

A Constraint on Passive Nominals in English*

Katsuhiko Iwasawa

0. Introduction

In this paper, I will principally be concerned with the facts relating to deverbal derived nominals in English. (1a) and (1b) below are expressions which have the derived nominal destruction as a head, each of which corresponds both lexically and semantically to the sentences (2a) and (2b):

- (1) a. the enemy's destruction of the city
- b. the city's destruction by the enemy
- (2) a. The enemy destroyed the city.
- b. The city was destroyed by the enemy.

The derived nominal destruction can be used both in the active sense as in (1a) and in the passive sense as in (1b). In other words, the Possessive NP (henceforth, Poss NP) is interpreted as the logical subject in (1a) and as the logical object in (1b). A form such as (1b) with the passive sense will be referred to as a passive nominal. Some other typical examples of passive nominals are cited below.¹ Most of the derived nominals which can be used as passive nominals seem to end with suffixes such as -(a)tion, -ment, -al, -ure:

- (3) a. Kennedy's assassination by Oswald
- b. a child's abandonment by its parents
- c. the play's revival by the NET
- d. John's censure by his superiors

Note that there are some derived nominals which cannot be used as passive nominals, even though their corresponding verbs

can be used in the passive forms. From a semantic point of view, such derived nominals include those which mean psychological or mental state (e.g., enjoyment), cognition or perception (e.g., knowledge, perception, etc.), those which mean verbal action (e.g., report, reading, singing, denial), and those which are derived from verbs of giving (e.g., gift). (4)-(6) are the cases in point:

- (4) a. *the play's enjoyment
- b. *the fact's knowledge
- c. *the government's perception (by the media)
- d. *John's recognition (by Fred)
- e. *irregularities' acknowledgement (by the senators)
- (5) a. *the invasion's report
- b. *the honor roll's reading
- c. *the aria's singing
- d. *the charge's denial (by the defendant)
- (6) *some money's gift to the library (by John)

This paper will investigate the reason why derived nominals such as those in (4)-(6) are not permissible passive nominals, as (1b) and (3) are. It appears that any attempt to account for the paradigm (4)-(6) would have to mention the distinction between the derived nominals in (1b) and (3) on the one hand, and those in (4)-(6) on the other. Thus, we must first find out what distinguishes these two classes of derived nominals.

1. Previous Analyses

When we regard NPs as consisting of three parts, i.e., specifier, head, and complement, it is possible in principle to

search for the distinguishing features in any of these three parts. In fact, it seems that previous studies concerned with the same problem as ours can be said to have endeavored to do so. Paying attention to the head, for example, we may well ask whether it is also used as Substance Noun or not (Cf. Nakajima (1980)). Apparently, the derived nominals in (1b) and (3) all lack the Substance Noun usage. But (4)-(6) include not only those which can be used as Substance Noun (e.g., report, gift), but also those which cannot be used as such (e.g., enjoyment, perception, recognition, etc.). Thus, this criterion does not suffice for our purpose.

Among the studies focusing on the properties of the complement of the expressions in question are Anderson (1978) and Fiengo (1980). Anderson and Fiengo distinguish these two classes of derived nominals in terms of the syntactic categories of the complements which they subcategorize at the underlying structures. More specifically, they claim that the derived nominals in (1b) and (3) take an NP complement, whereas those in (4)-(6) take a PP complement, which is illustrated by (7):

- (7) a. [_N [_N destruction] [_{NP} the city]]
 b. [_N [_N enjoyment] [_{PP} of [_{NP} the play]]]

NP movement applies to these structures and moves their complement NP to the specifier position of the entire NP to yield passive nominals, with a stranded preposition in the case of (7b):

- (8) a. [_{NP} the city's [_N [_N destruction] [_{NP} e]]]
 b. [_{NP} the play's [_N [_N enjoyment] [_{PP} of [_{NP} e]]]]]

Given this distinction, it is possible to claim that only those which take an NP complement can be used as passive nominals, since in general stranded prepositions are not permitted in NPs, as is exemplified by (9):

- (9) a. *the president's admiration for
 b. *Panama's accord with
 c. *this leader's reliance on
 d. *the university's allegiance to
 e. *your behavior's approval of

Therefore, if the derived nominals in (4)-(6) took a PP complement, their ungrammaticality as passive nominals would be accounted for in terms of the same principle that accounts for the ungrammaticality of (9).

