

NOTES ON THE THEORETICAL BASIS FOR TEACHING STRUCTURAL UNITS

by

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I

In a recently published series of English textbooks for junior middle schools, there is, among many other noticeably new features, a unique way of introducing some of its vocabulary items. The count nouns are always listed with an indefinite article *a* or *an*, instead of having them in company of the plural suffix; the latter having been the practice of many other textbooks. This might seem an innovation to most English teachers and many of them would probably look at it with curiosity and wonder how to incorporate this particular feature into their classroom activity while the rest of them doubtless would just pass it over and think, if ever, that the purport of such an arrangement is merely to arrest the eye.

A closer look at this arrangement, however, will certainly reveal that it is by no means a sheer innovation out of the compiler's vanity, but rather an indication of the adoption of a new technique to teach a basically significant form in the total structure of English, ingeniously designed by the textbook writer out of his profound understanding of the language. For it does not only attempt to inculcate a contrastive feature between the mother tongue of the learner and the target language—for the Chinese language, as manifested in its various dialects, lacks a similar syntactic device to mark whether a noun is a count or non-count one.⁽¹⁾ But it tries as well to teach a structural unit, the items of which are almost always inseparable. It is true that this structural unit, important as it is, is slightly touched upon in most traditional grammars by means of such statements as: '“a” or “an” is called the *Indefinite* [Article], because it does not particularise a noun, but generalises it.' and 'As a general rule, a *Common* noun in the *Singular* number

(1) In Mandarin Chinese, for instance, a count noun is marked by its inability to co-occur with an intensifier-like morpheme immediately in front of a verbal element designating possession. (See Chomsky's *Syntactic Structures*, Chinese Edition translated by William S.-Y. Wang and H. T. Lu, pp. 4-5.)

should have an article placed before it.'⁽²⁾ Yet, in a more scientific approach the relationships between the indefinite article and the count noun are treated as one of the most basic units that underlie the English sentence. In the transformational grammar of English, for instance, a sentence is interpreted in the very first phrase-structure rule as composed of two possible elements:

$$S \longrightarrow NP + VP$$

And an NP is in turn described as containing any of three alternative constructions:

$$NP \longrightarrow \left\{ \begin{array}{l} \text{proper noun} \\ \text{indefinite pronoun} \\ \text{Det} + N \end{array} \right\}$$

The last of the three, namely, Det+N, is the very structure under consideration.

II

The instance cited above is of course only one of the many formal features of English that can and should be embodied in a well devised language-teaching program. But, for the justification of such inclusion, theoretical basis as well as pedagogical validity must be sought. The structure of NP as one of the two components of S has been partially treated in the last section. What automatically occupies our attention next is the other component, VP, of S. Its structure can be summarized in a few rules, omitting what is irrelevant to our discussion: ⁽³⁾

$$1. VP \longrightarrow \left\{ \begin{array}{l} \text{be} + \left\{ \begin{array}{l} \text{substantive} \\ \text{Adv-p} \end{array} \right\} \\ \text{verbal} \end{array} \right\}$$

$$2. \text{Aux} \longrightarrow \text{tense} + (M) + (\text{aspect})$$

$$3. \text{Aspect} \longrightarrow (\text{have} + \text{part}) + (\text{be} + \text{ing})$$

$$4. \text{verbal} \longrightarrow \left\{ \begin{array}{l} \text{VI} \\ \left\{ \begin{array}{l} \text{VT} + \text{NP} \\ \text{Vb} + \text{substantive} \\ \text{Vs} + \text{Adj} \\ \text{Vh} + \text{NP} \end{array} \right\} + (\text{Adv-m}) \end{array} \right\}$$

(2) J. C. Nesfield, *English Grammar Series for Chinese Students*, Book IV, pp. 8 & 168.

(3) Paul Roberts, *English Syntax*, pp. 396-7. The numbering of the rules is added by the present author.

$$\begin{array}{l}
 5. \text{ VI} \rightarrow \left\{ \begin{array}{l} \text{Vi}_1 \\ \text{Vi}_2 + \text{Prt} \\ \text{Vi}_3 + \text{Comp} \end{array} \right\} \\
 6. \text{ VT} \rightarrow \left\{ \begin{array}{l} \text{Vt}_1 \\ \text{Vt}_2 + \text{Prt} \\ \left\{ \begin{array}{l} \text{Vt}_3 \\ \text{Vt}_{to} \\ \text{Vt}_{ing} \end{array} \right\} + \text{Comp} \end{array} \right\}
 \end{array}$$

What interests us in the rules is that they clearly disclose the obligatory co-occurrence of one item with another.

