

DISCOURSE FUNCTIONS  
OF THE ACTIVE-PASSIVE DICHOTOMY  
IN ENGLISH

BY

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To Lucy

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DISCOURSE FUNCTIONS  
OF THE ACTIVE-PASSIVE DICHOTOMY  
IN ENGLISH

By

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It is hypothesized that the primary function of the active-passive dichotomy in English is to control thematization.

In PART I, below, various linguistic-theoretical formalizations of the active-passive relationship are explored. Included are the 'mainstream' transformational generative frameworks from Syntactic Structures to the present, three 'alternative' transformational frameworks (case grammar, relational grammar, and lexicalist theory), and stratificational grammar.

In PART II, support for the above hypothesis is gained from studies of various passive types: **be** vs. **get** passives, 'full' vs. agentless passives, and 'true' vs. 'pseudo-' passives. Further support is gained from an examination of actives and passives in different environments, especially in embedded clauses. The psycholinguistic literature provides valuable insights and evidence relevant to the discourse function of the active-passive dichotomy. As part of the current study, a psycholinguistic experiment is performed which further supports the hypothesis.

A linguistic-theoretical framework must fulfill certain requirements in order to adequately describe the above discourse function of the active-passive dichotomy. It must, for example, permit a unified treatment of different passive types in English. Other requirements are discussed as well. Of those considered, the stratificational framework seems to be the only one capable of meeting all the requirements described.

## INTRODUCTION

Previously, in virtually all studies of passive voice (and in virtually all 'mainstream' linguistic studies, for that matter) the assumption was for some time that--in one way or another--the sentence is the 'basic' unit of language. Consideration was primarily of the grammaticality of sentences (e.g. Jacobs and Rosenbaum 1968:275), the structure of sentences, and so on.<sup>1</sup> Many inferred from this that the sentence is the largest unit of language which should be of concern to the linguist.

This has provided a relatively narrow context within which to develop an analysis of the interpretation of language structures. It is, in fact, too narrow a context, as some have pointed out (e.g. Rommetveit 1974; Longacre 1976; Clippinger 1977).

As an example of this rather narrow view, consider the way the function of the English passive voice construction has 'traditionally' been interpreted. Most grammarians, and most linguists, have interpreted this construction as fulfilling the function of 'emphasizing' some noun phrase by making it the 'subject of the discourse'.<sup>2</sup> See, for example, the discussion in Lyons (1968), section 8.1.2. This view is based on sound intuitions, but looks no farther than the bounds of a single sentence.

And, it is a highly oversimplified view of the function of passive voice. It will be seen that passive functions in more

than one way to control thematization; further, these functions depend upon discourse contexts.

Chapters 1 - 5 present, without much comment (most of which is withheld until later chapters), the development of several formalizations of the active-passive relationship. These chapters comprise PART I.

PART II is an extended discussion of the function of the active-passive dichotomy. 'Truncated' (i.e. agentless) passives are discussed first, in Chapter 6, but more space is devoted to the consideration of 'full' passives (those which include an agent or an agent-like element in a *by* phrase), i.e. Chapters 6 - 10.

The final chapter unites PART I and II in a discussion of the characteristics required in an adequate formalization of the active-passive relationship.

#### Notes

<sup>1</sup>Such phrases seem to include the assumption that 'the grammaticality of sentences' is equivalent to 'the grammaticality of utterances', the 'structure of sentences' equivalent to 'the structure of utterances', and so on.

<sup>2</sup>While the noun phrase is often a patient, it is not always; it is always an NP for which realization as the subject of the sentence is highly marked, however.

PART I  
FORMALIZATIONS  
OF THE  
ACTIVE-PASSIVE RELATIONSHIP

The average Ph.D. thesis is nothing but a  
transference of bones from one graveyard  
to another.

J. Frank Dobie (1980)  
A Texan in England

CHAPTER 1  
'MAINSTREAM' TRANSFORMATIONALIST FORMALIZATIONS  
OF THE ACTIVE-PASSIVE RELATIONSHIP  
UP TO AND INCLUDING CHOMSKY'S ASPECTS (1965)

In this chapter, I have attempted to trace the major developments in 'mainstream' transformationalist formalizations of the active-passive relationship up to and including that of Chomsky's Aspects of the Theory of Syntax (1965). This and the immediately following chapters, which present further developments in formalizations of the relationship between active and passive sentences, are to serve primarily as background. Evaluation of the ability of particular formalizations to meet our descriptive needs in terms of discourse functions of the active-passive dichotomy is left to still later chapters.

Until the work of Chomsky (1957), no attempt was made to formalize the relationship between an active sentence like (1.1) and its passive counterpart (1.2).

(1.1) John hit Fred.

(1.2) Fred was hit by John.

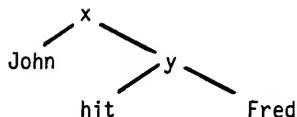
Bloomfield (1933), for example, characterized sentences as being of particular 'sentence types'. The two types relevant to this discussion are the 'actor-action' and the 'goal-action' sentence types. Bloomfield (1933:173) gave the Tagalog sentence (1.3) as an example of the former, and (1.4) as an example of the latter.

(1.3) /sja j pu'mu:tul naŋ 'ka:huj/  
'he cut some wood' (actor-action)

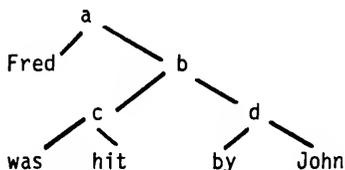
(1.4) /pi'nu:tul nja aŋ 'ka:huj/  
was-cut by-him the wood' (goal-action)

Sentence (1.1), above, is thus of the 'actor-action' sentence type, while (1.2) is of the 'goal-action' type. Use of Bloomfield's 'immediate constituent' analysis to produce tree diagrams of (1.1) and (1.2) would yield (1.5) and (1.6) respectively.

(1.5) John hit Fred.



(1.6) Fred was hit by John.



Bloomfield (1933) did not explicitly and formally relate sentences like (1.1)--which could be analyzed into immediate constituents as in (1.5)--with sentences like (1.2)--which could be analyzed into immediate constituents as in (1.6).

In all fairness, Bloomfield did say (1933:267) that forms such as **Fred** in (1.1) and (1.2) 'occur in...a position...with a positional meaning'. In a sentence like (1.1), the 'positional' or 'class' meaning of **John** would be 'performer of an action' or 'actor'. Presumably, the class meaning of **John** would be the same in (1.2). He

also described the class meaning of a form like **Fred** in (1.2) as 'undergoer of an action'.

The notions 'performer of an action' and 'undergoer of an action' are analogous to those currently referred to by the terms 'agent' and 'patient'. Bloomfield, however, denied the relevance of class-meanings when he said (1933:267-268) that

class meanings are not clearly-definable units which could serve as a basis for our work, but only situational features, undefinable in terms of our science.... Form classes, like other linguistic phenomena, can be defined, not in terms of meaning, but only in terms of linguistic (that is, lexical or grammatical) forms.

This self-imposed restriction, which arose from his behaviorist slant, prevented Bloomfield from attempting to formalize any relationship between active sentences and their passive counterparts.

More generally, this same restriction implicitly defined the kind of grammar Bloomfield used to describe natural language. This grammar, though not yet formalized as such, was a limited phrase structure grammar which Chomsky later (in Syntactic Structures) showed to be inadequate.

Lyons (1968:210 ff.) put this aspect of Chomsky's work into its proper perspective. In his Introduction to Theoretical Linguistics, he helped elucidate the direct link between the kind of immediate constituent analysis done by Bloomfield and its extension and further formalization by Chomsky. The continuity of thought is greater than many might suspect, since this point has often been missed. In his discussion of phrase structure, Chomsky did not explicitly state what links his work had with the older literature. It appears that, as a

result, many readers have missed the real point of his discussion of phrase structure grammars in particular.

Chomsky was able to relate active and passive sentences, but not because he rejected Bloomfield's arguments against the relevance of class meanings. In general, Chomsky did not reject these arguments. His own assumption was that 'the semantic component of a generative grammar, like the phonological component, is purely interpretive' and that 'all information utilized in semantic interpretation must be presented in the syntactic component'. In this, he was suggesting that semantics should not be relegated to 'unanalyzed semantic intuition' (Chomsky 1965:75).

In Syntactic Structures, Chomsky (1957:42 ff.) introduced a transformational rule for passivization as an example to demonstrate the inadequacy of a phrase structure grammar alone for the description of a natural language. This claim of inadequacy was based not on the desire to include class meanings into consideration, but on a desire for greater simplicity in the grammar. The simplicity gained was the elimination of some major redundancies in the statement of cooccurrence restrictions. It was gained at the expense of the introduction of a transformational component.

Chomsky noted that many cooccurrence restrictions would have to be placed on subject, verb, and object to include (1.7) - (1.10), yet exclude (1.11) - (1.14).

- (1.7) John admires sincerity.
- (1.8) Sincerity frightens John.
- (1.9) John plays golf.

- (1.10) John drinks wine.
- (1.11) \*Sincerity admires John.
- (1.12) \*John frightens sincerity.
- (1.13) \*Golf plays John.
- (1.14) \*Wine drinks John.

Such cooccurrence restrictions present no problem, until passive sentences are taken into consideration. In passives, cooccurrence restrictions on subjects are like those on objects in their active counterparts. Similarly, cooccurrence restrictions on some noun phrases in *by* phrases in passives are like those on subjects in the active counterparts. See (1.15) - (1.22). This leads to what Chomsky (1957:43) referred to as an 'inelegant duplication'.

- (1.15) Sincerity is admired by John.
- (1.16) John is frightened by sincerity.
- (1.17) Golf is played by John.
- (1.18) Wine is drunk by John.
- (1.19) \*John is admired by sincerity.
- (1.20) \*Sincerity is frightened by John.
- (1.21) \*John is played by golf.
- (1.22) \*John is drunk by wine.

What is preferred, is a simpler description of the same linguistic data in a way that allows greater generalizations to be made. Chomsky gave us this by the exclusion of passives from deep structure. Instead, passives were described as introduced via an optional rule of the form (Chomsky 1957:112):

STRUCTURAL ANALYSIS: NP-Aux-V-NP

STRUCTURAL CHANGE: X1-X2-X3-X4 →

X4-X2+be+en+X3-by+X1

Some argued, however, that active and passive should not be derived from the same deep structure, since the two are not synonymous. A particularly eloquent argument for the nonsynonymy of active and passive is presented in Ziff (1966).

In addition, it had by the time of Aspects (1965) become clear that all of Chomsky's 'optional' singulary transformations (e.g. passivization) had to be reformulated as obligatory, to be 'triggered' by the presence of a marker in the deep structure which was generated by the phrase structure rules for this purpose. Lees (1960), for example, had shown that this was necessarily so for the negation transformation. Katz and Postal (1964) outlined the more general principle that, in Chomsky's words (1965:132), 'the only contribution of transformations to semantic interpretation is that they interrelate Phrase-markers'. For an extended discussion, see Chomsky (1965:132 ff.).

This is the point at which it was decided that transformations should not alter meaning.<sup>1</sup>

But, since passive sentences were to obligatorily result from the presence of a passive 'trigger' generated by the phrase structure component, they were differentiated from active sentences at a deep structure level. The new passive transformation was thus to be 'meaning-preserving' and would not conflict with Katz and Postal's above-mentioned principle.

Chomsky (1965) discussed Katz and Postal's principle specifically in regard to passive (see Chapter 2 of Aspects). Actually, it was Hockett (1961) who had first suggested that passivization depend on a 'trigger' in the deep structure. Hockett's suggestion preceded the proposal of the Katz-Postal Hypothesis. Chomsky, therefore, repeated Hockett's suggestion merely in a footnote, saying that Hockett gave 'no supporting argument' and that the suggestion was 'no more than a notational innovation' (1965:223).

It having been established by transformationalists that there should be a passive 'trigger' generated by the phrase structure component, the next question was, 'where in the deep structure should the passive "trigger" be specified?'

Lees (1960:8), as noted by Chomsky (1965:103), observed that verbs which do not take manner adverbials freely also 'do not undergo the passive transformation'. Chomsky compared verbs like **resemble**, **cost**, **marry**, and **weigh**. Sentences with the former two do not have passive counterparts. See (1.23) and (1.24). The latter two verbs (**marry** and **weigh**) have no passive counterparts when used in structures which do not allow manner adverbials freely, e.g. (1.25) and (1.26), but can 'undergo passivization' when used in structures that freely take manner adverbials, e.g. **hastily** and **carefully** in (1.27) and (1.28).

- (1.23) (a) John resembles Alan.  
(b) \*Alan is resembled by John.
- (1.24) (a) This book costs ten dollars.  
(b) \*Ten dollars is cost by this book.

- (1.25) (a) John married Mary.  
(b) \*Mary was married by John.
- (1.26) (a) This car weighs two tons.  
(b) \*Two tons is weighed by this car.
- (1.27) (a) The preacher married John and Mary hastily.  
(b) John and Mary were married hastily (by the preacher).
- (1.28) (a) John weighed the letter carefully.  
(b) The letter was carefully weighed (by John).

Chomsky deduced from this data that since the ability of a verb to undergo passivization depended on the verb's ability to freely take manner adverbials, the phrase structure component should enforce this cooccurrence restriction. His suggestion (1965:103-104) was to write the phrase structure rule for manner adverbials so as to include the dummy element **passive** (1.29). The passive transformation was to obligatorily apply when the structural description (1.30) was met.<sup>2</sup>

(1.29) Manner → by passive

(1.30) NP-Aux-V-...-NP-...-by passive-...

The placement of the **by passive** dummy element in the manner adverbial was also intended to account for so-called 'pseudopassives' such as (1.31).

(1.31) The boat was decided on by John.

The location of the NP to become the surface subject after passivization was to the left of the **by passive** 'trigger'. This was a critical feature of the structural description. By a slight modification

of the passivization rule, this NP was permitted to be contained inside a prepositional phrase, in turn permitting the generation of such 'pseudopassives'. However, the structural description and the rule had to exclude the possibility of the application of passivization to NP's in certain other types of prepositional phrases. Sentence (1.31) is an acceptable passive counterpart to (1.32) if the latter is a paraphrase of (1.33)(a), but not if it is a paraphrase of (1.33)(b).

(1.32) John decided on the boat.

(1.33) (a) John chose the boat.

(b) John decided while on the boat.

Chomsky's phrase structure rules placed a 'prepositional phrase' like **on the boat** in (1.32)--paraphrasable as (1.33)(a)--before the manner adverbial. This kind of 'prepositional phrase' was involved with verb subcategorization rules, he argued, and should be placed separately from prepositional phrases which were not. See (1.36).

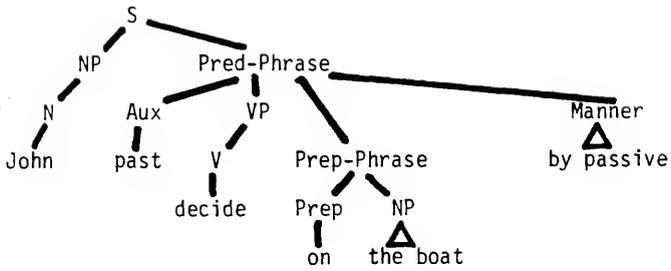
(1.34)  $S \rightarrow NP \wedge \text{Predicate-Phrase}$

(1.35)  $\text{Predicate-Phrase} \rightarrow \text{Aux} \wedge VP \text{ (Place) (Time)}$

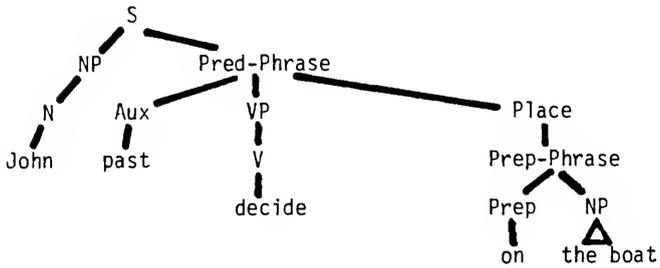
(1.36)

$$VP \rightarrow \left\{ \begin{array}{l} \text{be Predicate} \\ V \left\{ \begin{array}{l} (NP) (Prep-Phrase) (Prep-Phrase) \wedge \\ \text{(Manner)} \\ \text{Adj} \\ S' \\ \text{(Like) Predicate-Nominal} \end{array} \right\} \end{array} \right\}$$

(1.37)



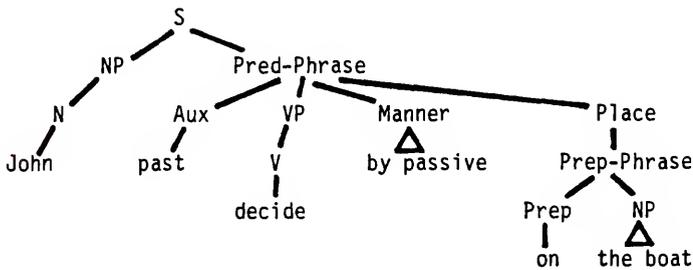
(1.38)



Thus, those 'prepositional phrases' involved in verb subcategorization fell to the left of the passive 'trigger' and were thus contained in NP's able to undergo the passivization rule. Those prepositional phrases not involved in verb subcategorization would fall to the right of the 'trigger' and were not able to undergo passivization.

Tree diagram (1.37)--previous page--shows the deep structure of the passive sentence (1.31), according to the Aspects formalization. The deep structure of the active (1.32) with paraphrase (1.33)(b) is shown in (1.38). As (1.39) shows, the passive counterpart to (1.38) cannot occur because its phrase structure tree is both ill-formed<sup>3</sup> and does not provide the environment for the passive transformation to apply.

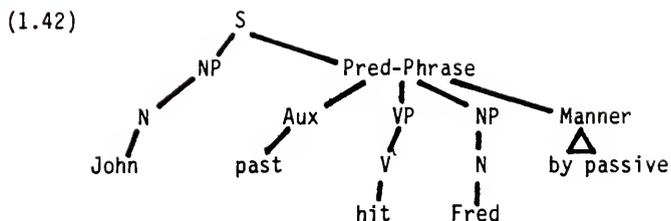
(1.39) \*ill-formed



The Aspects formalization of other passives (as opposed to 'pseudo-passives') was very similar, e.g. (1.40) and (1.42). The deep structure for the active counterpart (1.41) would simply be given as lacking the **by passive** 'trigger' in the manner adverbial.

(1.40) Fred was hit by John.

(1.41) John hit Fred.



'Truncated' (or 'agentless') passives, in the same 1965 formalization, included a transformation to delete the 'logical subject' (1965:70).

The recoverability principle (see above at footnote #1 to this chapter) required that no deletion occur in such a way that the deleted element not be 'recoverable'. In order to guarantee recoverability, Chomsky decided that

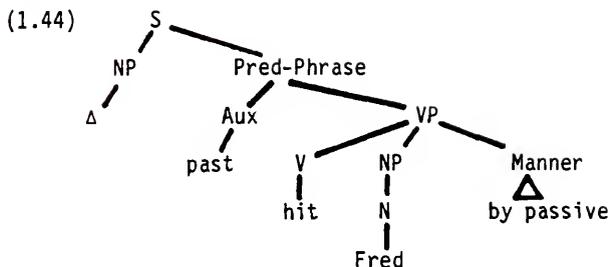
a deletion operation can eliminate only a dummy element, or a formative explicitly mentioned in the structure index... or the designated representative of a category. (1965:144)

In the case of passive sentences such as those under consideration, a recoverable deletion could apply only to a dummy element.<sup>4</sup> As Chomsky explained,

the use of the dummy symbol  $\Delta$  has been extended here to the case of various unspecified elements that will be deleted by obligatory transformations. (1965:222)

An agentless passive like (1.43) would--in the Aspects formalization--be derived from the deep structure (1.44). Both the passive and deletion transformations would obligatorily apply.

(1.43) Fred was hit.



This formalization more or less accounts for the base data. But, whether it is more adequate and simpler than Bloomfield's account remains moot.

#### Notes

<sup>1</sup>This, of course, implies the recoverability condition (Chomsky 1965, Chapter 3, especially 132, 137-138, 144-147, and footnote #3 on page 222; Chapter 4, section 2.2), which will be of special interest later on, relative to the discussion of agentless passives.

<sup>2</sup>As Chomsky states, the leftmost elipsis cannot contain an NP.

<sup>3</sup>Sentence (1.38) is ill-formed because the verb subcategorization rules Chomsky mentions would block the verb **decide** from taking Manner unless it also had a Prep-Phrase under the VP.

<sup>4</sup>The dummy element  $\Delta$  was to be introduced by rule, in the categorical component, a simple phrase structure grammar 'with all the lexical items mapped into the single symbol  $\Delta$ ' (1955:222). See Chomsky (1965:esp. 222 ff.) for an extended discussion of the dummy element and its relevance to deletion transformations.

CHAPTER 2  
FORMALIZATIONS IN THE WAKE OF ASPECTS

In this chapter, the various suggestions relevant to the formalization of the active-passive relationship which were made after the appearance of Chomsky's Aspects of the Theory of Syntax and prior to the emergence of the extended standard theory are summarized. Only those writings within the 'mainstream' of transformational generative grammar will be considered; other relevant work will be discussed in subsequent chapters.

Hasegawa (1968) questioned the identification of the **by** passive 'trigger' as a manner adverbial.

He argued initially that this aspect of the formalization required further study, 'since there may be passive forms of verbs which usually do not co-occur with manner adverbials, and the notion of "manner adverbial" is itself not very clear' (p. 230). However, he did not pursue this line of argument.

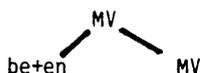
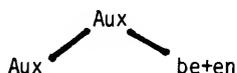
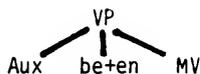
Hasegawa left the passive trigger in the manner adverbial, though for reasons which are not clear, introduced notational changes.<sup>1</sup> Rules (2.1) and (2.2), from the categorical component of a transformational grammar, were given to describe the manner adverbial (1968:237).

(2.1) Man → (Manner) (Ag)

(2.2) Ag →  $\left\{ \begin{array}{l} \text{of} \\ \text{by} \end{array} \right\}$  D

The bulk of Hasegawa (1968) was devoted to the consideration of two points of apparent inadequacy in the passive formalization of Katz and Postal (1964) and Chomsky (1965). First, Hasegawa (p. 321) argued that 'the status of the adjoined passive formative **be+en**' in the underlying structure was 'not sufficiently clear'. Also, he pointed out (p. 232) that the earlier transformationalist formalizations did not include any attempt to generalize on the relationship between **be+en** and **get+en** (the latter being the **get** passive).

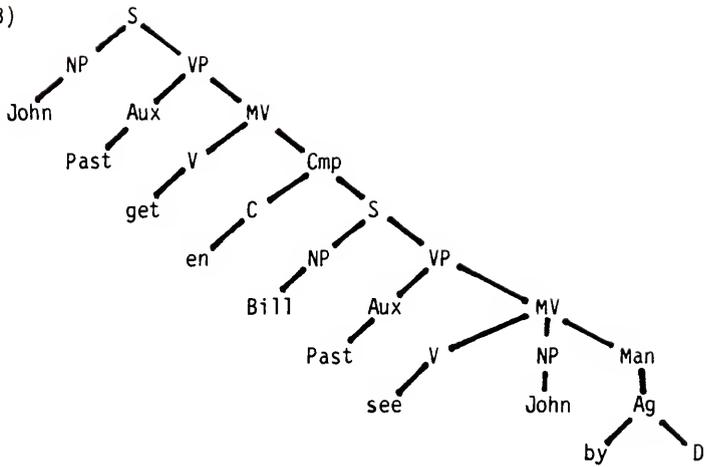
In reference to the lack of clarity in the status of **be+en** (and **get+en**) in the underlying structure, Hasegawa discussed three possibilities. The **be+en** (or **get+en**) might occur in the derived phrase structure under the VP, under Aux, or under MV ('main verb'). The three possibilities (p. 231) are illustrated in (2.3), (2.4), and (2.5).



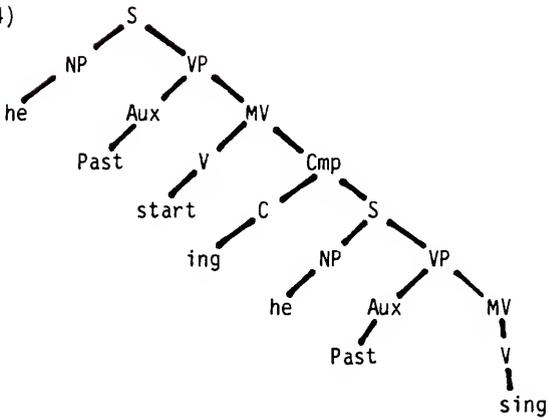
For reasons sketched out near the beginning of this article (pp. 230-232), Hasegawa rejected the first two of these.<sup>2</sup>

Taken together with (2.1) and (2.2), this fragment of the categorical component proposed by Hasegawa formalized his view of

(2.13)



(2.14)



the status of **be+en** and **get+en** as part of MV:<sup>3</sup>

(2.6) S → NP + VP

(2.7) VP → Aux + MV

(2.8) MV → { be + C # S #  
MV<sub>1</sub> (Loc) (Time) }

(2.9) MV<sub>1</sub> → { be + Pred  
V (Particle) (NP) (Cmp) (Man) }

(2.10) Cmp → { C # S #  
(Prep Phr) (Prep Phr) }

He first suggested **be+en** and **get+en** as V's which could take sentential complements, e.g. in a structure V#S#.