Unfortunately for this account, however, there is no direct evidence that the derived nominals in (4)-(6) take a PP complement. Moreover, although Anderson claims that it is possible to predict from a certain semantic relation between the head and its complement NP (i.e., the notion of affectedness) whether the derived nominal head takes an NP complement or a PP complement, yet that semantic notion itself is rather vague and does not serve to make a correct prediction about their subcategorizational distinction. For these two reasons, we cannot adopt their subcategorizational features as a valid criterion for distinguishing the two classes.

The position yet to be considered is that of specifier, the position which Poss NPs usually occupy. We will see that the criterion we seek for can be found out in the characteristics peculiar to this position. Among the previous studies, Amritavalli (1980) pays attention to this position. In the next

section, we will briefly review this study and will point out its inadequacies. The final section will offer an alternative account free from these inadequacies.

Before going on, it should be noted that we assume the following two things about the expressions in question. One is concerned with their derivation. We assume that (1a) and (1b) are derived from the underlying form (10) by of-Insertion and by NP Movement, respectively. Their derived structures are shown in (11a) and (11b):

(10) [_{NP}... [_N [_N destruction] [_{NP} the city]]]

(11) a. [_{NP}... [_N [_N destruction] [_? of [_{NP} the city]]]]

b. [_{NP} the city's [_N [_N destruction] [_{NP} e]]]

The other is concerned with the way in which they assign thematic relations in the sense of Jackendoff (1972). We assume that the thematic relations which derived nominals assign to their arguments are the same with those which their corresponding verbs assign to their arguments in the corresponding sentences. Thus, in (12a) the thematic relations of John are Agent and Source, that of some money is Theme, and that of to the library is Goal, just as in (12b):

(12) a. John's gift of some money to the library

b. John gave some money to the library.

With these two points in mind, let us turn to Amritavalli's important study.

2. Amritavalli (1980)'s explanation

Amritavalli (1980) proposes an Experiencer Rule which correlates functional structures (thematic structures) with syntac-

tic structures. Although this rule is not directly related to our problem, it would be worth mentioning here, because it can account for at least the ungrammaticality of (4). The Experiencer Rule can be summarized as follows:

- (13) In NPs, an Experiencer is expressed in the form of
Poss NP.²

where Experiencer is a thematic relation introduced anew by Amritavalli, which refers to an animate object experiencing internal or psychological states. The complement NPs of the derived nominals in (14) are assigned the thematic relation of Experiencer:

- (14) amusement, annoyance, astonishment, boredom, conviction, delight, disappointment, disgust, dismay, distress, elation, embarrassment, humiliation, hurt, inspiration, interest, irritation, (dis)pleasure, puzzlement, surprise, relief, etc.

Thus, NPs with the derived nominals in (14) are subject to the Experiencer Rule (13). For example, amusement and annoyance cannot be used in the forms of (15a) and (16a), since their Experiencers the children and John must be realized as Poss NP by virtue of (13):

- (15) a. *Bill's amusement of the children with his stories
b. the children's amusement at Bill's stories
(16) a. *the result's annoyance of John
b. John's annoyance at the result

If we extend the notion of Experiencer so that it includes the logical subject of the psychological states or processes of

some sort, which is not unreasonable, then we would be able to account for (17) and (4) also in terms of (13):

- (17) a. *the power's love
 b. *the war's reminiscences

The derived nominals in (17) and (4), i.e., love, reminiscences, enjoyment, knowledge, perception, recognition, and acknowledgement denote some psychological states or processes of human. Thus, the logical subjects of these nouns are Experiencer. Then, in (17) and (4), the Poss NP position should have been occupied by an Experiencer NP according to (13).