In the first rule, it is unambiguously seen that "be" in this function never occurs by itself in a VP. As a Vb in Rule 4, "be" is always followed by a substantive. ⁽⁴⁾ It is therefore fruitless to teach "be" as an isolated item either through translation or through explanation. To translate "You are welcome." word by word into Chinese would result in a Chinese sentence "你是被歡迎的", which is far from being idiomatic but which is frequently found in translated documents. Worst of all, it does not reveal a bit of the structure. On the other hand, to explain that "be" serves to fill up a gap between an NP and a substantive where there is no other verb present might seem sound and effective to the linguistically sophisticated. Yet it would inevitably lead to the necessity of defining the terminology, which is a hard job for both the teacher and the learner.

The significance of Rule 3 lies in the fact that no matter whether "have + part," "be + ing," or both are selected, it is always mandatory that both items in each construction be taken together. This means on the one hand that for all practical purposes the past participle form of any verb must be learned in company of the word "have." ⁽⁵⁾ The memorization of the three principle parts of "irregular verbs," for instance, may be useful and valuable to a certain extent; but without the context in which they occur the principle parts in the form of a list would be meaningless. It also means on the other hand that the "-ing" form of any verb must be learned in conjunction with "be." ⁽⁶⁾

(4) The constructions "There is/are" and "It is" are results of transformations. (See P. Roberts, pp. 398-401.) These should be treated separately from rather than together with the basic structure of "be".

(5) Participial phrases and participles functioning as adjectivals are transformed structures, and therefore deserve separate treatment at a higher level.

(6) Cf. the note above.

Rules 4, 5 and 6 positively indicate, first of all, that the traditional classification of verbs under three categories, i.e. linking, transitive, intransitive verbs (despite the insufficiency of their basis on meaning) is too rudimentary for any practical purposes for learning the language except in the very beginning stage. To understand and be able to use English verbs, there is need for a more detailed subclassification. As is shown in the rules, besides the small classes of Vb, Vs and Vh, the class VI deserves further division into Vi_1 , Vi_2 , and Vi_3 ; the class VT into Vt_1 , Vt_2 , Vt_3 , vt_{to} and Vt_{ing} .⁽⁷⁾ The subclasses, however, are not to be defined on the basis of the meaning they express. The distinctions among them are to be discerned by their ability or inability to co-occur with certain construction or constructions. The following re-statements in terms of their environments will serve to make the distinctions clearer:

$Vi_1 + (Adv - m)$
 $Vi_2 + Prt + (Adv - m)$
 $Vi_3 + Comp + (Adv - m)$
 $Vt_1 + NP + (Adv - m)$
 $Vt_2 + Prt + NP + (Adv - m)$
 $Vt_3 + Comp + NP + (Adv - m)$ ⁽⁸⁾
 $Vt_{to} + Comp + NP + (Adv - m)$
 $Vt_{ing} + Comp + NP + (Adv - m)$
 $Vb + substantive + (Adv - m)$
 $Vs + Adj + (Adv - m)$
 $Vh + NP + (Adv - m)$

Thus, we have now obtained a handful of clearly stated formulae, with which to teach all classes of verbs discriminately, usefully and effectively in their meaningful contexts.

A few examples of contrastive analysis will unmistakably illustrate the significance of these patterns taught by the verb subclasses in a

(7) A more detailed classification, though not similar in nature, is found in Hornby, Gatenby and Wakefield. *The Advanced Learner's Dictionary of Current English*.

(8) At first glance, Vt_3 , Vt_{to} and Vt_{ing} may seem to occur in the same environment. Actually the three Comp's in the three statements are different from each other. The first one may be in a variety of forms, the second must be a *to* and a following verb, and the third must be in the *-ing* form. In theory, a Comp precedes an NP. Yet, in the final stage it is always switched to the position following the NP through a T-VT transformation, unless it is long and complicated, in which case the transformation is optional. On the other hand, the Prt in the construction for Vt_2 may undergo a similar optional transformation unless the NP is a personal pronoun, in which case the transposition is obligatory.

language program. Examine:

He considered me kind.

* He expected me kind.

* He did me kind.

