Interrelations between Negatives and Quantifiers (I)

— Scope of Negation —

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Chapter I   Introduction

Concerning the study on the interrelations between negatives and quantifiers in English, a number of transformational works have been done recently. These recent works have established that the interrelations between negatives and quantifiers are related significantly to the semantic interpretation of a sentence in which they occur. In this short paper, I want to consider the problem concerning the scope of negation. In defining the scope of negation, I want to apply the feature difference between [+specific] and [−specific]. By manifesting the definition of this feature, we can define the scope of negation clearly. Furthermore, I want to consider the various definitions concerning the scope of negation such as the notion "in construction with" by Klima and the notion "command" by Langacker.

Chapter II The Feature of *Some*

When we consider the change *some* into *any* in the following sentences, the feature of *some* is the key point if the change is obligatory or not. The distinction of the feature [+specific] or [−specific] can well show the grammaticality of sentences like these:

(1)   I didn't listen to *some* of the speakers.   (Quirk)[1]

(2)   I didn't listen to *any* of the speakers.   (Ibid.)

In Sentence (1), *some* must have the feature [+specific], on the contrary, in Sentence (2) *some* has the feature [−specific], so that *some* is changed into *any* obligatory by Indef-incorporation.

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1   Randolph Quirk & Sidney Greenbaum, *A University Grammar of English*, London, Longman, 1974, p. 188.

Fillmore[2] makes an objection to Klima's rules because Klima's rule generates the nonsynonymous pairs as optional variants of each other.[3]

(3)	a.	Some of us didn't go to the picnic.	(Stockwell)[4]
	b.	None of us went to the picnic.	(Ibid.)
(4)	a.	Sometimes I don't ever know what to do.	(Ibid.)
	b.	I don't ever know what to do.	(Ibid.)
(5)	a.	Many of us didn't go to the picnic.	(Ibid.)
	b.	Not many of us went to the picnic.	(Ibid.)
(6)	a.	I didn't see *some* of them.	(Ibid.)
	b.	I didn't see *any* of them.	(Ibid.)

Concerning the peculiarity of Sentence (6), Fillmore rejects the suggestion that the difference of Sentence (3)–(5) is not owing to the distinction between "predicate negation" and "sentence-negation"; according to Jespersen's term, the distinction between "special negation" and "nexal negation."[5] Fillmore proposes that such indefinite quantifiers can have the feature either [+specific] or [−specific]. According to this principle, *some* in the positive sentence will be ambiguous.

(7)　I told her to do something.　　　　　　　　(Stockwell)

(8)　I'm looking for some girls with red hair.　　　(Ibid.)

In Sentence (7), the underlying structures can be considered in two ways: the difference between [+specific] and [−specific] can be expressed in the NP of *something*.

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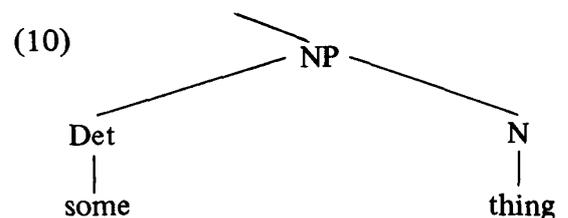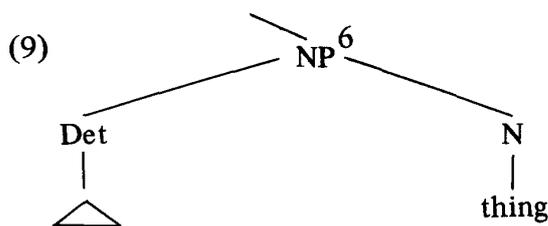
2　C.J. Fillmore, "On the Syntax of Preverbs," *Glossa*, 1, 1967, pp. 91-125.

3　Edward S. Klima, "Negation in English," J.A.Forder and J.J. Katz eds., *Structure of Language; Readings of the Philosophy of Language*, N.J., Prentice-Hall, 1964, pp. 246-323.

4　R. Stockwell, *The Major Syntactic Structures of English*, New York: Holt, Rinehart and Winston, Inc., 1973, pp. 231-91.

5　Otto Jespersen, *Negation in English and Other Languages*, Kobenhavn, Andr. Fred. Høst & Son, 1917, pp. 43-5.

6　This tree seems to be able to express the feature difference, but the operation of inserting the quantifier *any* is vague.

When *something* doesn't have a feature [+specific], the structure can be expressed as (9), in which the determiner can be interpreted freely. Therefore, the determiner of this seems to be expressed as a symbol of dummy. This determiner can also be called non-speaker oriented determiner. On the contrary, in case that *something* has a feature [+specific], the indefinite quantifier functions like a determiner which has a specific meaning; namely, this determiner can be called speaker-oriented determiner. In the same way, the ambiguity of Sentence (8) can be interpreted by defining the distinction between [+specific] and [−specific]. The underlying structure of Sentence (8) which will show the difference of the meaning is like this:

(11)

(12)
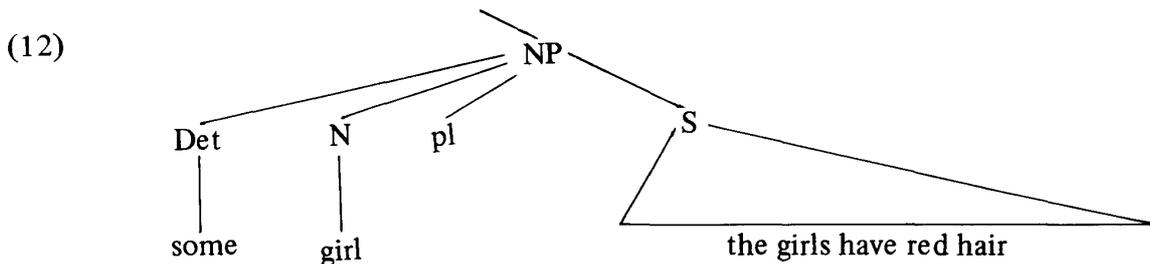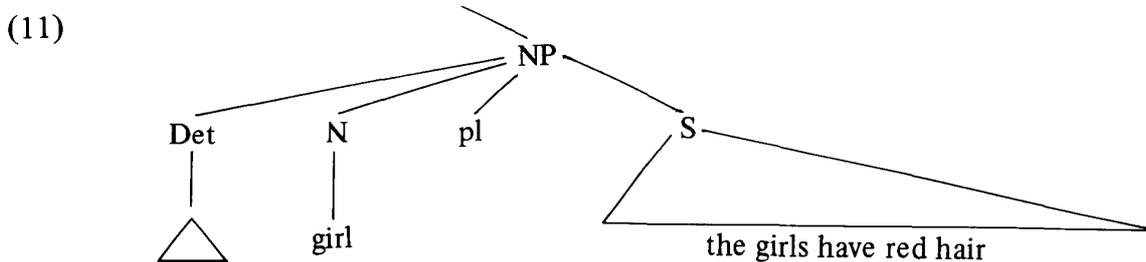
Similarly, in (11), *some girls* has a feature [−specific], while in (12) *some girls* has a feature [+specific]: the former non-speaker-oriented, the latter speaker-oriented. However, the harmony cannot be maintained between the positive sentence and the negative sentence if we consider the unacceptability of the following sentence.

(13)*? I'm not looking for some girls with red hair.   (Stockwell)

In the same way, the following sentence can easily be found why it has an ambiguity.

(14)   Sometimes I know what to do.   (Stockwell)

But it is indeed true that *some* can freely be interpreted as specific or non-specific, but sometimes one possible reading can be determined.

(15)   Some little boys came in the door.   (Stockwell)

(16)   They were staring at some gorgeous secretaries.   (Ibid.)

Indefinite quantifier *some* in Sentence (15) and (16) has only the feature [−specific]. Why can these two sentences be determined to have only one feature? This fact can probably explain that in Sentence (15) *some* is closely related to *come in,* so that the relation between subject and

verb will determine the meaning of *some*. Furthermore, in Sentence (16), *some* is the object of the verb *stare at,* so that *some* is the non-speaker oriented quantifier.

When we consider the following sentences which contain *some* or *any,* we are obliged to think the scope of negation.

(17)　John wasn't sure that anyone would believe him.　　　　　　　　(Stockwell)

(18)　None of them went anybody to try to force John.　　　　　　　　(Ibid.)

(19)　*The well-known fact that the comet will even approach the earth again is not relevant
　　　　to this argument.　　　　　　　　　　　　　　　　　　　　　(Ibid.)

(20)　*John dislikes anyone.

(21)　John dislikes having to tell anyone what to do.

(22)　*John doubted anything.

(23)　John doubted that they would ever persuaded Bill to do anything about it.

Chapter III　The Definition on the Scope of Negation

The definition　on　the scope　of　negation　by　Klima is like this:

We shall describe the scope of *wh-* and *neg* in terms of the concept "in construction with." This concept can be explicated most simply if we consider the constituent structure rules graphically, as in Fig. 1. Fig.2(b) represents the set of constituent structure rules given in Fig.2(a).

$$w \longrightarrow y\text{-}x^1\text{-}x^2$$
$$x^2 \longrightarrow x^3\text{-}x^4$$
$$x^4 \longrightarrow x^5\text{-}x^6$$
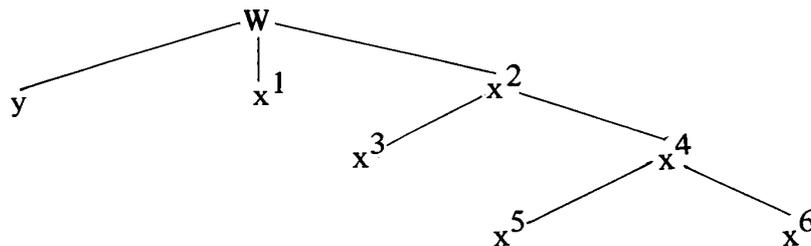
Fig. 2(a)

Fig. 2(b)

A constituent (for example, x^4 or x^5) is "in construction with" another constitu-

ent (in this case x^3) if the former is dominated by (that is, occurs somewhere lower down the branch of) the first branching node (that is, x^2) that dominates the latter (x^3). Similarly, y is "in construction with" x^1 as well as x^2, since y is "in construction with" x^1 as well as x^2, since y dominated by w (in fact, all three, y, x^1, and x^2, are "mutually in construction"). On the other hand, y is not "in construction with" x^3 since y is not dominated by x^2.