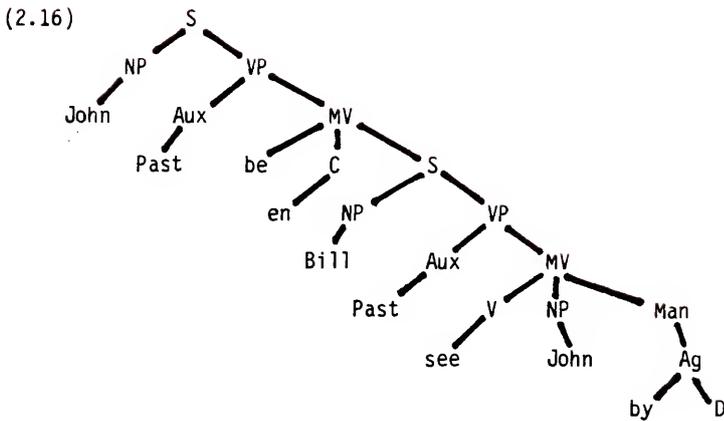
Tree diagram (2.13)--facing page--shows the deep structure of (2.11), as given by Hasegawa (p. 235). This structure for the **get** passive is analogous to that for those verbs taking sentential complements in general; see (2.14)--also facing page--for an example of a verb (**start**) which takes an **ing** complement.

(2.11) John got seen by Bill.

(2.12) He started singing.

Hasegawa was forced to formalize the **be** passive in a somewhat different way, 'since **be** does not behave as a member of V in a number of well-known transformations' (p.236). The passive **be** appears in rule (2.8), above. In accordance with the above phrase structure rules, the tree for a **be** passive counterpart to (2.11), i.e. (2.15), would be as in (2.16)--on the following page.

(2.15) John was seen by Bill.



This brings us back to Hasegawa's second criticism of the Katz-Postal-Chomsky formalization. Katz and Postal (1964) and Chomsky (1965), he observed, had not generalized the **be** and **get** passives as one 'process'. Although Hasegawa had one set of transformations for both,<sup>4</sup> the deep structures were given as quite different. Thus, Hasegawa's formalization was at least partially subject to the same criticism he applied to that of Katz and Postal, and, Chomsky.

There are other criticisms which could be levied against the Hasegawa formalization.<sup>5</sup>

There was necessarily a redundant specification of tense (via Aux) in the matrix sentence and in the embedded sentence.

There was also a redundant occurrence of the patient noun phrase in each.<sup>6</sup>

Unlike the Katz-Postal-Chomsky formalization, in which **be+en** was introduced via rule, Hasegawa's formalization required redundant specification in the deep structure of **be+en** (or **get+en**) as well as **by D**.

Hasegawa also sought greater generalization in identifying **be** and **get** with verbs taking sentential complements. But, **be** and **get** would be the only English verbs taking **en** complements. Further, the form of complementation for each of these two verbs would be different. This hardly seems the path toward greater generalization.

When all of these factors are taken into account, Hasegawa's identification of **be** and **get** with verbs taking sentential complements seems poorly motivated. This is especially so in light of the fact that the earlier formalization of Katz and Postal (1964) and Chomsky (1965) was not subject to any of these latter criticisms.<sup>7</sup>

Kac (1969:146), also in opposition to Chomsky (1965) and Katz and Postal (1964), suggested

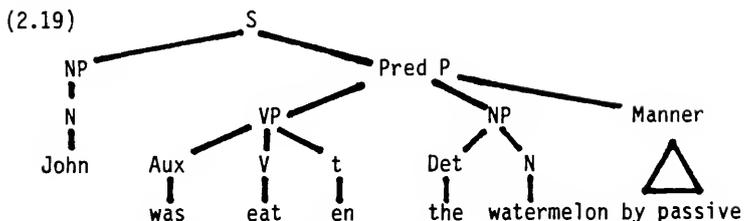
that a somewhat reactionary view of transformations be taken coupled with a drastic re-evaluation of the role of constituent structure in generative grammars.

Specifically, he proposed that transformations 'become uniformly optional and allow for the full range of operations (i.e. adjunction, permutation, etc.)'.<sup>8</sup>

His arguments were based on a misunderstanding of Chomsky's revised treatment of the passive transformation. Kac apparently thought that Chomsky intended an active-passive pair like (2.17) and (2.18) to be derived from the same source, i.e. (2.19)--see following page.

(2.17) John ate the watermelon.

(2.18) The watermelon was eaten by John.



However, Chomsky (1965:132) stated that

many of the optional singular transformation of Chomsky (1955, 1957, 1962) must be reformulated as obligatory transformations, whose applicability to a string is determined by the presence or absence of a certain marker in the string.

(The emphasis in the quotation is mine.) Chomsky's intention was that the deep structure of a passive would contain the passive trigger; in the active counterpart, the passive trigger would be absent. See (1.40) - (1.42), above.

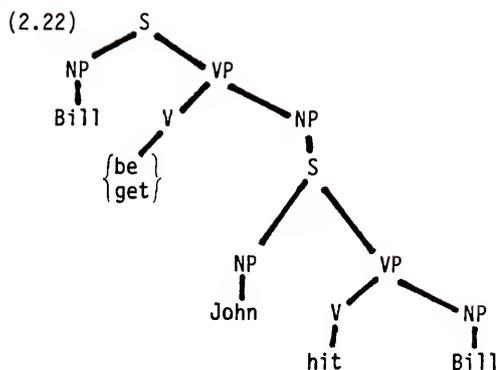
The article by Kac (1969) is thus a non sequitur.

R. Lakoff (1971), in 'Passive Resistance', reviewed Hasegawa (1968) and dealt with many of the same concerns.

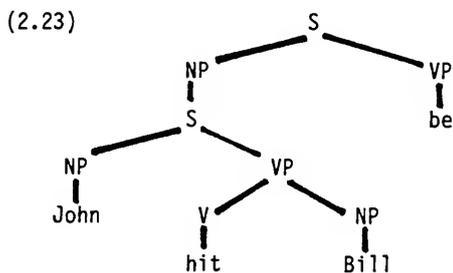
She argued against Hasegawa's analysis, primarily on the basis that he treated **be** and **get** passives in approximately the same way. That is, the deep structures he suggested for (2.20) and (2.21) would be essentially as in (2.22).

(2.20) Bill was hit by John.

(2.21) Bill got hit by John.



She pointed out the nonequivalence of **be** and **get** passives. In general, the **get** passive, she said (1971:160), 'often suggests the active involvement, emotional or otherwise, of the superficial subject; the **be** passive, on the other hand, does not'. Based on the differences she observed, Lakoff suggested that although Hasegawa's treatment was a 'good candidate' for the deep structure of the **get** passive, the G. Lakoff-Ross-Postal formulation was a better one for **be** passives.<sup>9</sup> Thus, a **get** passive sentence like (2.21) would have the deep structure (2.22). But, according to the Lakoff-Ross-Postal formulation, the **be** passive (2.20) would have the deep structure (2.23).



Chu (1973) examined the passive in Chinese and English. He made this interesting observation (p. 444) about the **be** and **get** passives: the imperative **be** passive is ungrammatical, while the imperative **get** passive is at least sometimes grammatical. Compare (2.24) - (2.27).

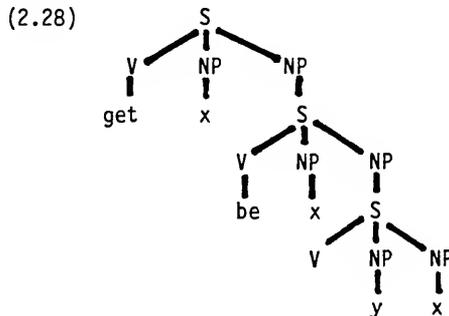
(2.24) \*Be arrested by the police.

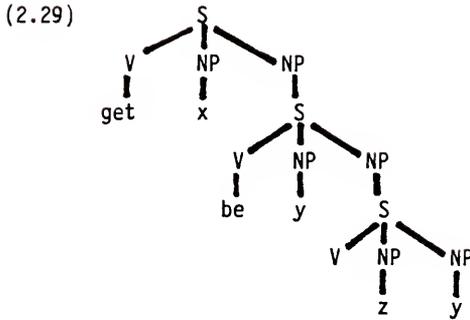
(2.25) \*Don't be arrested by the police.

(2.26) ?Get arrested by the police.<sup>10</sup>

(2.27) Don't get arrested by the police.

Largely based on this evidence, and on data presented in Lakoff (1971), Chu tentatively proposed that the **get** passive 'is actually a higher verb over the passive sentence' (1973-467). For the **get** passive he suggested a deep structure like (2.28). The inchoative **get**, he proposed, differed only in structure (i.e., not lexically), and might be as in (2.29).<sup>11</sup>





In Syntactic Theory, Bach (1974) summarized the 'state-of-the-art' in the transformationalist formalization of the active-passive relationship. He gave several reasons why passive structures must be derived, and not generated by the phrase structure component of the grammar.

The first was the well-known argument involving the interaction of passive and equi (p. 158).

The second reason (also p. 158) involved dative movement. The absence of a passivization rule would greatly complicate the lexicon to account for the ability of ditransitive verbs such as **give** to appear in the passive with an object, e.g. (2.30). Further complications would result if the grammar were to include sentences like (2.30) but exclude sentences like (2.31)--impermissible in some dialects.

(2.30) Sally was given the book by John.

(2.31) The book was given Sally by John.

Third, Bach (p.160) cited Postal's (1971) Crossover Principle to explain the grammaticality of (2.32) and the ungrammaticality of (2.33).<sup>12</sup> 'If both actives and passives were present in the base, then we would need an entirely different explanation for the ungrammaticality of these examples'--such as (2.32) (Bach 1974:160). Also, Bach stated that the grammaticality of (2.32) and ungrammaticality of (2.33) established the directionality of the rule relating actives and passives, i.e. from active to passive.

(2.32) John shaved himself.

(2.33) \*John was shaved by himself.

Finally, Bach demonstrated why Hasewaga's formulation of the be passive with a higher verb 'runs into insuperable difficulties' (p. 161). He showed that it could not account for passives involving idioms composed of a verb and object noun of NP in cases where the object appeared only in highly restricted environments.<sup>13</sup> If the restrictions were to be handled by lexical insertion of the verb-object combination as a single item, then we could not account for the existence of passives like (2.34). If such restrictions were not to be handled by lexical insertion of this kind of idiom as a single unit, the separate entries would have to be marked in the lexicon to restrict them to the proper environments. Further, he considered sentences such as (2.35). As he pointed out, Hasegawa's 'suggested formulation of Passive would have to find some ad hoc

means of getting the subject **there** of this sentence into its position as an independent subject of a higher sentence. Notice that **there** is not even present in deep structure' (Bach, 1974:162).

(2.34) Tabs were kept on his movements by the FBI.

(2.35) There was believed to have been a fire in the outhouse.

It would seem that the best pre-extended standard theory formulation of **be** passives was along the lines of that in Chomsky's Aspects (1965). For reasons discussed above, the **get** passive should not involve a higher verb **get**; the best formulation of the **get** passive would appear to have been along the lines of a suggestion rejected by Hasegawa, i.e. that **get** be introduced via rule to replace the passive **be**. The best available formulation of the inchoative **get** followed Chu (1973)--if separated from the passive **get**. However, none of these descriptions is equally convincing with regard to all parts of the data. For more discussion, see Chapter 10, below.

#### Notes

<sup>1</sup>'Ag' represents an agentive **by** phrase; 'D' is the dummy element (Chomsky's ' $\Delta$ ', in Aspects); 'Man' is the new label for the manner adverbial containing 'Manner' and '(Ag)'.

<sup>2</sup>Akmajian (1977) offered independent evidence that **be+en** should not be included under **Aux**; see esp. pp. 435-436.

<sup>3</sup>Hasegawa (1968) also included this fragment from the lexicon:

get, be [+\_\_En#S#,...]  
begin, start [+\_\_[αC<sub>1</sub>] #S#,...]  
tend, try [+\_\_to#S#,...]  
quit, stop [+\_\_Ing#S#,...]  
En [+C,...]  
∅ [+C,...]  
to [+C,...]  
Ing [+C,...]

<sup>4</sup>Hasegawa's (1968) formulation actually divided the passive transformation into three parts,

T<sub>Ag</sub> -- 'replacement of the agentive dummy by the subject NP' (p. 239)

T<sub>VC</sub> -- 'substitution of C for Aux of the embedded sentence' (p. 140), where 'C' is **be** or **get**

T<sub>erase</sub> -- the subject of the embedded sentence is deleted (p. 241); T<sub>erase</sub> was to be generalized to an all-purpose equi-like rule

<sup>5</sup>See also Chomsky (1972a:42), footnote #28) for further criticisms.

<sup>6</sup>Consider all other verbs in English which occur in structures where equi 'obligatorily' applies, for example (i). In such cases, equi applies if the environment for the rule's application is present. If the environment is not present, it is still possible to have a well-formed structure, e.g. (ii). Compare this to a

(i) Ike wants to leave right away

(ii) Ike wants Ted to leave right away.

parallel situation that would present a problem in Hasegawa's analysis of passives, e.g. (iii) and (iv). Note that if the environment for equi does not exist, the resulting structure is ill-formed. In other words, unlike all other English verbs, the passive be would--in Hasegawa's formulation--require a deep structure subject to equi.

(iii) Ira was hit by Tom.

(iv) \*Ira was Bob hit by Tom.

<sup>7</sup>Further, inclusion of get passives under the Katz-Postal-Chomsky formulation would not necessarily be so 'expensive' as Hasegawa (1968) suggested (p.232).

<sup>8</sup>This is obviously in direct conflict with the Katz-Postal Hypothesis. See below.

<sup>9</sup>R. Lakoff's (1971) observations generally seem to be valid. However, the deep structures she proposed did not represent the only, nor necessarily the best, possible formulations consistent with the data. See below.

<sup>10</sup>Although Chu (1973:444) marked (2.26) ungrammatical in isolation, I find it marginal, at worst. It seems perfectly grammatical in the appropriate context. Consider:

SECRET AGENT: OK, boss, what should I do now?  
CHIEF: We've got to find out about police corruption in Homersville.  
SECRET AGENT: Right.  
CHIEF: Here's what you need to do. Go to Homersville tomorrow morning. Get arrested by the police. I don't care how you do it, but get a look at the inside of that jail.

or,

FATHER: Listen, son, I've been trying to explain...  
Do you want a criminal record?  
SON: But, look Dad, everybody smokes dope.  
FATHER: All right, I don't care! Get arrested by the police.

A sentence like (2.25) is usually 'a strange thing to say' (I quote a native speaker informant). This, I think is very likely to be influencing judgements of grammaticality of such sentences.

<sup>11</sup>It should be noted that an English deep structure of VSO was assumed by Chu (1973). He also used a modified version of Hasegawa's treatment of the be passive, with be as a higher verb.

Chu's suggestion that the passive **get** and the inchoative **get** do not differ lexically does not seem to work. Consider, for one thing, the ungrammaticality of (i) as opposed to the grammaticality of (ii). Chu's original suggestion requires that the derivation of (ii) be from a structure like (2.88) and that it include the application of equi-NP deletion. If equi does not apply, then we get (i). How can we block the generation of (i)? We could insist

- (i) \*The window got itself broken.
- (ii) The window got broken.
- (iii) John got himself punched in the nose.
- (iv) John got punched in the nose.

that equi be obligatory. But, then we cannot explain the grammaticality of both (iii) and (iv). Sentences (iii) and (iv) seem to require that equi be optional. But, consider (v) and (vi), which, along with (i) and (ii), show that it is not. By this reductio ad absurdum proof, we see that the passive **get** and the inchoative **get** must exhibit a greater difference than that described by Chu in 1974.

- (v) \*John wanted himself to go fishing.
- (vi) John wanted to go fishing.

Consider (vii) and (viii). These two sentences illustrate a lexical difference between the two verbs **get**, above.

- (vii) \*John got himself punched in the nose, but it wasn't his fault.
- (viii) John got punched in the nose, but it wasn't his fault.

<sup>12</sup>Sentence (2.33) was given by Bach (1974) as having unmarked stress, since only sentences with unmarked stress are subject to the Cross-over restriction.

<sup>13</sup>Bach (1974:161) gave as examples **keep tabs on**, **make headway**, and **take umbrage**.

CHAPTER 3  
THE 'EXTENDED STANDARD THEORY'  
(EST) FORMALIZATION

Three problems prominently involving the description of the active-passive relationship have contributed to major revisions in the 'standard theory' (the phrase with which Chomsky has referred to his Aspects model). First, Chomsky (1972b, c) concluded that the standard theory required revision with regard to the level at which rules of semantic interpretation might apply in a derivation. This problem area centrally involves consideration of the Katz-Postal Hypothesis. Second, closely following Hasegawa (1968), but primarily for different reasons, Chomsky (1972a) divided the passive transformation into two parts. This question--of a two-part passive rule--has since been tied to the attempt (in the 'extended standard theory') to simplify the types of rules in a transformational grammar. This, in turn, closely concerns the third problem area, i.e., the division of transformational rules into two types (as discussed by Emonds, 1970): 'root' and 'structure-preserving'.

The question of how the active-passive relationship is involved with rules of semantic interpretation, and further, with the Katz-Postal Hypothesis was considered in Chomsky (1972b) and (1972c). Sentences such as those in (3.1) were presented there.<sup>1</sup> The importance of this data to Chomsky lay in the fact that (1972b:104) 'the scope of negation will be determined by the position of **not** in

surface structure'. This is important because the standard theory stated that 'the grammatical relations that enter into semantic interpretation are those represented in deep structure' (1972b:102). Chomsky (1972b, c) presented active-passive data of this sort as 'cases in which semantic interpretation seems to relate more directly to surface structure than to deep structure' (1972b:88).<sup>2</sup> In earlier work cited by Chomsky, Jackendoff (1969) had discussed the role of surface structure in semantic interpretation. Jackendoff's arguments were not widely distributed until Chomsky's papers appeared (those which were reprinted by Mouton as Chomsky 1972b and 1972c); they were given in considerable detail, later, in Jackendoff (1972).

(3.1) Not many arrows hit the target.

?The target was hit by not many arrows.

Many arrows didn't hit the target.

The target was not hit by many arrows.

?Not many arrows didn't hit the target.

\*The target wasn't hit by not many arrows.

Chomsky (1972a:41) assumed an underlying structure for (sentential) passives as in Aspects, i.e. (3.2). However, in a major theoretical departure, he divided the passive rule into two steps: 'agent postposing' and 'NP preposing'.<sup>3</sup>

(3.2) NP-Aux-V-NP-by

The justification for this division was based on observations of 'passive-like' structures in complex noun phrases.

(3.3) the enemy's destruction of the city

(3.4) the enemy destroying the city

(3.5) the city's destruction by the enemy

First, Chomsky (1972a) established that structures like (3.3) could not be derived from 'parallel' structures like (3.4). A structure like (3.4), he argued, had as its deep structure an S, but (3.3) was underlyingly an NP. A sentence like (3.5) was taken to be 'only apparently the nominalization of a passive' (Chomsky 1972a:43).

The 'passive-like' paraphrase of (3.3)--(3.5)--could not involve the rule of passivization as presented in Aspects.<sup>4</sup> The structural description for the Aspects rule of passivization took as its domain the structure under an S-node. Since NP's like (3.3)--and thus (3.5)-- were underlying NP's, the earlier passivization rule could not apply to (3.3) to yield (3.5). This situation seemed to require that the relationship between (3.3) and (3.5) be totally different from that between (3.6) and (3.7).

(3.6) The enemy destroyed the city.

(3.7) The city was destroyed by the enemy.

The division of passivization into two components permitted a resolution of this problem.<sup>5</sup> The environments for agent postposing and NP preposing could be reformulated so that they could apply in the domain of S, or, within a complex NP.

Chomsky cited other motivation for separation of the rule into two parts. Within complex NP's, either agent postposing or NP preposing could apply independently.

Consider the underlying structure (3.8). With or without NP preposing, **destroy** will be realized phonologically as **destruction**. The preposition **of** will be inserted via 'a general rule applying to N-NP constructions' (Chomsky 1972a:41-42). Without NP preposing,

(3.8) would yield (3.9). If NP preposing applied, we would get (3.10).

(3.8) the - (destroy, +N) - the city

(3.9) the destruction of the city

(3.10) the city's destruction

Consider (3.11). Here, agent postposing can apply independently to yield (3.12).

(3.11) the enemy's - (destroy, +N) - the city - by

(3.12) the destruction of the city by the enemy

Note that to complete the generalization, NP preposing must be extended 'so that it can apply not only in cases given before, but also before agent phrases'. Only with this extension can both NP preposing and agent postposing occur together. See (3.13) - (3.15). Given this extension of NP preposing, Chomsky was able to use the same two rules in the formalization of the active-passive relationship, whether the domain was an S or a complex NP.<sup>6</sup>

(3.13) the enemy - (destroy, +N) - the city - by

(3.14) the destruction of the city by the enemy

(3.15) the city's destruction by the enemy

(3.16) the - John's - (offer, +N) - by

(3.17) the offer by John

The division of passivization into NP preposing and agent postposing had one other important theoretical consequence. Consider (3.16) and (3.17). According to Chomsky (1972a:42), 'of the two components of the passive transformation, only NP-preposing and not agent-postposing requires the presence of an object (more generally,

a noun phrase, as in the "pseudo-passives" **John was laughed at, ...approved of**, etc.) in the position following the verb'.<sup>7</sup>

The question of a two-part passive rule later became critical in the development of the S and X' convention. Jackendoff (1974) suggested an equivalence of S and V" in order to generalize notions such as 'subject of' and 'object of' to NP's. This generalization was intended to include rules of semantic interpretation, as well as selectional restrictions (p. 14).

Hornstein (1977), however, argued that this identification of S and V" was incorrect. As he pointed out, such a generalization of the projection rules 'would state, in effect... that the relation between an NP and its predicate in a sentence is the same as that between an NP head and its nominal phrase in an NP. Semantically, however, it is not clear that they are parallel' (Hornstein, 1977:141).

Hornstein argued for the elimination of NP postposing.<sup>8</sup> Citing examples such as (3.18), he showed that some instances of **by** NP could not be the result of NP postposing 'as there is no place that...' such NP's 'could have been moved from' (p. 144). In cases such as (3.18), then, the **by** phrase had to be generated in the deep structure. Hornstein also pointed out (see esp. p. 145) that NP postposing did not always apply in parallel fashion to structures of the form NP's N and within an S. See (3.19) - (3.21). Thus, Hornstein suggested, all **by** phrases in complex NP's could be generated in the deep structure. He proposed a deep structure for NP's as in (3.22).<sup>9</sup>

(3.18) John's photograph of Mary by Warhol

(3.19) (a) \*the sense of danger by John

- (b) Danger was sensed by John.
- (3.20) (a) \*the fear of Harry by John  
 (b) Harry was feared by John.
- (3.21) (a) \*the respect for Mary by John  
 (b) Mary is respected by John.
- (3.22)            NP        N (of) NP (by) NP  
                   +possession    +theme    +agent

In 'On ~~wh~~-movement', Chomsky (1977) still assumed a formulation following the Aspects model. He gave the deep structure for (3.23) as (3.24), using a notation that incorporated no significant departure from past practice. The passive transformation was the result of two applications of the rule Move NP.<sup>10</sup> Thus, (3.24) becomes (3.25), then (3.26).

- (3.23) Bill was killed by John.
- (3.24) (S(NP<sub>i</sub> John) (VPbe en kill (NP<sub>j</sub> Bill)by(NP<sub>k</sub> e)))
- (3.25) (S(NP<sub>i</sub> e) (VPbe en kill(NP<sub>j</sub> Bill)by(NP<sub>i</sub> John)))
- (3.26) (S(NP<sub>j</sub> Bill)(VPbe en kill(NP<sub>j</sub> e)by(NP<sub>i</sub> John)))

The agentless passive, e.g. (3.27), was similarly derived by one application of Move NP. The deep structure of (3.27), i.e. (3.28), results in (3.29).<sup>11</sup>

- (3.27) Bill was hit.
- (3.28) (S,(S(NP<sub>i</sub>e)(VPwas(AP<sub>i</sub>en(VP(Vhit)(NP<sub>i</sub>Bill))))))
- (3.29) (S,(S(NP<sub>i</sub>Bill)(VPwas(AP<sub>i</sub>en(VP<sub>i</sub>hit(NP<sub>i</sub>e))))))

Note that the rule (or rule sequence) which resulted in 'passivization' was at this point no longer viewed as obligatory. The **by** phrase no longer served as a passive 'trigger'.<sup>12</sup>

Both Jackendoff (1972) and Chomsky (1977) cited Emonds work on the notion of structure-preserving rules. As Jackendoff put it (1972:13),

it is no accident that the deep object of a passive sentence comes to occupy subject position rather than perhaps a position between the auxiliary and the main verb, where no noun phrase can be generated in the base. Likewise, it is no accident that the deep subject of a passive ends up in a prepositional phrase which is like all other prepositional phrases, rather than in some altogether new kind of constituent.

Chomsky gave an example (namely the derivation of (3.23), above) to demonstrate the notion of structure-preservedness as it applies to passive. In (3.24), we have the deep structure for (3.23). After NP postposing, (3.25) results. After NP preposing, the result is (3.26). Notice that an empty NP is not obliterated during the derivation, but is preserved as an indexed NP with null terminal.<sup>13</sup>

#### Notes

<sup>1</sup>In earlier work cited by Chomsky, Jackendoff (1969) had discussed the role of surface structure in semantic interpretation.

<sup>2</sup>Chomsky's own (English) counterexamples to the standard theory all involve 'the scope of logical elements' (1972b:106), i.e. negation and quantification.

<sup>3</sup>This is essentially an adaptation of Hasegawa (1968) to fit within the framework of the (extended) standard theory.

<sup>4</sup>Thus, while NP's like (3.4) were formulated as nominalizations of passive S's, NP's like (3.5) were formulated as 'passives of base-generated derived nominals' (Chomsky, 1972a:43).

<sup>5</sup>But introduced another. See Sullivan (1976:119).

<sup>6</sup>In Chomsky (1972a) the X' convention was introduced. See especially pp. 52 ff. In this article, Chomsky suggested that rules whose domain was S should also apply within the domain of N'.

<sup>7</sup>As Chomsky noted, Hasegawa's (1968) agent postposing transformation also lacked any requirement for the presence of an object. In the case of Hasegawa's formalization, the 'erase' transformation performed the necessary filtering function.