It is clear that the first of the three utterances ranks highest in the degree of grammaticalness while the second ranks lower (which most Chinese learners will certainly think makes sense because of its parallel structure with what would be expected in their own language) and the third lowest. The different degrees of grammaticalness, however, cannot be attributed to the different amounts of meaning they express. On the contrary, grammaticalness is best approached through a recognition of the subclass to which a verb belongs. "He considered me kind." is grammatical because it happens to contain a verb of the subclass (Vt_3 in this case) that requires an NP (*me*) and such a complement as the word *kind*. "He expected me kind." sounds less grammatical because it contains a verb of another subclass (Vt_3 in this case) that requires an NP and a complement that should be of a different form from *kind*. Finally, the fact that the verb in "He did me kind" belongs to a third subclass (Vt_1 in this case) which takes only an NP but not any Comp makes the utterance the least grammatical. The implication here is that when a learner has learned what subclass a verb can be assigned to, he will automatically use it in a grammatical sentence even if without being aware of how much sense it makes.

Similarly in each of the following pairs one utterance appears to make more sense than the other because the verb happens to be in a more appropriate environment rather than because the meaning is more complete or because the semantic context is more compatible with the verb:

He saw it.

He heard it.

He awaited me.

* He looked it.

* He listened it.

* He waited me.

From the examples above, it can be safely inferred that to tell the difference in meaning (if there is) between such pairs as *see: look, hear: listen* and *await: wait* can not be an effective means to teach the structures in which they operate. It is only through a functional approach that the learning can be fruitful.

If a learner who has studied English mostly through the semantic approach uses the forms in the column on the left instead of those on

the right, it is perhaps not so much the learner as the teacher that is to blame.

- * He very loves her. He loves her very much.
- * He must can do it. ⁽⁹⁾ He must be able to do it.
- * The gather is big. The gathering is big.
- * It's important him go there. It's important for him to go there.
- * The scenery is fascinate. The scenery is fascinating.
- * We are expecting his arrive. We are expecting his arrival.

The reason why *very* does not occur in the environment "He _____ loves her" is not that it does not fit the meaning (actually, a literal translation would be perfect in Chinese) but that it does not fit the structure. It is the teacher's responsibility to emphasize the structural compatibility (or incompatibility) of one item with another in addition to the semantic compability (or incompatibility), if there is any. This can certainly be best achieved through such intensive drill as repetition and substitution.

III

When a survey has been made on the reasons for what and how to teach in a language program, it may seem appropriate to give some thought to another problem: when to introduce a certain structure? The problem might appear to be very easy to solve: the easiest and most fundamental ones should be introduced first. But this answer actually amounts to nothing more than begging the question. First of all, there is difficulty in choosing between the easiest and the most fundamental, for what is easy to a foreign learner may not at the same time always be basic in the total structure of the language, or vice versa. Secondly, although it is possible to see whether a syntactic item is easy through a contrastive study, the result can serve as a criterion for choice only when there are two or more alternative forms equally important in function at the same structural point, e.g. "be going to," "be about to," "shall" and "will." ⁽¹⁰⁾ On the other hand, it is certainly not so easy to determine how basic a form is in the structure as a whole. (Frequency of occurrence in speech or writing does not provide a reliable basis for such a judgment.)

To dig into the problem, we here need to take a further look into

(9) *Can* is defined in one of its many meanings as "to be able to". (See *Webster's New World Dictionary*)

(10) See Charles C. Fries, *American English Grammar*, pp. 151-68.

the nature of grammar of a language.

"...a language involves not merely a system of constituent classes, but a system of classes, subclasses, sub-subclasses, etc...a hierarchy of classes. Some of the structural patterns are statable in terms of constituent classes, some only in terms of elements farther down the hierarchy....That is, language is not merely a system, but a hierarchy of systems.

