

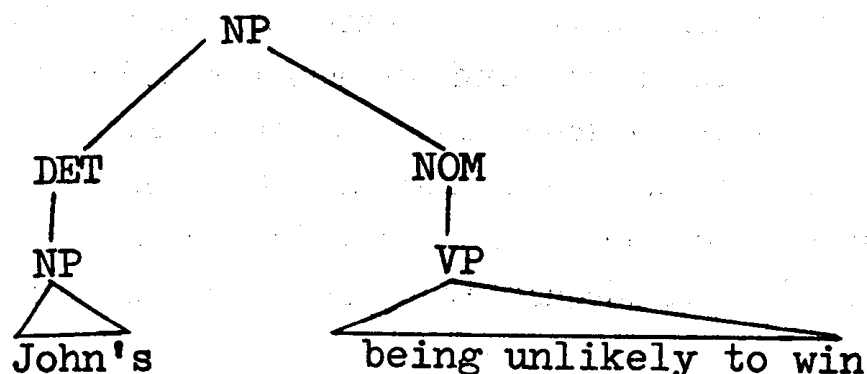
gerundive nominals. We discussed Schachter's claim that gerundive nominals must be analyzed as ordinary noun-headed NPs with the possessive determiner cannot be maintained. In addition Schachter's analysis cannot account for gerundive nominals which involve nonpossessive NPs. There are some cases in which some transformation must apply to a sentential underlying structure of gerundive nominals. All the discussion so far shows that the transformational analysis of gerundive nominals is more adequate than the nontransformational one.

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ture would be assigned to the gerundive nominal of (46).

(48)



However, the underlying structure shown in (48) does not represent the correct semantic interpretation of the gerundive nominal. For the predicate *unlikely* requires a sentential subject. Furthermore this analysis of *unlikely* is quite different from the one generally accepted.

Under the transformational analysis, on the other hand, roughly the following sentential underlying structure is assigned to the gerundive nominal of (46).

(49) $\begin{matrix} [& [\text{John would win}] & \text{was unlikely}] \\ \text{S} & \text{S} \end{matrix}$ gave his opponent confidence.

The sentential underlying structure shown in (49) correctly represents the semantic interpretation involved in the gerundive nominal in question. In addition, at least Subject Raising must apply to this underlying structure in deriving the gerundive nominal of (46). The same type of arguments can be offered to derive the gerundive nominal of (47).

What has been discussed so far shows that a sentential structure must be posited as the underlying structure of gerundive nominals like those in (46) and (47) and that Subject Raising must apply to such an underlying structure, which constitutes a strong evidence for the transformational analysis.

3. Conclusion

First we examined all the arguments Schachter offers for the non-transformational analysis and against the transformational analysis of

Therefore to derive gerundive nominals like those in (43), which involve *there*, first we must posit a sentential structure as the underlying structure of gerundive nominals. Second, we must apply *There*-insertion to such an underlying structure, although one more transformation, i. e., the gerundive-nominalization transformation must operate further. Examples (43) given above offer a strong evidence for the transformational analysis.

Let us consider the following example next.

- (44) Its having surprised me that John was here made me forget to go to class.

Within the framework of the transformational analysis, *that* clause is postulated as the underlying subject of the gerundive nominal in (44), as is illustrated in (45).

- (45) $\begin{matrix} S & S \\ [& [\end{matrix}$ [That John was here] had surprised me] made me forget to go to class.

Furthermore at least Extraposition applies to *that* clause in (45) and (44) derives.

According to the nontransformational analysis, on the other hand, sentence (44) cannot be generated at all. In particular *that* clause in (44) which follows a constituent of VP cannot be generated by the phrase structure rules proposed by Schachter.

Thus sentence (44) shows that a sentential structure must be posited as the underlying structure of gerundive nominals like those in (44) and that Extraposition must apply to such an underlying structure. This evidence strongly supports the transformational analysis of gerundive nominals.

Third let us consider the following examples.

- (46) John's being unlikely to win gave his opponent confidence.

- (47) John's happening to be there at the right time got him the job.

Under the nontransformational analysis, the following underlying struc-

case of pronouns occurs.

We have shown that Schachter's suggestion that "the nonpossessive constructions might be derived from underlying sentences, and only the possessive constructions assigned a determiner-plus-nominal underlying structure" cannot be maintained, for it cannot explain that sentences like (41a) and (41b) are synonymous. Hence Schachter's nontransformational analysis of gerundive nominals is clearly inadequate.

2. Evidence for Transformed Sentences

In the previous section, we pointed out a serious inadequacy involved in Schachter's analysis. In the following we will present three types of evidence which shows that at least some transformation must apply to a sentential underlying structure in deriving gerundive nominals.

First let us consider sentences like (43) in which *there* occurs in the position of the possessive in gerundive nominals.

- (43) a. There cannot be peace without there being war first.⁶
b. There was no sign of there having been a struggle.