In this way the Experiencer Rule proposed by Amritavalli can, with a little extension of the notion of Experiencer, account for the fact that the derived nominals in (4) and (17) cannot be used as passive nominals. Nevertheless, it cannot account for (5) and (6) as it stands, since these cases do not take an Experiencer as their argument. In order to accommodate these, we must either extend the notion of Experiencer more appropriately or abandon any explanation along these lines and find some completely other sort of explanation. Below we will develop an argument along the first line, that is, further extension of the notion of Experiencer.

3. An Alternative Proposal

In this section it will be shown that it is appropriate to extend the notion of Experiencer to mean the human noun which is assigned the thematic relation of Location. Consequently, the Experiencer Rule is modified as follows:

- (18) In NPs, a human noun which is assigned the thematic relation of Location must be expressed in the form of

Poss NP,

where Location is the notion which includes not only Location, but also Source and Goal in the sense of Jackendoff (1972). I may sometimes use the terms Source and Goal below for expository purposes, but they are both regarded as Location with respect to (18).

The ungrammaticality of (4)-(6) is accounted for by the revised Experiencer Rule (18). The derived nominals in (4)-(6) denote mental states or processes, verbal action, and the act of giving. Their subjects are typically human, and they are appropriately expressed as the Poss NP, as is the case with (19)-(21):

- (19) a. my enjoyment of the play
- b. John's knowledge of the fact
- (20) the defendant's denial of the charge
- (21) John's gift of some money to the library

It should be noticed here that the thematic relations which are assigned to the Poss NPs include Location in the above sense. Thus, the derived nominals in (4)-(6) take as their logical subject the human noun which is assigned the thematic relation of Location, which has to be expressed as Poss NP as in (19)-(21) by virtue of the constraint (18). (4)-(6) do not have such Poss NPs, hence the ungrammaticality.

We have assumed above that the subject NPs in (19)-(21), and hence the logical subjects of (4)-(6), bear the thematic relation of Location. Let us confirm this point here. As for (20) and (21), the derived nominals which mean verbal action and the act of giving, respectively, their subjects bear the thematic relation of Source (and that of Agent). That the subjects of

report and gift are Source is indicated by the fact that their original verbs cannot take an explicit expression of Source, as in (22):

- (22) a. John reported the invasion (*from Bill).
 b. John gave a book (*from Bill).

In the case of (19) whose head nouns are those which mean some psychological state or process, the subjects are at the same time Location where that mental state exists or that process takes place. This can be seen in (23)-(24), where the subjects of the corresponding verbs are expressed by locative phrase to NP:

- (23) a. John knows the fact.
 b. The fact is known to John.
 (24) a. I was very amused at his story.
 b. His story was very amusing to me.

Therefore, the subjects of the derived nominals in (19) also can be said to bear the thematic relation of Location.

We have seen that the ungrammaticality of (4)-(6) is accounted for in terms of (18). (18) can account for other examples as well. For example, consider (25):

- (25) a. John's expression of great relief
 b. *great relief's expression by John

(25a) is ambiguous. Expression means either a verbal action or a facial expression. In the former reading, in which expression represents a verbal action, the ungrammaticality of (25b) is accounted for just in the same way as (5). Thus, John in that case is both the Agent of that verbal action and the Source of that verbal expression. Therefore, according to (18),

the Poss NP of expression must be John. No other NPs may be allowed in this position, as (25b) shows. In the latter reading, the ungrammaticality of (25b) is also due to (18). John in this case is the Agent and the Location where that expression is expressed. The sentence (26), which is somewhat unnatural (though fully acceptable) explicates this point:

(26) John expressed great relief on his face.³

(26) can be viewed as a paraphrase of the latter reading of (25a). As is clear in (26), John in (25a) bear the thematic relation of the subject of express (i.e., Agent) and that of on his face (i.e., Location) in (26). Therefore, the ungrammaticality of (25b) in the latter reading is again due to (18).