The rules and diagram of Fig.2 are the same as the initial expressions in the description of the constituent of the S(entence).
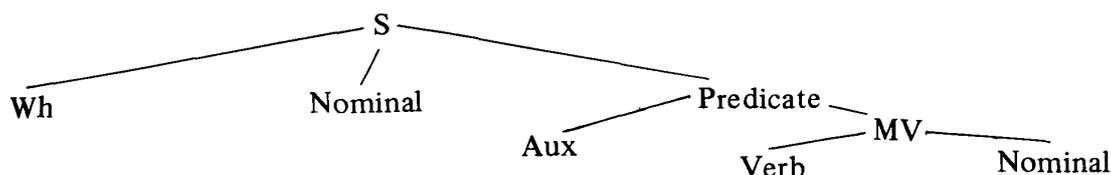
Fig. 3

In Fig.3, the subject Nominal and the Predicate, as well as all of the constituents into which the Predicate is expanded are "in construction with" *wh-*. Consider the constituent structure involving a negative affix "They are unable to accept any suggestions."

[they]$_{Nominal}$ [Tense]$_{Aux}$ [be [un]$_{neg}$ [able]$_{Adj}$

[to accept any suggestions]$_{Comp}$]$_{Predicative}$

The structure is the following:
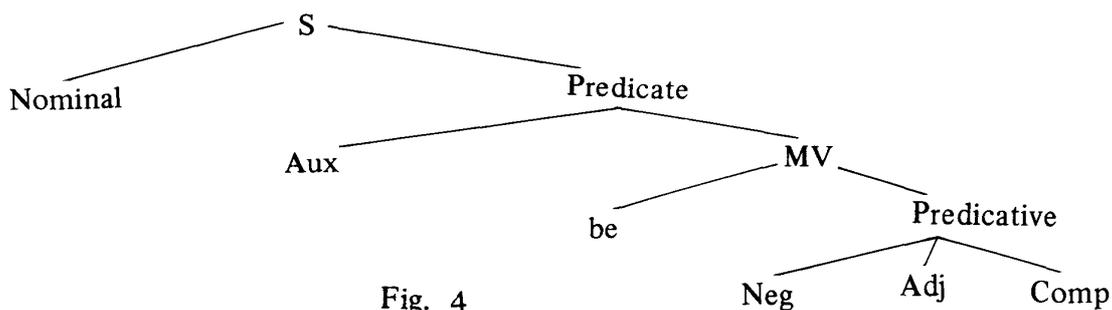
Fig. 4

The *Comp*(lement) in Eg.(166), and everything dominated by it are "in construction with" *neg*. Similarly, in "they doubt that writers ever accept suggestions, where *neg-doubt*, the Comp(lement) and all it contains (that is, that writers ever accept suggestions) are "in construction with" *neg*, whereas, for example, the subject Nominal *they* is not. The rule of Indef-incorporation can now be generated to cover both the pre-verbal particle *neg* and the affix *neg* by restricting the application of the rule specifically to Quant(ifiers) "in construction with" *neg*.[7]

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7. E. Klima, "Negation in English," pp. 297-8.

Where the analysis of Klima is useful is that Klima's expression of verb phrases can assign very difficult structural positions to noun phrase objects and sentential complements. The underlying deep structures of Sentence (20) and (21) by Stockwell are described like these:

The underlying deep structure of Sentence (20):

(24)
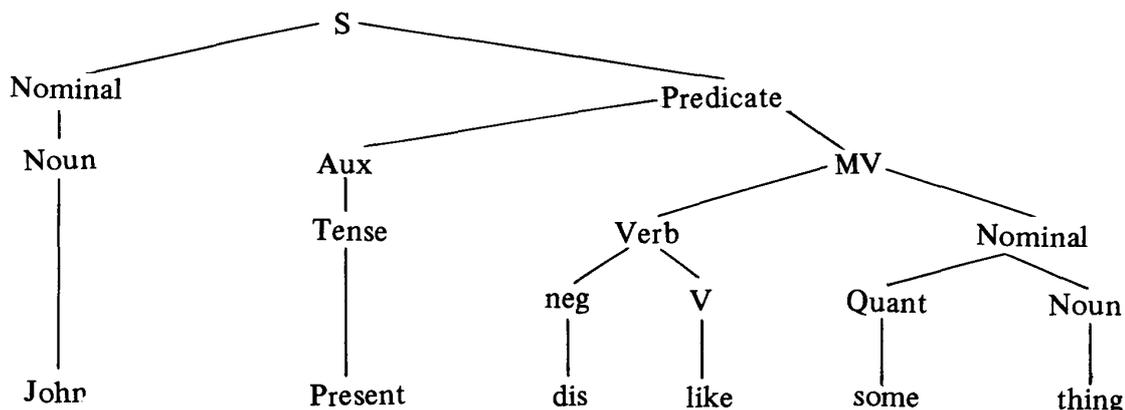
(25)
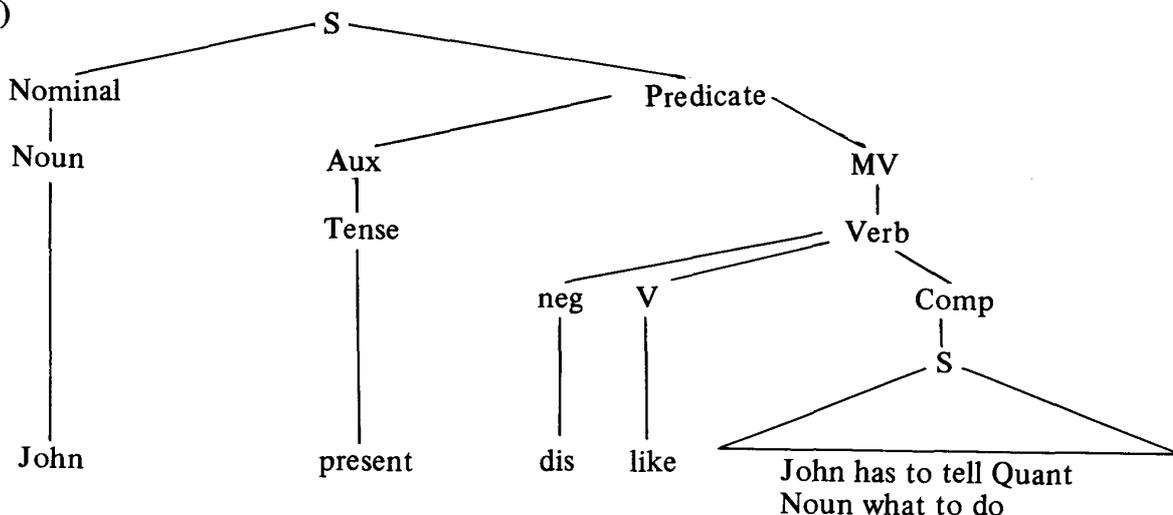
Stockwell says about these diagrams like this: "By Klima's definition, the only elements in construction with *neg* in these two trees are those dominated by the first branching node above *neg*, i.e. those dominated by Verb."[8]

In Sentence (20), *someone* in the underlying structure can be said to be changed into *anyone*, so that the feature of *some* can be said [−specific]. But in the underlying structure (24), the difference of the feature between [+specific] and [−specific] is not described. If we consider the corresponding sentence below, we will be able to have acceptable sentences.

8　R. Stockwell, *The Major Syntactic Structures of English*, p. 239.

(20) *John dislikes anything. (Stockwell)

(26) John dislikes something.

(27) John doesn't like anything.

(28) John doesn't like something.

Though I want to admit the shades of meaning between *doesn't like* and *dislike,* in this case I would like to apply these two pairs to discuss the scope of negation and the feature of *some.* The word *dislike* has a negative affix *dis-,* but the function of *dislike* doesn't seem to be a negative constituent if we consider the fact that Sentence (20) is ungrammatical. Negative affix *dis-* has nothing to do with other constituents, it only functions as one verb. In Sentence (26), the sentence with *something* but *anything* will be a grammatical sentence. However, concerning the feature distinction between [+specific] and [−specific], Sentence (26) will be ambiguous. The underlying deep structure of Sentence (26) can be considered in two ways.

(29)

```
                        S
         Tns _____ So⁹
                 NP _____      
                  |            VP
                  N        V        NP
                        affix  V   Det   N
        present  John    dis   like some thing
```
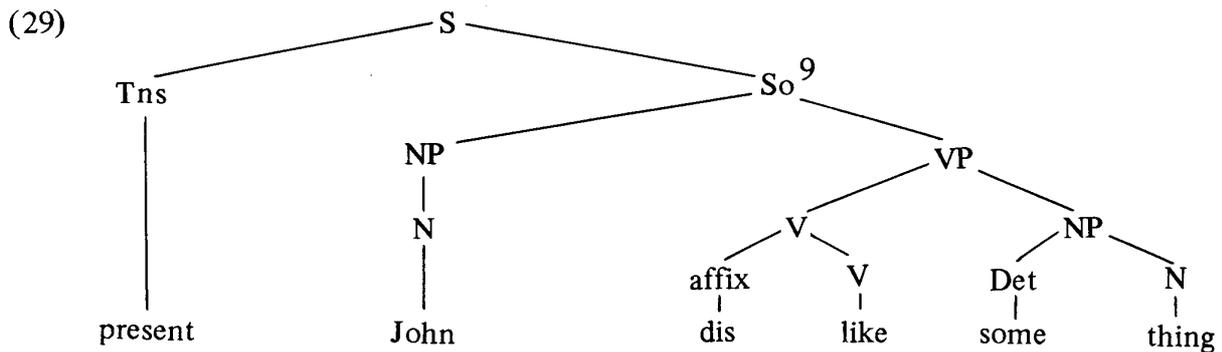
This tree diagram will show the structure in which *some* has a feature [+specific]. On the contrary, when *some* has a feature [−specific], the underlying deep structure will be considered as follows:

(30)

```
                        S
         Tns _____ So
                 NP _____      
                  |            VP
                  N        V        NP
                        affix  V   Det   N
        present  John    dis-  like  △   thing
```

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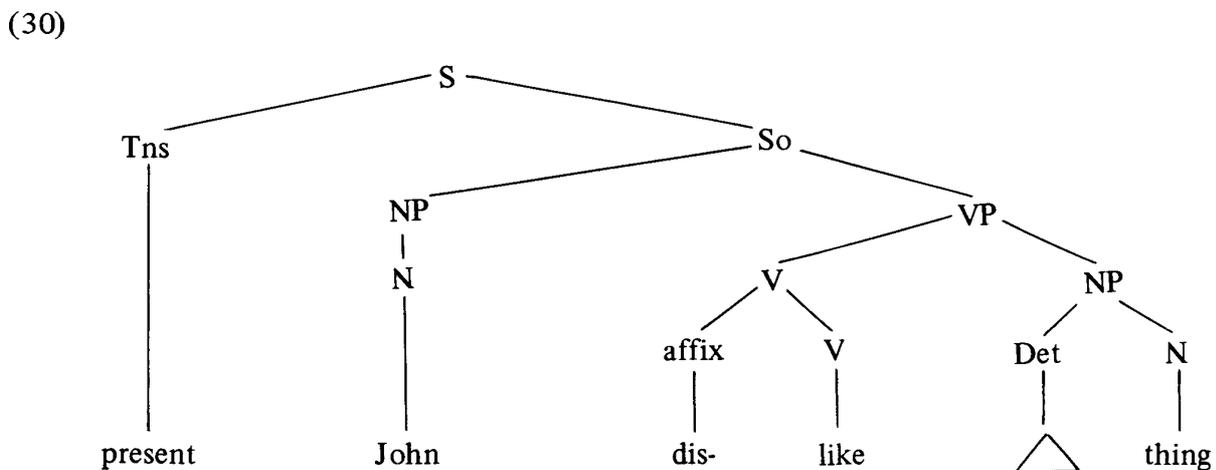
9 So expresses the sentence nucleus without the constituent *Tns.*