<sup>8</sup>There are two main problems with a preposing-only account. First, as Hornstein himself noted (p. 149), 'preposing from the of-NP slot is not always so good'. The same can be said for **on-NP**. Compare:

- (i) John was done a favor.  
the favor for John  
\*John's favor
- (ii) Poland was attacked.  
the attack on Poland  
\*Poland's attack

Similarly, locatives, which can supposedly be preposed in the domain of S to yield so-called 'pseudopassives', cannot be preposed in the domain of NP. Compare:

- (iii) The bridge was flown under.  
\*the bridge's flight under

Consider also the case of certain temporal expressions, in which the situation is reversed:

- (iv) \*Tuesday was observed the Moon.  
Tuesday's observation of the Moon

The second problem is one of an unnecessary complication of selectional restrictions. If all **by** phrases in NP's are base-generated, two choices result. We could accept non-parallel selectional restrictions on agent NP's in the domain of S vs. those in NP's with derived nominals (e.g. **destruction**). Or, we could attempt to derive the sentential active from an S with the agent N in a **by** phrase. Both alternatives carry serious consequences; see Chomsky (1957:42 ff.).

<sup>9</sup>Trace theory also entered the picture at this point. Consider Hornstein's remarks:

If... NP-Postposing were dropped and we adopted preposing rules exclusively, traces would never be left stranded and subsequently obliterated by spelling rules... also... spelling rules applied to traces could probably be dispensed with. (p. 146)

\* \* \*

Rightward NP movement rules and trace theory do not mix. (p. 147)

\* \* \*

It is interesting to note that a trace theory without spelling rules would predict that no rightward NP movement rules exist. (p. 147)

<sup>10</sup>Agent postposing and NP preposing are two specific examples of Move NP.

<sup>11</sup>In (3.29), (<sub>NP</sub>e) is the trace of Bill. See below.

<sup>12</sup>Chomsky and Lasnik (1977:431): 'The transformational rules of the core grammar are unordered and optional.... Adjacency of categories cannot be stipulated and no more than one element of the context in which the operation applies may be specified'.

Chomsky (1980:6): '...All aspects of obligatoriness of syntactic rules, contextual dependencies, and ordering fall in a natural way under local surface filters....'

<sup>13</sup>This is to satisfy the constraint on structure-preserving rules specified by Emonds that--in the words of Jackendoff (1972:13)--'with a certain class of exceptions... the output of a transformation must be a structure that can be independently produced by a base rule'. Or, as Chomsky and Lasnik (1977:432) stated, 'we assume that a movement rule always leaves a trace....'

CHAPTER 4  
'ALTERNATIVE' TRANSFORMATIONAL  
FORMALIZATIONS

This chapter deals with the formalization of the active-passive relationship in three 'alternative' transformational theoretical frameworks.

Case Grammar

First, this chapter will explore the formalization within the framework set forth by Fillmore in various articles from 1966 to 1971.

Fillmore presented his alternative transformationalist framework because he did 'not believe that "subject" or "object" are to be found among the syntactic functions to which semantic rules must be sensitive' (1966:21). To illustrate this point, he cited sentences such as the following:

- (4.1) The door opened.
- (4.2) The janitor opened the door.
- (4.3) The janitor opened the door with this key.
- (4.4) The key opened the door.
- (4.5) The door was opened with this key.
- (4.6) The door was opened by the janitor.

As he stated, 'the semantically relevant relation common to...' sentences (4.1) and (4.2) '...is that between the subject of the

intransitive verb (in (3.1)) and the object of the transitive verb (in (4.2)), not between the subjects of the two sentences' (p. 21).

To account for such data, Fillmore proposed a different base structure from that seen in Chomsky (1965). Rules (4.7) - (4.10) illustrate this.<sup>1</sup>

(4.7) S → Mod Aux Prop

(4.8) Prop → V (Erg) (Dat) (Loc) (Inst) (Ag)

(4.9) {Erg, Dat, Loc, ...} → NP

(4.10) NP → P (Det) (S) N

Two major features distinguished Fillmore's earliest version of the case grammar from an Aspects-like framework. Both concerned the treatment of the noun phrase. First, the noun phrase was to be dominated by a functional-category maker, i.e. 'Erg', 'Dat', 'Loc', 'Inst', or 'Ag'. Second, the underlying representation of every noun phrase contained a preposition ('P' in rule (4.10), above). The preposition provided the realization of the underlying function of the NP (e.g. **by** for Ag, **with** for Inst or Erg). Preposition-deletion rules applied in certain cases, based on syntactic environments--to most direct objects, and to all subjects; see (4.11) and (4.12).

(4.11)  bees swarm in the garden  
Erg Loc

(4.12)  the garden swarms with bees  
Loc Erg

As of Fillmore (1966), the rule proposed to relate active and passive was 'ergative fronting in transitive sentences' (p.30). This rule is given in (4.13), where the '2' in the SC is the 'Erg' in the SD.

(4.13) SD: Aux V-Erg-Y (Inst) (Ag)  
(X Be en)  
SC: 1-2-3 2-1-3

As Fillmore explained, this rule was not totally adequate. Two problems were primary. First, it did not handle 'dative-subject passives' (e.g. **Bob was sent the letter**). Also, it did not account for certain 'non-deletable prepositions' (as in **It was looked at**).

The primary advantage of Fillmore's framework over that of Chomsky's Aspects was that the former was seen to relate not only (4.14) and (4.15), but further, to relate (4.16) and (4.17) with them and with each other.

- (4.14) John broke the window (with a hammer).  
(4.15) The window was broken (by John) (with a hammer).  
(4.16) The window broke.  
(4.17) The hammer broke the window.

In 'The case for case' (1968), Fillmore further expanded and formalized his framework.

He distinguished 'case', 'the underlying syntactic-semantic relationship', and 'case form', 'the expression of a case relationship in a particular language' (Fillmore 1968:21).

He modified the base rules as well.<sup>2</sup> Rule (4.7), above, was replaced by (4.18), (4.8) by (4.19), (4.9) by (4.20), and (4.10) by (4.21). The 'case categories'  $C_1$  to  $C_n$  were to be selected from the set in (4.22).

- (4.18)  $S \rightarrow \text{Mod} + \text{Prop}$   
(4.19)  $\text{Prop} \rightarrow V + C_1 + \dots + C_n$   
(4.20)  $\{A, I, D, F, L, O\} \rightarrow K + \text{NP}$  ('K' for 'kasus')  
(4.21)  $\text{NP} \rightarrow (\text{Det}) (S) N$  (assumed)  
(4.22) Fillmore's (1968:24) cases:

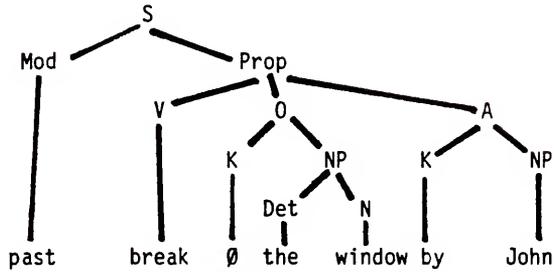
Agentive (A)  
Instrumental (I)  
Dative (D)  
Factitive (F)  
Locative (L)  
Objective (O)

The set of verbs possible in a given deep structure depended on the 'case frame' of the sentence, i.e. on the combination of cases present in the deep structure. For example, the verb **break** could occur in any of the frames [ \_\_\_\_\_ + O ], [ \_\_\_\_\_ + O + A ], [ \_\_\_\_\_ + O + I ], or [ \_\_\_\_\_ O + I + A ]: see (4.14) to (4.17), above.

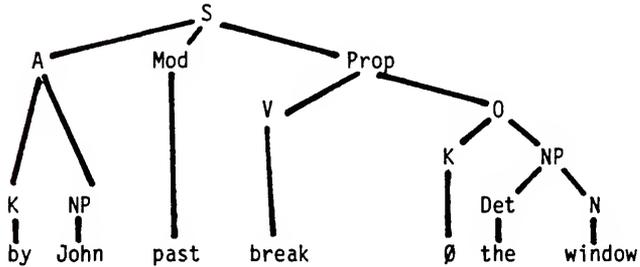
'Optional' elements were indicated by parentheses; thus, the 'case frame' for **break** could be given as [ \_\_\_\_\_ O (I) (A) ].

Trees (4.23) - (4.27) show the derivation of the active sentence (4.14) in the 'Case for case' framework.

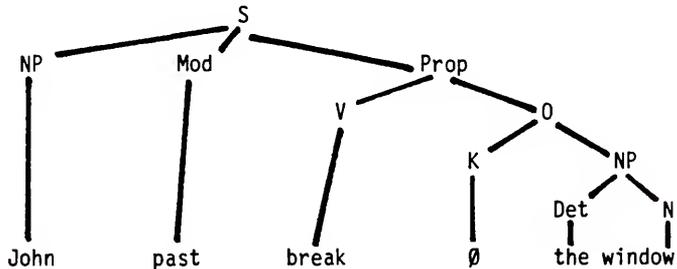
(4.23)



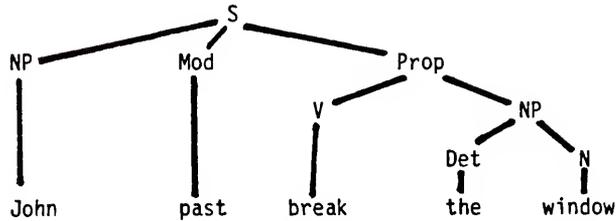
(4.24) by 'subject-fronting' from (4.23)



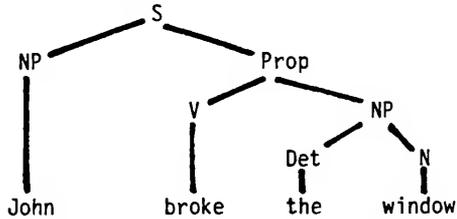
(4.25) by 'subject-preposition deletion' from (4.24)



(4.26) by 'object-preposition deletion' from (4.25)

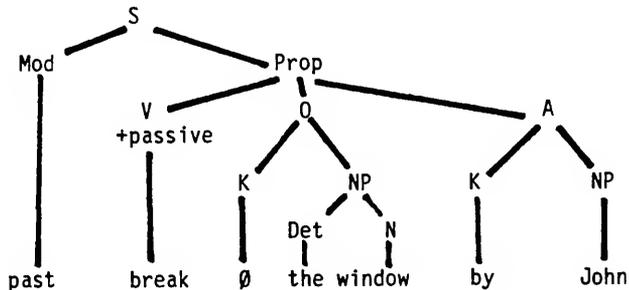


(4.27) the surface structure derived from (4.23)

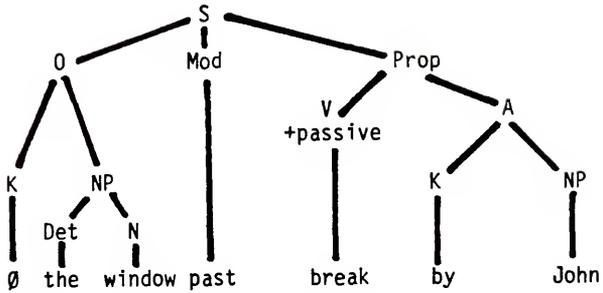


The passive construction (4.15) was accounted for 'via the association of the feature [+passive] with the V' (p.37). The feature [+passive], in Fillmore's framework, permitted O or D to be realized in subject position despite the presence of A,<sup>3</sup> provided the passive verb form, and blocked application of the object-preposition deletion rule. Trees (4.28) - (4.32) show the derivation of the passive (4.15) (without I).

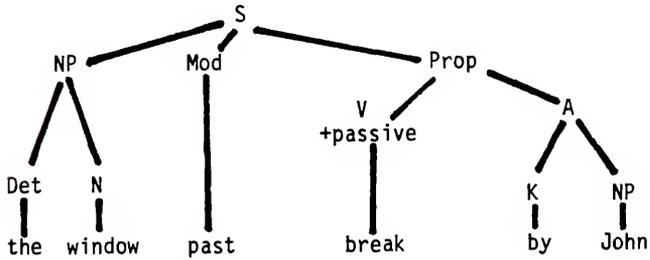
(4.28) c.f. the active (4.23)



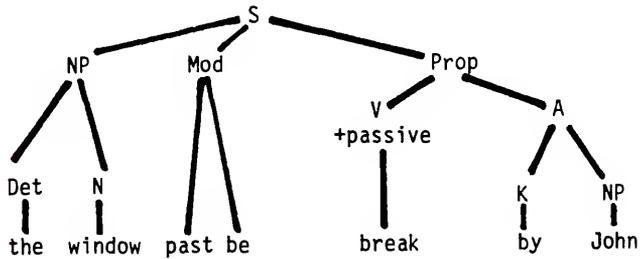
(4.29) via 'subject-fronting'



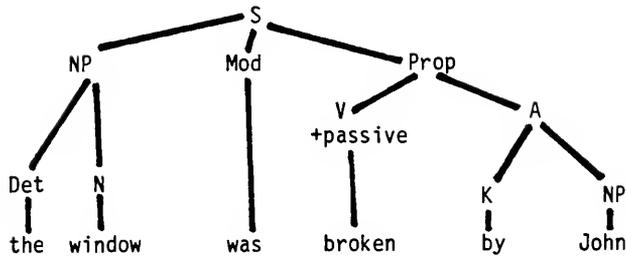
(4.30) via 'subject-preposition deletion'



(4.31) conditioned insertion of be



(4.32) conditioned morphological change



The above examples illustrate the basic aspects of the formalization of the active-passive relationship in Fillmore (1968). Passive sentences with D (dative) subjects were to be derived in a similar fashion (see Fillmore pp. 39-40, esp.)

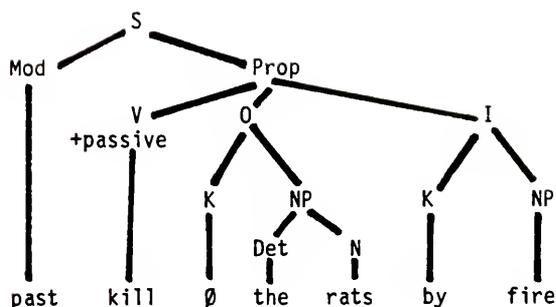
Sentences (4.33) and (4.34) represented a related problem that had to be dealt with.

(4.33) The rats were killed by fire (\*by the pest-control officer).

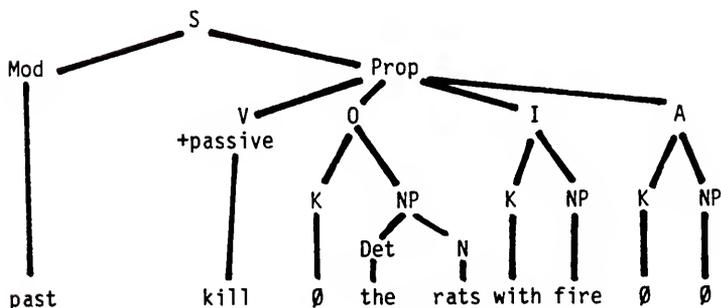
(4.34) The rats were killed with fire (by the pest-control officer).

Fillmore's solution, presented in 'Toward a modern theory of case' (actually a rewritten and expanded version of Fillmore (1966)), was to introduce the following lexical insertion rule: 'The Instrumental preposition is **by** if there is no Agentive present, otherwise it is **with**' (1969:374). The deep structure for (4.33) would be (4.35), that for (4.34), (4.36).

(4.35)



(4.36)



Thus, (4.33) and (4.34) were distinguished on the following basis. Sentence (4.33) marked the I with **by** because there was no A in the deep structure (4.35). However, (4.34) contained a dummy NP under A in the deep structure; this dummy element was deleted after it conditioned the choice of insertion of **by** or **with**.<sup>4</sup>

By Fillmore (1977:65), the 'initial association of the preposition **by** with the agent case had to yield in favor of a more complicated principle associating **by** with the highest-ranking case in the sentence'. This was necessary in order to account for

such varied types of **by** phrases as in **eaten by George, destroyed by fire, assumed by everybody**--containing, respectively agent, instrument, and experiencer<sup>5</sup> noun phrases. Fillmore himself pointed out (1977:65) that

in the end... such provisions did not look any better than an account according to which the preposition **by** gets introduced by means of a Passive transformation.

### Relational Grammar

In 'relational grammar' (or 'RG') a new transformationalist school arose which took 'subject', 'object', 'verb', etc. as the grammatical categories relevant to the formalization of grammatical rules. Advocates of relational grammar have asserted that such grammatical categories are linguistic universals, and that the most universal formulations of syntactic rules will take these categories as their arguments.

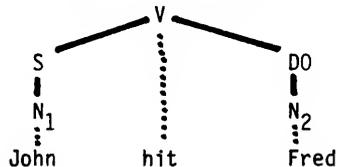
Johnson (1975) was probably the earliest work in relational grammar which was widely read.<sup>6</sup>

In Johnson's framework, both the active (4.37) and its passive counterpart (4.38) had the same underlying representation,<sup>7</sup> i.e. (4.39).

(4.37) John hit Fred.

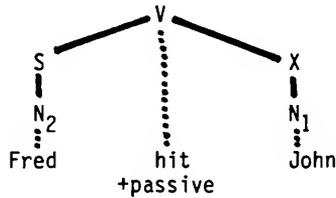
(4.38) Fred was hit by John.

(4.39)



In (4.39) 'S' represents the relation 'subject', 'V' the relation 'verb', and 'DO' the relation 'direct object'. The passive (4.38) was to have the 'derived relational network' (4.40). The underlying DO was 'promoted' to S. 'X' represents the grammatical relation of an item 'demoted' from S.<sup>8</sup>

(4.40)



In (4.40), the feature [+passive] is not to be confused with Fillmore's lexical feature [+passive]. Johnson's feature [+passive] was introduced by rule to a derived relational network. As such, it constituted 'an ad hoc device to distinguish active and passive verbs' (1975:33).

The passive rule was given by Johnson (1975:34) as (4.41). 'RD' is the 'relational description' which is the input to the rule; 'RC', the relational change', describes the output from the rule. The lower-case 'x' and 'z' are variables over 'relational subnetworks'.

(4.41)

<u>RD</u>	<u>RC</u>
S(x,V <sub>i</sub> )	X(x,V <sub>i</sub> )
DO(z,V <sub>i</sub> )	S(z,V <sub>i</sub> )

The basic form of rule (4.41) was taken to be universal. However, Johnson recognized that the passive rule would have to possess language-specific features. For example, the English passive rule 'must specify that the passive verb form is BE + V + past participle and that the ex-subject is marked with the preposition **by**' (p. 47).

The above rule (4.41) had two parts. The first was the 'demonstration' of the subject to the 'X' relation. This corresponded --in English--to agent postposing at the sentential level, half of the process of passivization in the EST framework. The second part of the rule corresponded--again, with regard to English, at least--to sentence-level NP preposing in EST.

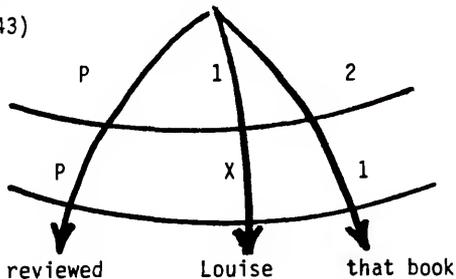
Keenan (1975) demonstrated clearly that any universal formalization of the active-passive relationship could not be defined in purely structural terms, i.e. 'in terms of the changes induced in the dominance and linear ordering relations of P-markers' (p. 340).<sup>9</sup> He used such arguments to support a 'relational' definition of passivization, one defined 'in terms of the changes it induces in the grammatical relations... which NP's bear to their verbs' (also p 340).

Perlmutter and Postal (1977) presented many of the same arguments against a structural approach to the description of the active-passive relationship. Like Keenan, they proposed an approach based on the use of notions such as 'subject', 'direct object', and so on. They introduced the notion of 'strata' in a relational grammar.<sup>10</sup> For example, consider the passive sentence (4.42). According to Perlmutter and Postal's notion of 'strata', the relations of the

NP's **that book** and **Louise** change from one 'stratum' to another as shown in Fig. (4.43). At one 'stratum', **Louise** has 'relation 1' (subject) and **that book** has 'relation 2' (direct object). At the second 'stratum' **that book** has 'relation 1' and **Louise** has the 'X relation' (chomeur).<sup>11</sup>

(4.42) That book was reviewed by Louise.

(4.43)



Those working in relational grammar have generally accepted this type of formalization of the active-passive relationship.

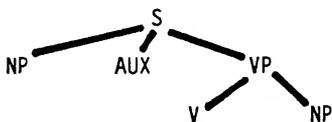
Consideration of the relevance of the 'Noun Phrase Accessibility Hierarchy' to the RG formalization of the active-passive relationship is beyond the scope of the present study. For some discussion of this matter, see Keenan and Comrie (1977, 1979), and Comrie and Keenan (1979).

Lexicalist Theory

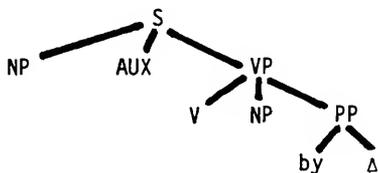
A major divergence from Aspects--though still within a generative framework--was proposed by Freidin (1973).<sup>12</sup> He stated (1973:1) that the general acceptance of the derivation of passives via a transformational rule was 'based on the assumption that the active-passive relation is structural in nature and is therefore best handled by a transformation'. Freidin claimed that this assumption was erroneous and that it entailed basic problems for the theory.

One criticism he levelled against the 'standard theory' involved the assumed synonymy of active and passive counterparts. If synonymy is assumed, he argued, then (4.44) (a) and (b) must be synonymous. This is a problem, since 'such a claim might lead us to wonder how a manner adverb--in this instance **by**  $\Delta$ --could be semantically empty' (p.2). However, in light of ample data against the exact synonymy of actives and passives (even excluding cases involving quantification, negation, etc.), this argument seems to be a non sequitur.

(4.44) (a)



(b)



Another argument by Freidin against the Chomskyan (in this case Aspects) formalization of the active-passive relationship was equally irrelevant. This argument concerned the recoverability condition imposed by the acceptance of the Katz-Postal Hypothesis. Freidin claimed that a sentence like (4.45) should be assigned two possible readings by the standard theory model, if it involved deletion either of *by someone* or *by something*. But (4.45), he pointed out, is not so clearly ambiguous. Further, such an analysis violated the recoverability condition. Aspects, however, did not contain any proposal for such an analysis; rather, in it Chomsky suggested something like (4.44) (b).

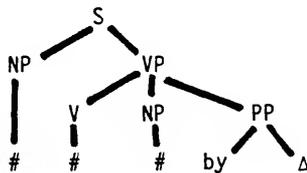
(4.45) Bill was hit on the nose yesterday.

Freidin (pp. 6-8) did also present arguments against the empty-node analysis of (4.44) (b).

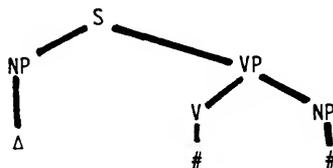
In the first place, he asserted, such an analysis postulated 'two distinct underlying structures for passives' (p. 6), i.e.

(4.46) (a) and (b). (The '#' represents some lexical item.)

(4.46) (a)

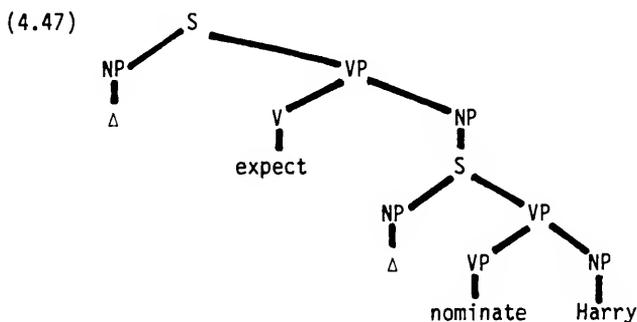


(b)



While this may form the basis for a theoretical objection, of prime consideration should be the question of whether both underlying structures are empirically motivated. It is argued in Chapter 6, below, that two (such) sources are required for English passives.

Freidin's second objection to the formulation (4.46) (b) also involved a fallacy. He argued that two applications of NP preposing on (4.47) would yield either (4.48) (a) or (b). But, if NP preposing into an empty NP node resulted in passivization, then (4.48) (a) could not result from (4.47). Thus, Freidin's apparent 'counter-example' was not one, unless it were required that all deletion rules operate on the empty node.<sup>13</sup>



(4.48) (a) Harry expects to be nominated.

(b) Harry is expected to be nominated.

Freidin did point out some very real problems with the description of the active-passive relation in (purely) structural terms. All of these problems resulted from the assumption that the ability to passivize a sentence depended on some lexical

property of its main verb. This lexical property was either defined in terms of strict subcategorization features (as in Aspects) or in terms of a rule feature [-passive].

The strict subcategorization approach involved the assignment of **by passive** to the manner adverb slot by the base rules. As Freidin observed, some very serious problems had surfaced with regard to the description of cooccurrence restrictions on verbs, manner adverbs, and **by passive** in the standard theory. Certainly, the problems were serious enough to make the standard theory formalization suspect.

In the rule feature approach, unpassivizable verbs which permitted a following NP (i.e. those which satisfied the structural description for the application of the passive rule) were marked [-passive] in the lexicon. The feature [-passive] blocked application of the passive transformation. This 'solution', as Freidin noted, was an ad hoc one, since it 'is no more revealing than a list of verbs which are exceptions to the passive rule' (p. 10).

Freidin thus came to the same conclusion as did those in relational grammar: 'structurally there is no motivation' for excluding sentence (4.49) (b) from undergoing passive (p. 10). (The emphasis in the quote is mine.) Therefore, 'it is not strictly true that transformations apply blindly to phrase-markers of the proper form' (also p. 10).<sup>14</sup> And (p. 11), 'there seems to be no non-ad hoc way for PASSIVE to filter out the ungrammatical strings' such as (4.49) (b).

- (4.49) (a) Max resembles Harry.  
(b) \*Harry is resembled by Max.

Freidin's lexicalist proposal described the active-passive relationship in the lexicon. The proposal consisted of two main parts.

According to Freidin's preliminary proposal, the lexical entry for *give* would resemble (4.50).