"If this is indeed the case, then, it should be possible to construct a grammar which sets forth the facts of the system at any level at which it is integrated....Since one [grammar] would be written in terms of classes, and another in terms of classes and subclasses, and since the subclasses are set up within the framework of the classes, one of the grammars should work out to contain another. Each grammar would be a synopsis of the next, or an expansion of the preceding. This implies that for any language there is not merely one grammar, but a HIERARCHY of grammars."⁽¹¹⁾

If Gleason's assertion holds that there is possibility for a hierarchy of grammars for a language, then what is most basic must be statable in terms of the broadest structural classes—that is, it must be able to be contained in a grammar, so to speak, on the lowest level or at the top of the hierarchy. Such a hierarchy of grammars can very well be exemplified in the system of the English verbs. The traditional classification of linking, transitive and intransitive verbs, regardless of the inadequacy of their meaning-based definitions, is stated in the broadest terms. Paul Roberts' distinction among the English verbs is narrower in designating them under Vi_1 , Vi_2 , Vi_3 , Vt_1 , Vt_2 , Vt_3 , Vt_{to} , Vt_{ing} , Vb , Vs , and Vh . Yet to include "imagine", "stop", and "avoid" all in one subclass, i.e. Vt_{ing} , is definitely an over-generalization for a learner on a more advanced level. Obviously they are not parallel in their function to fit the position of Vt_{ing} in the rule: $Vt_{ing} + \text{Comp} + \text{NP} + (\text{Adv-m})$. Compare:

- | | |
|---|-------------------------------|
| 1. a I imagined John going. ⁽¹²⁾ | 1. b I imagined myself going. |
| 2. a I stopped John going. | 2. b *I stopped myself going. |
| 3. a *I avoided John going. | 2. b *I avoided myself going. |

⁽¹¹⁾ H. A. Gleason, Jr., *An Introduction to Descriptive Linguistics*, 1961, pp. 218-9.

⁽¹²⁾ I owe to my colleague Mr. Charles T. C. Tang these examples and the concept of sub-classification in this particular case.

Both 1.a and 1.b are grammatical and need no further restrictions. For *stop*, only 2.a is grammatical while 2.b needs to undergo a further transformation for the deletion of *myself* to make it grammatical. For *avoid*, 3.a is totally ungrammatical while 3.b has to undergo the same transformation as for 2.b. It is therefore advisable to further divide Vt_{ing} into three sub-categories and each would have to have its own specifications in the phrase-structure and transformational rules:

$$Vt_{ing} \longrightarrow \left\{ \begin{array}{l} Vt_{ing\ 1} \\ Vt_{ing\ 2} \\ Vt_{ing\ 3} \end{array} \right\}$$

Then any noun or pronoun including those in the *-self* form can be the NP following $Vt_{ing\ 1}$ and $Vt_{ing\ 2}$ although an obligatory transformation rule must be provided for " $Vt_{ing\ 2} + \text{Comp} + \text{NP}$ " to delete the NP when it is in the *-self* form. The NP following $Vt_{ing\ 3}$ has to be in the *-self* form, and in addition the same obligatory rule must also be provided for the deletion.

In the foregoing paragraph, we have illustrated three grammars dealing with the classes and subclasses of the English verbs on three different levels. Through a similar evaluation, it seems very possible to decide, on the basis of a scientific analysis instead of on the hunch of the language teacher, whether the categorization of a certain structural unit is on the same level as that of another. If so, it should also be possible to plan a language program including as an integrated whole all and only those structural units that are not only necessary and adequate but also appropriate to the learner, whatever degree of manipulation skill he has attained in that language.

IV

A final problem which a language teacher may encounter after he has made an investigation into the nature and the stratification of a language is: How to frame a language program which may embody the significant points in the structure? For there always seem to be some structures that may easily be explained but can hardly be incorporated into drill work as a means to attain manipulation skill. Dr. Charles T. Scott, for instance, has raised the question of how to learn effectively the "deep structure" of a foreign language, and speculated that

"we can expect no quick and easy solution" to such a problem.⁽¹³⁾ Difficulties of this kind, however, are not insoluble by nature. To limit our discussion to specific cases as an illustration for general application, we will quote Scott's examples, which run as follows:⁽¹⁴⁾

".....how is it possible for the native speaker of English to understand that the following two questions, despite their identical surface structure, may elicit quite different responses?

(1) What are you looking for?→

I'm looking for my watch.

(2) What are you running for?→

I'm running because I'm late.

Or, again, how is it possible for the native speaker of English to interpret the following two statements as responses to very different questions?

(1) The picture was painted by a new artist.←

Who painted the picture?

(2) The picture was painted by a new technique.←

How was the picture painted?"

What causes the first two questions to elicit quite different responses is surely the "deep structure"—that which underlies the surface structure of the questions. In accordance with transformational grammar, questions are derived from statements. Through the transformations, it is quite possible to see in what ways they differ from each other. And it might be equally possible to devise some drills to point up the differences. For clarity's sake, we will account for the differences not in the terminology of transformation but in familiar terms.