The difference between (29) and (30) will show the ambiguity of Sentence (26). In Sentence (27), the meaning can be defined because *some* is changed into *any*. The underlying deep structure will be like this:

(31)

```
                        ___S___
                  _____/       \_____
                Tns                   __So__
                 |        ___NP      /  |    \___
                 |       /    |   NEG   VP
                 |      N      |    |   / \___
                 |      |      |   V      NP___
                 |      |      |   |     / \___
                 |      |      |   |   Det    N
                 |      |      |   |    △     |
              present  John  not  like       thing
```
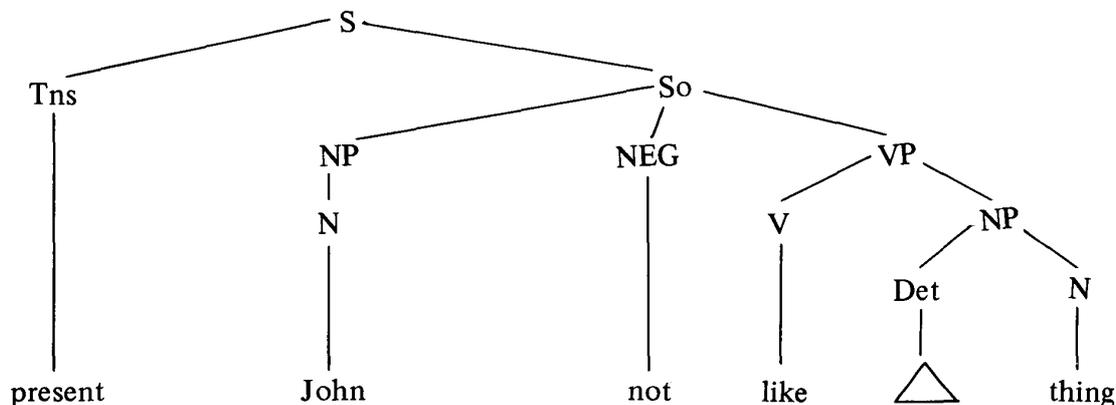
In Sentence (27), *some* is changed into *any,* so that *some* has a feature [−specific]. However, Sentence (28) will contain lots of problems. As Sentence (26) is an acceptable sentence, in Sentence (28) the scope of negation can be considered in two ways; namely, we can consider the negated item either *like* or *something.* Considering these relations, Sentence (28) can be interpreted in three ways. One underlying structure of Sentence (28) will be as follows:

(32)

```
                      ___S___
                _____/       \_____
              Tns                   __So__
               |        ___NP      /      \___
               |       /    |                 VP___
               |      N     |       ___V___   / \___
               |      |     |      /       \ NP
               |      |     |    neg       V / \___
               |      |     |     |        | Det    N
               |      |     |     |        |  |     |
            present  John         not     like some thing
```
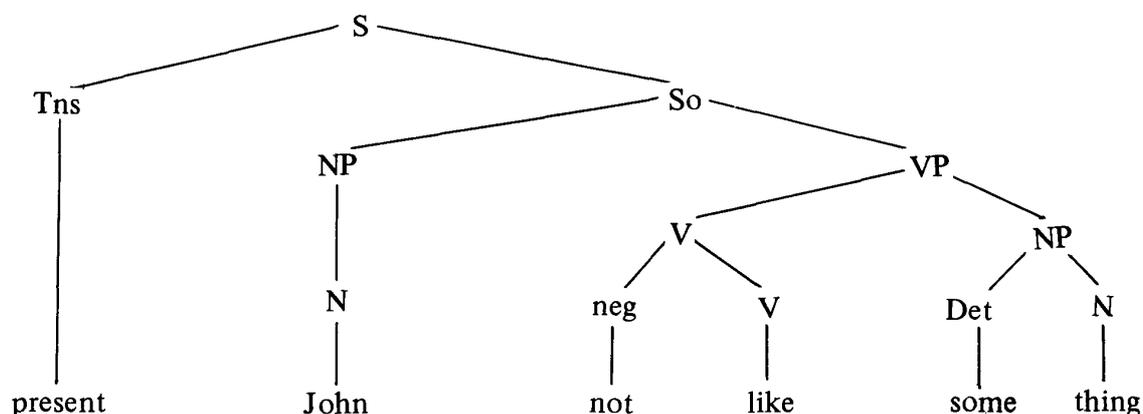
In the underlying deep structure (32), the scope of negative constituent must be only the verb *like,* so that the meaning of (32) becomes almost the same as Sentence (26), and *some* in (32) has a feature [+specific]. In the same way, another underlying deep structure can be considered in the following way.

(33)

```
                              S
            Tns                        So
                     NP                        VP
                                      V              NP
                      N           neg    V      Det      N
         present    John          not   like     △      thing
```
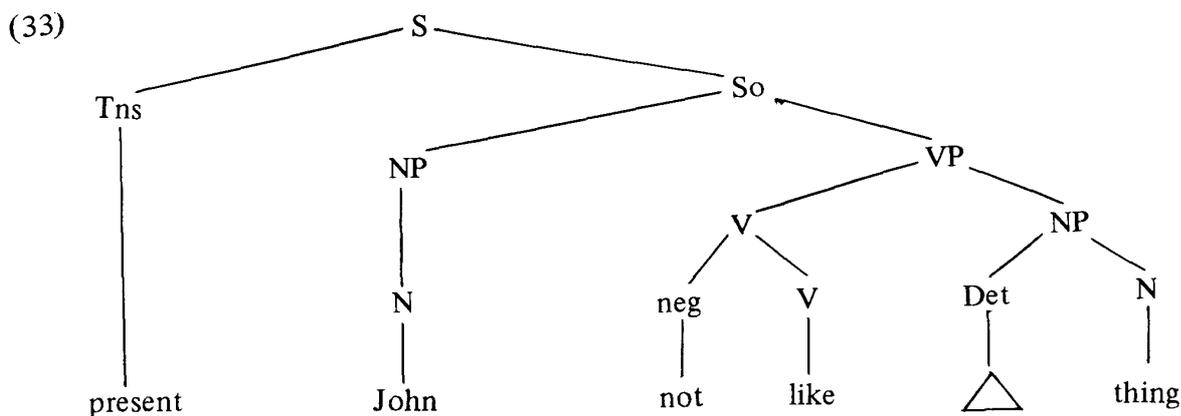
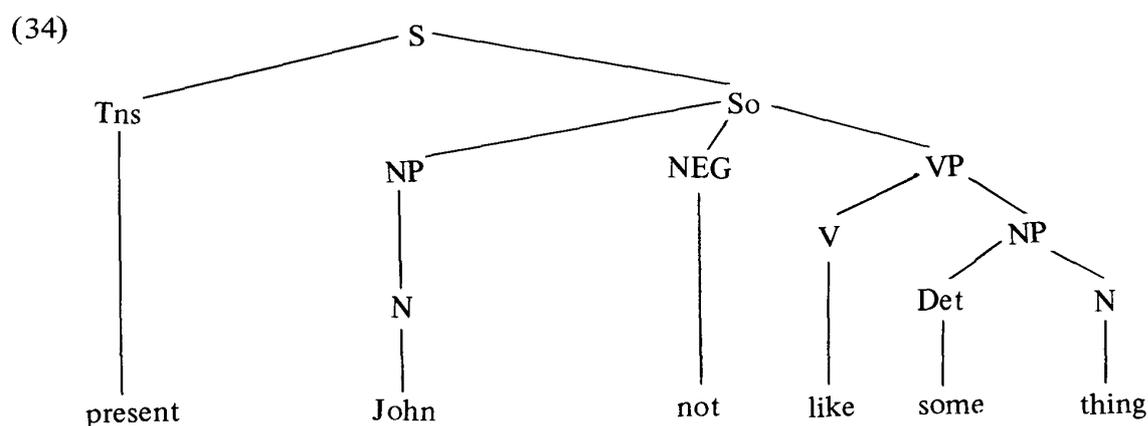In the underlying deep structure (33), *not* functions like an affix of the verb *like* as the tree (32), but *some* has a feature [−specific], so that *some* can be expressed as a dummy symbol. The other underlying deep structure of Sentence (28) will be as follows:

(34)

```
                              S
            Tns                             So
                     NP          NEG             VP
                                             V        NP
                      N                             Det     N
        present     John        not         like  some   thing
```

In the underlying deep structure (34), the scope of negation seems to be the VP. The combination of NP and VP is negated. Besides, *some* will have a feature [+specific]. For, if *some* has a feature [−specific], *some* will be changed into *any* obligatorily. These tree diagrams will probably explain the difference of Sentence (20), (26), (27), and (28).

Klima's notion "in construction with" will not be a very powerful analysis. By his analysis, the distinction between sentential and non-sentential object will clearly be shown. However, I cannot find a clear definition of relating the environment to the sentential NEG environment.