(4.50) /gIv/

+MOTIONAL: (involves the movement of a physical object (the obligatory NP in the strict subcategorization features below) to a particular location (the optional NP in the strict subcategorization feature for +V, or the NP in an optional PP where the preposition is locative)...) )

Item:: +V: [+\_\_\_\_ (NP) NP (PP)]; ...  
+N: /gIft/; [+Det \_\_\_\_ (PP) (PP)]; ...  
S<sub>nom</sub>: N = object Ved  
+A: M<sub>a</sub>; [+\_\_\_\_ NP ]; ...

This part of the proposal required the mirror-image cooccurrence restrictions for actives and passives argued against in Chomsky (1957). To avoid this problem, Freidin suggested a redundancy rule which would predict actives and their selectional restrictions from entries for passives given in the lexicon. The redundancy rule (p. 16) was stated as (4.51).

- (4.51)  $M_{\text{pass}}$  entails the existence of an active verb where (V-active  $NP_x$  \_\_\_\_\_  $NP_y$ ) if (V-passive  $NP_y$  \_\_\_\_\_  $NP_x$ ) and V-active and V-passive are semantically equivalent.<sup>15</sup>

Given this redundancy rule, it becomes unclear how examples such as /gIv/ are to be handled. Notice that there is a third NP with any such ditransitive verb,  $NP_z$ , the receiver of the object. The possible orderings are shown in (4.52). Further, note (4.52) (c). The problem of the existence of this second possible passive was left unresolved by Freidin.

- (4.52) (a) V-active:  $NP_x$  \_\_\_\_\_  $NP_y$  (prep +  $NP_z$ )  
(b) V-passive<sub>1</sub>:  $NP_y$  \_\_\_\_\_ (prep +  $NP_z$ ) (prep +  $NP_x$ )  
(c) V-passive<sub>2</sub>:  $NP_z$  \_\_\_\_\_  $NP_y$  (prep +  $NP_x$ )

The second part of the proposal suggested that passives should be analyzed as the main verb **be** plus a predicate adjective (the past participle). Given this part of Friedin's proposal, the question of where **be+en** was to be assigned (as part of Aux, MV, etc.--see the discussion of Hasegawa (1968), above) disappeared.

Where one problem disappeared, another reappeared (but was not observed by Freidin): the problem of mirror-image selectional restrictions. How could the listing of an adjective (if passive past participles were to be treated as such) in the lexicon imply--via any sort of redundancy rule--the existence of an active verb and its cooccurrence restrictions?<sup>16</sup>

Despite the problems with the statement of the redundancy rule for cooccurrence restrictions, this lexicalist proposal attempted to capture the following generalization in formal terms:

NP's perform the same semantic functions even though the form of the predicate has changed from active to passive and the syntactic positions of the NP's have been reordered. (Freidin, 1973:12)

Freidin's proposal attempted to capture this generalization in the lexical entries of verbs which possessed both active and passive forms. See again the example for /gIv/. Two sets of selectional restrictions were stated. One set was stated with regard to semantic features (above) in prose. The other set of selectional restrictions (below, at 'Item:::', in standard TG notation) dealt with base structure. In this view, 'every predicate... governs a particular set of semantic relations' (p. 12), and every verb governs a particular set of structural relations.

In this sense the lexicalist proposal amounted to an implicitly stratified model with regard to syntactic and semantic relations. The model formally and explicitly related actives and corresponding passives in terms of semantic relations.<sup>17</sup> It formally distinguished actives and passives syntactically.

There are, however, potentially grave problems arising from the type of structure assumed for 'the lexicon' in this and other generative models. For a detailed discussion, see 'A stratificational view of the lexicon' (Sullivan, 1977b).

An alternative to the various generative views of 'the lexicon' has been suggested by stratificationalists.<sup>18</sup> This alternative (stratificational) formalization explicitly and formally separates the two sets of selectional restrictions, without incurring the other problems with 'the lexicon' which were alluded to above. This separation of the two sets of restrictions is inherent in the stratificational approach to 'the lexicon' and requires no additional descriptive machinery. In this respect, it differs significantly from the lexicalist position. The resulting formalization of the active-passive relationship is discussed in the following chapter (Chapter 5).

#### Notes

<sup>1</sup>The following are abbreviations used in this chapter:

Prop	'proposition'
Erg	'ergative'
Dat/D	'dative'
Loc	'locative'
Inst/I	'instrument'
Ag/A	'agent'
P	'preposition'
Mod	'modality'
O	'objective'
F	'factitive'
K	'kasus' (case marker)

<sup>2</sup>Fillmore's case grammar contained two types of rules. Rules of type I mapped case systems into phrase-markers. Rules of category II were transformations which generated derivations in the usual way. Thus, passive was a rule of category I.

Chomsky (1972c:173) asserted that 'it would be quite consistent with his theory of case grammar to regard passive as a transformation, rather than a rule mapping case structure onto phrase-markers'. Exactly what Chomsky meant by this is not altogether clear.

Consider. A phrase-marker (upon which rules of category II operate) indicates a 'default' linear order. This 'default' order is to obtain if no (further) reordering transformations apply. The deep structures in Fillmore's case grammar possessed no linear ordering, default or otherwise. For this reason, and because Fillmore considered passive to be a rule of category I--rather than a transformation of category II--'there are clear empirical differences...' between Fillmore's proposal and that of Chomsky (1965) '...concerning the status of passive' (Chomsky, 1972c). But, what happens to these empirical differences if Chomsky's suggestion is followed and the rules of category I are reformulated as transformations is that the empirical differences dissolve. The implication of Chomsky's (1972c) statements is that he would be able to find Fillmore's case grammar acceptable. But this could be the case only if it were reduced to a 'mere notational variant' of the extended standard theory. Then, of course, it could be rejected anyway because it would contain no empirically significant divergence from the extended standard theory.

Chomsky (1972c) devoted several pages to a discussion of the differences between Fillmore's case grammar and the extended standard theory (pp. 173-180). His arguments against semantically-based grammar do not hold up. See for example, one straw man he easily knocked down in Chomsky (1972b:85):

If the concept of 'semantic representation' ('reading') is to play any role at all in linguistic theory, then these three expressions must have the same semantic representations...

(33) John's uncle

(34) the person who is the brother of John's mother or father or the husband of the sister of John's mother or father

(35) the person who is the son of one of John's grandparents or the husband of the daughter of one of John's grandparents, but is not his father

In the same article, he discussed the question of 'notational variants' of EST. He said, 'it is senseless to propose as an alternative a "semantically-based" conception of grammar in which S (the semantic representation) is "selected first" and then mapped onto the surface structure P, and ultimately P (the phonetic representation)' (ibid.). See Chapter 5, below.

<sup>3</sup>Fillmore intended O and D to be--along with A--'optional choices provided by a Subject Selection Rule' (1977:69).

<sup>4</sup>As Fillmore said later (1977:71), deciding on the case status of some NP's, e.g. **fire** in (3.33), 'is like deciding on the "-emic" status of the stopped consonant in **spy**'.

<sup>5</sup>Fillmore (1971:42) introduced the case 'Experiencer'.

<sup>6</sup>Johnson (1975) cited earlier work by Keenan and Comrie, as well as talks given by Postal and Perlmutter (see Johnson, 1975:3).

<sup>7</sup>This underlying representation was termed by Johnson (1975:31) the 'underlying relational network' (or 'URN'). It should be noted that such trees in RG do not indicate any linear order, but only functional relations. Linearization is imposed by a sequencing rule which enforces the order S-V-DO-(X); see Johnson (1975:36).

<sup>8</sup>For arguments concerning the justification of the 'X' relation (chomeur), see Sheintuch (1976).

<sup>9</sup>It is primarily in such structural terms that EST currently defines the active-passive relationship.

<sup>10</sup>This notion of strata is not equivalent to that used by stratificational linguists. In the RG framework, the set of NP relations is universal and is the same at all strata, except that the 'X' relation (chomeur) cannot occur in the first stratum. The 'strata' in RG are analogous to stages in a TG derivation.

<sup>11</sup>According to the Stratal Uniqueness Law, 'only one dependent of a clause can bear a given term relation in a given stratum' (Perlmutter and Postal, 1977).

<sup>12</sup>Other similar lexicalist proposals have been set forth on similar lines. For the sake of brevity, the discussion will be limited primarily to Freidin (1973).

<sup>13</sup>In effect, Freidin argued against the empty node analysis on the basis that such an analysis would not work for the Complement Subject Deletion, involved in (4.48) (a). This, of course, has nothing to do with whether or not such an analysis could work for passive.

<sup>14</sup>See Chomsky (1972c:197), quoted by Freidin: 'Each transformation applies to a phrase-marker on the basis of the formal configurations expressed in it, and quite independent of the meanings or grammatical relations expressed by these formal configurations'.

<sup>15</sup>Freidin asserted that this resolved the problem of rule feature analysis, which marked unpassivizable transitive verbs with the feature [-passive].

But, his formulation required the listing in the lexicon of which verbs can be passive. Which is to be preferred--marking the marked condition, or marking the unmarked condition? The rule feature analysis (almost) seems preferable on this basis.

<sup>16</sup>More recently, those taking the lexicalist position have tended to differentiate between 'adjectival passives' and 'verbal passives'. See, for example, Bresnan (1980:21 ff.).

<sup>17</sup>This formally-specified relationship is to be preferred to the EST formalization, which assigns the similarity in their interpretation to a vague, unspecified set of 'projection rules'.

<sup>18</sup>Sullivan (1977b) explained this alternative in terms not restricted to the stratificational point of view. Several articles in Makkai and Lockwood also deal with this issue. See also Lockwood (1972), Chapter 2: 'A preliminary sketch of linguistic structure', pp. 14-29.

CHAPTER 5  
FORMALIZATION OF THE ACTIVE-PASSIVE  
RELATIONSHIP IN STRATIFICATIONAL LINGUISTICS

To avoid what has been a continuing misunderstanding, it is perhaps worth while to reiterate that a generative grammar is not a model for a speaker or hearer. (Chomsky, 1965:9)

When we speak of a grammar as generating a sentence with a certain structural description, we mean simply that the grammar assigns this structural description to the sentence. When we say that a sentence has a certain derivation... we say nothing about how the speaker or hearer might proceed, in some practical or efficient way, to construct such a derivation. (Chomsky, 1965:9)

Lamb is trying to develop an analogical model for the production and comprehension of speech, a theory that will not only define and describe the texts of a language, but will do so in a way that explains how human beings themselves produce and understand such texts. (Algeo, 1972:10)

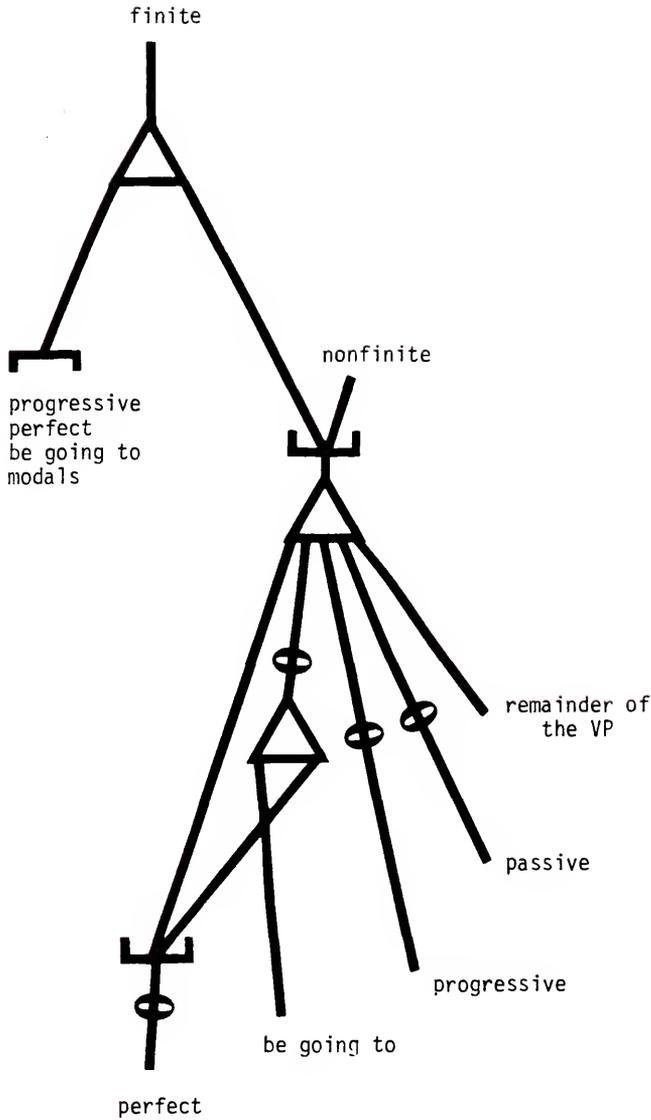
Transformational linguists have pretended that the uncertain applicability of their theory in the last area (language production and understanding--DWC) is not a shortcoming. (Chafe, 1967:89)

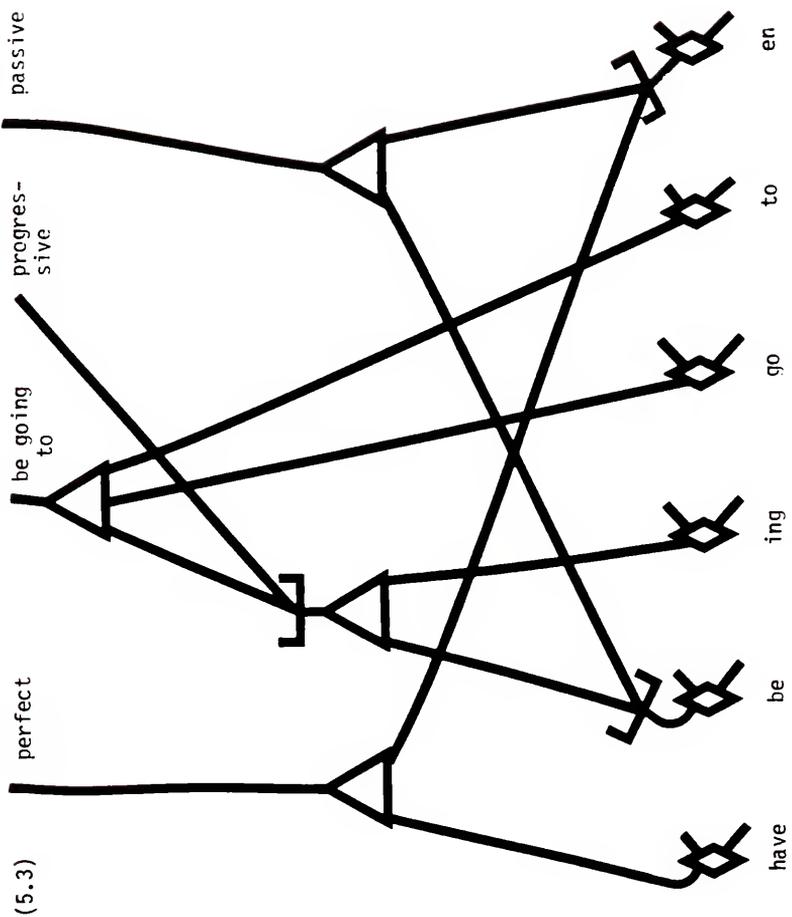
Our goal is to model natural language behavior. (Reich, 1970:21)

As Reich (1972a:85) has said, SG is 'a theory which accounts for BOTH the structural descriptions AND the psycholinguistic data'.

As the goals of stratificational linguistics differ from those of transformational generative grammar, so must the type of formalism

(5.2)





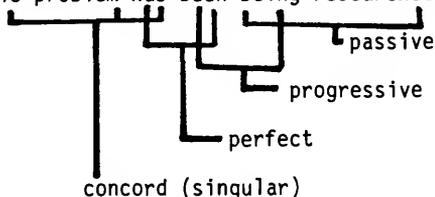
it employs. Motivations (in addition to the general goal suggested in Reich's last statement) for the stratificational formalism are discussed in Lockwood (1973), Lamb (1973), and Reich (1972a), for example. The most up-to-date overview of the notational system--and the framework in general--is presented in Lockwood (1972, currently in revision). For a brief explanation of the notational system, see Sullivan (1978).<sup>1</sup> Current views on the stratificational approach in general are expressed in Sullivan (1980).<sup>2</sup>

The remainder of this chapter deals with the treatment of the active-passive relationship in stratificational linguistics.

Reich (1970) dealt with the place of passive marking within the system of English auxiliary verbs.

For example, consider the auxiliaries which occur in (5.1), which 'consist of a complicated interlocking chain of discontinuous elements' (Reich, 1970:25).<sup>3</sup>

(5.1) This problem has been being researched for too long.

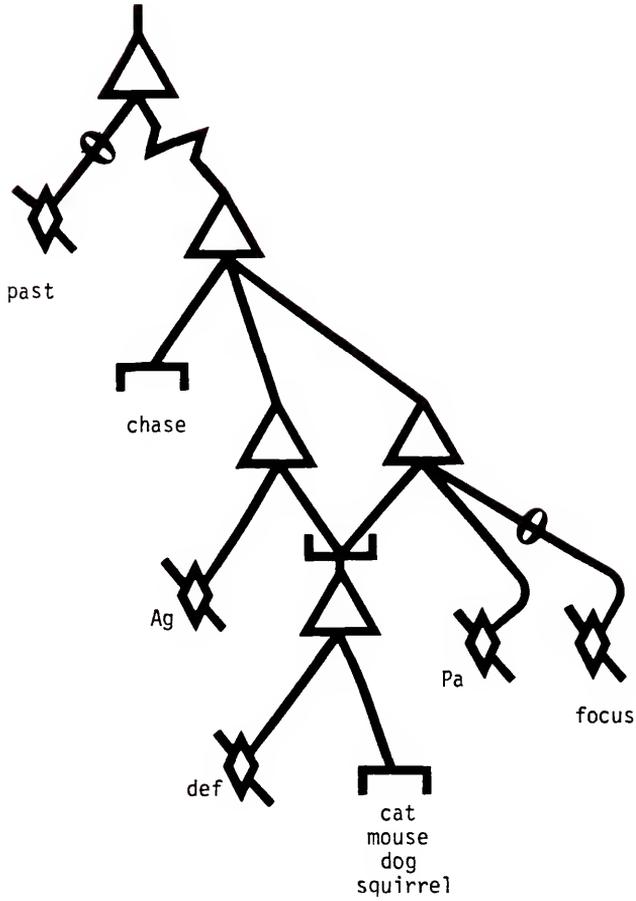


Newell (1966:82) proposed the portion of the (lexotactic) diagram (5.2) for nonfinite verb phrases in English. Reich (1970:29) amended the diagram to include finite verb phrases.

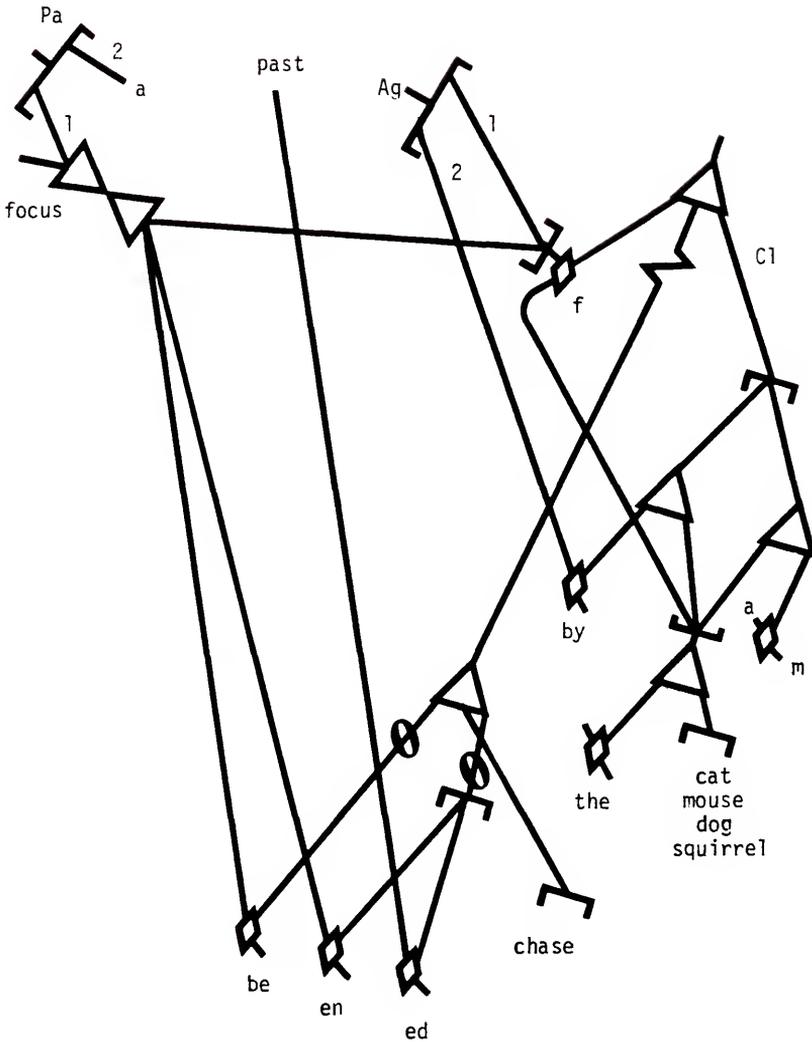
Here are some comments by Reich concerning the **be of be ing** (5.3):<sup>4</sup>

The **be** is the same **be** of the passive **be en**, and the **en** of the passive is the same as the **en** of **have en**. What is meant by this is that no matter whether the **be** came from **be**

(5.4)



(5.5)



en or from **be ing**, it will be realized in a particular way, depending upon person, type I tense, and number (e.g., **am**, **is**, **are**, etc.), but not depending on what construction it came from. Similarly, **en** has many alternative realizations, depending on what verb it is to be associated with, but not depending upon whether it came from **be en** or **have en**. (Reich, 1970:30)

For clarification on this point, see Sullivan's (1977b) 'A stratificational view of the lexicon'. This article also contains points relevant to the consideration of elements marking realizations of deep case relations, e.g., the postverbal agentive marker **by** or instrumental marker **with**. See especially p. 14 for discussion relating directly to the agentive **by**.

Lockwood (1972) discussed the active-passive relationship in terms of general clause structures.

Diagram (5.4) is adapted from Lockwood (p. 150). It shows the predication structure (semotactics) for some participants accompanying the sememe  $S/\text{chase}/$ .<sup>5</sup>

Diagram (5.5), also adapted from Lockwood (pp. 151 and 153), shows the relevant portion of the lexotactics providing the realization of the sememes in (5.4).<sup>6</sup> Note that available details and generalizations given by Newell (1966) and Reich (1970) are left out for the sake of clarity.

(5.6) \*The window broken.

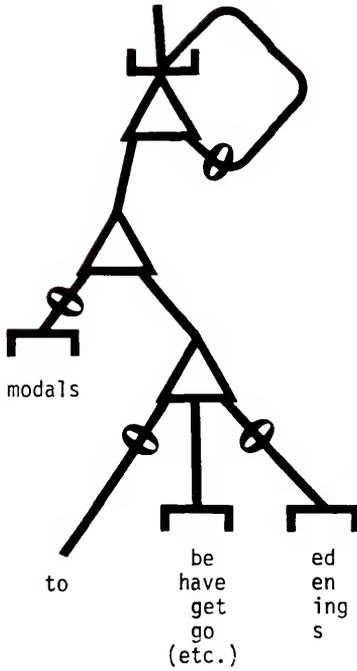
(5.7) \*The window broke by John.

(5.8) \*The window was by John.  
(where **John** is Ag)

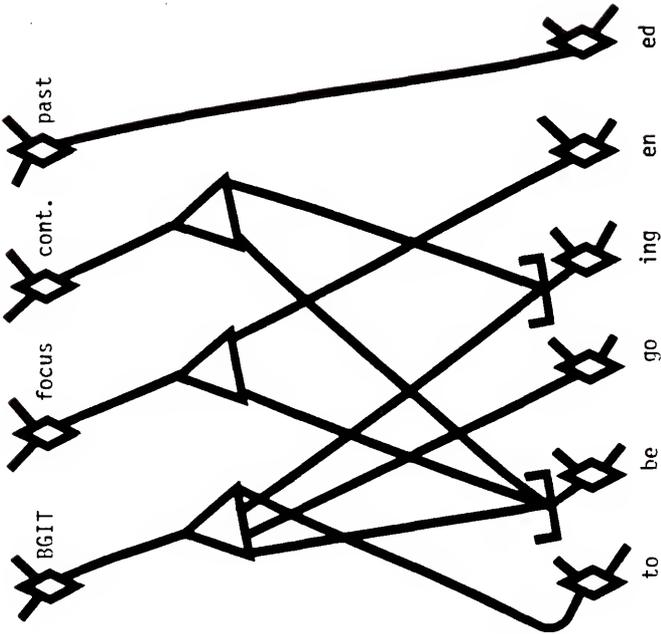
(5.9) \*John was broken the window.

The lexotactics as described by Lockwood does not prohibit ungrammatical sequences such as (5.6) - (5.9), where **John** is Ag

(5.11)



(5.12)



(agent) and **window** Pa (Patient). Rather, such sequences will be blocked by the interaction of the sememic and lexotactic strata. For example,  $L/en/$  occurs in the VP only as part of the realization for  $S/perfect/$  ( $L//have/en//$ ) or  $S/focus/$  ( $L//be/en//$ ).<sup>7</sup> This will block (5.6), since it has  $L/en/$  without  $L/have/$  or  $L/be/$ . Similarly, the postverbal agentive marker  $L/by/$  occurs only in the composite realization of Pa + focus as  $L//f/be/en//$ . (See again diagram (5.5).) 'It is a general principle in stratificational theory that restrictions dealt with on a higher stratum do not need to be repeated on a lower one' (Lockwood, 1972:151). In a still more general way, the principle can be stated as (5.10):

- (5.10) A restriction dealt with on one particular stratum or between two particular strata need not be repeated elsewhere.