Note that since *there* is not a possessive, the nontransformational analysis cannot derive these examples. Therefore Schachter himself suggests to generate gerundive nominals in sentences like (43) from a sentential underlying structure (p.214). Let us assume then that gerundive nominals in sentences like (43) are derived from a sentential underlying structure. It is generally accepted, however, that *there* is not postulated in the underlying structure but supplied by *There*-insertion. This means that at least one transformation must apply to a sentential underlying structure of gerundive nominals. In the derivation of the gerundive nominal of (43a), for example, *There*-insertion applies to a sentential underlying structure which is roughly something like $\begin{matrix} \text{[war} \\ \text{S} \\ \text{is first]} \end{matrix}$ and the derived structure which is roughly $\begin{matrix} \text{[there is war} \\ \text{S} \\ \text{first]} \end{matrix}$ derives.

6. This example is due to Takako Suzuki.

possessive of a gerundive nominal is a determiner generated by the same rules that generate the possessive in noun-headed NPs, the occurrence of nonpossessive NPs exemplified in (40) above is an insoluble problem for this analysis. Gerundive nominals which involve nonpossessive NPs like (40) above are not derived at all. To solve this problem, Schachter suggests that "the nonpossessive constructions might be derived from underlying sentences, and only the possessive constructions assigned a determiner-plus-nominal underlying structure" (p.214).

Let us assume that nonpossessive gerundive nominals are derived from underlying sentences as Schachter suggests. Consider the following examples.

(41) It does not snow here without $\left\{ \begin{array}{l} \text{a. it} \\ \text{b. its} \end{array} \right\}$ blowing.⁵

(42) You must come here without $\left\{ \begin{array}{l} \text{a. them} \\ \text{b. their} \end{array} \right\}$ seeing you.

Apparently (41a) and (41b) are synonymous. According to Schachter's proposal, however, the gerundive nominal of (41a) is assigned an underlying sentential structure, while that of (41b) is assigned a determiner-plus-nominal underlying structure. This is clearly inadequate. In addition to the counter-arguments against the nontransformational analysis offered in the previous sections, this inadequacy throws doubt on the determiner-plus-nominal analysis of gerundive nominals.

Under the transformational analysis, however, examples like (41) and (42) in the above raise no difficulty. For the gerundive nominals in (41a) and (41b) are assigned the same sentential underlying structure with the pronoun *it* as the subject, which accounts for the fact that (41a) and (41b) are synonymous. Likewise, (42a) and (42b) are assigned the same sentential underlying structure, but their derivations are different. Only in the case of (41a) and (42a), the subjects of the gerundive nominals are not possessivized. In that case the objective

5. Examples (41) and (42) are taken from Takako Suzuki's handout on "Property Preposition on Without", which was presented at Summer Institute of Linguistics held on August 30, 1977 at ICU.

Schachter argues that under the nontransformational analysis of gerundive nominals the freely extraposed nominals can be characterized as just the class which corresponds to an underlying configuration $\begin{smallmatrix} [S] \\ NP \end{smallmatrix}$ while the nominals for which extraposition is impossible or conditional, all correspond to an underlying configuration $\begin{smallmatrix} [(DET)NOM] \\ NP \end{smallmatrix}$ and thus a general characterization of the extraposable class is acquired.

As Schachter argues in the above, the nontransformational analysis can account for the distributional difference between gerundive nominals and other nominals which are thought to be generated from underlying sentences, as was exemplified in (35), (36), (37) and (39). Under the transformational analysis, Ross's output condition cited in (38) correctly filters out the ungrammatical examples in (35), (36) and (37). Moreover the occurrence of (39a) can be prevented by imposing restriction on Extraposition in such a way that it cannot apply to gerundive nominals. However, the transformational analysis cannot explain why gerundive nominals differ from other transformed sentences in their syntactic behaviors.

1.7. Inadequacy of Schachter's Analysis

In the previous sections, we examined all the arguments Schachter offers for the nontransformational analysis and against the transformational analysis of gerundive nominals. We showed that almost all arguments of Schachter's do not argue against the transformational derivation of gerundive nominals. In this section, we will point out an inadequacy involved in Schachter's analysis.

Observe the following examples, which are taken from Schachter (p. 213).

- (40) a. I think I'll take advantage of the rain stopping to go out.
- b. There ought to be a law against a man's sister ever entering his house after he's married.
- c. To think of me kissing Mr. H after all he's done to me.

Since under the nontransformational analysis it is claimed that the

(37) a. I want Bill's leaving to remain a secret.

b. *I want that Bill left to remain a secret.

Schachter notes that Ross proposes, in the first place, that nominalized sentences in general are subject to an output condition restricting their occurrence in internal position, and secondly, that gerundive nominals are a systematic exception to this output condition. Schachter cites the condition and the exception to it which Ross states.

(38) Grammatical sentences containing an internal NP which exhaustively dominates an S are unacceptable, unless the main verb is a gerund.

Schachter points out that Ross's output condition described above leaves the exception unexplained. While Schachter claims that the nontransformational analysis can explain why gerundive nominals are exceptionally acceptable in sentences such as (35), (36), and (37). Schachter explains that since a gerundive nominal is not an "NP which exhaustively dominates an S", it is not subject to a distributional condition affecting such NPs. He states further that since gerundive nominals are NPs like other noun-headed NPs, they just show the same syntactic behavior like other NPs.

Schachter cites another example of a distributional contrast between gerundive nominals and other nominals in question, i. e., *that* clauses, infinitives and embedded questions. He points out that gerundive nominals are not extraposed without restriction as is shown by the following examples.