However, the notion of Langacker is superior to the notion of Klima.[10] Langacker's notion is defined as "command." The notion "command" can explain more relevant data of negation than the notion "in construction with," so that the notion "command" seems to be more general than Klima's notion. Langacker's notion "command" is defined as follows: A node "commands"

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10 R.W. Rangacker, "On Pronominalization and the Chain of Command," D.A. Reibel and S.A. Schane eds., *Modern Studies in English: Readings in Transformational Grammar*, Englewood Cliffs, N.J.: Prentice-Hall, 1966.

another node B if (1) A doesn't dominate B; (2) B does not dominate A; (3) A is in structure S^i; and (4) node S^i dominates B.
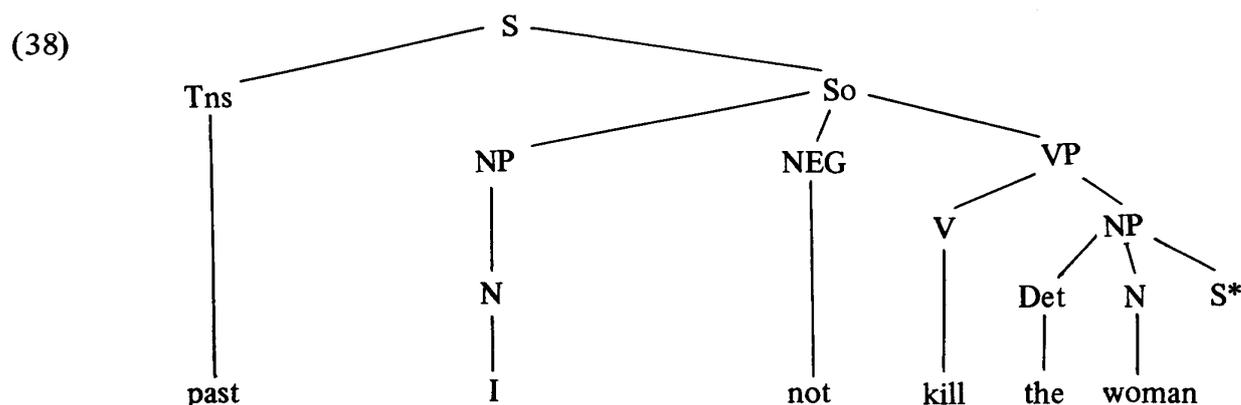
In analyzing pronominalization, Langacker shows that the notion "command" has a very strong power comparing with the notion "in construction with." In the notion "in construction with," it will ordinarily be the case that whenever NEG commands a node A, node A will be in construction with NEG. The difference between the notion "command" and the notion "in construction with" will appear clearly in the case of [+Affect] words. Langacker doesn't discuss the case of [+Affect] words at all. Both notions of "in construction with" and "command" cannot have a powerful filter to produce the following ungrammatical sentences:
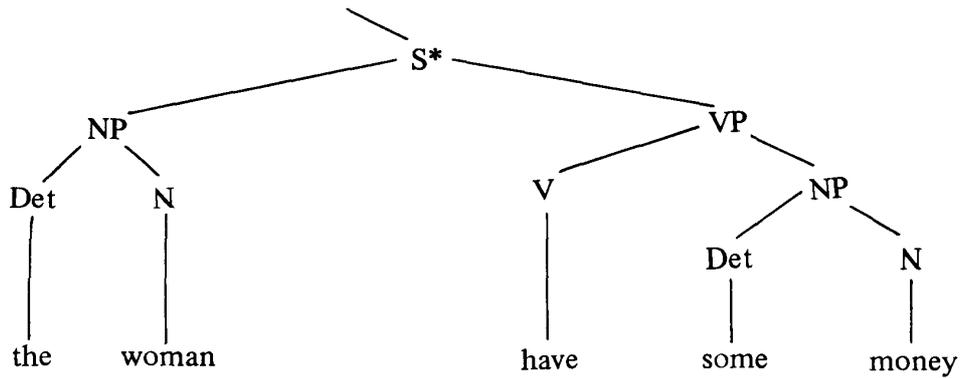
(35)　*Anyone disliked anything.　　　　　　　　　　　　　　　(Stockwell)

(36)　*John ever doubted that we would come.　　　　　　　　　(Ibid.)

Though both Klima and Langacker are not dealing with the [+Affect] words, in the case of them some peculiar filters will be necessary. When Langacker is discussing NEG, he points out some relative clause counterexamples that neither the notion "in construction with" nor the notion "command" can account for. These counterexamples are as follows:

(37)　a.　　I never met that man who somebody tried to kill.　　(Stockwell)

　　　b.　*I never met that man who anybody tried to kill.　　(Ibid.)

　　　c.　　This isn't the man who is looking for some Bantam roosters.　(Ibid.)

　　　d.　*This isn't the man who is looking for any Bantam roosters.　(Ibid.)

　　　e.　　I didn't kill the woman who had some money.　　(Ibid.)

　　　f.　*I didn't kill the woman who had any money.　　(Ibid.)

Langacker doesn't point out a special condition excluding ungrammatical sentences like (37b), (37d), and (37f). In these sentences, *some-any* rule can necessarily be applied to account for these ungrammatical sentences. I want to consider a little what kind of filter is needed to explain these ungrammatical sentences. The tentative underlying deep structure of Sentence (37e) will be considered in the following ways:

(38)

```
                              S*
             NP                              VP
        Det       N               V                NP
                                              Det       N

        the     woman           have         some      money
```

By the interpretation of a tentative underlying deep structure (38), *some* in the relative clause *who had some money* must be within the scope of negation. Therefore, in the interpretation of (38), *some* has a feature [+specific]. Furthermore, two more readings may be allowed if we consider this sentence by applying a tentative tree diagram.

(39)
```
                          S
     Tns                           So
                    NP                          VP
                                        V                   NP
                    N                 neg   V        Det   N      S*
                                      not  kill      the woman
     past           I
                 S*
          NP                          VP
     Det       N               V                NP
                                           Det       N

     the     woman           have        some      money
```
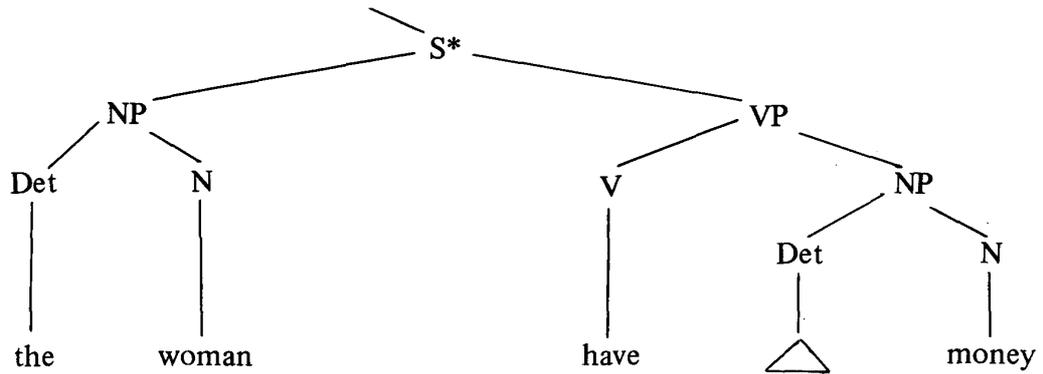
(40)
```
                      S
     Tns                       So
              NP                      VP
                              V              NP
              N             neg   V    Det  N    S*
                            not  kill  the woman
     past     I
```

```
                        S*
           NP                        VP
      Det      N              V            NP
                                      Det      N
      the    woman          have     △      money
```
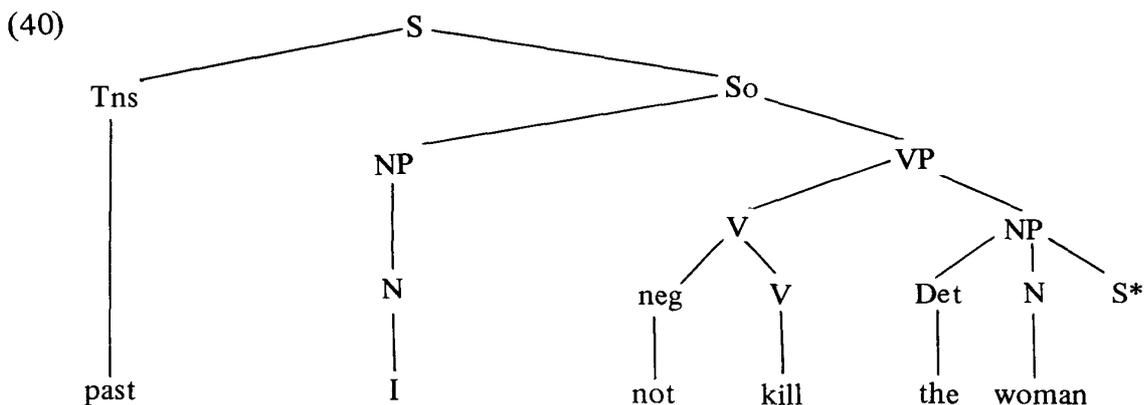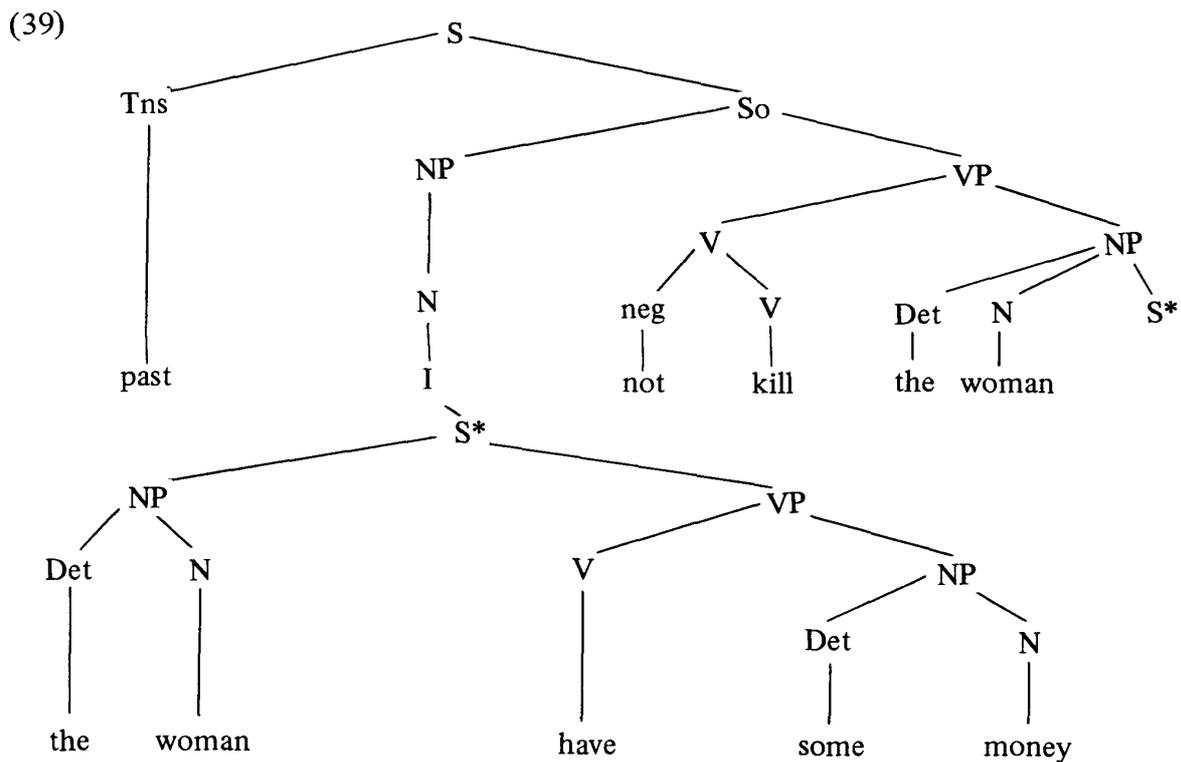
In the reading of a tentative underlying deep structure (39), the scope of negation will be only within the verb; namely, the negated item must be said the verb *kill,* so that the constituent NEG functions like an affix which is dominated by the V. Therefore, the relative clause is outside the scope of negation. The relative clause *who had some money* can be interpreted as *some* has a feature [+specific] in the figure (39). The other reading of this sentence which is expressed in the tentative underlying deep structure (40) will be the one that *some* has a feature [−specific]. If we consider only (37e), these three readings will be possible. However, looking into the ungrammatical sentence (37f), we will be in trouble with explaining why such a sentence as (37f) cannot be acceptable. Comparing the three possible readings of Sentence (37e) with Sentence (37f), the reading of Sentence (37f) will be corresponding to the interpretation which is desirable in the tentative underlying deep structure (38) except *some* has a feature [−specific]. If the relations between the scope of negation and *some-any* rule within the relative clause exist, the ungrammatical sentence (37f) will determine the reading of Sentence (37e). If so, the scope of negation cannot be expanded to the relative clause, so that in Sentence (37e) the scope of negation will be narrow. However, considering only (37e), this limited interpretation will not be able to be found. These phenomena will be partly depending upon the *some-any* in the embedded sentence; namely, relative clauses. There seems to exist a certain kind of constraints in the structure (38) expresses when *some* has a feature [+specific], but considering the ungrammaticality of Sentence (37f), *some* within the relative clause will not be able to have a feature [+specific]. Therefore, there may be a kind of constraints between [+specific] and [−specific] in the relative clauses. Probably, the relative clause is not negated. In Sentence (37e) and (37f), the relative clause is not negated. In Sentence (37e) and (37f), the relative clauses *who had some money* and *who had any money* may be beyond the scope of negation by considering the difference of the acceptability in Sentence (37e) and (37f). Therefore, it follows that the negated constituents must be the VP which is determined by the nucleus sentence. The same thing can be said about other pairs of Sentence (37a) and (37b), and Sentence (37c) and (37d).