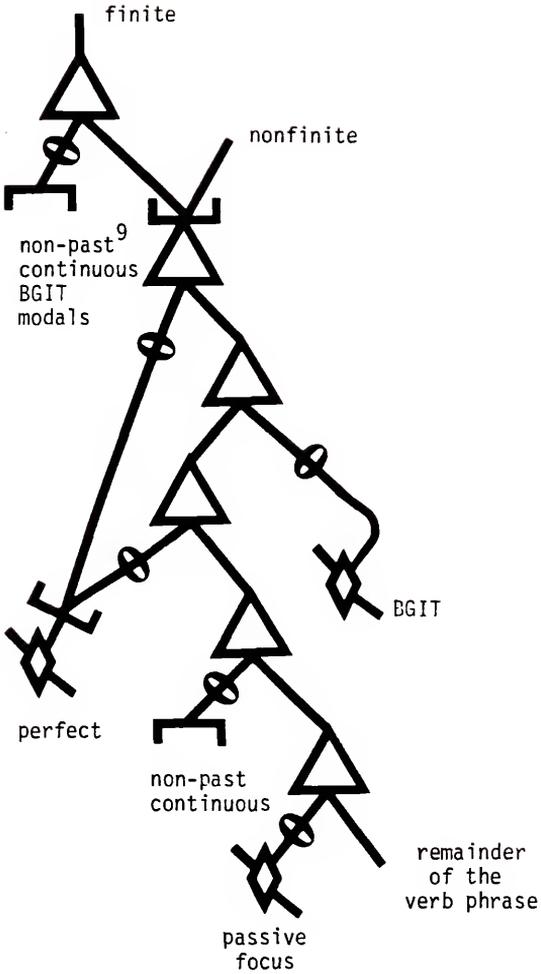
In other words, a restriction should be stated (ideally) only in one way, i.e., either as a syntagmatic constraint or as a realizational rule, and only one time. A restriction expressed at some point in the relational network thus can have a 'filtering' effect (in much the sense of Chomsky and Lasnik's filters) on the inputs and outputs of other strata, especially adjacent strata.

Application of the above principle (5.10) allows a great deal of simplification relative to Reich's description of the VP.

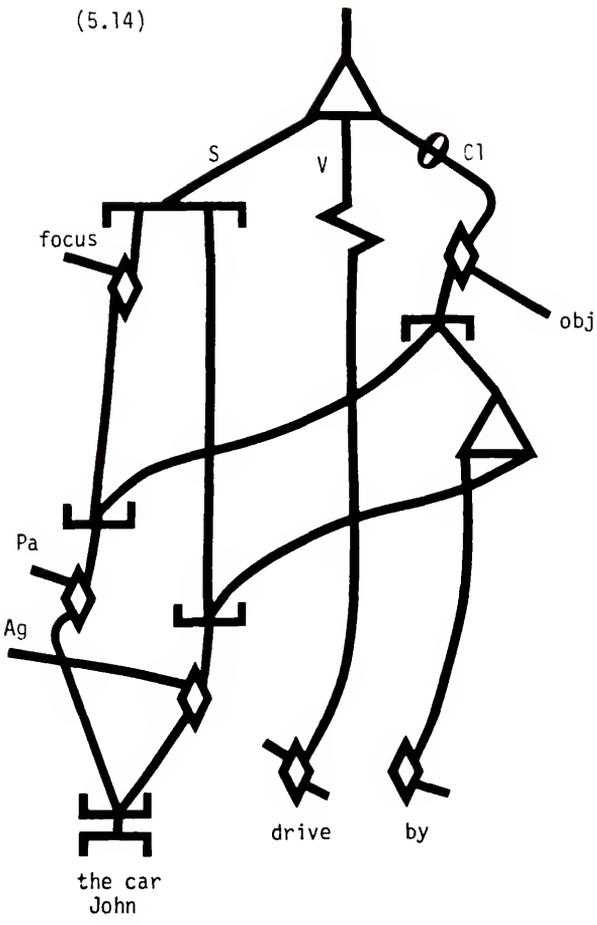
The relevant portion of the lexotactics can be reduced to the configuration shown in (5.11).

The semonic knot pattern which 'feeds' this portion of the lexotactics will restrict the output of the lexotactics to only the

(5.13)



(5.14)



grammatical combinations of elements. It will also enforce the correct order of elements within the complex realization of a single sememe. For example, an ordered AND node in the semonic knot pattern enforces the correct order  $L//be/en//$  within a passive verb phrase. Diagram (5.12) shows a portion of the semonic know pattern. (The sememe realized as  $L//be/go/ing/to//$  is arbitrarily designated  $S/BGIT/$  for convenience.)<sup>8</sup>

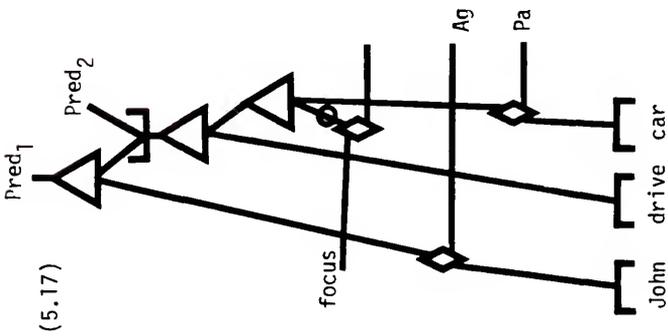
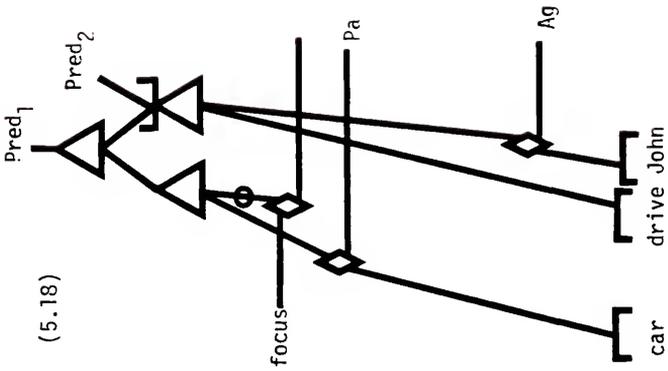
Hierarchical ordering in the semotactics enforces the overall ordering of tense, aspect, and focus within the verb phrase. Diagram (5.13)--based on (5.2), but with the 'ordering' taken care of by the semotactics--shows in general how this could be done, following Reich's (1970) formulation. The present formulation seems incomplete, however. Its inadequacies should be solvable in the semotactics, assuming appropriate semonic knot patterns to provide the correct realizations.

Turning now from the problems of verb phrase morphology, the description of overall clause structures will be considered. Sullivan (1976) modified Lockwood's description of the lexotactics, giving the network shown in diagram (5.14) (p. 130). Diagram (5.14) shows the lexotactics for (5.15) and (5.16).

(5.15) John drove the car.

(5.16) The car was driven by John.

Sullivan's description of the lexotactics of the active-passive relationship--diagram (5.14)--diverges from Lockwood's (see again (5.5)) in one major respect: 'the only syntactic alternation provided' in (5.14) is 'the realization of patient in subject position. Everything else that occurs is a derivative of this. Since



stratificational theory presupposes a network of relationships, the realization of patient in subject position is sufficient to trigger a series of subordinate realizations' (Sullivan, 1976:127).<sup>10</sup> If  $S_{\text{/passive focus/}}$  occurs, it causes the Pa to be realized in subject position. The Ag, therefore, is realized in the next available slot, i.e., in the first complement position (C1). The postverbal agentive marker  $L_{\text{/by/}}$  is provided automatically as a by-product. The object marker  $L_{\text{/obj/--}}$  equivalent to Lockwood's  $L_{\text{/m/--}}$  was treated as a syntactic redundancy (which it is), not as part of the realization of  $S_{\text{/Pa/}}$ .

Sullivan (1976) further suggested that there are two possible semotactic configurations for Ag-Pa predication. They are shown in diagrams (5.17) and (5.18). The former shows Ag-dominant predication, as suggested by (5.20) and (5.21). On the basis of (5.22), I would like to withhold consideration of (5.19) for the present, as  $S_{\text{/drive/}}$  seems to be a class of verbs which require the presence of an adverbial for a structure of this sort. The sememe  $S_{\text{/drive/}}$  can now be considered together with such predicates as  $S_{\text{/attack/}}$  and  $S_{\text{/explain/}}$ . These suggest the Pa-dominant structure of (5.18).

(5.19) The car drives well.

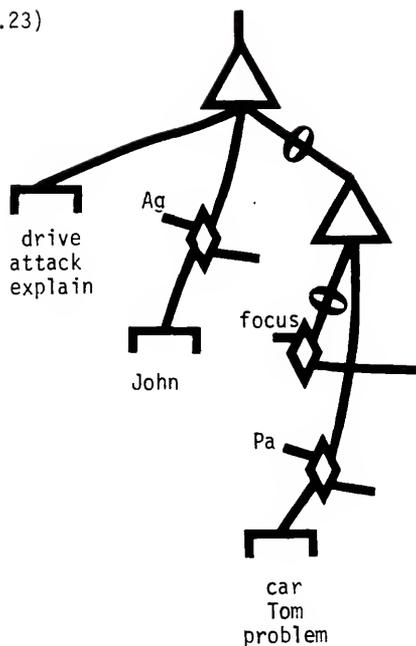
(5.20) John is driving.

(5.21) John drives.

(5.22) \*The car drives.

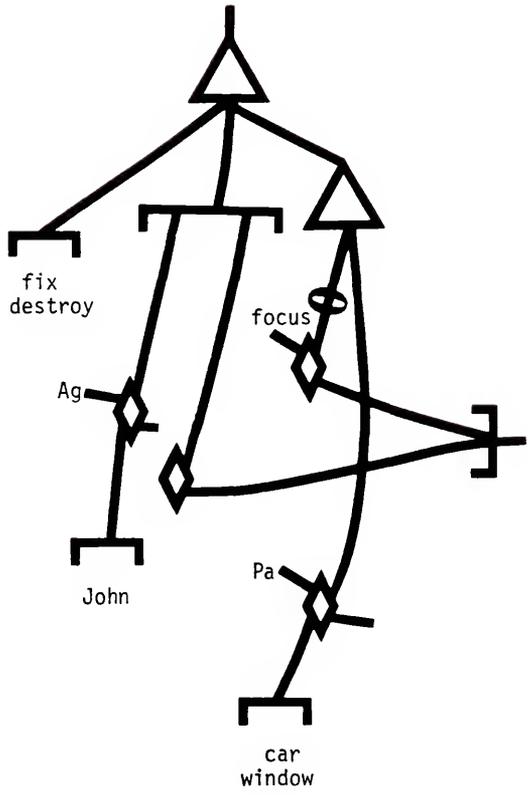
The same information is included in diagram (5.23). The semotactic diagram (5.23) accounts for (5.19) and (5.20) (agent-predicate),

(5.23)





(5.30)



(5.24) (agent-predicate-patient), and (5.25) (agent-predicate-patient-focus). It could also be modified to account for (5.26) (predicate-patient-focus; where <sup>SN</sup>/focus/ is a determined element). See diagram (5.27).

(5.24) John drove the car.

(5.25) The car was driven by John.

(5.26) The car was driven.

In (5.28) the possible combinations of Ag, Pa, and focus with this class of predicates are summarized.

(5.28) (a) Ag-Pred

(b) Ag-Pred-Pa

(c) Ag-Pred-Pa-focus

(d) Pred-Pa-focus

Another class of predicates, <sup>S</sup>/fix, destroy, .../ does not permit (5.28) (a). For example, (5.29) (a) and (b) are ungrammatical. Diagram (5.30) shows the cooccurrence restrictions on Ag, Pa, and focus with these predicates.

(5.29) (a) \*John fixes.

(b) \*John is destroying.

Finally, there is a third class of predicates that permit the combinations shown in (5.31), <sup>S</sup>/break, tear, burn, .../. Diagram (5.32) includes the necessary cooccurrence restrictions.

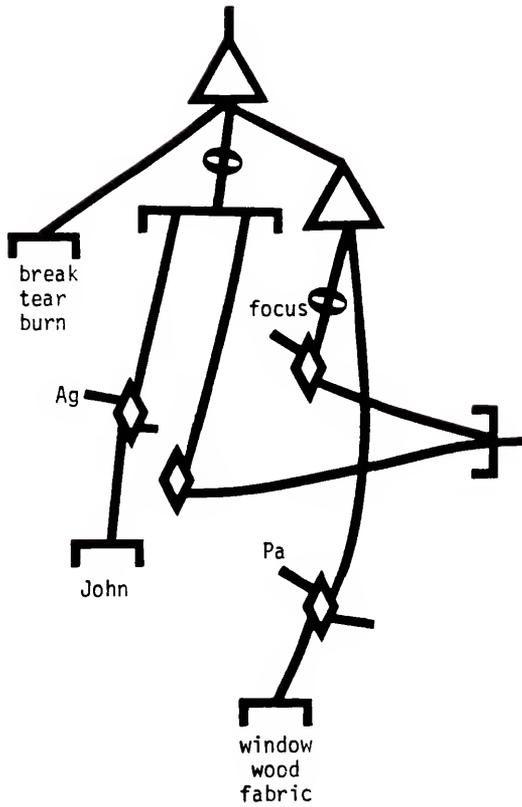
(5.31) (a) Ag-Pred-Pa

(b) Ag-Pred-Pa-focus

(c) Pred-Pa

(d) Pred-Pa-focus

(5.32)



(5.33)

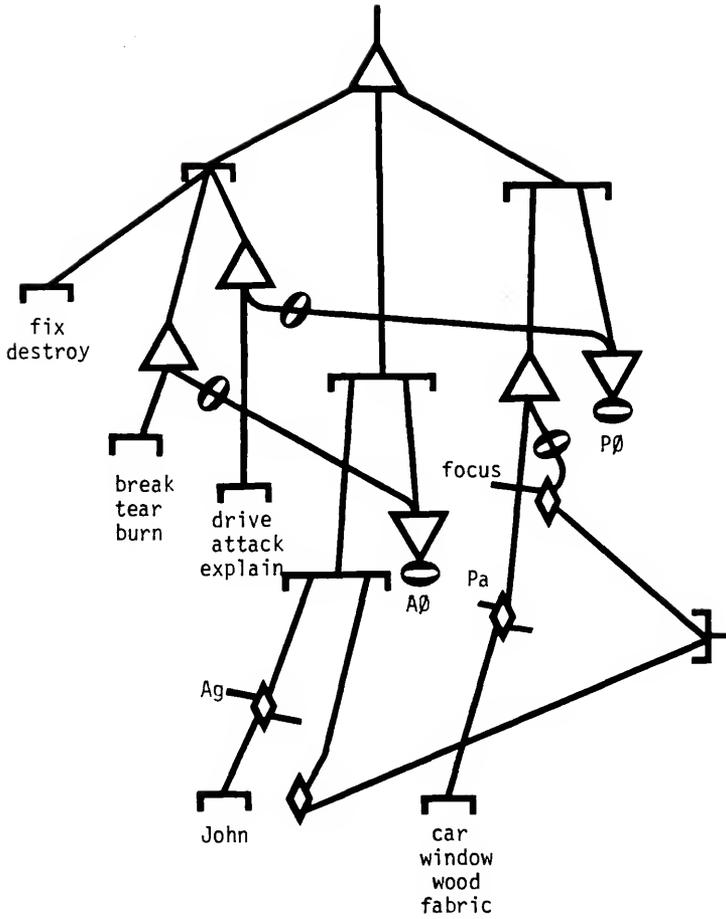


Diagram (5.33) summarizes (5.27), (5.30), and (5.32). The possibility of a null Ag without conditioned passive focus ( $A\emptyset$ ) is restricted by the diamond node above the predicate class  $S_{\text{break}}$ , tear, burn, .../. The possibility of null Pa ( $P\emptyset$ ) is restricted by the diamond node dominating the class of predicates  $S_{\text{drive}}$ , attack, explain, .../. The ordered OR nodes above the diamond nodes at  $A\emptyset$  and  $P\emptyset$  and their right-hand lines are the equivalent expansions of the corresponding circled lines in (5.27), (5.30), and (5.32).

Diagram (5.33) leaves a great deal unexpressed with regard to other types of passives, especially the so-called 'pseudopassives'. This area is beyond the scope of this chapter. However, the description of other passive types in English is to be added to the semotactics presented here, such a description will make use of the realizational (upward) OR node at the right of diagram (5.33).

In this way, 'passivization' is presented as a unified phenomenon. 'Splitting the passive transformation into parts and incorporating them into three complementizing transformations (Hasegawa, 1968) seems to imply that the active-passive pairs are related only fortuitously, that passivization is not a unified phenomenon' (Sullivan, 1976:119). The same criticism is applicable to the work of more recent versions of Chomskyan transformational generative grammar (EST and REST).

The relationship of (5.34) to (5.35) and (5.36) to (5.37) is a related matter. Transformationalists have based some dubious claims about the active-passive relationship on data such as this. 'It turns out that in fact there is no consistent way to characterize the way

the passive... changes meaning, so there cannot be a projection rule for the passive' (Jackendoff, 1972:9).

(5.34) Some man loves every woman.

(5.35) Every woman is loved by some man.

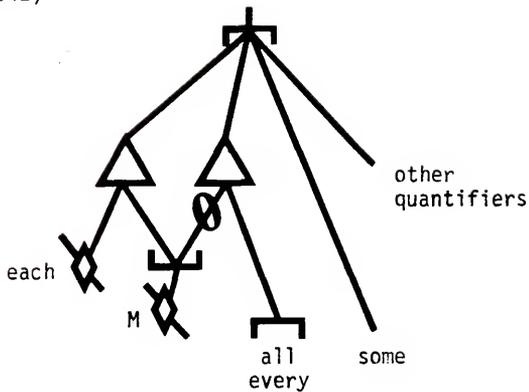
(5.36) Every man loves some woman.

(5.37) Some woman is loved by every man.

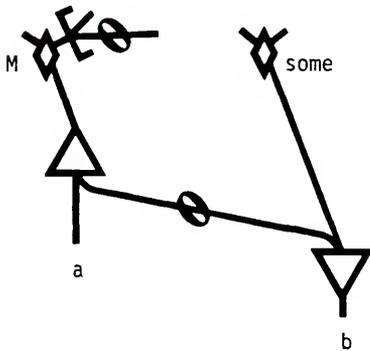
The matter should be more carefully considered. Sullivan (1976:135) observed that the relation of (5.34) to (5.35) is one of inclusion, as is the relation of (5.37) to (5.36). In other words, there is a sense in which (5.34) and (5.37) are ambiguous. Sentences (5.35) and (5.36), respectively, are very close paraphrases of one meaning of each. An expanded paraphrase of (5.35) might be **For every woman, there is some man who loves her.** More than one man may be involved, but as the lack of grammatical plural indicates, no more than one man for each woman. This does not require a one-to-one mapping of men to women, but could involve a mapping like:  $woman_1-man_1$ ,  $woman_2-man_1$ ,  $woman_3-man_2$ ,  $woman_4-man_3$ , ... ,  $woman_n-man_m$ . A similar situation exists for (5.36). **For every man, there is some woman that he loves** is an expanded paraphrase of (5.36). Again, more than one woman may be involved, and the mapping need not be one-to-one.

While the interpretations of (5.35) and (5.36) require this 'some/every-mapping', those of (5.34) and (5.37) do not. In (5.34) and (5.37), the interpretation of **some** may involve such mapping, but need not.

(5.42)



(5.43)



Now consider (5.38) - (5.41). In each, **some** indicates one indefinite man/woman is involved.

(5.38) Some man loves Ann.

(5.39) Ann is loved by some man.

(5.40) John loves some woman.

(5.41) Some woman is loved by John.

In general, then this **some** indicates one indefinite member of a class. However, **every** can condition **some/every**-mapping. This mapping is required in the interpretation of postverbal **some** if there is an **every** in the subject. The quantifier **all** seems to exhibit a similar effect on the interpretation of postverbal **some** when substituted (for **every**) into sentences (5.34) - (5.37). The quantifier **each** requires this mapping in all environments. Thus, I will call this phenomenon **some/∀**-mapping ('∀' indicating universal quantification).

Diagram (5.42) shows a small portion of the semotactics relevant to the description. The  $S/M/$  is the sememe that controls **some/∀**-mapping.

The interpretation of  $L/some/$  may include  $S/M/$ . This is shown in diagram (5.43).

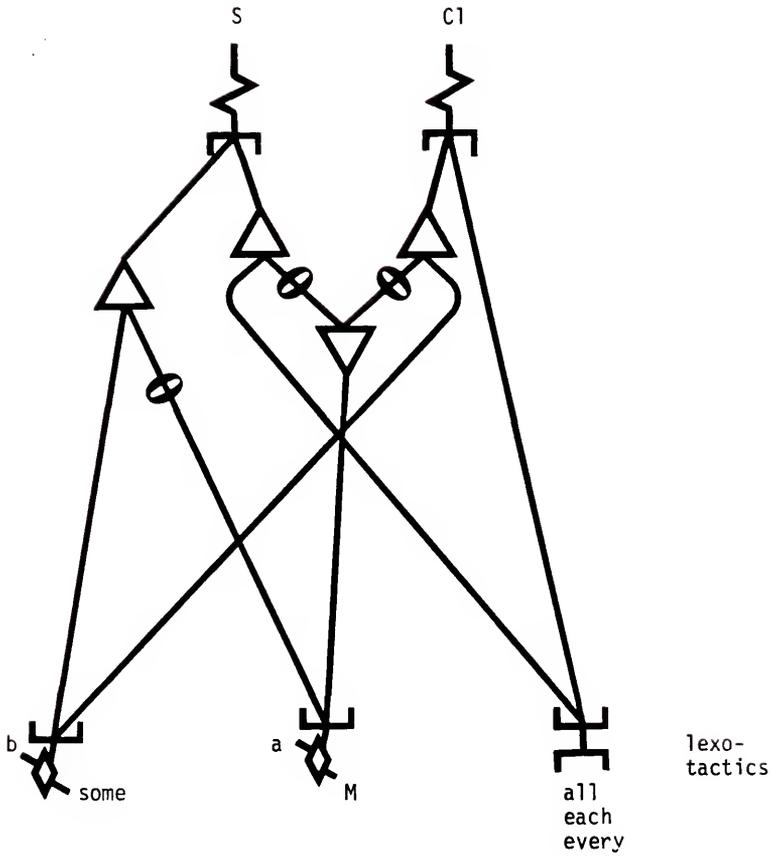
Diagram (5.44) shows a portion of the lexotactics. Here, the occurrence of a quantifier including  $\forall$  in subject position can condition **some/∀**-mapping in C1. The realizational lines marked 'a' and 'b' connect with those similarly labelled in (5.43).

(5.45)  $*S// (Ag/every/man)/love/(Pa/some/woman)//$

(5.46)  $S// (Ag/every/M/man)/love/(Pa/some/woman)//$

(5.47)  $S// (Ag/every/man)/love/(Pa/some/woman)/focus//$

(5.44)

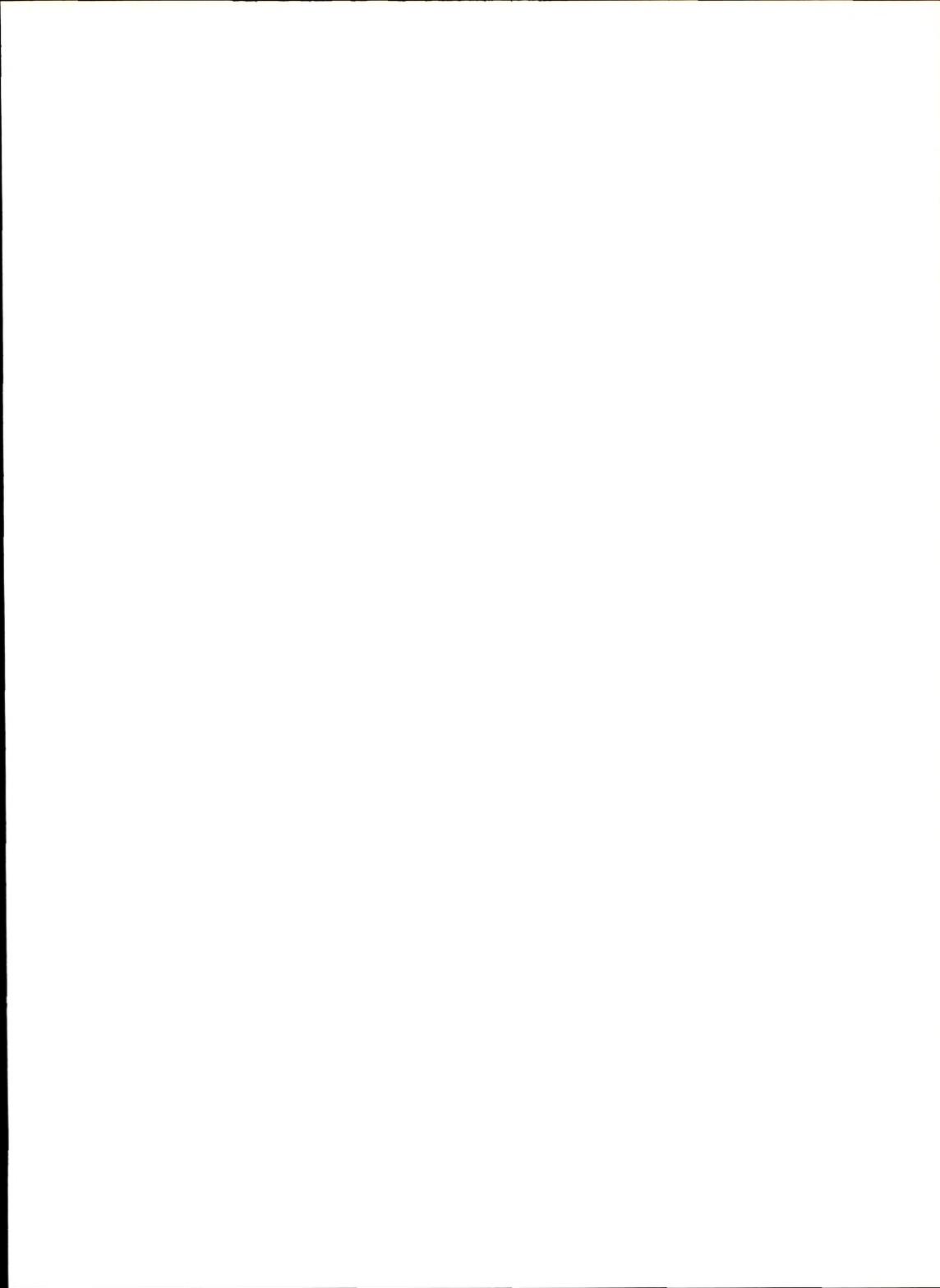


The phenomenon of **some/V**-mapping interacts only indirectly with the active-passive dichotomy. For example, the semotactics and lexotactics will work together to block (5.45), which lacks the appropriate **some-V** mapping.<sup>11</sup> In this case, without passive focus, the Pa would be realized in C1. But the lexotactics requires <sup>L</sup>/M/ with <sup>L</sup>/some/ under C1 because the realization of <sup>S</sup>/every/ is in subject position. Both (5.46) and (5.47) can be realized grammatically. The former contains **some/V**-mapping; <sup>L</sup>/some/ is realizable in C1. The latter contains <sup>S</sup>/focus/; this realizes the Pa in subject position, where the <sup>L</sup>/M/ is optional.

