

PASSIVE CONSTRUCTIONS IN JAPANESE - A LEXICAL APPROACH IN HPSG -

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1. INTRODUCTION

The passive construction has been a focus of attention in many linguistic studies both in English and in Japanese. In the main trend of Generative Transformational Grammar of 1960's and early 70's, the English passive sentences were derived from their active counterparts through a series of transformations collectively called "passivization" (Chomsky (1957, 1965)). The passive has also been treated in terms of the change of grammatical functions among NPs. This approach is represented by Relational Grammar (Perlmutter (1984), Perlmutter and Postal (1983), Johnson (1977)). Since 1980's there seems to be a trend that moves toward a lexical analysis of the passive rather than a syntactic one. In the current Government-Binding Theory, this derivation is ascribed to a Move- α stimulated by three major principles: θ -criterion, Case Theory, and Binding Theory (Chomsky (1981), Jaeggli (1986)). This approach assumes a lexical operation that changes the verb form from base to the passive participle, absorbing the case-assigning property of the original verb.¹ The idea of Relational Grammar is incorporated in Bresnan's Lexical Functional Grammar (LFG). In LFG, the passive operation is conducted by a lexical rule that turns the the object of the active form into the subject, and either assigns the original subject to the null function or to an Oblique Agent phrase (Kaplan and Bresnan (1982), Sells (1985)). Among phrase structure grammars, GPSG postulates Passive Metarule to syntactically analyze the passive structures (Gazdar et al. (1985)), while HPSG has opted for a lexical approach, positing the passive lexical rule (Pollard and Sag (1987)).

An exactly parallel trend can be found in Japanese linguistics; i.e., from syntactic (transformational) to lexical approach (for the syntactic approaches, see Kuroda (1978), Kuno (1973), Inoue (1976) etc.; for the lexical approaches, see Farmer (1980, 1984), Hasegawa (1981a,b), Miyagawa (1989), etc.). But the Japanese passive construction is characterized by several interesting properties that find no counterpart in the English passive, passivization of intransitive verbs being the most prominent one among them. The Japanese passive has naturally called for different approaches from the ones proposed for the English passive.

The purpose of this paper is to propose a new lexical approach to the Japanese passive construction in the framework of HPSG. On the way, I will modify several parts of HPSG so that it can accommodate the Japanese language. Ultimately I will propose one type of lexical rule that covers not only (one type of) the passive structure but also the causative,

the benefactive, and (one type of) the topic construction in Japanese. This paper is organized in the following way: Section 2 will give a brief sketch of the passive structure in Japanese. In Section 3, I will present my proposal, which will also include a new approach to the topic construction. Section 4 is an attempt to extend my proposal seeking the parallelism between the passive structure and other derived structures.

2. A SKETCH OF THE PASSIVE IN JAPANESE

Japanese has two types of passives, variously called "direct" vs. "indirect", "pure" vs. "adversitive", "transitive" vs. "intransitive", etc. (cf. Kuno (1973), Inoue (1976), Gunji (1987)). Both types of these passives are formed by passive morpheme (r)are attached to the verb stem. The direct passive is analogous to the English passive in that it has a functionally equivalent active counterpart which always involves a transitive verb phrase (henceforth TVP). Besides, the original object corresponds to the subject of the passivized sentence, and that the original subject is deprived of the subjecthood; the agentive phrase is marked by [ni] which usually signals the indirect object or the dative case. The indirect passive is unique in not having the active counterpart. The indirect passive can be formed not only from a TVP but also from an intransitive verb phrase (henceforth VP) attached by the passive morpheme (r)are. The indirect passive is characterized by special semantic overtones as well. That is, it often carries the connotation that the subject is adversely affected in a certain sense by the action designated by the rest of the sentence.² The following are some examples of these two types of passive sentences ((1)= the direct passive; (2)= the indirect passive):

- (1) Naoko ga sensei ni sikar-are-ta.
 NOM teacher DAT sold-PASS-PAST
 'Naoko was scolded by the teacher.'
- (2) a. Naoko ga kodomo ni nak-are-ta.
 NOM child DAT cry-PASS-PAST
 'Naoko was adversely affected by the child's crying.'
- b. Naoko ga kodomo ni kabin wo war-are-ta.
 NOM child DAT vase ACC break-PASS-PAST
 'Naoko was adversely affected by the child's breaking the vase.'