(39) a. *It wasn't revealed the manager's having embezzled the money.

b. It wasn't revealed that the manager had embezzled the money.

c. It wasn't possible for the manager to have embezzled the money.

d. It wasn't known whether the manager had embezzled the money.

inapplicability of the gerundive-nominalization transformation to sentences which involve tense morphemes and modal auxiliaries. Thus the occurrence of tense morphemes and modal auxiliaries in gerundive nominals is prevented by the two analyses in question. Accordingly the non-occurrence of tense morphemes and modal auxiliaries in gerundive nominals is mute for the choice between the two analyses.

To summarize, the nonoccurrence of initial adverbs and Tense and Modal does not present any evidence for the two analyses in question.

1.6. Distribution

Schachter discusses two ways in which the distribution of gerundive nominals is closer to that of ordinary noun-headed NPs than it is to that of true nominalized sentences (pp. 221-224). Let us consider whether the distributional difference of gerundive nominals offers any evidence for choosing between the two analyses in this section.

Schachter points out that many investigators have commented on distributional differences between gerundive nominals and other nominals which are thought to be derived from underlying sentences, such as *that* clauses, infinitives, and embedded questions. According to Schachter, one difference is that gerundive nominals may occur after auxiliary verbs as subjects of questions, while other presumed nominalized sentences may not.

- (35) a. Did his playing the piano surprise you?
b. *Did that he played the piano surprise you?
c. *Would for him to have played the piano have surprised you?
d. *Is whether he played the piano known?

Schachter says that the relationship between this distributional difference and the differences illustrated by the following examples is suggested by Ross (1967):

- (36) a. That John's showing up pleased her was obvious.
b. *That that John showed up pleased her was obvious.

- c. I was surprised at the game's having been cancelled because of the storm.
- d. They told me of Mary's having taken the bus even though she would have preferred flying.

Schachter argues that the ungrammaticality of sentences (31) and the grammaticality of sentences (32) are predictable under the nontransformational analysis, because in the case of (31), the phrase structure rule (3) does not generate initial adverbs in pre-determiner position, and in the case of (32), initial adverbials are generated as a part of VPs dominated by NOM.

Under the transformational analysis, the ungrammaticality of sentences (31) is not accounted for. While the nontransformational analysis can account for the ungrammaticality of (31), but Schachter's analysis of adverbs is redundant in the sense that the phrase structure rule (29) derives the same type of adverbs in the sentence-initial position and other positions in VP.

It turns out that sentence initial adverbs do not offer any evidence for the two analyses in question.

AUX in the phrase structure rule of (29) given above is further rewritten as TNS (a tense morpheme) or TNS plus MOD (a modal auxiliary). Schachter offers the same type of arguments with regard to the nonoccurrence of tense morphemes and modal auxiliaries in gerundive nominals. Schachter states that since gerundive nominals have the structure of ordinary NPs and since this structure does not include AUX, the nonoccurrence of (33) is as much to be expected as the nonoccurrence of (34).

(33) a. *the Dodger's maying win the pennant.

b. *our being to be ready at seven o'clock.

(34) a. *John's may book

b. *Bill's be to pencil

As Schachter points out, under the transformational analysis, the derivations of ungrammatical sentences like (33) are blocked by the

nominals.

1.5. Nonoccurring Sentence Constituents

Schachter claims that types of sentence constituents that do not occur as constituents of gerundive nominals argue against the transformational analysis (pp.218-221). What Schachter calls nonoccurring sentence constituents will be discussed in this section.

One type of constituents Schachter notes is such sentence-initial adverbs as those in (30), which are generated by the phrase structure rule (29) that Schachter proposes.

(29) $S \rightarrow (ADV) NP AUX VP$

- (30) a. Perhaps I was mistaken.
b. Yesterday we had beans again.
c. Because of the storm, the game was cancelled.
d. Even though she would have preferred flying, Mary took the bus.

Schachter cites the following examples to illustrate the nonoccurrence of sentence initial adverbs in gerundive nominals.

- (31) a. *I acknowledge perhaps my having been mistaken.
b. *The fact of yesterday our having had beans again is beside the point.
c. *I was surprised at because of the storm, the game's having been cancelled.
d. *They told me of even though she would have preferred flying, Mary's having taken the bus.

Schachter further notes that it is just initial adverbials that are excluded from gerundive nominals, and that adverbials in other positions are permissible as in (32).

- (32) a. I acknowledge my having perhaps been mistaken.
b. The fact of our having had beans again yesterday is beside the point.

Schachter argues that since this same restriction holds for the occurrence of postposed possessives and *on NP's part* in gerundive nominals, if gerundive nominals are generated by the rules that derive noun-headed NPs, both the occurrence and the distribution of the expressions in question will be automatically explained.

Schachter discusses that if gerundive nominals are transformations of underlying sentences, the derivation of nominals like those in (25) is a problem, since there are no underlying sentences like (27a, b).

- (27) a. *This burned the midnight oil of you(r)
 b. *Any talked loudly on you(r) part

However, since the gerundive nominal *burning the midnight oil* in (25a) is an idiom, it is regarded as an intransitive. In addition, since the demonstrative *this* precedes the gerundive nominal, the gerundive nominal in question is a nominal gerund, i. e., an NP in the underlying structure. Since the gerundive nominal in (25a) is not derived from an underlying sentence, its derivation is not a problem at all.

Observe the following examples.