Recall Jackendoff's (1972:9) assertion--quoted earlier--that 'there is no consistent way to characterize the way passive... changes meaning, so there cannot be a projection rule for the passive.' Now, there is no way this assertion can be faulted, given what Jackendoff assumes.

However, it contains one assumption that need not be taken as a 'given' of the problem set. Jackendoff assumed a priori that in order for passive to have a rule of semantic interpretation, it must change meaning in a consistent way. It is this assumption which I challenge. The assumption is a necessary one only if rules of semantic interpretation are required to take as operands (a) ordered strings of elements (i.e., the nodes of deep structures) or (b) rules which rearrange the elements of those strings (into other ordered strings).

Stratificational theory relates the 'meaning' and 'surface structure' of the English sentences (5.34) - (5.37) through sememic-to-lexemic realizational rules, which combine with the 'filtering'



effects of the semotactics and lexotactics. There is an asymmetry in the interpretation of subjects and complements with  $L_{/some/}$ .<sup>12</sup> The active-passive choice interacts with this asymmetry in a predictable way. Stratificational theory provides a way to describe the asymmetry and its effects.

Other asymmetries in the interpretation of subjects and complements (for example, those in sentences involving the interpretation of negatives and quantifiers in combination and the resulting effect on the selection of active or passive voice--see Jackendoff, 1972) can be handled in a similar fashion in a stratificational model.

The 'inconsistencies' of passivization cited by Jackendoff (and numerous others) are an artifact of the transformational framework.

In contrast, the stratificational descriptions offered here are clearly promising as representing a good first approximation.<sup>13</sup> Further, in SG, the intuitively-satisfying relationship of Figure 5-1 is maintained. There is no need for rules of semantic interpretation 'breaking in' at various stages in a syntactic derivation, the situation which appears to have arisen as a result of the assumption (by transformationalists) of the relative autonomy of semantic and syntactic levels.<sup>14</sup>

#### Notes

<sup>1</sup>Those interested in details concerning technical aspects of the notational system of stratificational linguistics should consult Reich (1972b), Sullivan (1977a, 1979), and Christie (1978). For a summary of stratificational diagram notation used in the current study, see Appendix IV.

<sup>2</sup>Those interested in the details on the development of (the earlier stages, at least, of) stratificational linguistics should see Lamb (1971).

<sup>3</sup>As Reich pointed out, a description of the system of English auxiliaries is a good example for contrasting transformational and stratificational approaches. The passive English verb phrase, for example, includes the realization of one constituent (the marking of the verb as passive) as two discontinuous segments, the lexemes //be/en//. It also includes possible portmanteau realization of tense within the first of these segments. For example, the lexemes /past/ and /be/ may be realized portmanteau fashion as the morpheme /was/, or, the lexemes /past/, /be/, and /plural/, as the morpheme /were/.

<sup>4</sup>This is a simplified version of Reich's diagram. Details concerning past tense and concord are left out.

<sup>5</sup>In the stratificational notation, slash brackets // are used to indicate linguistic 'elements' (more accurately, points in a relational network). This table shows the denotata of the superscripts commonly used for '-emes':

		level
S	sememe	(semantic, i.e., semotactics)
L	lexeme	(syntactic, i.e., lexotactics)
M	morpheme	(morphological, i.e., morphotactics)
P	phoneme	(phonological, i.e., phonotactics)
HP	hypophoneme	(phonetic, i.e., hypophonotactics)

Each of these superscripts may be followed by 'N', indicating the corresponding '-on' (referring to a point in the interstratal realizational pattern, also referred to as a 'knot pattern').

<sup>6</sup>The /m/ is the lexeme which, in the morphotactics, will occur in the portmanteau realizations /him/, /whom/, /me/, etc. The labels 'S', 'VP', and 'Cl' represent 'subject', 'verb', and 'first complement position', respectively.

<sup>7</sup>I will indicate an ordered--but not necessarily uninterrupted--sequence with double slashes separating elements in the sequence. Paradigmatically-related elements will be given in the following fashion: /en, ed, ing/, i.e., with the comma as internal delimiter.

<sup>8</sup>The upward OR node labelled 'a' in diagram (5.12) will lead to the sememes /continuous, non-past (for most V's)/.

<sup>9</sup>By 'non-past', I am referring to the structure with unmarked present time interpretation and possible (marked) future time interpretation, realized in the lexotactics as //be/ing//. Actually, this is probably an oversimplification.

<sup>10</sup>Note that the details of the VP are not included in this discussion.

<sup>11</sup>Recall that no linear order is specified by the order of the listing. Hierarchical ordering is implicit, but is not explicitly shown here, either. I have used parentheses to indicate gross hierarchical groupings.

<sup>12</sup>Actually, the asymmetry seems to be observable with indefinites in general, e.g., also with the lexemes /a/ and /any/.

<sup>13</sup>For stratificational studies on the active-passive relationship in other languages, see Pope (1975), Sullivan (1976), and Griffen (1980).

<sup>14</sup>See the quotation from Chomsky (1972) on the title page of PART II, below.

Interestingly, the criticism of an empirically unjustified assumption of the relative independence of linguistic levels has frequently been aimed against stratificationalists by transformationalists. The criticism, in this direction, is wholly without basis. A stratificational grammar includes extensive interactions among strata, in ways such as those described above. See Sullivan (1977b, esp. p. 19) for discussion.

PART II  
THE FUNCTIONS  
OF THE  
ACTIVE-PASSIVE DICHOTOMY

It does... seem noteworthy that the extensive studies of meaning and use that have been undertaken in recent years have not... given any serious indication that questions of meaning and use are involved in the functioning... of grammars in ways beyond those considered in the earliest speculations about these matters, say in Chomsky (1957).

Noam Chomsky (1972:198-199)

CHAPTER 6  
CONDITIONED SELECTION OF ACTIVE  
OR PASSIVE VOICE

This chapter deals with cases in which the selection of active or passive voice is conditioned by other features present in the discourse.

First, consider 'agentless' passives. Unlike the 'full' passives, most agentless passives, such as (6.1) (a), do not have corresponding actives.

(6.1) (a) The city was destroyed.

(b) \*Destroyed the city.

(c) \*The city destroyed.

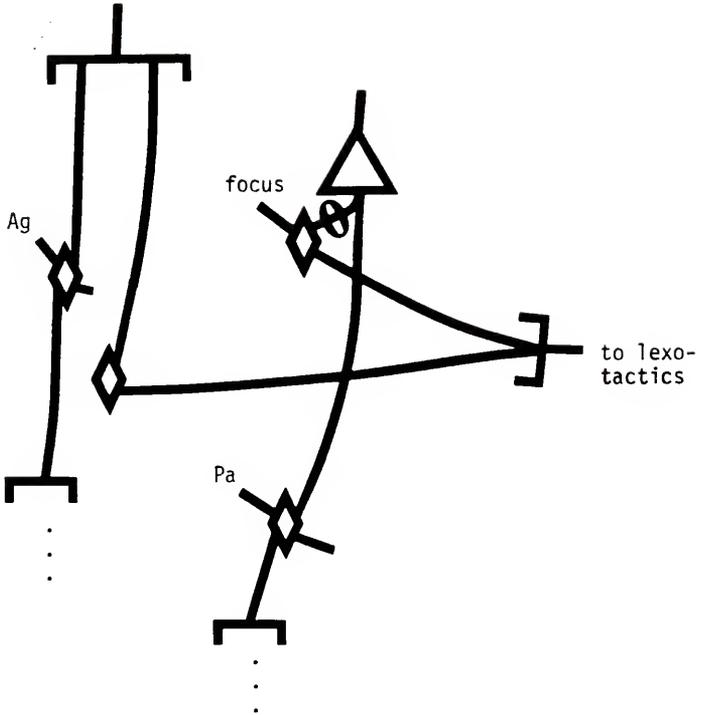
(6.2) (a) The city was destroyed by the enemy.

(b) The enemy destroyed the city.

Given an Aspects-like--or early EST--model, the passive trigger has '-emic' status in the deep structure of (6.2) (a). It is the '-eme' which provides the contrast between (6.2) (a) and (b). There is no contrast between (6.1) (a) and (b) or (c), however. Neither (6.1) (b) or (c) is a permissible English sentence. Thus, (6.1) represents a case of suspension of contrast between active and passive.<sup>1</sup> The presence of the passive trigger in the deep structure of (6.1) (a) cannot be insisted upon, and in the transformationalist formalizations of active-passive since Aspects, it has not been.

Arguments against having two different sources for **be** passives in English clearly do not obtain (see, for example, Freidin (1973), discussed in Chapter 4, above). In fact, two sources seem to be required:

(6.3)



one in which passive has '-emic' status, one in which passive is conditioned by the absence of an Ag NP.

The stratificational description discussed in Chapter 5 includes both sources for passives. See diagram (6.3). A portion of the semotactics for English predicate structure is shown. The line which leads ('down') to the lexotactics to select passive syntactic features can be reached in either of two ways, as indicated by the upward OR node. The S/passive focus/ has an 'input' line on the left side of its diamond node, showing its '-emic' status. It provides one possible source to the selection of passive voice features in the lexotactics. The other possible source is the  $\emptyset$ -element under the category Ag. This  $\emptyset$  is a conditioned element, as indicated by the lack of an 'input' line on the upper left side of its diamond node.

The lack of a specified Ag does not always condition the selection of passive voice. Consider, for example, (6.4) (a) and (b). In such a case, there is no suspension of contrast. In (6.4) (a), passive focus has (or at least is capable of having) '-emic' status.

(6.4) (a) The window was broken.

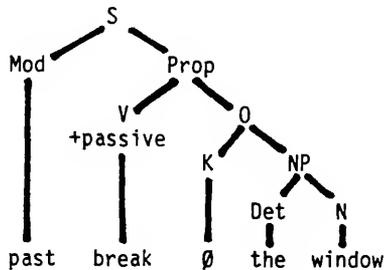
(b) The window broke.

An Aspects-like model correctly assigned '-emic' and conditioned status to passive in sentences such (6.2) (a) and (6.1) (a), respectively. But, it (apparently incorrectly) assigned conditioned status to passive in sentences like (6.4) (a).

In Fillmore's general framework, passives and their 'ergative-like' counterparts, e.g. (6.4) (a) and (b), had to be distinguished on the following basis. A sentence like (6.4) (b) had neither Ag nor Ins. A sentence like (6.4) (a) had either a null Ins or null Ag, or both. The underlying structure for (6.4) (b) in this framework would be (6.5);

that for (6.4) (a) could be (6.6) (a), (b), or (c). A problem with Fillmore's framework was that sentences like (6.2) (a) and (b) had the same source. The two surface structures were to be differentiated by an optional rule.<sup>2</sup> This amounted to a statement that 'full' actives and passives had a relationship akin to free variation. But this is clearly not the case.

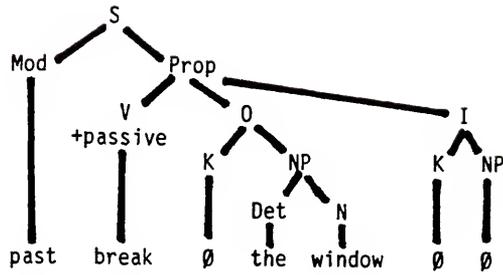
(6.5)



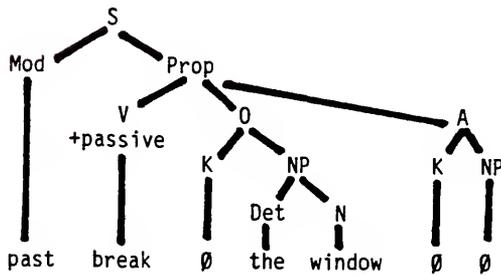
Apparently, none of the theoretical frameworks discussed in PART I permit an adequate description of '-emic' and conditioned status for each passive type discussed so far. The one exception is the stratificational framework. As shown, it correctly assigns '-emic' status to passive in sentences such as (6.2) (a) and conditioned status in sentences such as (6.1) (a). As shown in the more complete diagram of the relevant portion of the semotactics (Chapter 5), the potentially '-emic' status of passive in sentences such as (6.4) (a) is also provided for.

With regard to the description of the conditioned or '-emic' selection of passive voice, then, the stratificational model is clearly superior.

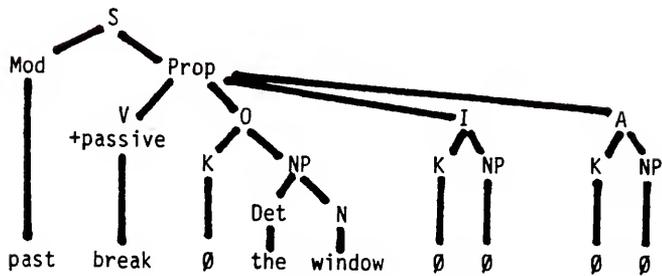
(6.6) (a)



(b)



(c)



There are three other cases in which it can be said that the selection of active or passive is conditioned. In two such cases, the restrictions on the selection can be stated in grammatical (formal) terms without undue effort.

One is the case in which the active-passive choice interacts with the presence of different combinations of quantifiers. This is discussed in Chapter 5, above. Again, the superiority of the stratificational model is suggested.

Sullivan (1978) adapted these examples from Postal (1974):

- (6.7) (a) I ordered that Ed leave.  
(b) I ordered Ed to leave.
- (6.8) (a) I ordered that Ed remove Bob from the room.  
(b) I ordered Ed to remove Bob from the room.
- (6.9) (a) I ordered that Bob be removed from the room by Ed.  
(b) ?I ordered Bob to be removed from the room by Ed.

As Sullivan observed, in order to prevent the generation of sentences like (6.9) (b), a Chomskyan model would require an ad hoc constraint prohibiting the occurrence of passive in certain infinitival complements. This constraint should, according to Chomsky and Lasnik (1977) be expressed in the form of a 'local surface filter' (see Chapter 3, above, for discussion). Such a filter might generally resemble (6.10). However, (6.10) is itself insufficient. Consider (6.11) and (6.12).

- (6.10) \* V NP to V<sub>passive</sub>
- (6.11) (a) \*Bob was ordered that he be removed from the room.  
(Bob and he coreferential)  
(b) ?Bob was ordered to be removed from the room.
- (6.12) (a) Ed was ordered that he remove Bob from the room.  
(Ed and he coreferential)  
(b) Ed was ordered to remove Bob from the room.

There is no single filter which could exclude (6.9) (b) and both (6.11) (a) and (b). Should some combination of filters be adopted? Surely this is not the correct approach.<sup>3</sup> Sullivan (1978) suggested an alternative. He pointed out that what (6.9) (b), (6.11) (a), and (6.11) (b) have in common is that **Bob** must in those sentences be both the recipient (Rc) of the verb **order** and the patient of the verb **remove**. His suggestion was (in part) that the ungrammaticality of the three 'problem' sentences above could be described in terms of constraints on the occurrence of one sememe with multiple semantic functions.<sup>4</sup> A specific example is the situation at hand. The Rc of a matrix verb cannot also be the Pa in an embedded clause.

Chomsky (1980:35), in discussing sentences such as (6.7) - (6.12), asserted that with trace theory<sup>5</sup>

We can therefore accommodate in a natural way the well-known resistance of verbs of subject control to passivization.

\* \* \*

There are some curious exceptions to this principle. Hust and Brame (1976) and Solan (1977) cite such double-passives as **John was promised to be allowed to leave**, which should be blocked but is not for reasons that are unclear.

The 'exceptions' are not really so curious. The grammaticality of the last sentence mentioned by Chomsky is predicted by the stratificational description proposed by Sullivan (1978).

Sullivan (1978 and 1980) discussed another example of conditioned selection of active or passive. He noted that in some participial phrases active is required, while in others, it is prohibited. See (6.13) and (6.14).

(6.13) This is the man filming that novel for TV.

(6.14) This is the novel being filmed for TV by that man.

Sullivan (1980:319) offered the following 'rule of thumb' (if (6.13) and (6.14) can be taken as 'characteristic of the general situation'):

If a participant which is thematic in the greater discourse appears as the patient of a particular predication, that predication is realized as a passive construction in the lexotactics; if the predication is realized as a clause, the patient of the predication is realized as the subject of the clause.

There is no active sentence which directly corresponds to (6.14). On the other hand, there is no passive directly corresponding to (6.13).

Now, consider the following two sentences, (6.15) and (6.16). They are both similar to (6.13), but with marked (present) tense. Further, one is active, like (6.13); the other contains an embedded clause which is passive.

(6.15) This is the man who is filming that novel for TV.

(6.16) (a) This is the man by whom that novel is being filmed for TV.

(b) This is the man that novel is being filmed by for TV.

It is clear that (6.15) is less highly marked than either version of (6.16). Sentence (6.15) contains less thematic complexity than (6.16). That is, its thematic structure can be represented as (6.17); for (6.16) the thematic structure is (6.18). This difference in thematic structure is probably the main reason for the greater markedness of (6.16).

(6.17) the man (the man)

(6.18) the man (that novel)

(6.19) This is the novel that is being filmed for TV by that man.

(6.20) This is the novel (that) that man is filming for TV.

(6.21) the novel (the novel)

(6.22) the novel (that man)

Note that (6.15) is morphologically less complex than the more highly-marked (6.16). This might seem to suggest that the greater markedness of (6.15) is due to its morphology. However, (6.19) is morphologically more complex than its more highly-marked counterpart, (6.20). The markedness observed is not primarily dependent on morphology, but on thematic complexity.

Sullivan's 'rule of thumb' regarding (6.13) and (6.14) is very possibly a specific corollary of the generalization (6.23):

(6.23) In a sentence with multiple predications, greater thematic complexity contributes to greater markedness.

The claim that greater thematic complexity contributes to a higher degree of markedness in a sentence is further strengthened by the following data. Recall that increased central embedding contributes to unacceptability (Chomsky, 1965).

(6.24) The rat the cat killed ate the malt.

(6.25) \*The rat the cat the dog worried killed ate the malt.

(6.26) \*The rat the cat the dog the cow tossed worried killed ate the malt.

(6.27) \*The rat the cat the dog the cow the maid milked tossed worried killed ate the malt.

The thematic structures of these sentences can be represented as follows, in (6.28) - (6.31).<sup>6</sup>

(6.28) the rat (the cat)

(6.29) the rat (the cat (the dog))

(6.30) the rat (the cat (the dog (the cow)))

(6.31) the rat (the cat (the dog (the cow (the maid))))

The following sentences with passives in the embedded clauses are all acceptable, (6.32) - (6.35):

(6.32) The rat that was killed by the cat ate the malt.

- (6.33) The rat that was killed by the cat that was worried by the dog ate the malt.
- (6.34) The rat that was killed by the cat that was worried by the dog that was tossed by the cow ate the malt.
- (6.35) The rat that was killed by the cat that was worried by the dog that was tossed by the cow that was milked by the maid ate the malt.

The thematic structures of (6.32) - (6.35) are shown in (6.36) - (6.39).

- (6.36) the rat (that=the rat)
- (6.37) the rat (that=the rat (that=the cat))
- (6.38) the rat (that=the rat (that=the cat (that=the dog)))
- (6.39) the rat (that=the rat (that=the cat) (that=the dog (that=the cow)))

Here, the unacceptable sentences (6.25) - (6.27) are morphologically less complex than the acceptable sentence (6.33) - (6.35). It should be noted that the morphologically less complex structures are, however, recursive (see Reich, 1968 and 1969). Such recursive structures are subject to constraints on the degree of embedding which may occur (Christie, 1976). The increased morphological complexity common to (6.33) - (6.35) yields iterative structures, on the other hand. The thematic structures of (6.24) - (6.27) and (6.32) - (6.35) are analogous to the general sentence structures, i.e. are recursive and iterative, respectively.

In all the acceptable sentences, the depth of thematic embedding never exceeds one. In the unacceptable sentences here it always exceeds one. As noted by Chomsky (1965:198, footnote to Chapter 1 in Aspects), Yngve (1960) made a very important point, i.e. that 'some transformations can be used to decrease nesting, and hence to reduce the perceptual load'.

Therefore, it seems to be primarily the thematic complexity of (6.25) - (6.27) which contributes to their unacceptability.<sup>7</sup> A way to test this hypothesis would be to construct a discourse with a self-embedded thematic structure--such as that given for sentence (6.27), but without nested sentence structure. The themes would be introduced in successive independent clauses. Speakers would be asked to indicate 'paragraph divisions' (i.e. segment the discourse as in Coleman (1981)). If the speaker rejects thematic complexity of the type given for (6.27), then he should 'reorganize' the discourse into a structure resembling (6.40).

(6.40) (the rat) (the cat) (the dog) (the cow) (the maid)

Actually, any 'reorganization' which eliminates thematic structures more complex than those with depth of embedding greater than one will be predicted, given that no other constraints are violated.

Christie (1976) noted such 'reorganization' of unacceptable centrally-embedded sentences such as (6.25) - (6.27). This reorganization is observable in the way such sentences are read aloud. They are usually read with 'list-reading' (i. e. iterative) intonation, even by those linguists who claim them to be 'grammatical'. Reich (1969) also discussed the differences in intonation patterns between the iterative and recursive versions of restrictive relative clauses. It is worth noting that the ungrammatical equivalents of (Sullivan's) (6.13) and (6.14), above, are interpretable only as incomplete iterative structures. See (6.41) and (6.42).

(6.41) (a) \*This is the man the novel being filmed for TV by ...

(b) \*This is the man by whom the novel being filmed for TV ...

(6.42) \*This is the novel the man filming ... for TV ...

All of the data containing embedded passives suggests a general tendency toward encodings and decodings with minimal thematic complexity (i.e. toward iterative interpretations in preference to recursive ones).

### Notes

<sup>1</sup>This is parallel to the situation in the phonology of English where the phonon /t/ of /stap/ (**stop**) cannot be said to be phonemically voiceless, since such '-emic' status is established only via contrast. There is no sequence /sdap/ in English on which to base the contrast.

<sup>2</sup>The Syntactic Structures formalization of the active-passive relationship was along similar lines.

<sup>3</sup>Chomsky (1973) stated that passive can't move the subject of a tensed S. See (i) and (ii).

(i) Fred believed (that) Mary was rich.

(ii) \*Mary was believed (that)  $\emptyset$  was rich by Fred.

In addition, (ii) appears to be ruled out by the Subadjacency Condition. See Chomsky and Lasnik (1977:430).

<sup>4</sup>Actually, this appears to require modification. In (6.11) (a), Bob and he are realizations of two separate sememes, but represent a single participant in the discourse block.

<sup>5</sup>The articles cited by Chomsky are J. Hust and M. Brame (1976), 'Jackendoff on Interpretive Semantics', *Linguistic Analysis* 2:243-277; L. Solan (1977), 'On the interpretation of missing complement NP's', unpub. mimeographed paper, Univ. of Mass., Amherst.

<sup>6</sup>Kuno (1976) dealt with thematic function in relative clauses.

<sup>7</sup>It is just as easy to find examples where the sentence containing passive is ungrammatical, but that with active is not. Compare (i) and (ii).

(i) This is the maiden all forlorn that milked the cow with the crumpled horn that tossed the dog that worried the cat that killed the rat that ate the malt.

(ii) \*This is the maiden all forlorn that the cow with the crumpled horn that the dog that the cat that the rat that the malt was eaten by was killed by was worried by was tossed by was milked by.

CHAPTER 7  
OBSERVATIONS ON THE 'MEANING' OF  
PASSIVE--SOME LINGUISTIC BACKGROUND

Generally speaking, articles on the functions of the active-passive dichotomy have appeared only recently in the theoretical literature, and then only sparsely. This chapter will discuss representative articles from two areas of contribution.

Some of the earlier studies dealt with the meanings of elements in passive sentences. For example, Langacker and Munro (1975) attempted to justify a suggestion for a (rather complex multi-sentential) deep structure for 'full' passives, based in part on the 'meanings' of *be* and *by* in passive sentences.<sup>1</sup> Another study was Bolinger's (1974) 'On the passive in English'.

Bolinger (1974) proposed the following hypothesis (p. 67):

the subject in a passive construction is conceived to be a true patient, i.e., to be genuinely affected by the action of the verb. If the grammatical object in the active counterpart is not conceived as a true patient, there will be no corresponding passive. The verb may be simple or complex, and among the latter of course are prepositional verbs.

Bolinger (1978) essentially reaffirmed the earlier hypothesis.

Bolinger's original thesis was criticized, and rightly so, by Householder (1978).

Bolinger's (1974) judgements of grammaticality presented a major problem. For example, he found sentences (7.1) - (7.5) acceptable.

- (7.1) The defendants--the ones arrested and brought charges against yesterday--are all expected to plead innocent.
- (7.2) He likes to be made things (for).
- (7.3) That product can't be made a profit from.
- (7.4) How does it feel to be aimed a gun at?
- (7.5) For a nice floor like this to be thrown a rug over would be a shame.

To me, (7.5) seems marginal, at best. I would judge the others, (7.1) -(7.4), clearly ungrammatical. Bolinger also gave the following sentences (7.6) - (7.10), and marked them as shown.

