

One Serious Problem in the Account of Passive Construction.

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The problem of describing the relation between active and passive sentences has been discussed by many generative transformational grammarians, such as Chomsky (1957, 1965, 1970), Hasegawa (1967), Chafe (1970), and Bouton (1970). But none of the arguments seems to account formally for the semantic difference which may exist between an active sentence and its passive counterpart. Therefore the aim of the present discussion is to show one problem which should be solved but remains unsolved in the account of the passive construction in the framework of transformational grammar.

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Chomsky (1957) introduces the passive transformation in essentially the following form: NP, Aux, Vt, NP', X→NP', Aux+be +En, Vt, by+NP, X. But in doing so, a problem arises. The derived phrase structure of the transform is not clear, since no definite phrase structure can be assigned to the agentive by-phrase and the be+En. Katz and Postal (1964, p. 72) account for the status of the agentive by+NP by deriving passive sentences:

...not from corresponding active forms, but rather from underlying P-marker containing an adverb manner constituent dominating underlying by plus a passive morpheme dummy.

Chomsky's recent account (1970, p. 203) of the passive is essentially the same as Katz and Postal's:

...the underlying structure for passives is roughly NP-Aux-V-NP-by Δ where by Δ is an agent phrase related, in ways that are still unclear in detail, to adverbials of means and manner. The passive operation, then, is an amalgam of two steps: the first replaces Δ by the subject noun phrase; the second inserts in the position vacated by the subject the noun phrase that is to the right of the verb.

Chomsky's justification for the postulation of the passive transformation is that if we deliberately exclude passives from the phrase structure, and reintroduce them by a transformational rule, several redundant duplications can be avoided in the grammar. One well known redundant duplication which occurs if the passive transformation is not introduced is that a selectional restriction is required twice, one for active sentences and one for passive sentences. The acceptability of the sentence Mary cut the tree and the unacceptability of the sentence *The tree cut Mary can be accounted for by selectional restrictions. In the passive, there are the same pairs of acceptable and unacceptable sentences as in the active form: The tree was cut by Mary vs. *Mary was cut by the tree. By comparing these sentences in the passive and in the active, we can easily see that the same selectional restriction holds for passive sentences as for active sentences, but in the opposite order. If passive sentences occur in deep structure in the same word order as in the surface structure level, then for each set of selectional restrictions required in the passive sentences, there is a comparable set of selectional restrictions for the corresponding

active sentences. But if the passive transformation is introduced, only one selectional restriction on the deep structure is necessary. Therefore, the peculiarity of sentences such as *The tree cut Mary and *Mary was cut by the tree can be explained by one selectional restriction.

Another reason for introducing the passive transformation is that, in doing so, we can elegantly account for the following three special syntactic characteristics of the passive sentences. The first is that the verb in passive sentences must be transitive, since we cannot say *It is appeared. The next is that if there is an agent phrase following the verb, the sentence must be passive, since we cannot say *Paul hit by Sam. The last is that passive sentences cannot take an object noun phrase, since we cannot say *Mary was hit Jack.

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Hasegawa's account (1968) of passive is quite different from that of Chomsky. He points out that Chomsky's analysis of the passive does not provide a clear account of the status of be+En and that (p.110-111):

...the notion of transformation is still too powerful in that it allows a mechanism that is not actually utilized by natural languages... introduction of be+En by transformation does not seem plausible since it is not completely automatic, in the sense that the presence of the agentive by+D does not always require the introduction of be+En...

He argues (p. 96) that we can provide a clear account of the status of be+En:

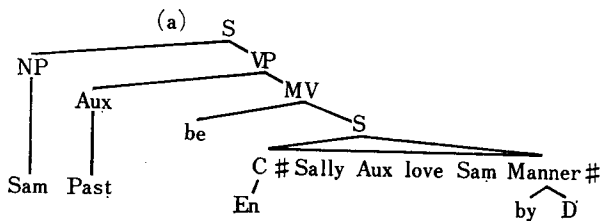
...If we regard be+En ... as elements that take a sentential complement, and derive passive forms from an underlying structure in which the passive formatives are followed by a sentential complement S.