- (28)
- | | | | | | | | |
|------------------|---|---|---|-------------------|---|---|--------------|
| any | { | a | { | rapid speaking | } | { | on your part |
| | | | | clear singing | | | |
| | | | | loud talking | | | |
| | { | b | { | ?speaking rapidly | } | { | |
| ?singing clearly | | | | | | | |
| ?talking loudly | | | | | | | |

The examples in (28) show that nominal gerunds can occur freely in this expression, but the occurrence of verbal gerunds is questionable or at least not so natural as that of nominal gerunds. Since nominal gerunds are not transformed sentences but NPs in their underlying structures, their derivation in this construction is not a problem at all, either.

We have demonstrated in this section that the occurrence of the nonsentential constituents such as emphatic *own* and postposed possessives does not argue against the transformational derivation of gerundive

structure rules (3) and (4) proposed by Schachter cannot derive emphatic *own* and postposed possessives at least. Besides, Schachter himself suggests a transformational alternative to his analysis of emphatic *own*. According to that, emphatic constructions involving *-self* pronouns are considered as the sentential counterparts of the *own* constructions. Thus he asserts that (24) seems to be a paraphrase of (23).

- (24) She was not only ceaselessly afraid that she herself would offend, but that I would offend.

Schachter states that the underlying structure of (23) and (24) contains a phonologically unspecified "emphatic" morpheme, which is realized in the surface structure as *own* if it follows a possessive, otherwise as a *-self* pronoun by a posttransformational lexical insertion. Schachter himself notes that "it is therefore possible to find a fairly plausible source for emphatic *own* under the transformational analysis" (p.218). As Schachter himself admits, his claim that the occurrence of emphatic *own* in gerundive nominals offers evidence for the nontransformational derivation of gerundive nominals and against the transformational derivation of gerundive nominals from underlying sentences does not seem very strong.

As for postposed possessives and what Schachter calls semantically similar expressions of the form *on NP's part*, Schachter cites the following examples.

- (25) a. This burning the midnight oil of yours has got to stop.
b. Any talking loudly on your part will be punished.

Schachter observes that in ordinary noun phrases, postposed possessives and *on NP's part* can occur in cases where the head noun is preceded by any determiner other than *the* or a preposed possessive. Schachter cites the following examples.

- (26) $\left\{ \begin{array}{l} \text{this/a/any/no}\cdots \\ \text{*the/*your} \end{array} \right\} \text{ lapse } \left\{ \begin{array}{l} \text{of yours} \\ \text{on your part} \end{array} \right\}$

- (22) a. John brought up Bill's idea.
 b. John realized Bill's dream.

It is difficult to presuppose the existence of referents for *Bill's idea* and *Bill's dream*. Thus, it seems that when noun-headed NPs preceded by possessives are abstract nouns, it is difficult to presuppose the existence of a specified entity which these NPs represent. Hence, it is impossible to associate automatically the presuppositional character of definite NPs with the structure of $\begin{matrix} [& [NP]NOM \\ NP & DET \end{matrix}$. Thus, it is simply impossible to correlate the factive, presuppositional character of the gerundive nominal and the definite NP with the structure of the NPs which are assigned $\begin{matrix} [& [NP]NOM \\ NP & DET \end{matrix}$, as is claimed by the nontransformational analysis.

1.4. Non-Sentence-Constituents

Schachter tries to show that in addition to determiners, emphatic *own* and postposed possessives do occur in gerundive nominals, which are not immediate constituents of sentences but are constituents of ordinary noun-headed NPs (pp.216-218). We will consider whether the occurrence of emphatic *own* and postposed possessives argues against the transformational analysis and for the nontransformational analysis.

As for emphatic *own*, Schachter cites the following examples from Jespersen (1940, p.101).

- (23) She was not only ceaselessly afraid of her own offending, but
 of my offending.

Schachter argues that since this *own* requires a preceding possessive, it cannot occur as a part of underlying sentences and must be generated after the possessive by the rules which generate noun-headed NPs.

However, Schachter himself notes that "the precise structure that should be assigned to those constituents (that is, emphatic *own* and postposed possessives) is not entirely clear" (p. 217). The phrase

that the former presupposes the occurrence of a specified event, the latter the existence of a specified entity. Schachter notes that just as the sentences of (19) presuppose that Mary left, sentences (20) presuppose the existence of referents for *John*, *Fred's sister* and *this truck*.

- (20) a. John married Fred's sister.
b. John wrecked this truck.

Schachter observes that noun-headed NPs with initial possessives consistently have the presuppositional character of definite NPs. Therefore he suggests to associate the feature [+definite] with all NPs to which the phrase structure rules assign the structure
$$\begin{array}{c} \text{[NP] NOM} \\ \text{NP DET} \end{array}$$
 to correlate the presuppositional character of the NPs with the occurrence of this feature. Furthermore he argues that if gerundive nominals with initial possessives have the same structure
$$\begin{array}{c} \text{[NP] NOM} \\ \text{NP DET} \end{array}$$
 as is claimed by the nontransformational analysis, they will also automatically be assigned [+definite]. Thus he claims that it becomes possible under the nontransformational analysis to associate the factive character of gerundive nominals with initial possessives with the entire class of [+definite] NPs and capture a large generalization.

However, consider the following examples.