Then, I would like to return to the definition of Klima and Langacker, the former concept "in construction with," the latter "command." By considering the relative clause counterexamples, both concepts don't seem to have much power. The cases for which Langacker considered "command" to be particularly useful actually involve the *any-no* suppletion rule rather than *some-any* rule. Even though the *some-any* rule and the *any-no* suppletion rule don't seem to share the identical environmental constraints, partly these two rules seem to be familiar to each other. The following ambiguous sentence will partly prove this fact.

(41)   I will force you to marry no one.   (Klima)
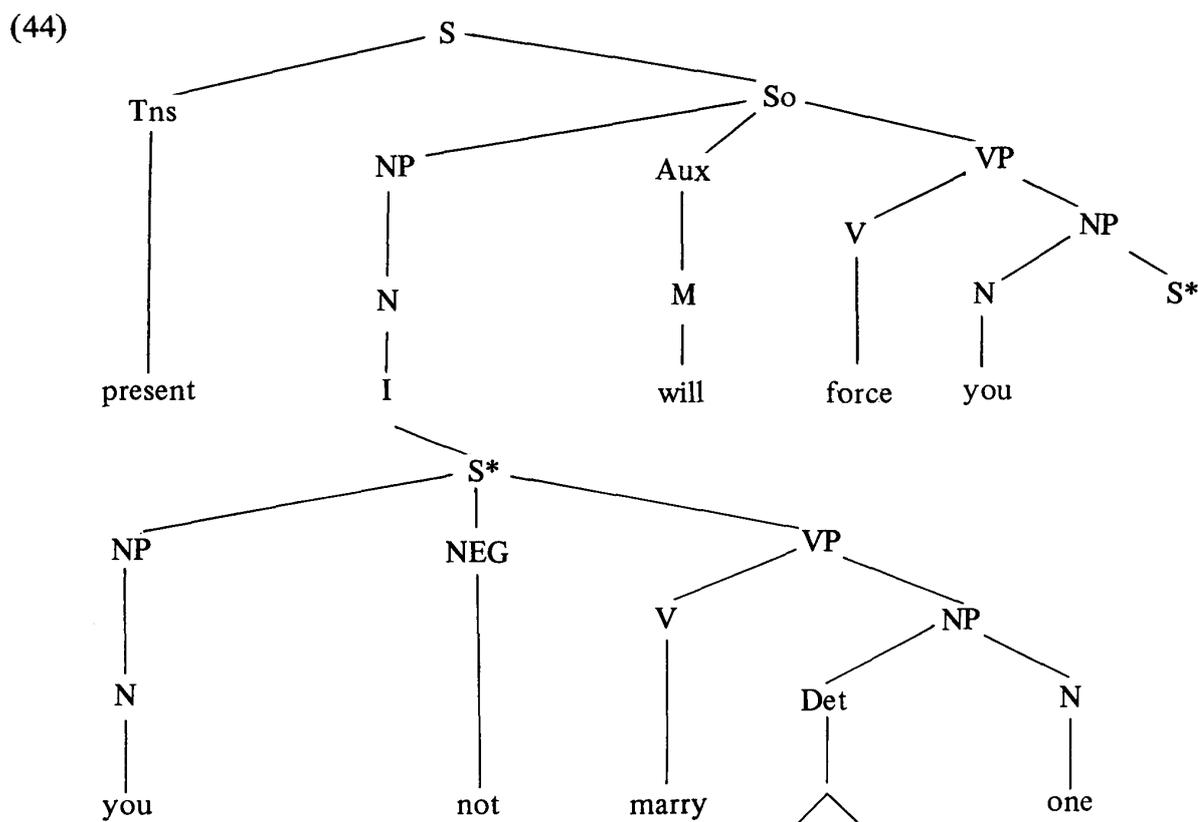
To account for the ambiguity of Sentence (41), Klima proposes that two possible underlying structures can be considered; namely, one underlying deep structure has a negative constituent in the embedded sentence. Then, Klima allows Neg-attraction to move NEG from the matrix into the indefinite NP of the embedded S. By considering only Sentence (41), both concepts of "in construction with" and "command" will be appropriate conditions in Negattraction. Concerning this fact, Langacker points out the counterexamples that Neg-attraction should be permitted to move the matrix NEG into the embedded S if both matrix sentence and embedded sentence have contained NEG like the following sentences:

(42)   a.   I won't force you not to marry anyone.
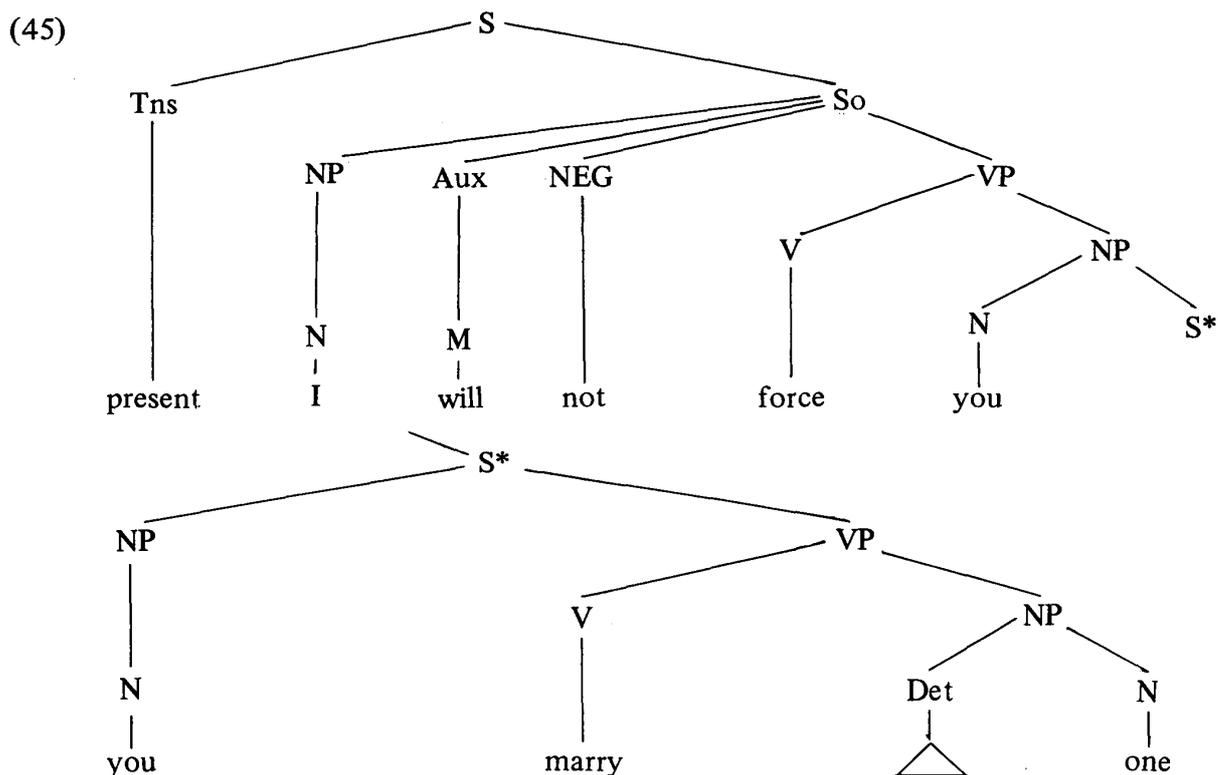
       b.   *I will force you not to marry no one.

Considering the ungrammaticality of Sentence (42b), Neg-attraction doesn't seem to be appropriate in all cases, so that Langacker points out that an *ad hoc* restriction that Neg-attraction should not be permitted to move one NEG across a string already containing a NEG would not be correct, since it would exclude the grammatical sentence.