The direct passive and the indirect passive also show a different behaviour with respect to the binding of reflexive zibun. It has been pointed out that the binder of zibun must be a subject of some sort (Shibatani (1977), Farmer (1984), Hasegawa (1981a,b)).³ When zibun is involved in the direct passive, the derived subject can bind the reflexive while the original subject (i.e. the subject of the active sentence) cannot bind it. However, the indirect passive allows both the original subject and the derived subject to bind the reflexive, resulting in ambiguity:

- (3) Mary_i ga sensei_j ni zibun_{i/*j} no ie de sikar-are-ta.
 NOM teacher DAT self GEN house in scold-PAS-PAST
 'Mary_i was scolded by the teacher in her_i own house.'
- cf. Sensei_j ga Mary_i wo zibun_{*i/j} no ie de sikat-ta.
 'The teacher_j scolded Mary_i in his_j own house.'
- (4) Mary_i ga sensei_j ni musuko wo zibun_{i/j} no
 NOM teacher DAT son ACC self GEN
 ie de sikar-are-ta.
 house in scold-PASS-PAST
 'Mary_i was affected by the teacher's_j scolding her son in her_i/his_j house.'

These peculiarities have prompted divergent analyses of the passive, some of which are quite different from those of English.⁴

3. A NEW APPROACH TO THE PASSIVE IN JAPANESE

In this section I will propose a new lexical approach to the Japanese passive. The framework of the analysis is basically HPSG, with several modifications made to accommodate the syntactic peculiarities of Japanese. In particular, major changes will be made in SUBCAT.

The idea of obliqueness hierarchy basically assumes that the surface word order directly reflects the GFs (SUBJ, OBJ, etc.) and the GCs (NOM, ACC, DAT, etc.) (cf. Keenan and Comrie (1977), Pollard and Sag (1987)). However, I will separate all these three: obliqueness, GF, and GC. I assume that both GFs and GCs are determined by the arguments' position in the SUBCAT list. The following is the tentative set of normal GF assignment rules and of normal GC assignment rules, both of which apply before the application of a lexical rule:

(5) **Normal GF Assignment Rules:**

- a. Assign SUBJ to the rightmost NP.
- b. Assign OBJ1 to the second NP from the right.
- c. Assign OBJ2 to the leftmost NP.

(6) **Normal GC Assignment Rules:**⁵

- a. Assign NOM(GA) to the rightmost NP.⁶
- b. Assign ACC(WO) to the second NP.
- c. Assign DAT(NI) to any other NP.

Some lexical rules change the GF, while others do not. GC assignment virtually changes the arguments from NPs to PPs, without a substantial semantic change (cf. Gunji (1983,

1987).) Once appropriate GCs are assigned, NPs can be permuted relatively freely, because they already have the syntactic information encoded.

3.1. Topic Lexical Rules

Before presenting my analysis of the passive, a discussion of the topic structure of Japanese is in order.⁷ "Topic" has been one of the most controversial concepts in the Japanese language. It is generally considered to be an NP (or the function associated with the NP) marked by the case marker [wa]. The following are some examples of the topic structure:

- (7) a. Taroo wa tuma ga Kyoto ni it-ta.
 TOP wife NOM to go-PAST
 'As for Taroo, his wife went to Kyoto.'
- b. Taroo wa Kyoto ni it-ta.
 TOP to go-PAST
 'As for Taroo, he went to Kyoto.'
- c. Naoko wa Hiroshi ga hana wo okut-ta.
 TOP NOM flower ACC send-PAST
 'As for Naoko, Hiroshi sent her flowers.'
- d. Naoko wa Hiroshi ga but-ta.
 TOP NOM hit-PAST
 'As for Naoko, Hiroshi hit her.'
- e. Tokyo wa Hiroshi ga umare-ta.
 TOP NOM be-born-PAST
 'As for Tokyo, Hiroshi was born there.'

It has been generally assumed that there are two types of topic structures in Japanese: one in which Topic corresponds to a certain argument or adjunct missing from the rest of the sentence (cf. (7-b, c, d, e) above), and the other in which the rest of the sentence cannot incorporate Topic (cf. (7-a)) (See Inoue (1976), Kuno (1973), Gunji (1987), etc.). In the former case, Topic is explained in terms of the unbounded dependencies with such notions as "Topic Fronting", "Movement to COMP", or "SLASH"; in the latter, Topic is usually considered as an extra phrase which is to be related to the rest of the sentence via a certain kind of pragmatic inference (cf. Kitagawa (1982), Farmer (1984)). In this case, Topic has not been associated with the subcategorization, because of its pragmatic character.⁸

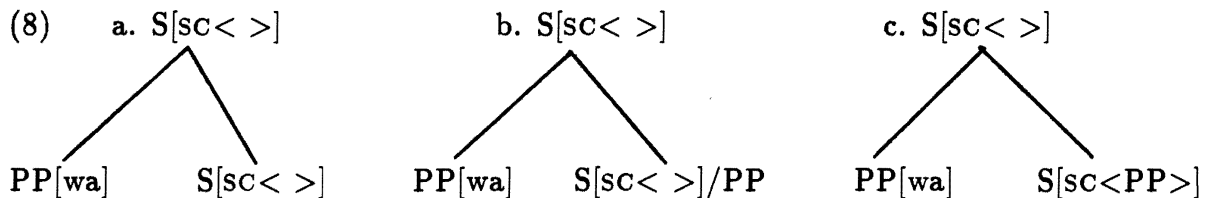
For the reasons that I will show below, I propose to classify Topic in three ways, rather than two, depending on the structure.