- (21) a. Bill resented being chosen.⁴
b. John regretted being arrested by the police.

Sentences (21a) and (21b) are used felicitously only when the facts that Bill was chosen and that John was arrested by the police are presupposed in (21a) and (21b) respectively. These gerundive nominals are assigned
$$\begin{array}{c} \text{[NOM]} \\ \text{NP} \end{array}$$
 under the nontransformational analysis. Therefore it is impossible to correlate the factive character of the gerundive nominal with the structure of the NPs which are assigned
$$\begin{array}{c} \text{[NP] NOM} \\ \text{NP DET} \end{array}$$
.

Furthermore, observe the following sentences.

4. This example is due to Wasow and Roeper (1972, p.52).

- b. *John's I just can't believe story.
- (16) a. Whose story do you believe?
- b. John's story I just can't believe.

Schachter suggests that a grammar of English should include a general condition which prohibits determiners from reordering out of the NP's of which they are constituents to account for the examples in (15) and (16). Schachter indicates that the same type of restriction is observed on reordering the possessive from the gerundive nominal as illustrated in the following examples.

- (17) a. *Whose do you object to getting a prize?
- b. *Tom's I just can't understand getting a prize.
- (18) a. Whose getting a prize do you object to?
- b. Tom's getting a prize I just can't understand.

Schachter argues that if the nontransformational analysis of gerundive nominals is adopted, the fact exemplified in (17) and (18) in the above is automatically accounted for by the general condition suggested above, that is, by prohibiting the possessive from reordering out of NPs.

However, it seems that the evidence given in (17) and (18) only shows that the possessive of the gerundive nominal behaves like other possessives in noun phrases in the surface structure. Therefore Schachter's arguments for the nontransformational analysis cited in the above do not prove that gerundive nominals are not underlying sentences.

Schachter offers some semantic evidence in support of his analysis. He notes the factive character of the gerundive nominal with the possessive. He points out that the following sentences are used only when the fact that Mary left is presupposed.

- (19) a. Mary's having left surprised me.
- b. I resented Mary's having left.

According to Schachter, it has also been noted, for example, by Keenan (1971), that a semantic similarity between factive nominals and so-called "definite names" (in general, definite NPs) is observed, in

for the preposition *of* does not precede *tales*. However, since *tell tales* is an idiom, it is considered as an intransitive. Then its gerundive nominal may be regarded as a nominal gerund, which Wasow and Roeper (1972) claim is an NP in the base. Wasow and Roeper (1972) point out that one of the characteristics of nominal gerunds is that they can take preceding adjectival modifiers. Since the quantifiers and the demonstrative in (14) just correspond to these adjectival modifiers, *telling tale* in (14) is a nominal gerund. Hence examples in (14) do not show that quantifiers and demonstratives precede verbal gerunds which we have been discussing. What has been discussed so far shows that in the phrase structure rule (4), neither quantifiers nor demonstratives can be arguments in (4)

To summarize, we have shown in this section that articles, quantifiers and demonstratives cannot precede the gerundive nominal. Accordingly Schachter's phrase structure rule (4) is not descriptively adequate and cannot hold as it is, which constitutes a counter-evidence for the nontransformational analysis.

1.3. The Possessive

Schachter argues that the initial possessive of the gerundive nominal is a determiner (pp.211-214). We will discuss whether Schachter's arguments really prove that the possessive is a determiner in the underlying structure.

Schachter points out that determiners in general, including possessive determiners are never reordered out of the NPs of which they are constituents. Therefore sentences in (15) are ungrammatical, whereas their counterparts in (16) are grammatical. The following examples are due to Schachter.

(15) a. *Whose do you believe story?

takes the direct object immediately following the verb.

(5) Negatives: The nominal gerund takes *no*, while the verbal gerund takes *not*.

(6) Aspect: The nominal gerund does not permit a tense marker, while the verbal gerund does.

gerundive nominals in Schachter's analysis. In (4), the determiner is rewritten as article, quantifier, demonstrative or NP. If articles can actually precede gerundive nominals, they should be substituted for the possessive NP. Thomas (1965, p.111), however, explicitly states that "the genitive which precedes the nominal cannot be replaced by any other form of determiner." Lees (1960, p.66) also cites the following examples. In (13b), the definite article cannot replace the possessive.

- (13) a. His drawing the picture rapidly...
- b. *The drawing the picture rapidly...

Hence, even if we admit the phrase structure rule (4), article cannot be an argument in it.

First of all, the examples Schachter cites to show that quantifiers and demonstratives precede gerundive nominals are marginal and exotic as Schachter himself admits. Secondly, it seems that the type of the gerund Schachter cites is quite different from the ones we have been discussing. For example, Schachter cites the following examples.

- (14) a. I won't tolerate any more telling tales out of school.
- b. There's been too much telling tales out of school around here lately.
- c. This telling tales out of school has got to stop.

At a first glance, *telling tales* may be regarded as a verbal gerund,³

3. Wasow and Roeper (1972, pp.45-46) proposed to differentiate two kinds of gerunds, one is the nominal gerund which has the internal structure of NP's, the other is the verbal gerund which has the structure of VP's. The specific structure differences they point out are;

- (1) Articles: The nominal gerund is introduced with articles, but the verbal gerund cannot.
- (2) Modifiers: The nominal gerund takes preceding adjectival modifiers, while the verbal gerund takes following adverbial modifiers.
- (3) Number: The nominal gerund can be pluralized, but the verbal gerund cannot.
- (4) Objects: The nominal gerund expresses the grammatical relation of direct-object-of in a prepositional phrase, whereas the verbal gerund

be more adequate, although a syntactic difficulty pointed out in the above still remains.