(43)   I will force the girl who doesn't want children to marry no one.   (Langacker)

By applying the notion "command," the relevant difference between Sentence (42a) and Sentence (42b) will be able to be expressed; namely, the matrix NEG cannot be moved into an embedded constituent which is dominated by an embedded NEG. Thus, it follows that Neg-attraction can't attach to NEG, to *some* if NEG_1 abd NEG_2 both command *some* and NEG_1 commands NEG_2 but not vice versa. Langacker tries to define the generalization of this phenomenon as the theory "principle of control." At least in this case, Klima's definition "in construction with" would be very closely related to the theory "principle of control" by Langacker. Therefore, none of three theories "in constriction with," "command," and "principle of control" cannot have an appropriate function in considering the analysis of negation. To explain the ambiguity of Sentence (41), I would like to describe a tentative underlying deep structure as follows:

(44)

```
                        ┌──────── S ────────┐
                    Tns                      So ──────────┐
                     │          ┌────────┬───────┐         VP
                     │         NP        Aux      │      ┌──┴──┐
                     │          │         │       V     N    NP
                     │          N         M     force  you    S*
                     │          │         │
                  present       I        will
                              ┌──┴────── S* ──────────┐
                             NP        NEG            VP
                              │         │          ┌──┴──┐
                              N         │           V    NP
                              │         │           │  ┌──┴──┐
                             you       not        marry Det   N
                                                         △   one
```

In the tentative underlying deep structure (44), the scope of negation will be the embedded sentence. In the embedded sentence, as *some* has a feature [−specific], *any* can occur in the determiner position. The constituent NEG operates on the determiner *any*, so that the sequence *not-any* becomes *no*. Another possible tentative underlying deep structure will be as follows:

(45)

```
                        ┌──────── S ────────┐
                    Tns                      So ──────────┐
                     │       ┌───┬────┬────┐              VP
                     │      NP  Aux   NEG   │           ┌──┴──┐
                     │       │    │    │    V          N     NP
                     │       N    M    │  force       you     S*
                     │       │    │    │
                  present    I   will  not
                            ┌──────── S* ──────────┐
                           NP                       VP
                            │                    ┌──┴──┐
                            N                    V     NP
                            │                    │  ┌──┴──┐
                           you                 marry Det   N
                                                      △   one
```

In the underlying deep structure (45), the scope of negation is much wider than that of the interpretation described in (44); namely, the scope of negation is *force you to marry anyone.*

In connection with several of his proposed constraints, Ross proposes the Indefinite Incorporation rule.

(46)   Indef Incorporation Rule by Ross[11]

A. $X—[+Affective]—Y—[+Intermidiate]—Z$
         1   2   3   4   5
$\Longrightarrow$ 1 ——— 2 —— 3 — $\begin{bmatrix} 4 \\ +\text{Indefinite} \end{bmatrix}$ —— 5

B. $X—[+Intermidiate]—Y—[+Affective]—Z$
         1   2   3   4   5
$\Longrightarrow$ 1— $\begin{bmatrix} 2 \\ +\text{Indefinite} \end{bmatrix}$ — 3 ——— 4 ——5

By postulating the Indefinite Incorporation Rule, Ross suggests that the rule should be *upward-bounded* in the point of feature-changing. Therefore, the constituent whose features are changed cannot be outside the limits of the structure dominated by the lowest S dominating the other non-variable constituents. Then, the scope of the rule includes the S dominating the Affective element and everything subordinate to that S. Ross himself admits that the formalization of the *upward-bounding* concept is greatly owing to the Klima's concept. However, Ross doesn't point out an important distinction which Klima makes. Ross's statement can be said concerning such [+Affective] elements as *NEG, WH,* and *only,* but cannot be said concerning the words which have negative elements as *doubt, unlikely, dislike,* etc.. Ross also notes a specific problem for Klima's analysis.

(47)   That Jack ever slept is impossible.   (Ross)

In Sentence (47), the subject clause is not in construction with the [+Affective] word *impossible.*

(48)

(Stockwell)

11 J.R. Ross, "Constraints on Variables in Syntax," unpublished Ph.D. dissertation, Cambridge, Mass., M.I.T., 1967.

Within the case grammar framework, the word *impossible* will occur in the same kind of frame as the verb *dislike*. Therefore *some-any* suppletion precedes case-placement, the rules can be made to work identically on the two superficially different structure.

Chapter IV The Feature of *Many*

Next, I want to consider sentences involving the quantifier *many* in the subject position.

(49) Many people saw the movie.   (Lasnik)[12]

(50) Not many people saw the movie.   (Ibid.)

Concerning these two sentences which also contain *many, many* may function differently from each other in Sentence (49) and (50). Therefore, the quantifier *many* seems to have a different meaning; namely, specific reference and non-specific reference. As is shown in Sentence (49), *many* in the subject of the sentence-initial position will have a specific reference. The tentative underlying deep structure will be as follows:

(51)
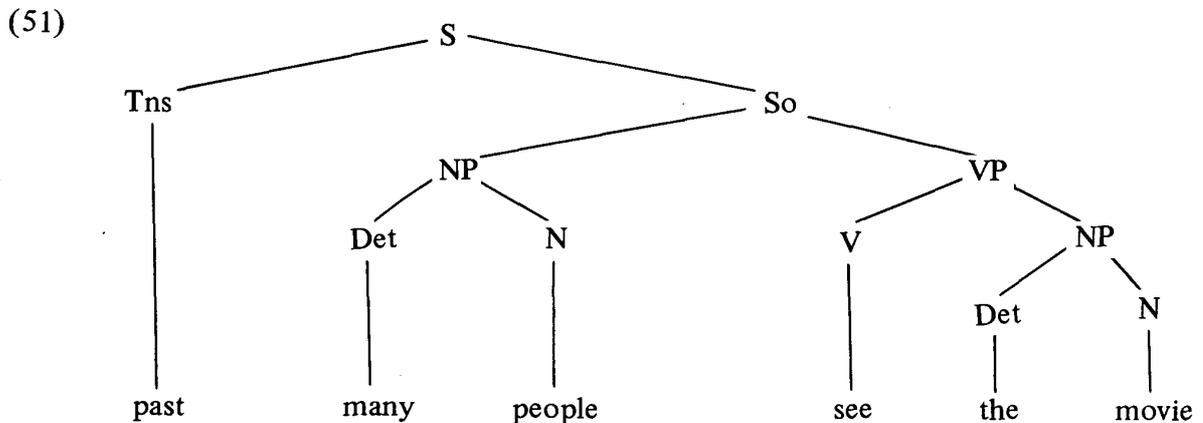
Because *many* in the structure (51) has a specific reference, the following sentences will be grammatical.

(52) Many people (namely, John, Bill, Mary, etc.,) saw the movie.   (Lasnik)

(53) Many people saw the movie. They enjoyed it.   (Ibid.)

In Sentence (52), it will be manifested that the quantifier *many* in the subject of the sentence-initial position has a specific meaning. The amount which can be expressed by the term *many* may be large, but it can mean a specific reference. On the contrary, in Sentence (50) the quanti-

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12 Haward Lasnik, "Analysis of Negation in English," unpublished dissertation for the Degree of Ph.D., M.I.T., 1972.

fier *many* which precedes the negative constituent will be completely different from the quantifier *many* in the subject of the sentence initial position. This difference of the quantifier will be depending upon the position of *many* in the underlying deep structure. It is indeed true that the quantifier *many* occurs in the matrix sentence in Sentence (49). But in Sentence (50), it seems that the quantifier *many* can occur in the embedded sentence though it appears in the matrix sentence in the surface structure. In Sentence (50), such a paraphrase as *it is not the case* (or *so,* or *true) that* ... can be allowed. Therefore, the tentative underlying deep structure of Sentence (50) will be like this:

(54)
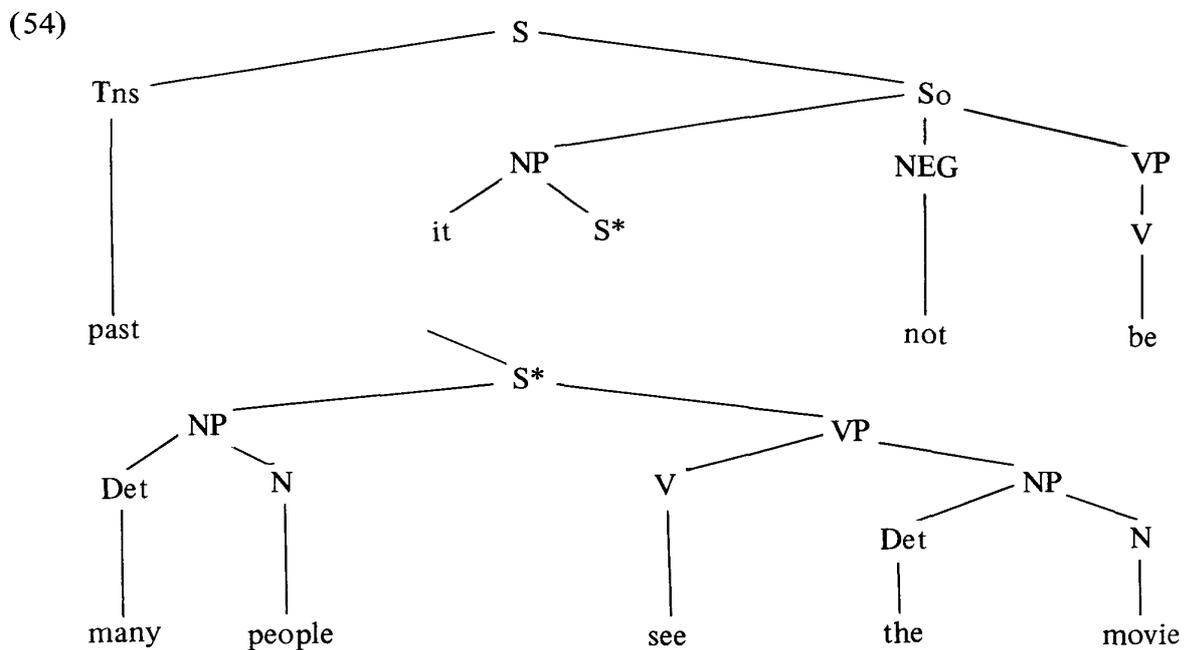
As is shown in the underlying deep structure (54), the quantifier *many* occurs in the lowest S. It is interesting to note that this lowest S is almost corresponding to the full sentence of Sentence (49). In the lowest S, it seems that the quantifier *many* cannot have a specific referential meaning. Therefore, the following sentences will be ungrammatical.

(55) *Not many people (namely, ...) saw the movie.   (Lasnik)

(56) Not many people saw the movie. *They enjoyed it.   (Ibid.)

Comparing the acceptability of Sentence (52) with the one of Sentence (55), the difference of the feature of the quantifier *many* will be shown clearly. Similarly, comparing the acceptability of Sentence (53) with the one of Sentence (56), the peculiarities of these sentences which involve the quantifier *many* will be shown clearly. In Sentence (53), the simple sentence which contains the quantifier *many* seems to permit the definite pronominalization, for the meaning of the sentence can be considered only one meaning as a whole. On the contrary, in Sentence (56),

the sentence which contains a negated quantifier phrase in the subject position cannot permit definite pronominalization. This is probably because sentences which contain a negative quantifier phrase in the subject position can be considered that the sentences must contain the embedded sentence in the underlying deep structure as is manifested in the tentative underlying structure (54).

If we consider the following sentence, we are forced to face lots of problems.

(57)　The movie wasn't seen by many people.

Though Sentence (57) looks like a passive form of Sentence (50), the meaning of Sentence (57) seems to differ from the one of Sentence (50). The corresponding active form to Sentence (57) will be as follows:

(58)　Many people didn't see the movie.