- (7.6) \*The premises were absented by the plaintiff.
- (7.7) ?The ground is covered by snow.
- (7.8) (a) \*The valley was filled by a mist.  
(b) \*The valley was filled with a mist.
- (7.9) \*At that moment the scene was entered by Hamlet.
- (7.10) \*The store was entered by two customers.

However, there is no question in my mind that sentences (7.6) - (7.10) are both grammatical and acceptable. To the argument that there is some arbitrariness with regard to the ability of different verbs to passivize, such disagreements on the grammaticality of (7.1) - (7.10) are no problem, and even offer some support. However, to Bolinger's (very strong) claim, that passives (always) involve 'true patients', such disagreement seems quite damaging.

Further, there is Bolinger's assignment of patient-like status to the subjects of English passives. Householder offered (7.11) as a counterexample.

(7.11) The Pacific was first seen by Balboa.

(7.12) \*The Pacific was never seen by me.

It is easy to produce such counterexamples, especially with verbs of sensation and cognition. Bolinger's (1978) 'counter-counterexample', (7.12), is an obvious red herring. It contains the pronoun **me** in the **by** phrase, and is not a true counterexample for this reason. Pronouns are, in general, prohibited from occurring in passive **by** phrases unless under contrastive stress; see Postal (1971). In addition, judgements of Pa-like status given by Bolinger were undeniably subjective and highly idiosyncratic. He stated (1974:76) that 'the English passive has established a semantic distinction between true transitivity and spatiality'. Given a sentence like (7.13), he would claim Pa-like status for **the bridge**. This is arguable. Here again, such disagreements among native speakers are disastrous for Bolinger's hypothesis.

(7.13) That bridge has been flown under many times.

Only a very few studies have dealt with functions of the active-passive dichotomy. One is Sullivan (1980), discussed in Chapter 5. Others have touched very briefly on the topic, e.g. Yngve (1960), mentioned in Chapter 6.<sup>2</sup> One study that dealt with the 'meanings' of passive in some detail was Davison's (1980) 'Peculiar passives'.

She noted that passive sentences often differed in 'communicative intent' from their active counterparts. She asserted (p. 42) that

...some passives convey more than the syntactically corresponding actives; they have different conditions for use in discourse, or are associated with extra assumptions on the part of the speaker, or 'mean' something slightly different.

Specifically, she asserted, passives ('peculiar' or otherwise) assign to their subjects 'some perceptible property connected to the event described' (p. 52), especially, 'some quality resulting from the event described' (p. 55). Davison gave three examples of such properties (pp. 53-54):

- (7.14) Passives often have 'adversative' meanings relative to their subject.
- (7.15) Passives mentioning famous persons suggest that 'the subject-topic has the quality of being interesting, at least to the speaker.'
- (7.16) Passives can indicate 'that the event is possible.'

For examples of (7.14) - (7.16), see (7.17) - (7.19), respectively.

- (7.17) (a) This chair has been sat on (by Fred).  
(b) That glass has been drunk out of (by someone).
- (7.18) (a) This porch was walked on by Teddy Roosevelt.  
(b) That cup was drunk out of by Napoleon.
- (7.19) (a) That bridge has been flown under by Smilin' Jack.  
(b) The enemy base has been flown over several times.  
(c) The valley has been marched through in two hours.

Davison concluded that such a variety of 'meanings' could not be attributed to the deep structure of passive sentences. Rather, she asserted, these 'meanings' are communicated via (Gricean) conversational implicature. Thus,

in any kind of formal mapping between active and passive structures, it is not necessary to take into account the extra meanings which are sometimes (but not invariably) associated with passive sentences, if it can be shown that such meaning is conveyed... by observance of Grice's Maxims. (Davison, 1980:64)

In other words, she was suggesting that an active and its corresponding passive should be derived from the same deep structure (p. 42). However, this suggestion depended on three assumptions. They were (7.20) -(7.22).

(7.20) Passives were to be derived from underlying actives via a meaning-preserving transformation; this rule would be an optional singulary transformation.

(7.21) Topic was to be represented in the deep structure.

(7.22) The 'extra' meanings of passives were assumed to be conveyed by 'observance of Grice's Maxims'.

The assumption (7.20)--of a meaning-preserving rule of passivization--was (and still is) inconsistent with transformational theory. See the discussion of Jackendoff (1972) in Chapter 3, above.

None of these assumptions--if shown to be true--is in significant conflict with the stratificational description presented in Chapter 5.<sup>3</sup> In fact, Davison's conclusion 'that the promotion of NP's to topic position is the crucial effect of the application of the English Passive rule' is what the stratificational description predicts.<sup>4</sup>

There is also indirect support in the linguistic literature for this conclusion concerning the function of the active-passive dichotomy.

- (7.23) (a) John shaved himself.  
(b) \*Himself was shaved by John.  
(c) \*John was shaved by himself.  
(d) John was shaved by himSELF.

Consider Postal's (1971) observations on the prohibition of sentences like (7.23) (b) and (c). In general, (7.23) (a) - (d) support the notion that the active-passive choice serves primarily to control thematization. Sentence (7.23) (b) would be blocked by a correct description of reflexivization. In (7.23) (c), passivization does not change the theme, hence, it should be prohibited by discourse block constraints. In sentence (7.23) (d), however, passivization does affect the content of theme position (since contrastive stress is involved); passivization is therefore permitted.

Finally, Keenan's observation relates closely to this matter (1975:345):

PASSIVE is difficult or impossible to apply if the reference of the promoted NP is not understood independently of that of the subject.

(By 'subject' Keenan is, of course, referring to the 'underlying subject'.) This fact, as well, suggests that passivization controls thematization.

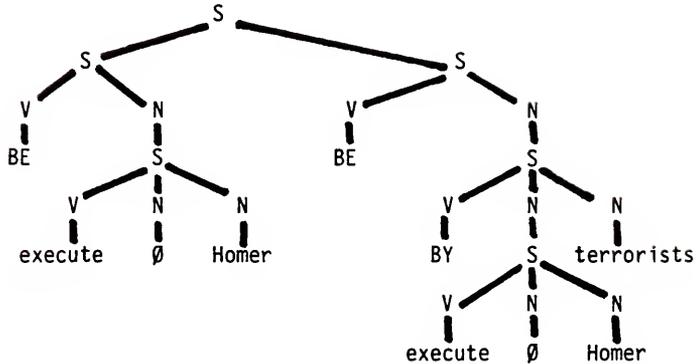
#### Notes

<sup>1</sup>Contrary to what the title of their paper implies, ('Passives and their meaning'), Langacker and Munro (1975) did not deal with the meanings or functions of passive sentences. The bulk of their article was devoted to the presentation of a rather 'Rube Goldbergish' deep structure for passives. See (i) and the deep structure they suggested for it, (ii). The article touched briefly on the meanings of *be* and *by* in passive sentences. They decided that

*by* does have intrinsic semantic content in passive sentences--content which in some way imputes responsibility or agency to its nominal object. (p. 816)

Concerning *be* there was somewhat more equivocation. They stated (p. 820) that 'the semantic significance of *BE* in passive sentences is somewhat elusive....' But, they concluded, '*BE* asserts the existence of a state....'

- (i) Homer was executed by the terrorists.  
(ii)



<sup>2</sup>Reich (1977) restated Yngve's point rather humorously, in 'The house that Noam built'.

<sup>3</sup>It is true that the stratificational model assigns '-emic' status to passive focus in all full passives and in some agentless passives. (See again Chapter 6.) I believe this assignment is correct.

The complete optionality of passivization in the current Chomskyan framework is, I think, a deficiency.

<sup>4</sup>What Davison called 'topic position' is what I have been referring to as 'theme'.

CHAPTER 8  
OBSERVATIONS ON THE 'MEANING' OF  
PASSIVE--SOME PSYCHOLINGUISTIC BACKGROUND

This chapter deals with some relevant psycholinguistic literature on the 'meaning' of passive.<sup>1</sup> While observations on the 'meaning' of passive in the linguistic literature have aimed at formal descriptions based on intuitional judgements of native speakers, the studies discussed in this chapter have sought to discover statistical tendencies in similarly-acquired judgements. The two approaches are not opposed, but are skew. Attempts at reconciliation of the two approaches have not met with a great deal of success in the past, especially with regard to studies of the active-passive dichotomy.

The tendency in both fields of inquiry has, however, been to view passive as a way to 'emphasize' a 'logical object'.<sup>2</sup>

For example, Tannenbaum and Williams (1968:246) reasoned that<sup>3</sup>

placing the conceptual focus on either the actor subject or on the acted-upon object of a simple situation would differentially affect the readiness to describe the situation in active or passive sentence forms.

In general, the results of their experiment seemed to bear out this hypothesis.

Johnson-Laird did two (1968a, 1968b) closely related studies on the interpretation of the passive voice. The hypothesis in each case was that the subject of a passive sentence was emphasized, but

that there was no real difference in emphasis on subject or object in an active sentence.<sup>4</sup>

In Johnson-Laird (1968a), the experimental subjects were divided into two groups. One group was presented with sentences (8.1) and (8.2), the other group, with (8.3) and (8.4). (The sentences were presented in written form, typed completely in capital letters.) The sentences for the first group (Group EQ) referred to two sets of colors in the same (Equivalent) order, while the sentences for the second group (Group CO) referred to colors in a different (Converse) order.

(8.1) RED FOLLOWS BLUE.

(8.2) BLUE IS FOLLOWED BY RED.

(8.3) RED FOLLOWS BLUE.

(8.4) RED IS FOLLOWED BY BLUE.

The subjects were to draw simple diagrams of the sentences, coloring in areas on a strip of paper in blue and red. Johnson-Laird (1968a:69) assumed that the size of the areas represented the relative importance of the subject and object of the sentence. Based on this assumption, he predicted (1968a:69) that<sup>5</sup>

(8.5)(a) The subject of a sentence would be represented by a larger area than its object.

(b) This difference would be greater for passive sentences than for actives.

These two predictions were confirmed by the data. However, the hypothesis (that passive sentences emphasized their subjects, while actives did not) was not necessarily proven. It did show that there was a difference in the interpretation of active and

passive counterparts. Whether or not the difference was in terms of emphasis--or, for that matter, exactly what was meant by 'emphasis'--was not clearly established.

Hornby (1972) proposed three types of subject and predicate. The 'superficial' (or 'grammatical' or 'surface') subject was defined primarily on the basis of its governing subject-verb agreement in the verb of the 'surface predicate'. He defined the 'logical' (or 'underlying' or 'deep-structure') subject as the NP immediately dominated by the S node in the deep structure. (This definition of 'logical subject' is taken from Chomsky (1965).) The rest of the deep structure was termed the 'logical predicate'. Hornby further distinguished a 'psychological subject' and 'psychological predicate', suggesting a close relationship between the 'psychological subject' and 'psychological predicate' and Halliday's (1967) 'theme' and 'rheme' (or 'given' and 'new' information) dichotomy. However, the 'theme' as Halliday defined it, must always precede the 'rheme'. For Hornby's 'psychological subject', this is not always the case. For the moment, Hornby's 'psychological subject' will be defined intuitively as 'what the sentence is about'. (It will be seen below that there may actually be no conflict between the 'psychological subject' of Hornby (1972) and the 'theme' of Halliday (1967).)

Sentences (8.6) - (8.8) from Hornby (1972) contain examples of each type of subject as he defined them. In the first of these sentences, **John** is 'surface', 'logical', and 'psychological' subject. In (8.7), **kumquats** is the 'psychological' subject, while **John** is both the 'logical' and 'surface' subject. In the third

sentence, **kumquats** is both the 'surface' and 'psychological' subject, and **John** is the 'logical' subject.

(8.6) John seldom eats kumquats.

(8.7) Kumquats, John seldom eats.

(8.8) Kumquats are seldom eaten by John.

Hornby's experiment had two purposes: to establish the validity of the tripartite distinction of subject and predicate types mentioned above, and, to establish the relation of the 'psychological subject/predicate' distinction to the sentential features of word-order, grammatical structure, and contrastive stress.

The experiment dealt with action-verb sentences only, each stimulus sentence having one agent and one patient type noun. In short, each experimental subject heard a tape-recorded sentence and was shown two pictures. He was then told to select the picture that went with the sentence he had just heard. However, it was arranged that neither picture fit the recorded sentence. Rather, the two pictures included representations of the agent noun and the patient noun, respectively, involved in some other activity. Structures used in the stimulus sentences were either active, passive, cleft on agent, cleft on patient, pseudocleft on agent, pseudocleft on patient, or stressed agent in form. See (8.9) - (8.15), respectively (below). It was expected that the experimental subject would select the picture containing a representation of the psychological subject of the sentence he had just heard.

Hornby (1972:639) found that his subjects did not invariably choose the picture containing the logical subject. Nor did they always choose the picture illustrating the first nominal element

mentioned. Nor did they choose the picture with the surface subject. The depiction of the first nominal element mentioned was selected more often for actives with unmarked stress (62%) and passives (65%), as well as for sentences with a pseudocleft agent (72%), or patient (68%). The second nominal element was more often selected as 'what the sentence was about' in sentences with a stressed agent (58%), and in those with a clefted agent (70%) or patient (59%).

The data clearly supported a distinction between 'logical' and 'psychological' subject.

Hornby's second goal--that of establishing the relations between the 'psychological subject/predicate' distinction and word-order, surface structure, and stress--remained not fully accomplished.

The major problem was that he controlled for marked/unmarked stress only in simple active sentences. The data would be more complete if it included marked-stress passives, marked-stress sentences with a pseudoclefted agent, and so on. If the unmarked stress pattern in each case places primary stress (even if not always of the same degree on an absolute scale) as indicated in (8.9) - (8.15), then Hornby's 'psychological subject' is the unstressed nominal element (since he had only two). Except possibly for an apparently unnoticed difference of opinion concerning the unmarked stress pattern for the cleft sentence, this corresponds with Halliday's notions of 'given' vs. 'new' information.<sup>6</sup>

(8.9) The Indian built the teepee.

(8.10) The teepee was built by the Indian.

(8.11) It was the Indian that built the teepee.

(8.12) It was the teepee that the Indian built.

(8.13) The Indian is the one that built the teepee.

(8.14) The teepee is what the Indian built.

(8.15) The Indian built the teepee.

There is one other point of departure. While Halliday insisted on the applicability of the 'given-new' distinction only to sentences with unmarked stress, Hornby's data seems to indicate--for the one case at least--the same phenomenon occurring in the marked-stress active (8.15).<sup>7</sup>

Because he failed to consider the marked/unmarked stress conditions in the data, Hornby (1972:633) saw word order as of major--though not overriding--importance in 'expressing the psychological relations'. He suggested that 'this function of word order in expressing the psychological relations may be a primary factor governing choice of the passive construction' (1972:633). However, as we have seen, Hornby's 'psychological subject' is apparently the less-stressed NP of the two in the sentences under consideration, i.e. the 'old information'.

Note that while Hornby's stimulus sentences did not include any similar to (8.16)(a), they did include active with marked and unmarked stress, as in (8.16)(b) and (8.17)(b), and yielded a different 'psychological subject' for each type, corresponding to the less-stressed NP. Since his experimental design measured differences (8.16)(a) among his data sentences, the 'psychological subject' would have been identified as **John**.

(8.16) (a) Fred was hit by John. (marked)

(b) John hit Fred. (unmarked)

(8.17) (a) Fred was hit by John. (unmarked)

(b) John hit Fred. (marked)

The choice of 'psychological subject' cannot itself determine the selection of passive voice, since passive can occur with either stress pattern, e.g. (8.16)(a) and (8.17)(a).

Similarly, the cleft and pseudocleft constructions have marked and unmarked stress patterns. The 'psychological subject' as Hornby defined it will shift away from the stress in either case, and will therefore be seen to be independent of clefting and pseudoclefting. Hornby's experimental design, therefore, revealed no direct relationship between the 'psychological subject/predicate' distinction and either word order or (surface) grammatical structure.

Clark (1965) measured the relative informational uncertainty of the logical subject, object, and verb in active and passive sentences.<sup>8</sup> Clark's (1965:365) results showed the agent ('actor') having much less uncertainty than the verb or patient ('object') in an active sentence. This is consistent with the idea that the agent in an unmarked-stress active carries the 'given' information, as Halliday (1967) and Hornby (1972) have indicated. However, Clark's results indicated that in the passive, the patient, verb, and agent bore no significant differences in uncertainty. This is, of course, contrary to our general expectation, which is that the patient in an unmarked-stress passive should be the 'given' NP (Hornby's 'psychological subject'), and thus have the lower uncertainty measure.

At least three criticisms are applicable to Clark's study.

First, his uncertainty measure calculated the diversity and thus the uncertainty of words, not that of meanings. Now, this may

not be a completely fair criticism, since there is no accepted procedure for unambiguous recognition, let alone quantification, of meanings in sentential and larger contexts. But, it should be observed that this factor could have had a confounding effect on the results.

Second,--and this is a weakness common to most of the studies to date--the sentences were either heard or produced in a linguistic vacuum. 'Context', if provided at all, was not linguistic context, but situational context (i.e. the extra-linguistic situation, or 'set'). If linguistic context is an influencing factor or --especially--the determining factor in the production of passives, then experiments dealing with the encoding or decoding of sentences in a linguistic vacuum could produce results with a high degree of randomness thrown in. At best, such experiments would only deal with unmarked conditions. At worst, listeners might randomly supply their own contexts, completely randomizing the resultant data in an uncontrolled fashion.

The third criticism is really that of James (1972). He suggested that some earlier studies failed to consider the image-value ('I-value'), or relative concreteness, of the agent and patient nouns involved. Since in some studies, such as Clark (1965), he argued, the experimental subjects were presented with no defining or limiting context, there could have been a tendency for them to produce more-concrete agent nouns and less-concrete patients, since the agent of most verbs is more highly constrained than is the patient. This is also consistent with Clark's (1965) findings. As other studies have shown,<sup>9</sup> concreteness and imagery in noun phrases

(which should be regarded in this context as potential themes) affect the manner in which experimental subjects remember them. It is thus expected that experimental subjects may exhibit a very low uncertainty on agents in active sentences, and a slightly greater uncertainty on patients in passives.

Recall that Johnson-Laird's experimental subjects (1968a) placed a proportionately greater 'emphasis' on the subjects of passives than on subjects of actives. His subjects and objects were red and blue, which cannot vary significantly in terms of concreteness or I-value. Thus, James' (1972) criticism does not apply to his study.

In fact, this result from Johnson-Laird's earlier work is consistent with the above-mentioned findings of Clark (1965). Recall also that passive is morphologically more highly marked than active. This could contribute to a stronger effect with the former. In addition, as the current experimental student shows (Chapter 9), passive obscures at least some paragraphing cues. This contributes further to an asymmetry in the effect of the active-passive dichotomy on thematization. See Chapter 9 (below) for details.

#### Notes

<sup>1</sup>These studies specifically dealing with passive are in general concerned with 'full' passives only.

<sup>2</sup>The term 'logical object' is meant in the sense as in Chomsky (1965).

<sup>3</sup>By 'actor subject' and 'acted-upon object', Tannenbaum and Williams were not referring to grammatical (i.e. surface) functions, but to semantic categories. These categories, it must be assumed, were meant in much the way the terms 'agent' and 'patient' are commonly used by case grammarians.

<sup>4</sup>It is not clear what motivated the original hypothesis (that the degree of 'emphasis' on the theme in actives and passives should be different), but in light of the results of the current study, it appears to be based on sound intuitions. See Chapter 9, below.

<sup>5</sup>There was a third, subsidiary, prediction:

(8.5.3) The difference in the areas given to active and passive subjects would be greater in Group EQ, since that group had to detect a meaning difference between active and passive, while group CO did not.

For group CO, the task was thus intended to reveal any implicit reliance of the experimental subjects on rules governing the use of active and passive. Why the use of sentences (8.3) and (8.4) should reveal any implicit reliance on such rules is not clear. At any rate, this third prediction was not confirmed.

<sup>6</sup>That this pattern (in unmarked stress sentences) corresponds to 'given' (unstressed) and 'new' (stressed) information is suggested by the results of Clark and Begun (1968), at least in the case of active and passive sentences. Their results strongly suggested that (p. 227) 'the "information"-bearing part of the sentence is the surface predicate' and that 'this is true for both actives and passives'. See also Clark (1965). Further empirical verification, however, is desirable. However, such verification is beyond the scope of the present study. One way to verify all of the stress patterns given would be to repeat Hornby's (1972) experiment, but contrasting only marked and unmarked stress passives for 'psychological subject'. If the 'psychological subject' is different in the two cases, then it can be identified with 'given' information.

<sup>7</sup>William J. Sullivan has suggested (personal communication), 'if a sentence has marked stress, that marked information focus gives the new information. What's old or given must then be determined from context alone since anything not marked "new" may be "given"'.

<sup>8</sup>As an informational uncertainty measure, Clark (1965) used:

$$u = - \sum_i p_i \log p_i$$

<sup>9</sup>For example, Begg and Paivio (1969) did a study on the recall of concrete and abstract sentences. In concrete sentences, experimental subjects recognized semantic changes more readily than changes in wording when meaning was not significantly altered. But, subjects noticed changes in wording in abstract sentences more than they did semantic changes. This, as Begg and Paivio suggested, indicates a difference in the way concrete and abstract sentences are stored in memory. A later experiment performed by Holmes and Langford (1976) brought out other differences in the way concrete and abstract sentences are stored.

CHAPTER 9  
PASSIVE AND THE ORGANIZATION  
OF EXTENDED DISCOURSE

Paragraphing signals are not entirely semantic, but are also formal in nature. This was demonstrated by Koen, Becker, and Young (1969). Experimental subjects were presented with prose passages and nonsense paralog. The subjects were instructed to indicate paragraph boundaries. In testing eleven passages, the researchers found that paragraphing cues in three were almost entirely formal.

Some evidence suggests that the selection of active or passive voice may be involved with such paragraphing cues.

Paduceva (1974) described certain constraints on what she termed the 'primary name (noun)' of a sentence. The primary noun, as she defined it, was simply the first in a sentence. Although her research was confined to data consisting only of a restricted type of descriptive narrative, she found a 'fundamental regularity for those texts':

In all phrases<sup>1</sup> of a paragraph except the first, the primary name cannot be chosen arbitrarily; a name can be primarily in a given phrase only if it is dominated.

Paduceva defined three types of 'domination': (1) DIRECT, where the noun phrase is anaphoric and coreferential with an earlier-occurring NP; (2) INDIRECT, where the noun phrase is anaphoric, but semantically included in an earlier-mentioned NP; and, (3) NON-FORMAL, which Paduceva defined as 'domination by an implied noun', which appeared to consist primarily, if not exclusively, of exophoric references.

Morton (1966) noted that the sentence pairs as in (9.1) and (9.2) each comprise a perfectly 'natural' two-sentence discourse, while those in (9.3) and (9.4) 'do not'. In the words of Clark and Clark (1968), both (9.3) and (9.4) 'seem somewhat odd'. I would like to reserve judgement on the 'oddity' of the latter two sentence pairs. In any case, there is something of a 'jarring' sensation at the beginning of the second sentence of each.

(9.1) I saw a house. The house was built by a man.

(9.2) I saw a man. The man built a house.

(9.3) I saw a house. A man built the house.

(9.4) I saw a man. A house was built by the man.

In English, the choice of active or passive voice is a major way of controlling realization in subject position. Subject position is very likely to be involved with constraints of the sort observed by Paduceva. Thus, it was hypothesized, the active-passive dichotomy might be involved in the control of paragraphing cues.

Coleman (in press) demonstrated that the noun-pronoun alternation could act as a paragraphing cue. That study tested the effect of the noun-pronoun alternation in corresponding text pairs with active and passive transition sentences. The noun-pronoun alternation was shown to have a highly predictable effect in texts with active transition sentences. The same effect, however, was not observable in texts with passive transition sentences.

In the current study, the raw data of Coleman (in press) was reanalyzed in order to test the above hypothesis.

Instrument

Several test texts were used. In general, a text consisted of a few sentences 'about' one NP, then a few sentences 'about' another NP; the two groups of sentences were separated by a 'transition sentence' which mentioned both NP's.

There were two basic texts, one having an animate NP as Ag in the transition sentence and an inanimate NP as Pa, the other having both NP's animate. It was thought that the animacy might affect the centrality of an NP to the discourse, and hence, the segmentation of the discourse. Thus, the two texts were used in order to control for this potentially confounding variable.

The order of presentation of the two NP's in each text was varied. This controlled for another possible confounding effect. In an Ag-first discourse, a highly-marked structure (passive) in the transition sentence would put new information in the subject position (and, it was hypothesized, create a discourse segmentation). In a Pa-first discourse, an unmarked structure (active) would have a similar result. The degree of markedness in the structure of the transition sentence could affect the 'strength' of the discourse boundary.

Each text variant mentioned had four versions, these differing only in terms of the transition sentence. The transition sentence was either active or passive and contained either a nominal or pronominal anaphor.

The text forms are shown in Appendix III.

Subjects

The number of subjects who were presented with each form is shown in Table 9-1, from Coleman (in press).

Table 9-1. Number of subjects given each text variant.

TEXT FORM		transition sentence		passive	
		active			
		N	Pron	N	Pron
	MH	40	31	51	--
	HM	37	34	37	35
	JM	15	15	15	15
	MJ	15	15	16	15

The subjects were all adult native speakers of English. Data from non-native speakers of English (and bilinguals) was culled after being collected.

Procedure

Each person who helped conduct the survey was asked to use the 'Directions to person conducting survey session'--Appendix I.

The subjects were purposely misled about the nature of the survey (see paragraph 3 of Appendix I). This was done to avoid subjects' applying consciously-learned 'grammar school' rules to the task.

All subjects completed a short demographic profile on the first page of the form. (See Appendix II for a sample demographic data page.) The second page of the form contained the text variant, roughly centered, with short instructions at the top of the page. (The text of these instructions is given in Appendix III.)