Observe the following examples.

- (11) a. Being bitten by the dog was a terrible experience
 { *for the mailbox.
 for Bill. }
- b. Being bitten by the dog was a terrible experience.
- (12) a. Being consulted often was fun { *for the computer.
 for John. }
- b. Being consulted often was fun.

Sentences (11a) and (12a) in the above show that there is a selectional restriction imposed on the occurrence of NP in the benefactive phrase, namely, the NP in the benefactive must be an animate NP. Naturally this selectional restriction must be imposed on the subject of gerundive nominals in cases like (11b) and (12b), where there is no overt benefactive phrase. That is to say we must postulate an underlying subject for gerunds like those in (11b) and (12b). Furthermore, that subject must be somehow specified as an animate NP.

Within the framework of Schachter's analysis, in sentences like (11b) and (12b), this selectional restriction cannot be stated at all. In addition, the subjects of the gerundive nominals in the grammatical sentences of (11a) and (12a) are understood as Bill and John respectively, but Schachter provides no device to explain these interpretations.

To conclude, as for (6b), Thompson's transformational analysis is adequate in that it accounts for the semantic interpretation involved in it, although a syntactic difficulty in deriving (6b) from such an underlying structure still remains.

1.2. Articles, Quantifiers, and Demonstratives

Schachter gives an argument for his phrase structure rules (3) and (4) (pp.210-211). His arguments will be considered in this section.

The phrase structure rules (3) and (4) previously described derive

gerund in (6c). In that case, the claim that subjectless gerundive nominals are transformed sentences at least partially holds in (6c) in the sense that the underlying structure we just proposed accounts for the noncontrolled interpretation involved in (6c).

Finally we will consider the subjectless gerundive nominal in (6b). Schachter cites Thompson's transformational analysis for this sentence and criticizes it. First we will follow Schachter's explanation of Thompson's analysis for (6b). Second we will recapitulate Schachter's criticism on Thompson's transformational analysis.

Thompson proposes the following Equi analysis for sentence (6b).

- (10) $\underset{S}{[NP_1 \text{ took the bus}]}$ was fun for NP_1

In (10), two occurrences of NP_1 are coreferential but otherwise unspecified and they are deleted ultimately. This underlying structure captures the interpretation of the implicit control involved in (6b), i.e., the missing subject of the gerundive nominal must be coreferential with the implicit NP in the benefactive phrase. However, Schachter argues against this analysis in that there is no syntactic evidence for such a derivation and that the deletion of the benefactive phrase violates the recoverability condition on deletion transformations. He concludes that if there is no deleted benefactive in (10), it is impossible to postulate an unspecified NP which is coreferential with the benefactive NP as the underlying subject of the gerund so that Equi NP Deletion can operate.

As Schachter points out, Thompson's Equi analysis for (6b) captures the interpretation of the implicit control involved in (6b), but there is a syntactic difficulty in deriving (6b) from such an underlying structure. Under the nontransformational analysis, on the other hand, since the gerund in (6b) is a nominal, there is no syntactic difficulty in deriving (6b). However, the inadequacy of the nontransformational analysis is that it cannot capture the semantic interpretation involved in (6b), i.e., the missing subject of the gerund must be coreferential with the implicit NP in the benefactive phrase. If there is any evidence which shows that a sentential underlying structure must be posited for the gerundive nominal in (6b), the transformational analysis turns out to

underlying structure can be posited for the gerundive nominal of (6c). In that case, the subject of the gerundive nominal should not be coreferential with the matrix subject. The other is how to derive (6c) from such a sentential underlying structure.

With regard to sentences like (6c), Schachter points out that sentences like (6c) are Thompson's "true counterexamples" to Wasow and Roeper's claim that Equi is the regular source of subjectless gerundive nominals. He states that if gerundive nominals are indeed transformed sentences one would expect them to have overt or at least recoverable subjects.

So far subjectless gerundive nominals in sentences like (6c) argues for the nontransformational analysis and against the transformational analysis. However, if there is any possibility for postulating some unspecified NP as the underlying subject of the gerundive nominal in (6c), the transformational analysis can at least account for the non-controlled interpretation in question.

As for this problem, there is a proposal by Thompson (1973), who follows Jackendoff's interpretive analysis. Thompson (1973, p. 381) proposes to represent all activity gerunds in English, which are gerundive nominals without subject and auxiliaries, as sentences with unspecified subjects in underlying structures. In addition, Thompson suggests that a set of semantic rules partially specify the interpretation of these unspecified subjects.

We propose to adopt Thompson's analysis, i. e., to posit some unspecified NP as the underlying subject of the gerund of (6c). In that case, since the subject of the gerund is unspecified, this underlying structure represents the noncontrolled interpretation of the gerund. We propose to postulate unspecified underlying subjects for subjectless gerunds only in cases where the matrix verb is a public verb like *recommend*.