The tentative underlying deep structure of Sentence (58) will be considered in the following way.

(59)
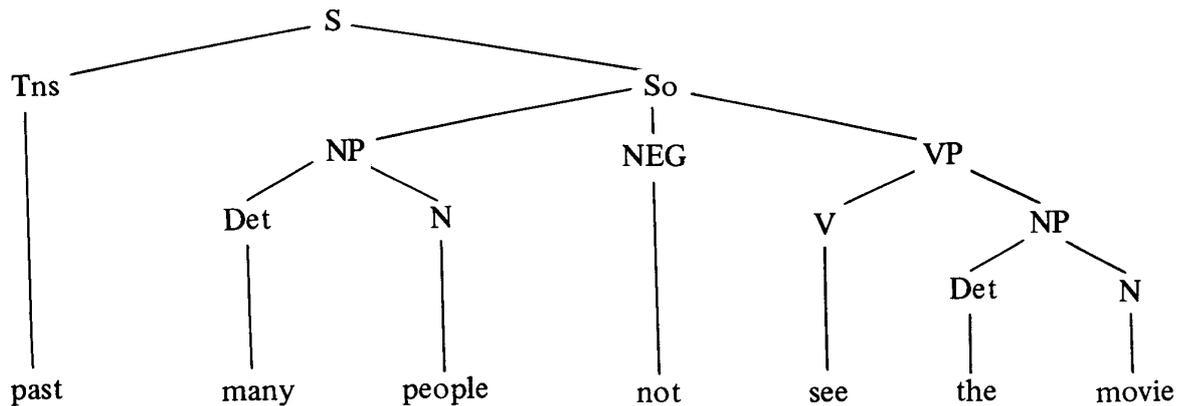
Considering the presupposition of the meaning-preserving, Passive Transformation cannot change the meaning of the sentence. However, there seems to be lots of difficulty to preserve the theory of the meaning-preserving hypothesis. I want to consider the interrelations between quantifiers and negatives more in detail based upon the severe controversy between the interpretive semanticians and the generative semanticians. Considering the meaning of Sentence (50), Sentence (57), and Sentence (58), the linear order *not many* may create a semantic unit. However, when the negative constituent *not* is not contiguous to *many*, the quantifier *many* will be able to escape the influence of negation.

Comparing the quantifier *many* with the quantifier *some*, there seems to be a little difference between them. When the negative constituent *not* is contiguous to the quantifier *some*, we must apply the obligatory morphological rule that *not some* should be changed into *any* when *some* has a feature [−specific], while *not many* doesn't have an obligatory morphological rule

though *not many* approximately means *few*. On the contrary, when the negative constituent *not* is not contiguous to the quantifier *some,* the alternative of the quantifier *some* can be permitted, depending upon the feature [+specific] or [−specific]. Therefore, if the quantifier *some* has a feature [+specific], *some* is not changed into *any.* Considering the quantifier *many,* such an obligatory morphological rule as the quantifier *some* cannot be found. Therefore, when the negative constituent *not* is not contiguous to the quantifier *many,* the alternative interpretation that the quantifier *many* within the scope of negation or outside the scope of negation can be permitted freely. To manifest this phenomenon, I want to consider the following sentence.

(60)   I couldn't solve many problems.

It is interesting to note the corresponding sentences which have the quantifier *some* or *any.*

(61)   I couldn't solve any problems.

(62)   I couldn't solve some problems.

For the purpose of making clear the meaning of Sentence (60), I want to draw a tentative underlying deep structure.

When the scope of negation is wide; namely, the quantifier *many* is influenced by the negative constituent *not,* the underlying deep structure of Sentence (60) will be considered as follows:

(63)
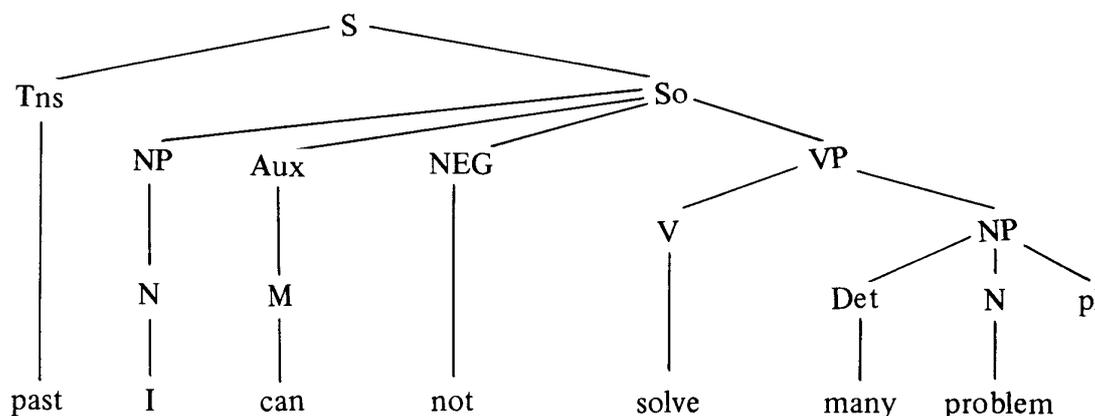
Except the case that the quantifier *many* occurs in the subject of the sentence initial position, the feature [+specific] or [−specific] of *many* can be neglected, so that I want to deal with the quantifier *many* like the tree represented above, though *some* is dealt with by applying the tentative underlying deep structure which shows the feature distinction between [+specific] and [−specific]. Furthermore, when the scope of negation is narrow; the negated item is only the verb *solve,* the tentative underlying deep structure will be considered as follows:

(64)
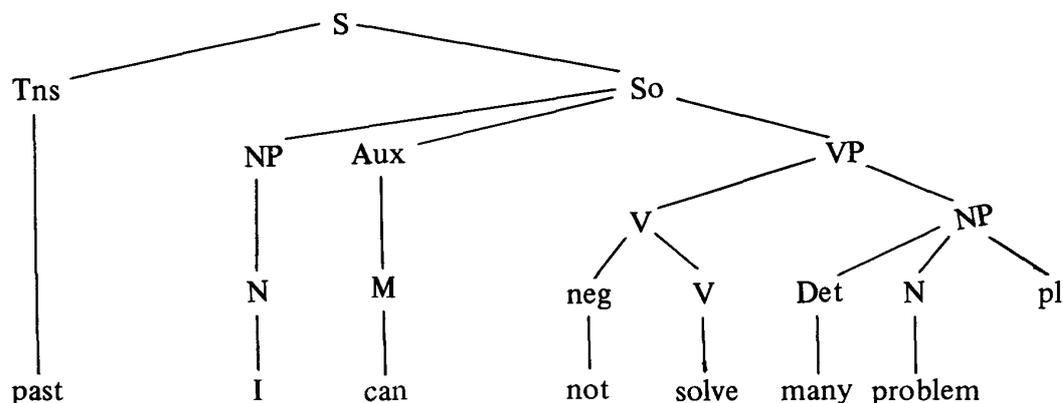
As is shown in the deep structure (64), the negated item is the only one verb *solve*, so that the quantifier *many* is outside the scope of negation. According to the interpretation as is manifested in the underlying deep structure (63), the reading of Sentence (60) must be almost equal to the following sentence.

(65)　I couldn't solve few problems.

If we consider the following cleft sentence, it is clear that the quantifier *many* is not within the scope of negation.

(66)　There were many problems that I couldn't solve.

Considering the scope of negation of Sentence (61), it seems to me that the interrelations of quantifiers and negatives must be crucial in depending upon the reading of the sentence within the simplex sentence. By contrasting Sentence (60) to Sentence (61) and (62) which contain the quantifier *some*, the peculiarities of *many* and *some* will be shown. The tentative underlying deep structure of Sentence (61) and (62) will be shown like the following as is shown before.

