold this position maintain that certain "grammatical concepts" are essential; that to deal with these essential grammatical "concepts" a minimum number of the usual grammar terms are necessary; and that these "concepts" and these terms can best be mastered through a study of "formal grammar." But throughout all the discussions of the value or usefulness of the study of "formal grammar" there appears no challenge of the validity of the material itself. Those who have concerned themselves with the scientific study of language, especially those who have engaged in the descriptive analysis of American Indian languages, have sometimes condemned the procedures of the traditional "formal grammar." This condemnation of the procedures of "formal grammar" by these linguists, however, has had no effect upon the treatment of "formal grammar" in the schools.

From the viewpoint of American structural linguistics, the principles, the procedures, the definitions, of "formal grammar" are unsound. This does not mean, of course, that every statement of a detail in the traditional "formal grammar" is false; it means that the conventional "formal grammar" is, like the Ptolemaic astronomy, falsely oriented. The study of the usual "formal grammar", then, has much the same sort of value and usefulness as the study of the astronomy of Ptolemy, or of the medical beliefs and practices of Galen, the great Greek physician. Being falsely oriented, "formal grammar," as it is studied in relation to English, cannot be expected to provide any satisfactory insight into the mechanisms of English or any grasp of the processes by which language functions.

Hereupon we should turn our attention to the value or usefulness of the "new" grammar—the descriptive analysis of the formal contrastive features of English that comprise its system of devices to signal structural meanings. There is no question concerning the necessity of "knowing" this grammar in the sense of automatically responding to these patterns of form and arrangement in the practical use of the language. Developing the unconscious habits of these responses must constitute some of the earliest steps in learning to talk English. The question is not one of "knowing" the grammar of English in this sense of ability to respond automatically to the system of signals; the question concerns the value and usefulness of "knowing" the grammar of English in the sense of a *conscious grasp and understanding* of the precise patterns that operate as the structural signals.

2. On English Learning

Many of the problems of foreign language teaching arise out of the special features of the native language. It is not enough to have teaching

materials based upon a descriptive analysis of the language to be learned. Such a descriptive analysis must be carefully and systematically compared with a similar description of the native language of the learner. Only in this way will one arrive at the kinds of new habits to be formed, and, perhaps more important still, at the kinds of things the student must learn to ignore in dealing with the foreign language. With American or English people for example, it is not enough for the teachers of foreign language to be able to speak English; to be efficient, they should "know" the structural system of English from the point of view of a sound descriptive analysis. It follows that it is not enough for the Japanese teachers of English to be able to speak Japanese; to be efficient they should "know" the structural system of Japanese from the same point of view.

Next, in the case adults whose native language is Japanese are to learn English, they must, among other things, learn to and to give the signals by which English conveys its structural meanings. The most efficient materials for such learning are those that are based upon an accurate descriptive analysis of the structural patterns. Such an analysis need not constitute in itself any part of the material to be learned, although many adults find help in such descriptive statement. In this case, however, "a study of the statements of the patterns, making them matters of conscious knowledge, must never be allowed to become a substitute for practice of the sentences themselves. The statements become valuable only insofar as they guide the practice exercises of the student and provide for him the knowledge that will give him assurance in his use of the language." (C. C. Fries, *Teaching and Learning English as a Foreign Language*, Ann Arbor, University of Michigan Press, 1956, p. 34)

In conclusion I should like to state the following concerning English sentence patterns and grammar which constitute vital function for English teaching and learning.

The child, in his learning of language, like anyone else who learns a language, does not simply repeat what he has heard; he soon learns the patterns of form and arrangement by which the "words" are put together and is then free to employ a great variety of content in these molds or frames. These patterns of form and arrangement are the grammar of the language and although a child or a native speaker is not conscious of them, they are nevertheless there, fashioning the utterances, and must be learned if the language is to be used. The question then is not whether one should learn a new language without learning the grammar of that new language. That is an impossibility. The question is whether, for an adult, the guiding of his practice through one pattern at a time and a conscious grasping of these patterns as a summary of that practice will not make more rapid and efficient his mastery of a new language. Even if one insists that the conscious formulation of the patterns involved is unnecessary, there is no escaping the need for learning them and in that learning the student will progress more satisfactorily if his efforts are channelled to avoid confusion, if he does not try to attack all the diverse complexity of the structure of a language at the same time.

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