CATEGORIAL RULES IN VSO LANGUAGES

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INTRODUCTION

One of the products of the phrase structure component of a transformational grammar is the constituent "verb phrase" (VP). If we were to ask why such a labelled node has been posited, we would find that the answer is threefold. In the first place, it is by means of this categorial symbol that we are able to define grammatical relations associated with the deep structure of a sentence. In the second place, it is by means of this symbol that we can establish the underlying word order of a sentence. Finally, the VP constituent is considered to be a part of a fixed universal vocabulary and, as a consequence, it is to be found in the deep structures of all natural languages. It is our intent to demonstrate that although these claims may have relevance for SVO and SOV languages, they are virtually without substance in VSO languages such as Hawaiian. This fact has many theoretical ramifications for the lexicalist's view of deep structure. The exact nature of these issues will be subsequently explicated, but first let us clarify what we mean when we talk about "deep structure".

UNIVERSALS OF WORD ORDER

The concept of universals of word order is due to Greenberg (1963) who has shown that the surface structures of language tend to fall into three dominant patterns. In each case the subject (S) precedes the object (O), and the verb is the variable in that it may appear in final position (SOV), in medial position (SVO) or in initial position (VSO). It should be made very clear that when Greenberg uses the term "word order" he has the concept of a surface structure word order in mind. When we use this term we mean the order of the lexical items in the deep structure of a language.

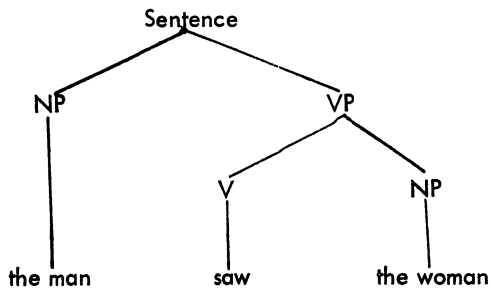
THE VP IN SVO LANGUAGES

The surface structure word order for English is SVO. Chomsky has assumed that English also possesses an SVO order in its deep structure. This claim is evident in his phrase structure rules which initially divide a sentence into its subject noun phrase (NP) and its predicate verb phrase (VP). The latter is subsequently divided into a verb plus a noun phrase..

1. Sentence - - -→ NP + VP

2. VP - - -→ V + NP

This is tantamount to stating that the deep structure of a transitive sentence in English is SVO.



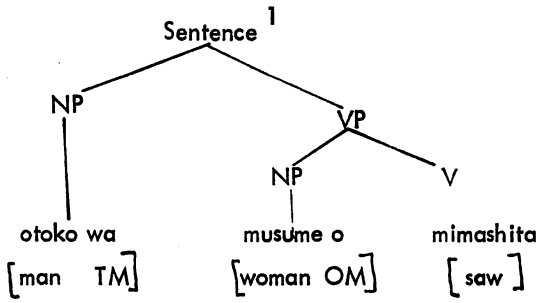
This deep structure representation is also employed in ascertaining grammatical functions. According to Chomsky (1965) such functions can be readily defined in terms of the relationships of the categories.

Subject of the sentence : [NP, Sentence]
Predicate of the sentence: [VP, Sentence]
Direct object of the sentence: [NP, VP]
Main verb of the sentence: [V, VP]

The VP constituent plays a major role in determining the grammatical functions of a sentence at the deep structure level. If English is really a SVO language, then its existence within the phrase structural component appears to be well motivated. What this means is that SVO languages offer no immediate challenge to the claim that VP is a part of the fixed vocabulary of linguistic universals.

THE VP IN SOV LANGUAGES

The surface structure word order of Japanese is SOV. This same word order has been assumed for its deep structure by Kuroda (1965) and Inoue (1969). This fact requires that the verb phrase be expanded as NP plus V rather than vice versa. Hence the following SOV order for Japanese.