(67)
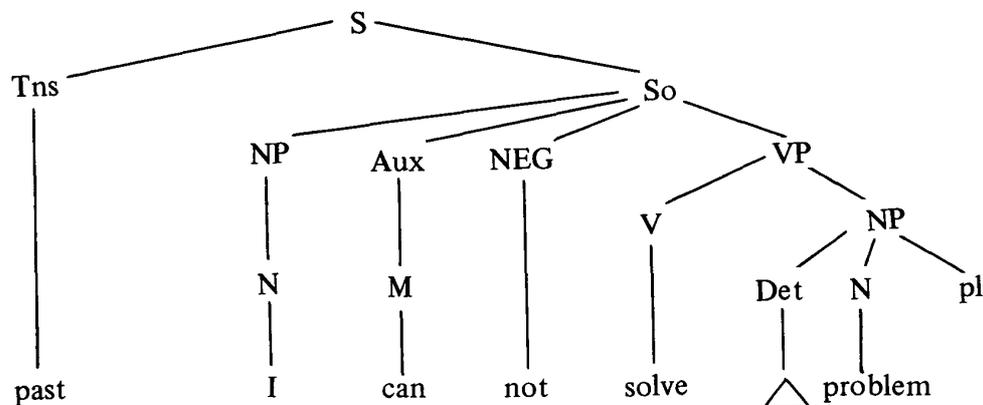
The reading of Sentence (61) doesn't seem to be permitted more than one; namely, when the scope of negation is wide, the negative constituent *not* has influenced the quantifier *some* as the quantifier has a feature [−specific]. However, we cannot probably produce a grammatical sentence
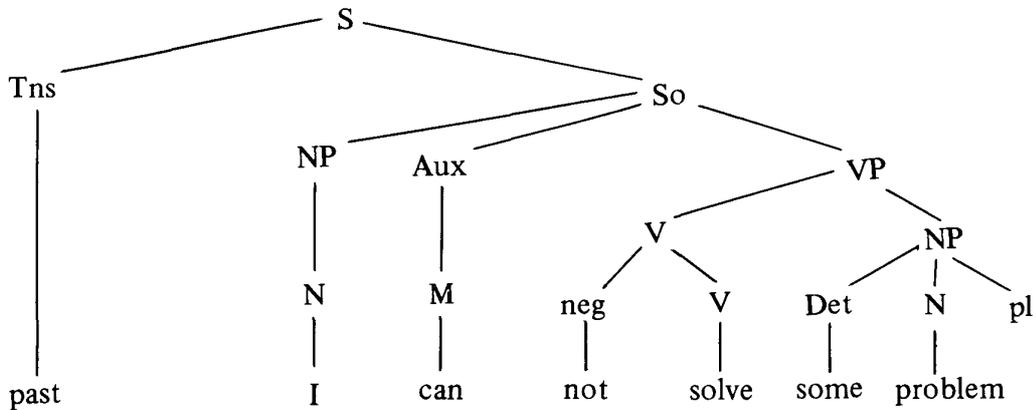
if the scope of negation is narrow; namely, if the negated item is only the verb *solve,* the quantifier *any* cannot occur in the object position. Therefore, in Sentence (62), we can interpret this sentence in the following ways.
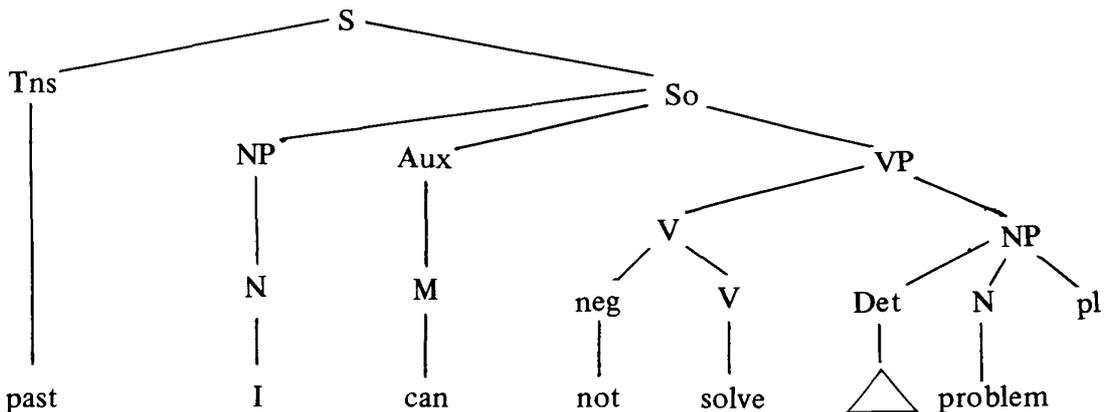
(68)
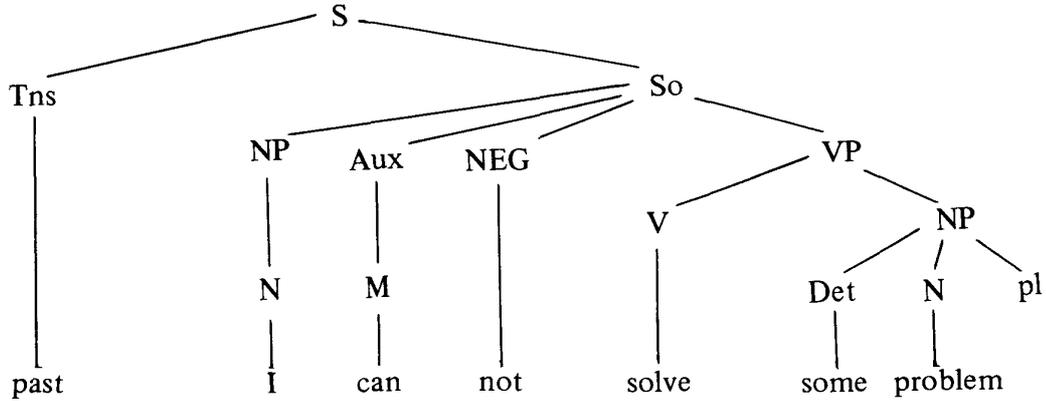
In the interpretation of the deep structure (68), as the scope of negation is wide, the quantifier *some* must have a feature [+specific]. Therefore, the quantifier *some* is not influenced by the negative constituent *not.* Other possible readings will be as follows:

(69)

and

(70)

In the underlying deep structure (69) and (70), as the scope of negation is narrow, the negative constituent *not* is distinctly separated from the quantifier *some*. Therefore the quantifier *some* can permit the alternative readings; one [+specific], and the other [−specific]. By contrasting Sentence (60) to Sentence (61) and (62), the characteristics of quantifiers *many* and *some* can be shown clearly. These two quantifiers share the same parts of peculiarities, but in part, they are completely different from each other. Besides, the quantifier *many* immediately following *not* can be acceptable, while the quantifier *some* immediately following *not* cannot be acceptable. The sequence *not any* must be changed into *no* by the obligatory morphological rule. These facts show the quantifier *many* which occur after the negative constituent *not* must have a feature [−specific], while the sequence *not some* is not acceptable. There seems to be a general theory that the quantifier immediately following *not* must have a feature [−specific].

However, it is worthy to note the scope of negation is not symmetric. Let's consider the following sentence.

(71)　Many problems weren't solved.

When a quantifier occurs to the left of the negative *not,* the quantifier will be outside the scope of negation. If we consider the corresponding sentence which the negative *not* occurs to the left of the quantifier *many,* the difference will be shown clearly.

(72)　Not many problems were solved.

Comparing Sentence (71) with Sentence (72), these two sentences will never be synonymous. In Sentence (72), *many problems were solved* seems to be under the influence of the negative constituent *not,* but in Sentence (71), the quantifier *many* is outside the scope of negation. Considering the position of the quantifier *many,* I can easily know that the feature of *many* is completely different. In Sentence (71), the quantifier *many* has a feature [+specific], but in Sentence (72), the quantifier has a feature [−specific]. If we consider the quantifier *many* which is situated in the subject of the sentence initial position, this quantifier seems to have peculiar characteristics. In Sentence (71), the scope of the quantifier *many* seems to be very much wider than the scope of the quantifier *many* as is seen in Sentence (72). Even though the negatives and the quantifiers do actually function in the complete different way, we may find out a similarity between the scope of the negatives and the scope of the quantifiers.

Now I want to consider another basic limitation on the scope of negation; namely, an element can only be in the scope of negation if it is commanded by a negative morpheme. The following sentences will show that the quantifier *many* is outside the scope of negation though the negative precedes the quantifier.

(73)   The man who didn't eat dinner saw many people.   (Lasnik)

(74)   That John didn't leave surprised many people.   (Ibid.)

In Sentence (73), the negative *not* does occur in the embedded relative clause, so that the quantifier *many* is outside the scope of negation. In the same way, in Sentence (74), the negative constituent *not* does occur in the embedded sentence in the underlying deep structure, so that the quantifier *many* is outside the scope of negation. To clear out this limitation, I want to describe a tentative underlying deep structure.

(75)
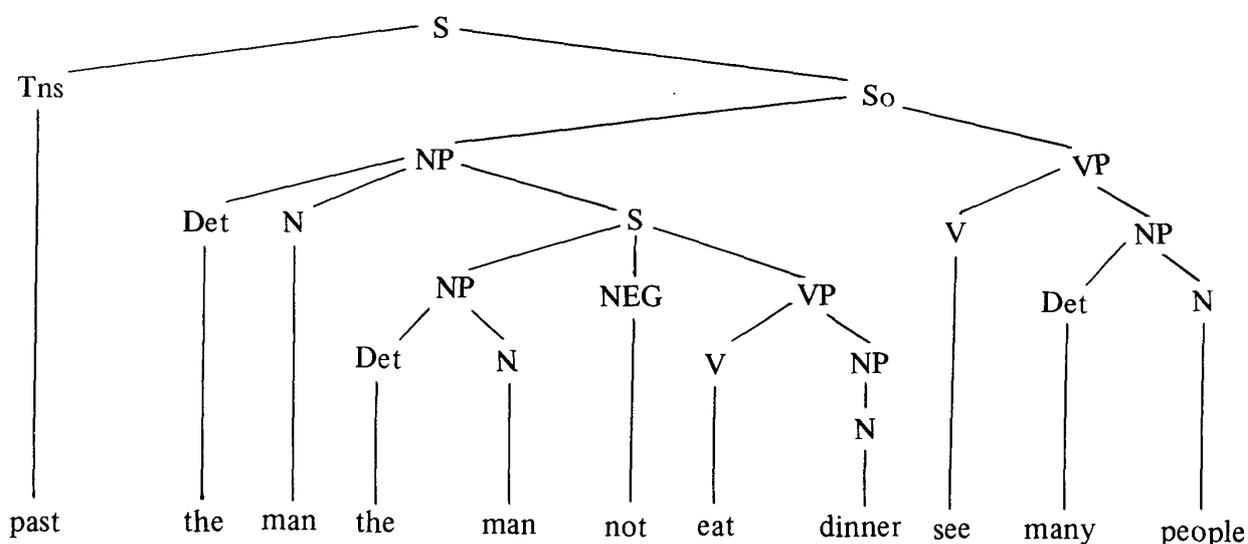
As is shown in the deep structure (75), the negative *not* occurs in the lowest S in the deep structure, so that the quantifier *many* is outside the scope of negation. Similarly, the possible underlying deep structure of Sentence (74) will be as follows:

(76)
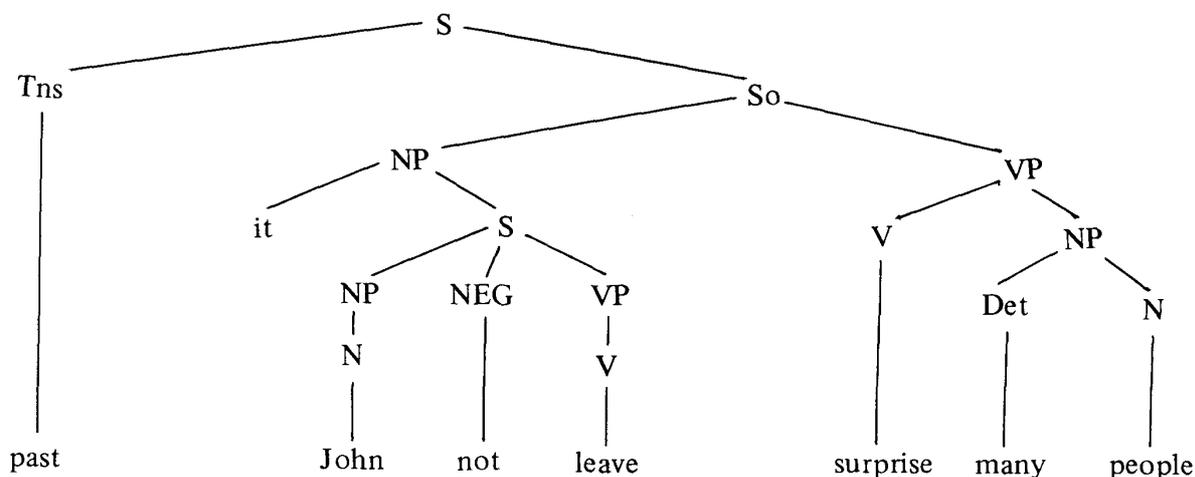
In the deep structure (76), the negative constituent *not* also occurs in the lowest S in the deep

structure, so that the quantifier *many* must be outside the negation.

As is shown in several examples, I want to claim that the method by applying the feature difference between [+specific] and [−specific] is very available to consider the scope of negation. In the following paper, I want to consider the controversies between the interpretive semantics and the generative semantics. (To be continued in the next number)