To recapitulate, subjectless gerundive nominals in sentences like (6c) argue for the nontransformational analysis and against the transformational analysis. However, adopting Thompson's proposal, we proposed to posit a sentential underlying structure for the subjectless

Let us consider how the transformational analysis accounts for the control difference in question. The controlled interpretation of (8a) is correctly accounted for by postulating a sentential underlying structure like (9a). As for the analysis of action nominals like (8b), Wasow and Roeper (1972) show that what they call nominal gerunds are simple NPs in the base and that they lack controlled interpretation. According to their analysis, the underlying structure of (8b) would be something like (9b).

- (9) a. I enjoy $\begin{matrix} \text{[I sing folksongs]} \\ \text{S} \end{matrix}$
 b. I enjoy $\begin{matrix} \text{[the singing of folksongs]} \\ \text{NP} \end{matrix}$

The different underlying structures shown above correctly account for the control difference of (8a) and (8b) under the transformational analysis.

Thus the transformational analysis correctly accounts for the control difference of (8a) and (8b), while the nontransformational analysis cannot.

It is clear that the nontransformational analysis is inadequate in that it cannot offer a satisfactory explanation for a controlled interpretation in sentences like (6a) and (8a), which the transformational analysis can offer.

Let us consider (6c) next. As for (6c), the interpretation of the gerundive nominal is noncontrolled. Within the framework of Schachter's analysis, since it provides only NOM with the nominal, this noncontrolled interpretation is naturally predicted.

Within the framework of the transformational analysis, on the other hand, how is this noncontrolled semantic interpretation of (6c) explained? Apparently some unspecified NP which is not coreferential with the matrix subject must be posited as the underlying subject of the gerundive nominal. However, a serious syntactic difficulty arises in the derivation. For, since Equi NP Deletion does not operate in that case, (6c) cannot derive. Thus there are two difficulties involved in the transformational analysis. One is that whether a sentential

As his explanation in the above shows, in the case of (6a), Schachter ascribes the controlled interpretation of the gerundive nominal to part of the meaning of the matrix verb *enjoy*, i. e., their subject experiences their object.

However, a problem was raised on his analysis of *enjoy*, i. e., his account of the control of gerundive nominals fails to explain the control difference between gerundive nominals and action nominals illustrated by the following examples.

- (8) a. I enjoy singing folksongs.
- b. I enjoy the singing of folksongs.

Schachter defends his analysis against this objection as follows. This problem is discussed in a footnote.

"If private verbs like *enjoy* require control," the reviewer comments, "then *I* should be the understood subject of *singing* in (8b)² as well as (8a)." But note that I have not claimed that private verbs require control. Rather, I have claimed that the meaning of a private verb requires that its subject "experiences" its object. I have said nothing, however, about the character of the "experience", and I see no reason why this should not be expected to vary according to the meaning of the object. ... In (8a) the gerundive nominal itself appears to denote participation in a type of activity. In (8b), the action nominal does not necessarily denote participation. Hence the controlled interpretation of the nominal in (8a) and the uncontrolled interpretation in (8b) (footnote 13, p.216).

What he means is that a controlled or uncontrolled interpretation is actually determined by the meaning of gerundive nominals themselves, in particular, by the type of gerundive nominals. If so, it turns out that this explanation does not say anything about the control difference of (8a) and (8b) at all. Thus Schachter's defence fails to explain the control difference between (8a) and (8b).

2. We use our numbering instead of Schachter's.

jectless gerunds in (6).

First we will consider (6a). Notice that the gerundive nominal of (6a) has a controlled interpretation, i.e., the subject of the nominal must be coreferential with *Fred* in the matrix sentence. It is obvious that a sentential underlying structure posited by the transformational analysis for gerundive nominals like (6a) captures this controlled interpretation. Wasow and Roeper (1972), for example, account for this interpretation by postulating the following underlying structure.

(7) Fred enjoyed _S [Fred took the bus].

Furthermore, under the transformational analysis, since *Fred* in the gerundive nominal is coreferential with *Fred* in the matrix sentence in (7) above, Equi NP Deletion deletes it.

The decisive point for choosing the nontransformational or the transformational analysis in this case lies in that whether the nontransformational analysis can account for the controlled interpretation of gerundive nominals like (6a) successfully. Let us examine Schachter's proposal on this problem.

First of all, it should be pointed out that within the framework of Schachter's analysis, since the gerundive nominal in (6a) is a nominal, the controlled interpretation in question is not captured. Therefore he proposes the following analysis to assign the controlled interpretation of gerundive nominals to sentences like (6a).

I would claim, then, that it is merely part of the meaning of private verbs like *enjoy* (and not part of the meaning of public verbs like *recommend*) that their subject experiences their object. In cases like (28b)¹, where the object is a determinerless gerundive nominal, denoting, as I have claimed, participation in a type of activity, part of the meaning of the sentence is thus that the subject experiences the activity, and this is, I think, sufficient to account for the controlled interpretation of the nominal in these cases, without postulating any underlying subject for the nominal itself (p.216).

1. (28b) is the following sentence:

(28)b. I enjoyed going to the beach yesterday.

- (2) Whether any gerundive transformation is needed for the explanation of the relevant examples

In the following, we will examine these points from section 1 to 2 in this order. Finally in section 3, the implications of our arguments will be discussed.