He also argues that this enables us to account for passive sentences as one of many other matrix/complement sentence constructions such as The door got shut by John, He started singing, He let Bill go, He made Mary happy, I saw John run, I call John a doctor, I kept the car in the garage, and so on. Hasegawa's analysis of passive is briefly as follows:

He gives the base rules as (pp. 103, 104):

1. $S \rightarrow NP + VP$
2. $VP \rightarrow Aux + MV$
3. $MV \rightarrow \left\{ \begin{array}{l} be + C \# S \# \\ MV_1(Loc) (Time) \end{array} \right\}$
4. $MV_1 \rightarrow \left\{ \begin{array}{l} be + Pred \\ V(Prt)(NP)(Cmp) (Man) \end{array} \right\}$
5. $Man \rightarrow (Manner)(Ag)$
6. $Ag \rightarrow \left\{ \begin{array}{l} of \\ by \end{array} \right\} D$

Thus, the underlying structure of the passive is:



Three transformations (p. 105) are required to generate a passive sentence:

1. Tangentive

S.I.: #, NP, Aux, V, (Prt), NP', X, by, D, Z, #

S.C.: Substitute NP for D

2. Tverbal complement

S.I.: $\left\{ \begin{array}{l} V \\ \text{be} \end{array} \right\} (\text{NP}), \text{C}, \#, \text{X}, \text{Aux}, \text{Y}, \#$

S.C.: Substitute C for Aux

where: X=null if C=En

3. Terase

S.I.: NP, X, # $\left\{ \begin{array}{l} \text{NP}, \text{C} \text{ (Prt)} (\text{P}) \\ \text{C}, \text{V} \quad (\text{NP}') \end{array} \right\}, \text{NP}, \text{Y}, \#$

where X does not contain an NP

S.C.: Delete the embedded NP and #

By applying these three transformational rules, in this order, the following derivation results:

(1) Sam Past Be En # Aux love Sam by Sally #

(2) Sam Past Be # En love Sam by Sally #

(3) Sam Past Be En love by Sally.

Hasegawa's account of the passive is well motivated in that some transformations are so powerful that they do allow for a mechanism which is not actually utilized by natural languages; in that Chomsky's passive transformation is of this kind; and in that the passive construction in English is realized as one of many other matrix/complement sentence constructions.

II.

It seems that one very important semantic difference which lies between passive and active sentences is lacking in both Chomsky's analysis and Hasegawa's. That is, as Bouton (1970) points

out, non-stative verbs tend to act more like statives when they have become passivized. This point can be easily shown by comparing (4) and (5) with (6) and (7), since stativity can be checked by the imperative form: imperative forms of stative verbs yield ungrammatical sentences whereas those of non-stative verbs do not:

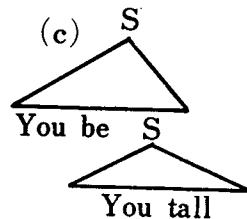
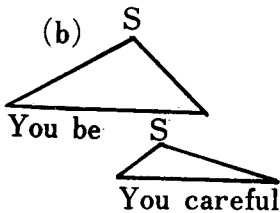
- (4) Mary hits Paul.
 (5) Hit him.
 (6) Paul is hit by Mary.
 (7) *Be hit.

Numerous examples of this kind can be easily found: *Be shot in the chest. *Be visited by John. *Be caught. and so on. Bouton argues that this semantic difference of passive and active sentences can be well explained by Hasegawa's analysis. That is, since as shown in diagram (a), passive sentences contain the stative verb be in the matrix sentences, they are stative in nature, even if their active counterparts are non-stative.

Despite Bouton's claim it is not clear whether verb be is stative or not. Look at the following sentences.

- (8) Be careful.
 (9) *Be tall.

The underlying sentences of (8) and (9) can be diagrammed as in (b) and (c) respectively¹.



If Bouton's claim that passive sentences are stative in nature because of the presence of stative verb be in the matrix sentences is assumed to be correct, sentence (8) should be also unacceptable, since it contains stative verb be in its matrix sentence. Moreover, diagrams (b) and (c) show that it is not stativeness of verbs in the matrix sentences but stativeness and non-stativeness of verbs (tall and careful, respectively, in the present case) in the embedded sentences that account for the unacceptability of sentence (9) and the acceptability of sentence (8). Therefore, we may be skeptical of Bouton's account of the semantic difference in stativeness of certain active and passive sentences.

This semantic difference of passive and active sentences is further complicated by passive sentences which contain stative verbs in the embedded sentences.² Look at the following sentences.

- (10) a. John saw Harriet.
 b. John likes Math.
 c. Mary resembles her mother.
- (11) a. Harriet was seen by John.
 b. *Math is liked by John.
 c. *Her mother is resembled by Mary.

The peculiarity given by (10) and (11) is that although the verbs in each of the three sentences in (10) are stative, only (10) a. has a grammatical passive counterpart (11) a., while (10) b. and (10) c. do not.

From the above discussion, it is clear that the account of the passive construction has its deficiency. That is, although the problem of describing the relation between active and passive

sentences has been disussed by many generative transformational grammarians, none of the arguments so far discussed clearly gives a formal explanation to the difference in stativity between active and passive sentences. This semantic difference is precisely what generative transformational grammarians should account for formally in order for the account of the passive construction to be explanatory.

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1. I assume Ross's account (1969) of adjective as verb to be correct.
 2. I assume tentatively the underlying structure of passive proposed by Hasegawa is correct.

References

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