We have seen that (18) gives an account for the ungrammaticality of the expressions (4)-(6) and (25b). Next, let us consider the motivation for (18). This problem can be approached from two points of view. One is related to the fact that human nouns are involved in (18). The other is related to the thematic relation. Both are the characteristics of the Poss NP position.

That human nouns have something to do with the explanation for the ungrammaticality of (4)-(6) is a reflex of a semantic hierarchy of nouns proposed by Hawkins (1981). The semantic hierarchy is (27)⁴:

(27) [[HUMAN] < [HUMAN ATTRIBUTE]] < [NON-HUMAN
ANIMATE] < [NON-HUMAN
INANIMATE]

Hawkins argues that nouns in NPs must appear in the left-to-right order in this hierarchy. Thus, the differences in acceptability in the following examples are due to this hier-

archy on his assumption:

- (28) a. John's legs
 b. ?the legs of John
- (29) a. *a table's leg
 b. the leg of a table

In (28), John is HUMAN and legs is HUMAN ATTRIBUTE. Thus, John and legs should appear in this order as in (28a), and not in the opposite order as in (28b). Similar things can be said about (29). Given this semantic hierarchy, we can say that HUMAN nouns, the leftmost ones in this hierarchy, appear in the Poss NP position most readily.

Note that Hawkins assumes that the semantic hierarchy (27) does not apply to derived nominals, because they have a functional structure unlike ordinary NPs. Derived nominals can have a Poss NP and a complement NP at the same time as in John's refusal of the offer, while ordinary NPs cannot, as is illustrated by *Mary's car of Harry. Hawkins says that due to this distinction the semantic hierarchy (27) does not apply to derived nominals.

However, it might be argued, correctly I think, that the semantic hierarchy does apply to derived nominal cases, though in a somewhat different way. Let us assume that it applies not to nouns but to NPs in derived nominal cases. Thus, we assume that in (25), for example, the order of the two NPs, John and great relief is subject to the semantic hierarchy (27). (25a) is in accordance with this hierarchy, while (25b) is not. Recall that we have assumed that such forms as (25a) are basic and are transformationally related to such forms as (25b) in relevant respects. On this assumption it can be said that

there is a tendency for Poss NP to be higher than or at least equal to complement NPs on the semantic hierarchy. This assumption is consistent with most of our examples and seems to be well motivated.

That the thematic relation of Location has something to do with the problem in question is basically a reflex of the following generalization about the Poss NP position:

- (30) In NPs, only the Poss NP can be assigned more than one thematic relation.

In NPs, complement NPs must in general be accompanied by a preposition. A preposition explicitly expresses one thematic relation the dominated NP bears. To put it differently, a preposition cannot express more than one thematic relation at once. But Poss NP does not have to be accompanied by a preposition. Therefore, in NPs, Poss NP, and no other NPs, can express (or bear) more than one thematic relation. Suppose here that we have a derived nominal which has a property of assigning two thematic relations to one of its syntactically realized arguments. Then that argument must be realized as Poss NP. This amounts to the claim that in the NPs whose head has such a property, the Poss NP is assigned the two thematic relations. (5) and (6) are the cases in point. Gift in (6) assigns Agent and Source to Mary in (31):

- (31) Mary's gift of the letter

This may be confirmed by the fact that agentive by-phrase cannot be attached to (31):

- (32) *Mary's gift of the letter by John

The ungrammaticality of (32) suggests that Mary in (31) is nec-

essarily assigned Agent and Source in (31)

We have already seen that the derived nominals in (5) and (6) assign to their Poss NP two thematic relations. The two thematic relations are Agent and Location (Source). Of these two thematic relations, it is Location that is important in distinguishing (1b) and (3) on the one hand and (4)-(6) on the other, since Agent is involved in all these cases except (4b). Therefore, to account for the possibility of passive nominals, it will suffice to refer to Location only, as in (18). This tactic has another advantage of accommodating the examples such as (4b), in which no Agent is involved.