1. Underlying Structure of Gerundive Nominals

The main concern of this section is to examine whether the sentential structure or the determiner-plus-nominal structure can be proved more adequate as the underlying structure of gerundive nominals. Schachter offers seven arguments for his proposal. Examining all of his arguments, we will determine which of the two analyses in question is more adequate in this section.

1.1. Subjectless Gerundive Nominals

Schachter discusses the problem of subjectless gerundive nominals in two sections (pp.207-210). Schachter points out the optionality of the initial possessive in gerundive nominals, which is reflected in the following examples.

- (6) a. Fred enjoyed taking the bus.
b. Taking the bus was fun.
c. Fred recommended taking the bus.

Within the framework of Schachter's analysis, since DET in the phrase structure rule (3) is an optional element, all the subjectless gerundive nominals in (6) above are uniformly simple nominals. Schachter explains that the occurrence of gerundive nominals without initial possessives merely reflects the general optionality of the initial possessive in noun phrases. Within the framework of the transformational analysis, on the other hand, all the gerundive nominals in (6) are assumed to have underlying subjects. Furthermore these subjects have to be deleted somehow in the derivation. We will examine the different claims offered by the two analyses with regard to each example of the sub-

assigned an underlying structure like that of noun-headed NPs by the following phrase structure rule.

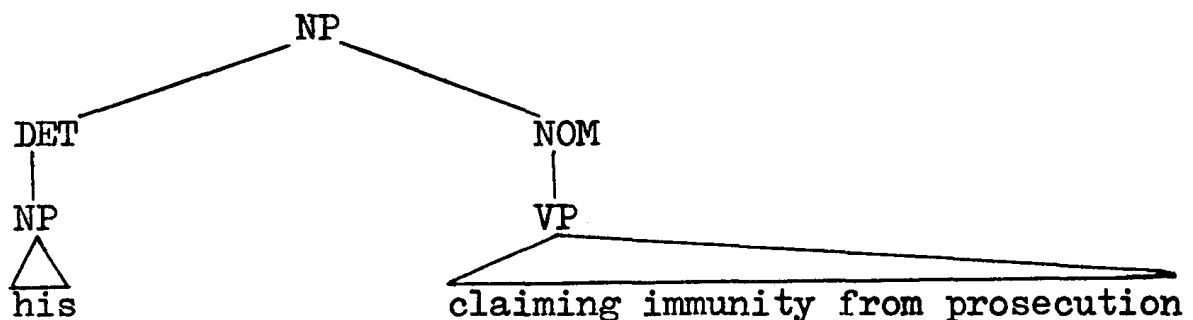
(3) $NP \rightarrow (DET) NOM$

The determiner, when chosen, is further rewritten as follows.

(4) $DET \rightarrow \begin{Bmatrix} ART \\ QUA \\ DEM \\ NP \\ \dots \end{Bmatrix}$

In (4), ART, QUA, and DEM represent article, quantifier and demonstrative respectively and NP is realized as a possessive. Furthermore NOM is rewritten as VP. According to Schachter's analysis (henceforth, the nontransformational analysis), the gerundive nominal in (1) is provided the underlying structure (5) and no gerundive transformation is involved in the derivation.

(5)



This paper will determine whether Schachter's nontransformational analysis of gerundive nominals can be proved much more adequate than the transformational one. The relevant points for the evaluation of the two analyses in question are mainly as follows:

- (1) Whether the determiner-plus-nominal underlying structure proposed by Schachter can be shown to be more adequate than the sentential underlying structure

Critique of a Nontransformational Account of Gerundive Nominals by Schachter*

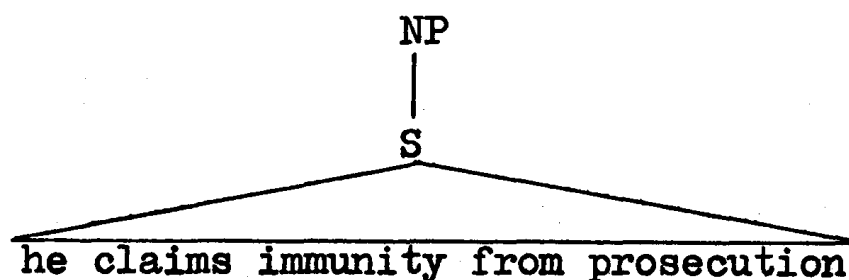
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0. Introduction

Lees (1960) first analyzed English gerundive nominals as transformed versions of underlying sentences (henceforth, the transformational analysis). In his analysis, gerundive nominals are a sentence dominated by NP in the underlying structure. His analysis has been followed with somewhat minor modifications by subsequent investigators such as Rosenbaum (1967), Kiparsky and Kiparsky (1971). Chomsky (1970) admits the transformational analysis in the case of gerundive nominals. Although the underlying structures of gerundive nominals proposed by those investigators differ slightly, their analyses agree to that of Lees in that they posit NP dominating sentential structures as the underlying structure of gerundive nominals. For example, roughly the following underlying structure would be assigned to gerundive nominal (1).

(1) his claiming immunity from prosecution

(2)



Schachter (1976) argued against the transformational analysis of gerundive nominals. He proposed instead that gerundive nominals are

*I am indebted to Professor Kazuko Inoue for her comments on the earlier version of this paper. Needless to say, all errors that may remain, however, are entirely my own.