(1) You are looking for your watch. → *You are looking for what → *What you are looking for → What are you looking for?

(2) You are running because you are late. →

*You are running $\left\{ \begin{array}{l} \text{why} \\ \text{for what} \end{array} \right\}$ (If "for what" is selected) →

*What you are running for → What are you running for?

(13) Charles T. Scott, "The Oral Approach: Retrospect and Prospect", *ELEC Publications*, Tokyo, Japan, 1966.

(14) Op. cit.

The problem obviously lies in the fact that during the process of transformation the first one has no alternatives to choose from while the second may choose between "why" and "for what". If this possible selection can be made explicit to the learner through some device, the problem will definitely be solved. One of the possible ways to include this point in the activity of a language class would be like the following.

Drill I

Teacher: What are you looking for?

Chorus: What are you looking for?

Teacher: Watch.

Student A: I'm looking for my watch.

Teacher: Search.

Student B: What are you searching for?

Teacher: Book.

Student C: I'm searching for my book.

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Drill II

Teacher: Why are you running?

Chorus: Why are you running?

Teacher: Because I'm late.

Student A: I'm running because I'm late.

Teacher: Studying.

Student A: Why are you studying?

Teacher: Because I have an examinaion.

Student B: I'm studying because I have an examination.

.....

Drill III

Teacher: Why are you running?

Chorus: Why are you running?

Teacher: What are you running for?

Student A: What are you running for?

Teacher: Why are you studying?

Student A: Why are you studying?

Teacher: What.....for

Student B: What are you studying for?

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Drill IV

Teacher: Why are you running?
 Student A: What are you running for?
 Teacher: Because I'm late.
 Student B: I'm running because I'm late.
 Teacher: Why are you studying?
 Student B: What are you studying for?
 Teacher: Because I have an examination.
 Student C: I'm studying because I have an examination.

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How the two statements of the same surface structure are interpreted as responses to very different questions can be attributed to the classification of the nouns *artist* and *technique* under two different categories — animate and inanimate. The phrase "by + inanimate noun" usually answers a "How-question" whereas the phrase "by + animate noun" usually answers a "Who-question." This point again may very well be set forth in classroom work in the form of drills, whether or not the student has learned the distinction between these two categories of nouns.

Drill I

Teacher: Who painted the picture?
 Chorus: Who painted the picture?
 Teacher: It was painted by a new artist.
 Student A: It was painted by a new artist.
 Teacher: Wrote the book.
 Student A: Who wrote the book?
 Teacher: By a young writer.
 Student B: It was written by a young writer.
 Teacher: Made the movie.
 Student B: Who made the movie?
 Teacher: By a new producer.
 Student C: It was made by a new producer.

.....

Drill II

Teacher: The picture was painted by a new artist.
 Chorus: The picture was painted by a new artist.

Teacher: Who painted the picture?

Chorus: Who painted the picture?

Teacher: The book was written by a young writer.

Student A: Who wrote the book?

Teacher: The movie was made by a new producer.

Student B: Who made the movie?

.....

Drill III

Teacher: How was the picture painted?

Chorus: How was the picture painted?

Teacher: It was painted by a new technique.

Chorus: It was painted by a new technique.

Teacher: How can English be learned?

Student A: How can English be learned?

Teacher: By the oral approach.

Student B: It can be learned by the oral approach.

Teacher: How is a car run?

Student B: How is a car run?

Teacher: By gasoline.

Student C: It is run by gasoline.

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Drill IV

Teacher: The picture was painted by a new technique.

Chorus: The picture was painted by a new technique.

Teacher: How was the picture painted?

Chorus: How was the picture painted?

Teacher: English can be learned by the Oral Approach.

Student A: How can English be learned?

Teacher: A car is run by gasoline.

Student B: How is a car run?

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Thus it seems plausible that most problems like these which baffle the teacher at first sight can be sloved by delving into their deep structures. What remains to be done is a comprehensive language program consisting of a grammar (or grammars) graduated from the

top of a hierarchy down to the bottom. Such a well-graduated series of grammars has been lacking for even one of the most heavily taught languages, i. e. English, and I believe it is only through the joint effort of the linguistic researcher and the classroom teacher in working out such a comprehensive grammar that language teaching and learning can be made thoroughly effective for English or any other languages.