Summarizing, (18) is a principle based on the semantic hierarchy (27) and Poss NP's characteristic (30), each of which is independently motivated. (18) can be put in the following way in relation to our problem of how to explain the possibility and impossibility of passive nominals: the derived nominals which take a human NP as its subject and assign the thematic relation of Location to that NP cannot be used as passive nominals.

(18) can account for the ungrammaticality of (4)-(6), (15a), (16a), (17), and (25b). But it is not without any problems. For example, there are possible counterexamples such as (33) and (34), with their active counterpart in parenthesis:

(33) Mary's robbery by John (Cf. John's robbery of Mary)

(34) Mary's persuasion by John (Cf. John's persuasion of Mary)

The logical subjects of robbery and persuasion are assigned the thematic relation of Goal and Source, respectively, in addition to that of Agent. Therefore, according to (18), passive nom-

inals are not possible with these derived nominals. But (33) and (34) are fully acceptable as passive nominals. Thus, we have to give an account for the grammaticality of these two examples.

Note that (33) and (34) have two peculiarities which (4)-(6) lack. One is that the NP complement of these derived nominals must be human nouns. Thus, the two competing NPs for the Poss NP position are on a par with respect to the semantic hierarchy (27). It might be that this reduces the effect of the semantic hierarchy (27), and hence that of (18), so that (33) and (34) are permitted. The other peculiarity is that they lack an explicit expression of Theme. When their Theme is expressed, they are unacceptable:

(35) *Mary's robbery of her money by John

(36) *Mary's persuasion to leave by John

This fact may be taken to indicate that the Poss NPs are not assigned the thematic relation of Location in these cases, so that they are immune to the revised Experiencer Rule (18). However, (33) and (34) require further study.

In this paper, we have dealt with the problem of accounting for the ungrammaticality of passive nominals such as (4)-(6). Our hypothesis is that it is due to the revised Experiencer Rule (18). We have also considered the motivation for this rule and concluded that it is attributable to the two peculiarities of the Poss NP position. And finally, we have mentioned two possible counterexamples to (18) and suggested what I think to be reasonable courses of solution.

NOTES

* I would like to thank Masaki Sano, Nobuhiro Kaga, Kozo Iwabe, and Katsunori Fukuyasu for valuable comments and criticisms on an earlier version of this paper.

¹ The examples in (3) are cited from Kayne (1981).

² Amritavalli notes that Experiencer is exceptionally realized as of-NP and cites the following two examples:

(i) John's disappointment of his audience

(ii) John's embarrassment of Mary

Here, his audience and Mary are Experiencer, but they appear as a non-Poss NP. Amritavalli's Experiencer Rule refers to of-NP only for these cases. However, these cases are, as Amritavalli says, exceptions and will be ignored below.

³ The reason why (26) is not completely unacceptable unlike (22) is perhaps due to the fact that his face and John express partially the same place. An example similar to (26) with John or him(self) in place of his face would be unacceptable for the same reason as (22).

⁴ By HUMAN ATTRIBUTE, Hawkins means human body-part terms such as eyes, nose, ears, hand, leg, nail.

REFERENCES

- Amritavalli, R. 1980. "Expressing Cross-Categorial Selectional Correspondences: An Alternative to the \bar{X} Syntax Approach," Linguistic Analysis 6:3. 305-43.
- Anderson, M. 1978. "NP Pre-posing in Noun Phrases," NELS 8. 12-21.
- Fiengo, R. 1980. Surface Structure. Cambridge, Mass.: Harvard University Press.

- Hawkins, R. 1981. "Towards an Account of the Possessive Constructions: NP's N and the N of NP," Journal of Linguistics. 247-69.
- Jackendoff, R.S. 1972. Semantic Interpretation in Generative Grammar. Cambridge, Mass.: MIT Press.
- Kayne, R.S. 1981. "Unambiguous Paths," in May R. and J. Koster (eds.) Levels of Syntactic Representation. Dordrecht, Holland: Foris Publication.
- Nakajima, F. 1980. Eigo no Kozo. Tokyo: Iwanami Shoten.