1. Adjunct Topic: preposed and marked by [wa] (cf. (7-e))
2. Extracted Topic: corresponds to an argument gap; extracted and marked by [wa]

(except for SUBJ) (cf. (7-c, d))

3. Base Topic: rightmost argument in the SUBCAT list; marked by [wa] in the list (cf. (7-a, b))

Below are their respective local trees:



Adjunct Topic is the preposed adjunct marked by [wa].⁹ Being an adjunct, it has no corresponding gap, and the rest of the sentence is “complete.” Extracted Topic is the preposed NP linked to a gap in the rest of the sentence via SLASH feature. Note that these two types of Topic have a saturated mother S and a saturated sister S. I assume that these two cases have [wa] assignment take place in syntax; that is, these Topics are marked by [wa] by virtue of its structure (either (8-a) or (8-b).) Base Topic is, on the other hand, a subcategorized Topic; the topic case ([wa]) of this type is assigned to the rightmost argument in the SUBCAT list. Obviously this makes a “topicalized subject” a Base Topic; however, a subject NP is not the only source of Base Topic. I claim that Topic of the type (7-a) (i.e. Topic without a corresponding argument or adjunct) is also Base Topic. To make this point I assume a lexical rule “Topic Introduction Lexical Rule” or (TILR) that derives a SUBCAT list with an additional argument at the right end. I will term this additional argument and its GF as “XARG”:

(9) Topic Introduction Lexical Rule (TILR)

$$\begin{array}{l}
 \text{base} \left[\begin{array}{l} \text{PHON } \boxed{1} \\ \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [] \boxed{2}, \rangle \\ \text{SEM} \mid \text{CONT } \boxed{3} \end{array} \right] \mapsto \\
 \text{topicalized} \left[\begin{array}{l} \text{PHON } \boxed{1} \\ \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [] \boxed{2}, [\text{XARG}] \boxed{4} \rangle \\ \text{SEM} \mid \text{CONT } \boxed{3} \end{array} \right]
 \end{array}$$

Crucially, this lexical rule introduces a “new” argument. The XARG cannot originate either in (the original) SUBCAT list or in the ADJUNCTS;¹⁰ there must be a separate possible (not necessarily realized) subject or PP[ga], and the XARG cannot be marked by any other postposition than [wa]. This XARG subsequently gets GC Topic or [wa] by Topic Case Assignment Rule. It is important to note that TILR does not affect the

original GFs of the arguments assigned by (5); SUBJ remains SUBJ, and OBJ remains OBJ. TILR only adds one more argument in the SUBCAT list.

This approach to Topic finds support in the argument of zibun-binding. As mentioned earlier, it has been assumed that reflexivization can be triggered only by a subject of some sort. Obviously, however, Topic of the types in (7-a) and (7-b) can bind the reflexive. The generalization is that:

Topic can bind the reflexive zibun iff
 either it corresponds to the subject
 or it has no correspondent in the original (untopicalized) sentence.

This generalization would be very difficult to capture without the approach that I am proposing. There seems to be little in common between a subject PP and a PP disconnected from any grammatical function. The three-way classification of Topic based on the Topic Lexical Rules that I am proposing in this section can capture this asymmetry of Topic in a straightforward way; it simply necessitates the stipulation that Base Topic, besides a subject, can bind a reflexive.

3.2. A New Approach to the Passive: A Proposal

Now let me turn back to the passive structure in Japanese. I will posit the following two lexical rules and one GC re-assigning rule to accommodate the direct and indirect passive:

(10) Direct Passive Lexical Rule (PLR 1)

$$\begin{array}{l}
 \text{base}^{\wedge}\text{trans} \left[\begin{array}{l} \text{PHON } \boxed{1} \\ \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, []_{\boxed{2}}, \dots, []_{\boxed{3}} \rangle \\ \text{SEM} \mid \text{CONT} \boxed{4} \end{array} \right] \mapsto \\
 \text{passive} \left[\begin{array}{l} \text{PHON } f_{\text{PASS}} (\text{rare}, \boxed{1}) \\ \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [\text{OBJ2}]_{\boxed{3}}, [\text{SUBJ}]_{\boxed{2}} \rangle \\ \text{SEM} \mid \text{CONT} \boxed{4} \end{array} \right]
 \end{array}$$