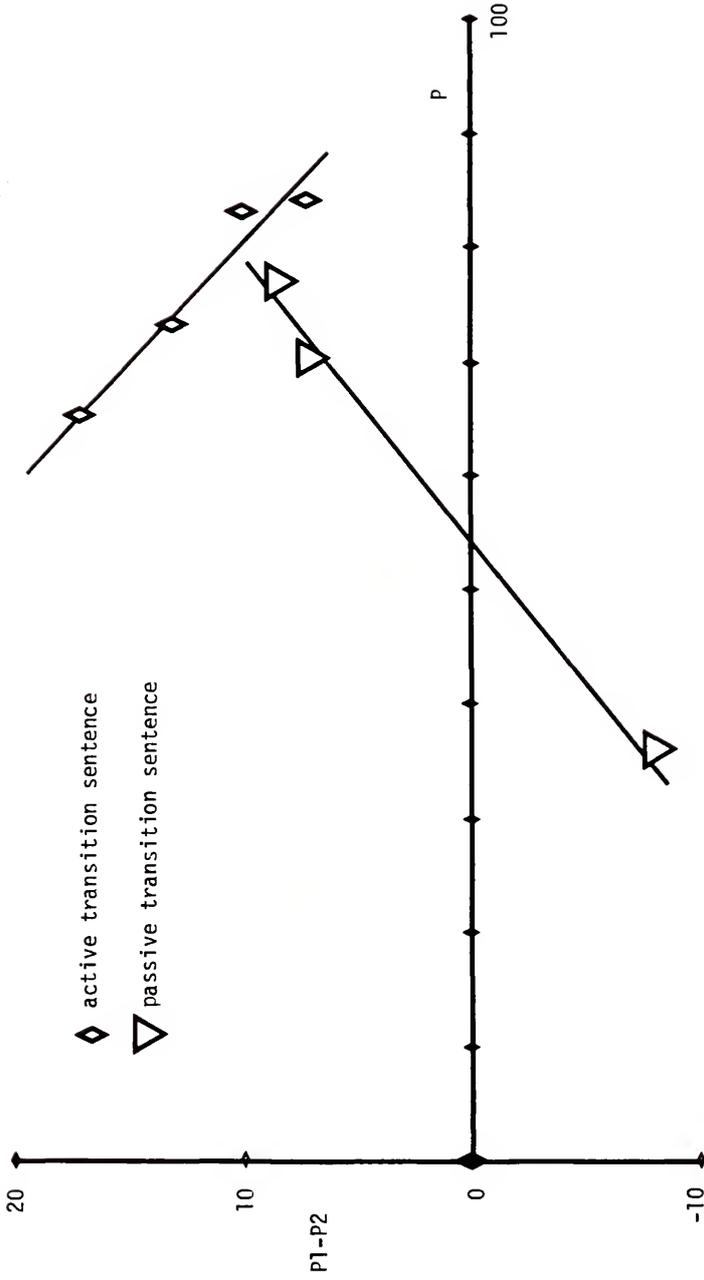


Figure 9-1. The effect of the noun-pronoun alternation on BREAK1: active vs. passive transition sentences.

Results and Discussion

Coleman (in press) showed that in texts with an active transition sentence there was a strong correlation between P, the overall tendency of subjects to mark a paragraph boundary just before the transition sentence, i.e. at BREAK1,<sup>2</sup> and P1-P2, the strength of the effect of the noun-pronoun alternation on that tendency. Pearson's r for this correlation was calculated as -.95. Further analysis of the results of that study has shown that a strong correlation also existed between the two variables mentioned when the transition sentence was passive. The correlation in this case was .99. (Both values can be accepted with a 95% or greater level of confidence; t-tests for Pearson's r were performed.) Note, however, that the 'best fit' in each case is quite different. See Table 9-2. The data pairs are plotted in Figure 9-1, which shows the relationship graphically.

Table 9-2. Effect of the active-passive choice on the noun-pronoun alternation.

	r	t	slope
active	-.95	4.402	-.4775
passive	.99	9.538	.4133

As noted in Coleman (in press), the noun-pronoun alternation 'had a very different effect on texts with active vs. those with passive' in the transition sentence. In texts with an active transition sentence, the strength of the anaphoric link increased with a pronominal reference, decreased with a nominal reference. See Figure 9-2. In texts with passive transition sentences, the effect was observed two cases, but reversed in the third; the three texts did, however, show a high

Table 9-3. The effect of the active-passive choice on BREAK1 and BREAK2.

		BREAK1		BREAK2	
		P	P1-P2	P	P1-P2
TEXT	MHN	.4396	.091	.1429	-.0319
	HMN	.5270	.4054	.6301	-.0721
	JMN	.7667	.0333	.0667	.1333
	MJN	.8387	.0542	.2258	.2125
FORM	MHP	--	--	--	--
	HMP	.4783	.1588	.6957	-.1538
	JMP	.6667	0	.0667	.1333
	MJP	.7667	.0667	.5	-.2

degree of correlation (see again Table 9-2 and Figure 9-1). The reason for the difference was left unresolved in the earlier study.

In the current study, the effect of the active-passive choice on the same paragraphing judgements is explored. Values for P (the overall proportion of subjects marking a paragraph boundary) and P1-P2 (the proportion of subjects marking a paragraph boundary who viewed the text with an active transition sentence minus the proportion of those viewing a text with a passive transition sentence) were obtained for each text variant. The values are given in Table 9-3.

No significant correlation was found between P and P1-P2 overall, for judgements concerning either BREAK1 or BREAK2. Thus, the active-passive choice did not have the same effect (on either BREAK1 or BREAK2) in all text forms. Actually, no overall correlation was expected.

A significant correlation (with t-tests indicating a 90% level of confidence) was found between P and P1-P2 across animate-Ag/inanimate-Pa texts ( $r = .97$ ), and, across animate-Ag/animate-Pa texts ( $r = .81$ ). The effect of the active-passive choice and the degree of correlation were both stronger in the animate-Ag/inanimate-Pa texts. This is as expected, since in this case the active-passive choice creates a greater difference in thematic content, via the presence or absence of the feature S/animate/.

Also, the estimates of P for texts with animate Pa vs. inanimate Pa differed significantly. They were  $P = .79$  and  $P = .63$ , respectively, with a z-score showing a significant difference in these measures ( $z = 2.814$ ) with  $\alpha = .01$ .

If the constraints observed by Paduceva obtain fairly generally, then the following should be observed. First, among text forms with Pa-Ag order of presentation, the use of passive should have prevented

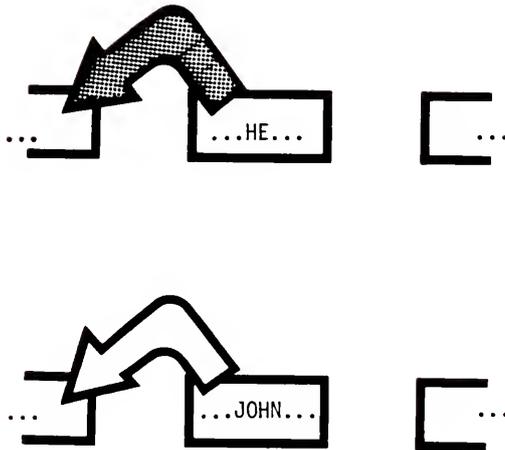


Figure 9-2. Strength of anaphoric 'link'.

violation of the constraints, and should therefore have decreased the proportion of breaks at BREAK1. In all four Pa-Ag texts, this was the case.<sup>3</sup> Second, among text forms with Ag-Pa order of presentation, the use of passive should have caused violation of the constraints, and therefore increased the proportion of breaks at BREAK1. However, in no Ag-Pa text was this observed; in every Ag-Pa text, passive decreased or had no effect on the proportion of breaks at BREAK1. There can be only one explanation for this result. In the texts with Ag-Pa order of presentation, a transition sentence such as (9.5) occurred in the text variant with passive, (9.6) in that with active.

(9.5) (a) Meg was punched in the nose one day by John.

(b) Meg was punched in the nose one day by him.

(9.6) (a) John punched Meg in the nose one day.

(b) He punched Meg in the nose one day.

The difference in the degree of markedness between (9.6) (a) and (b) is minimal, compared with the difference between (9.5) (a) and (b). In fact, most speakers judge (9.5) (b) to be ungrammatical unless it contains marked stress. There is a suspension of the noun-pronoun contrast in the unmarked stress variant of (9.5). Hence, (9.5) (a) and (b) are not a symmetrical pair parallel to (9.6) (a) and (b). The required presence of marked stress in (9.5) (b) probably affects the strength of the anaphoric link attributed to the pronoun in the *by* phrase.

In sum, the active-passive choice does seem to play a role in controlling paragraphing cues. However, this role cannot be defined solely in terms of the constraints observed by Paduceva.<sup>4</sup> The results of the current study indicate that the active-passive choice is a poor general test of the constraints, because of its vigorous interaction with anaphors in agentive *by* phrases.

Notes

<sup>1</sup>It should be noted that Paduceva's article in Linguistics is a translation from an original in Russian. It contains some peculiarities in nomenclature. The word 'phrase', for example, is used with regularity to mean 'sentence'.

<sup>2</sup>Henceforth the potential paragraph boundary immediately before the transition sentence will be referred to as 'BREAK1', that immediately after the transition sentence, as 'BREAK2'.

<sup>3</sup>In both the Ag-Pa and Pa-Ag text groups, there was insufficient evidence to indicate a linear correlation between P and P1-P2.

<sup>4</sup>Further testing should be performed using some other 'movement rule' which can be shown not to interact with the strength of anaphoric links.

CHAPTER 10  
PASSIVE'S 'POOR RELATIONS':  
GET, HAVE, AND 'PSEUDO-' PASSIVES

A fair amount of the literature on passive voice in English has been devoted--in part or in whole--to consideration of the so-called **get** passive, e.g. Gee (1974), Lakoff (1971), and Hasegawa (1968).

(10.1) Fred got punched in the nose (by John).

(10.2) Fred got himself punched in the nose (by John).

(10.3) Fred got him punched in the nose (by John).

(10.4) Fred got George punched in the nose (by John).

However, there has not always been a clear distinction between the **get** passive and a similar structure. Sentence (10.1) can accurately be labelled a '**get** passive'. Sentences like (10.2) have often been treated as variants of (10.1), i.e. as having another form of the **get** passive structure. In fact, (10.1) and (10.2) are very different structurally. Sentence (10.2) includes a clausal complement, unlike (10.1). If the pronominal reference in (10.2) were not coreferential with **Fred**, it would be realized as in (10.3), as **him**. A complete nominal reference could appear, as in (10.4). Sentences (10.2) - (10.4) are structurally identical. Note the independence of this structure from passivization. See (10.5) - (10.7). Note further that the meaning of **get** in (10.2) - (10.7) is always 'causative' in some sense. In (10.1), **get** is unmarked in this respect.

(10.5) Fred got John to punch him in the nose.  
(**him** coreferential with **Fred** or some other discourse block participant)

(10.6) Fred got John to punch himself in the nose.  
(**himself** necessarily coreferential with **John**)

(10.7) Fred got John to punch George in the nose.

Mention has also been made in the literature (e.g. Bolinger, 1974) of **have** passives. Two structures might be considered under this label. See, for example, (10.8) and (10.9).<sup>1</sup>

(10.8) Tom had a bucket of water thrown on him (by Ann).  
(**Tom** and **him** coreferential)

(10.9) Tom had a bucket of water thrown on himself (by Ann).  
(**Tom** and **himself** necessarily coreferential)

The **have** in (10.8) could be called an 'existential' **have**. In contrast, the meaning of **have** in (10.9) is 'causative' in much the sense of the **get** mentioned above. Sentence (10.10), parallel to (10.9), is perhaps a clearer example of this.

(10.10) Tom had a bucket of water thrown on Bob.

Notice that sentence (10.8) is ambiguous. It can also be taken as having the 'causative' **have**--if **Tom** and **him** are not coreferential. In any case, both structures are independent of passivization. See (10.11). It is multiply ambiguous, as the active equivalent of (10.9), or, of either interpretation of (10.8).

(10.11) Tom had Ann throw a bucket of water on him.

The 'causative' verbs **get** and **have**, and, the 'existential' verb **have** do not have any direct bearing on this discussion of passives.

The environment for the **get** passive--for some speakers, at least--includes restrictions that do not apply to the **be** passive. Bach (1974), for example, considers **get** passives with **it**-extraposition to be ungrammatical; (10.12) is an example.

(10.12) ?It got discovered that a burglar broke in during the night.

I find such sentences stylistically odd, since the **get** passive is used almost exclusively in informal contexts. It-extraposition, on the other hand, is--for me, at least--reserved for more formal situations.<sup>2</sup> I would not, however, consider (10.12) ungrammatical.

The grammars of some speakers have restrictions on **be** passives which do not apply to corresponding **get** passives. Many speakers judge (10.13) grammatical, but (10.14) ungrammatical.

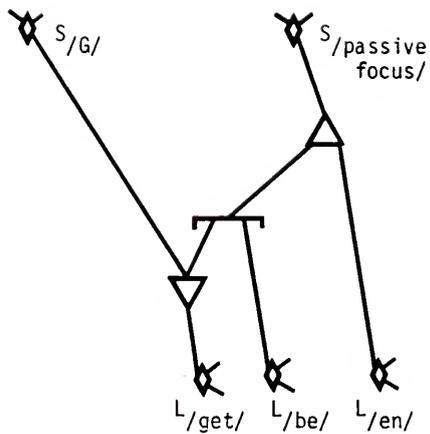
(10.13) OK, then, get arrested by the police.

(10.14) \*OK, then, be arrested by the police.

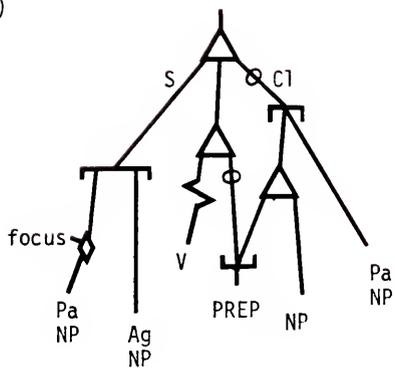
A complete description of the environments in which the **get** passive (or for that matter, the **be** passive) may occur is beyond the scope of the current study. It is worth pointing out, however, that a unified description of the **be** and **get** passives can be incorporated into the stratificational description presented earlier. See diagram (10.15). What remains is to discover how (for that matter--whether or not) the environments for  $S/G/$  can be described in the semotactics. As stated, this problem must be left for future investigation.

Now, consider the so-called 'pseudopassives'. The label is unfortunate. It reflects the inability of transformational generative grammar to provide a unified treatment of English **be** passives with subject noun phrases which may--in active counterparts--be realized as direct objects in some cases, as indirect objects or oblique objects in others. Recall from Chapter 4 that many studies have shown that an adequate, unified description of passive cannot be couched in purely structural (i.e. syntactic) terms. Such a description necessarily fails to account

(10.15)



(10.16)



for two sets of data. First, it cannot explain why some verbs with following NP's do not passivize. Second, 'it is difficult or impossible to enumerate the prepositions whose objects are promoted to subject in well-formed passive sentences' (Davison, 1980:49).

The ability of various NP's which would be realized as oblique objects in active sentences to occur as subjects of passive sentences must be described in terms of their semantic functions (i.e. semotactic categories). A treatment of the relevant portion of the semotactics is beyond the scope of the present study. However, any such treatment will not interfere with a unified stratificational description of the active-passive relationship. In the lexotactics, something like the line labelled 'P' in (10.16) is required anyway. It is needed to account for verb particles with intransitive occurrences of 'two-word verbs' like *run out*, *take off*, etc. See (10.17).

(10.17) (a) Our supply of pencils has run out.

(b) The airplane took off.

It will also provide the lexotactic (syntactic) position in which the preposition will be realized marking the semantic relation of the subject in certain kinds of passives. The preposition will be selected in exactly the same way whether the NP is realized as the (marked) subject of a passive or in complement position. The upward OR node above 'PREP' ensures the realization in the appropriate syntactic position, i.e. postverbally (under 'P') or as part of a prepositional phrase in C1.

One reason that 'pseudopassives' were such a problem in TG--especially up to and including the Aspects model--was that the rule of passivization was 'fed' by the rule of dative movement. The passive rule operated on direct objects only. Oblique objects which could not

undergo dative movement presented a major problem if they could, on the other hand, undergo passivization.

If semantic relations are of primary importance in determining which NP's can be the subjects of passive sentences--and current research seems to indicate that this is the case--then

accounts of how prepositional objects are assimilated to direct objects are of much less importance in providing an explanation for application of Passive to non-objects than previous writers have assumed. Little or no evidence exists in English that adverbial prepositional objects become direct objects. (Davison, 1980:57)

#### Notes

<sup>1</sup>In none of the examples that follow is the reading intended in which the (past) participial phrase is a 'reduced relative clause'.

<sup>2</sup>If (10.12) is 'anomalous' for this reason, a grammar of English should not exclude it. It would be blocked as the result of non-linguistic choices made by the speaker.

## CHAPTER 11 SUMMARY

Research on agentless passives, embedded passives, the so-called 'pseudopassives', the interaction of passivization with the interpretation of quantifiers, as well as results from the psycholinguistic literature (including the experiment in the current study), all indicate that the primary function of the active-passive dichotomy is control of thematization.<sup>1</sup>

The stratificational model presented in Chapter 5 is compatible with the requirements of a description of this discourse function of the active-passive dichotomy.

The stratificational model also permits appropriate assignment of '-emic' and conditioned status to passive focus in different types of passive sentences. No generative framework appears to be able to do so.

Finally, only the stratificational model allows a unified treatment encompassing both **be** passives and **get** passives, both 'full' and agentless passives, and, both 'true' and 'pseudo-' passives.

### Notes

<sup>1</sup>This includes control of the 'side-effects' of thematization. See Chapter 5 for the discussion of quantification, negation, and the active-passive dichotomy.

APPENDIX I  
DIRECTIONS TO PERSON CONDUCTING SURVEY SESSION

/\*Please read the sections in quotes out loud, verbatim. After you have announced that you are going to help conduct a survey, please read the following:\*/

"Please note: THIS IS NOT A TEST. This is a survey intended to discover something about human linguistic behavior. Do not be afraid that you will give a 'wrong' answer: there is no such thing as a 'wrong' or 'right' answer on this survey.

"Now, there are several versions of the questionnaire I am about to hand out. The differences between them are very minor differences in language which would be noticeable only under very close scrutiny. The purpose of this survey is to discover your reactions to these minor differences in wording, and how they may affect your responses to surveys in general. For this reason, please do not look at the questionnaire of the person next to you.

"When I pass out the survey forms, please do not look at the second page until instructed to do so."

/\*Pass out the forms, making sure each has two (2) pages. Also, make certain that those about to be surveyed follow your directions thus far. When everyone has a copy of the survey form, read:\*/

"Please read the directions on page one of the survey while I read them out loud."

/\*Read those directions to the subjects, beginning with 'Before beginning the survey....' A survey form page one is attached. Stress that those being surveyed are not to write their names anywhere on the survey form. Give the subjects time enough to supply their demographic data. If necessary, help them complete this part of the questionnaire quickly. When they are ready, read the following directions:\*/

"When and only when I ask you to, please turn to page two and read it. On page two of the questionnaire you will find a short reading. When you have read it, please mark an 'X' at the beginning of any sentence if it starts a section discussing a new topic.

"These instructions are repeated on page two of the questionnaire. Once the second part of the survey has begun, I cannot answer any questions. Are there any questions now?"

/\*Answer questions if necessary. Do not mention the word 'paragraph' unless someone in the group being surveyed does so first. If it is brought up, point out that the 'sections' of the reading may or may not correspond to 'paragraphs'--you do not know; ask them instead to follow their intuitions on where a new 'topic' is introduced. Read:\*/

"Please turn to page two now and begin. You have five minutes."

/\*When the time has elapsed, collect the questionnaires. When this is done, please answer only general questions regarding the nature of the survey, since the subjects you have surveyed may discuss it with potential future subjects. Ask the subjects not to discuss the survey with others anyway.\*/

/\*Please thank everyone for me.\*/

/\*Thank you, also.\*/

APPENDIX II  
SAMPLE DEMOGRAPHIC DATA QUESTIONNAIRE

On the following page, a sample demographic data questionnaire (used in the experiment described in Chapter 9) is shown. Its purpose was primarily to tell the researcher if a non-native speaker of English was being surveyed. It also served as a cover sheet, to help control the length of time for which a subject could view the text which followed.



APPENDIX III  
TEXT FORMS

At the top of each second page of the two-page survey forms (the first page contained the demographic data questionnaire -- see Appendix II) were the instructions shown on the next page of this Appendix. Below the instructions was the text variant viewed by the subject. The complete texts of each variant are given below.

\*\*\*\*\*INSTRUCTIONS\*\*\*\*\*

Read the short "story" below. When you are finished, please mark an "X" at the beginning of any sentence if it starts a section discussing a new topic. When you are completely finished, please turn over your questionnaire so that the person conducting the survey will know that you are done.

A man was walking past my store the other day. I knew I recognized him from somewhere, but I didn't know from where. It took me a minute, but when I thought about it, I remembered who he was. The man built a really nice house. The house I mean is the one over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street.

A man was walking past my store the other day. I knew I recognized him from somewhere, but I didn't know from where. It took me a minute, but when I thought about it, I remembered who he was. A really nice house was built by the man. The house I mean is the one over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street.

A man was walking past my store the other day. I knew I recognized him from somewhere, but I didn't know from where. It took me a minute, but when I thought about it, I remembered who he was. He built a really nice house. The house I mean is the one over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street.

There's this house over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street. A man I know built the house. He was walking past my store the other day. I knew I recognized him from somewhere, but I didn't remember from where. It took me a minute, but when I thought about it, I remembered who he was.

There's this house over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street. A man I know built it. He was walking past my store the other day. I knew I recognized him from somewhere, but I didn't remember from where. It took me a minute, but when I thought about it, I remembered who he was.

There's this house over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street. The house was built by a man I know. He was walking past my store the other day. I knew I recognized him from somewhere, but I didn't remember from where. It took me a minute, but when I thought about it, I remembered who he was.

There's this house over on Fourth Street. It's white, a two-story one with lots of windows on the side facing the street. It was built by a man I know. He was walking past my store the other day. I knew I recognized him from somewhere, but I didn't remember from where. It took me a minute, but when I thought about it, I remembered who he was.

John lives in a house on a corner. He hates it when people cut across his lawn. He has terrible fits of temper about it. John punched Meg in the nose one day. She was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken the shortcut across the corner.

John lives in a house on a corner. He hates it when people cut across his lawn. He has terrible fits of temper about it. He punched Meg in the nose one day. She was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken the shortcut across the corner.

John lives in a house on a corner. He hates it when people cut across his lawn. He has terrible fits of temper about it. Meg was punched in the nose one day by John. She was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken the shortcut across the corner.

John lives in a house on a corner. He hates it when people cut across his lawn. He has terrible fits of temper about it. Meg was punched in the nose one day by him. She was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken the shortcut across the corner.

Meg was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken a shortcut across a corner. John punched Meg in the nose one day. He lives in the house on the corner. He hates it when people cut across his lawn. He has terrible fits of temper about it.

Meg was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken a shortcut across a corner. Meg was punched in the nose one day by John. He lives in the house on the corner. He hates it when people cut across his lawn. He has terrible fits of temper about it.

Meg was fortunate not to have been seriously injured by the attack. She was surprised, of course, that it happened. She didn't know that people could be so fanatical about their lawns, or she would never have taken a shortcut across a corner. She was punched in the nose one day by John. He lives in the house on the corner. He hates it when people cut across his lawn. He has terrible fits of temper about it.

APPENDIX IV  
SUMMARY OF STRATIFICATIONAL  
DIAGRAM NOTATION

The basic nodes described below define the relationships AND (triangle), OR (bracket), and PRECEDENCE (line). AND and OR nodes may be ordered (lines emanating from one face separated, ordering to be read from left to right or top to bottom, unless otherwise specified) or unordered (lines emanating from face all at one point). They may be upward nodes (single line down) or downward nodes (single line up). With the AND node, ordering is understood as sequential ordering (catenation). With the OR node, ordering is understood as preferential ordering (relative markedness). Frequently-used nodes are shown below (beginning on the following page) with examples.



unordered (downward) AND--e.g. simultaneous realization



unordered (upward) AND--e.g. portmanteau realization



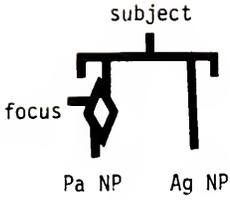
ordered (downward) AND--e.g. catenation



unordered (downward) OR--e.g. paradigmatic relation



unordered (upward) OR--e.g. neutralization

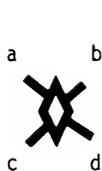


ordered (downward) OR--e.g. relative markedness  
of choices in a syntagmatic pattern



null terminus--e.g. zero realization

'Shorthand' conventions are shown below.



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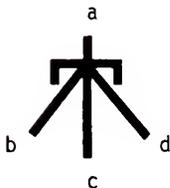
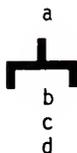
diamond node--used at stratal boundary to indicate '-emic' status



'zig-zag' in a line indicates missing detail



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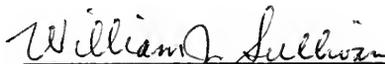
## BIOGRAPHICAL SKETCH

Douglas Wells Coleman received his B.A. in English in 1974, and an M.A. in theoretical linguistics in 1975.

From 1975 - 1979, he received various graduate teaching assistantships from the University of Florida's Program in Linguistics and English Language Institute. He taught undergraduate linguistics courses for the Program in Linguistics; freshman composition for the English Department; and, ESL composition, reading, and pronunciation drills for the English Language Institute. He also developed and team-taught an experimental course on 'The English of Computers', and, developed other ESL materials for the English Language Institute.

As a member of the faculty of the Rochester Institute of Technology (RIT), he has, since 1979, taught courses for deaf students in English grammar, reading, and writing at the National Technical Institute for the Deaf, a college of RIT. He also assesses language skills of deaf students, participates in curriculum development, and develops materials for three recently-created English courses.

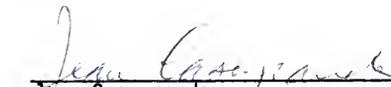
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This dissertation was submitted to the Graduate Faculty of the Program in Linguistics in the College of Liberal Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May 1982

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