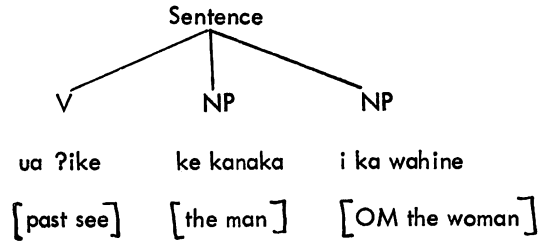


"The man saw the woman"

This new word order only has consequences for the way in which we rewrite the VP in the phrase structure rules. It leaves Chomsky's system of defining grammatical functions virtually unchanged. We can conclude from this that SOV languages offer no challenge to the claims that the VP is an intrinsic part of a phrase structure grammar.

THE VP IN VSO LANGUAGES

The surface structure word order of Hawaiian is VSO. But what about its deep structure? Is it also VSO? It appears that such is the case. As a consequence, the deep structure of Hawaiian or any other VSO language would have the following representation.



"The man saw the woman"

The first thing that we notice about such a representation is that no reference at all is made concerning the constituent VP. The reason for this is obvious. The verb of the sentence is separated from its object by the subject NP. In order for a VP to exist in the deep structure of a sentence both the V and its associated O must be contiguous. But they are not. Therefore this necessitates the following new phrase structure rule.

$$\text{Sentence} \longrightarrow \text{V} + \text{NP} + \text{NP}$$

Another consequence of an underlying VSO order is that it also necessitates a new system of defining grammatical relations. In the system used for SVO and SOV languages, the

VP played a dominant role in defining the predicate of the sentence, the direct object of the sentence, and the main verb of the sentence . Even the former definition of the subject NP no longer holds as there are now two NPs which are directly dominated by the sentence node.

It is now evident that any language which has a VSO order in its deep structure challenges linguistic theory as its mere existence means that the current system of defining grammatical functions and the present method of establishing underlying word order no longer holds. It also challenges the status of "verb phrases" within the hierarchy of linguistic symbols.

ON DEFINING GRAMMATICAL RELATIONSHIPS

Rather than have two different systems for defining grammatical relationships, we prefer to have just one. As we have already mentioned,in all of the three major types the S always precedes the O. We can utilize this information in ascertaining grammatical functions. The first NP is always the subject of the sentence and the second NP is the object.

THE RULE FOR ASSIGNING GRAMMATICAL FUNCTIONS

$$f(NP,\ NP) = (S,\ O)$$

THE APPLICATIONS

$$V + NP + NP = VSO$$

$$NP + V + NP = SVO$$

$$NP + NP + V = SOV$$

Note that no mention is made of the VP as it is no longer an integral part of the phrase structure component.

ON ESTABLISHING WORD ORDER

According to the revision suggested in this paper, we would need separate phrase structure rules for each of the major language types.

VSO RULE

$$\text{Sentence} \dashrightarrow V + NP + NP$$

SVO RULE

$$\text{Sentence} \dashrightarrow NP + V + NP$$

SOV RULE

$$\text{Sentence} \dashrightarrow NP + NP + V$$

Now that we have only one system for defining grammatical relationships it is natural that we should ask if it is also possible to have just one phrase structure rule for all languages. The answer to this question is "yes", it is possible. There is good evidence, for example, that English is a VSO language in its deep structure since many early transformational rules apply to structural indexes in which the verb occurs first, followed by the subject of the sentence, and terminated by the object of the sentence. This immediately raises the question as to whether or not other surface structure SVO and SOV languages may not also be VSO languages in their underlying forms. Until there is more evidence for such a claim (McCawley, 1970) we must tentatively assume three different phrase structure rules. Even if we had an unordered set of classes for our semantic representation, we would still have to have three different rules for assigning word order under the present analysis.

CONCLUSION

If VSO languages exist, then they have some interesting implications for theoretical linguistics. The first is that VSO languages do not have a VP constituent because the verb and its associated object are not contiguous in the deep structure. The second is that VSO languages necessitate a separate system for assigning grammatical functions. The third implication is that VSO languages differ greatly in the manner in which they establish word order.

All of these problems can be solved if we eliminate the constituent "verb phrase" from our phrase structural rules. The consequence of this action would be that all languages share the same rule that assigns grammatical function. Another consequence is that we would have three different phrase structural rules for establishing word order. This last assumption may be unwarranted as there is some evidence that all languages may share the same underlying VSO word order.

FOOTNOTES

1. TM and Om mean "topic marker" and "object marker" respectively.

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