(11) Indirect Passive Lexical Rule (PLR 2)¹¹

$$\begin{array}{c}
 \textit{base} \\
 \left[\begin{array}{l}
 \text{PHON } \boxed{1} \\
 \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [\boxed{2}] \rangle \\
 \text{SEM} \mid \text{CONT} \left[\begin{array}{l}
 \text{RELN } \boxed{4} \\
 \text{AGENT } \boxed{2} \\
 \vdots
 \end{array} \right]
 \end{array} \right] \mapsto \\
 \\
 \textit{passive} \\
 \left[\begin{array}{l}
 \text{PHON } f_{\text{PASS}} (\textit{rare}, \boxed{1}) \\
 \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [\boxed{2}], [\text{XARG}] \boxed{3} \rangle \\
 \text{SEM} \mid \text{CONT} \left[\begin{array}{l}
 \text{RELN} \quad \text{EXPERIENCE}(\boxed{4}) \\
 \text{EXPERIENCER } \boxed{3} \\
 \text{AGENT } \boxed{2} \\
 \vdots
 \end{array} \right]
 \end{array} \right]
 \end{array}$$

(12) GC Reassignment Rules: obligatory after (10) or (11)

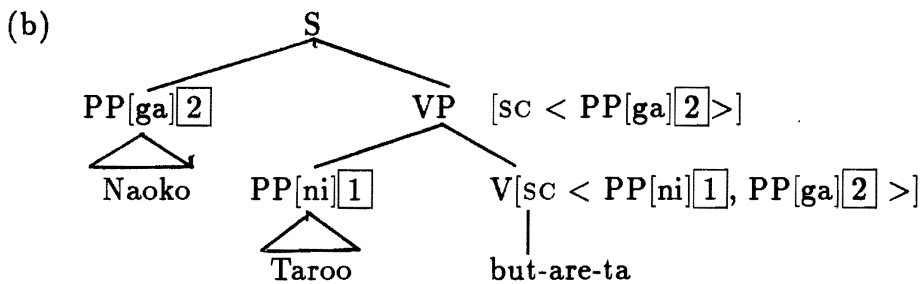
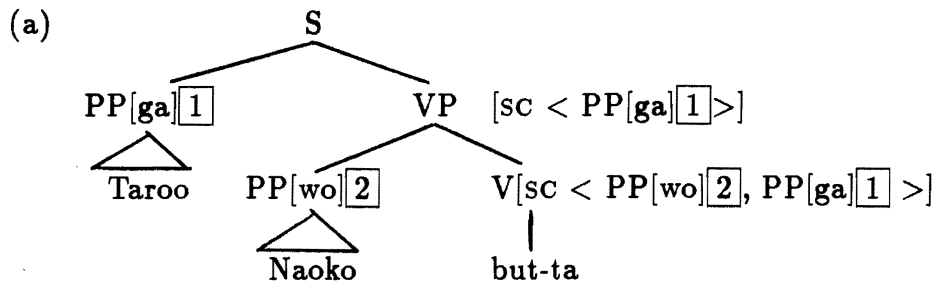
- a. Assign NOM(GA) to the rightmost NP.
- b. Assign DAT(NI) to the second NP from the right.
- c. Maintain the GCs originally assigned to the other NPs.

PLR 1 is a direct counterpart of the English passive lexical rule in HPSG (Pollard and Sag (1987)). It permutes the order of arguments in the SUBCAT list; non-SUBJ argument (i.e. an argument not in the rightmost position) is moved to the rightmost position, and the SUBJ is moved to the second position from the right. I assume that this rule changes the original GF of the arguments, making the new rightmost argument the new SUBJ, and the second argument the OBJ2. Subsequently the GC re-assignment rule (12) applies marking the rightmost NP with [ga] and the second NP with [ni].

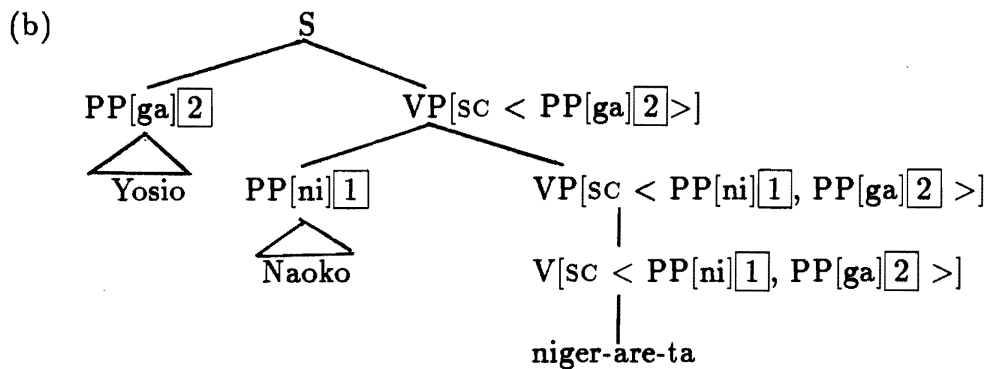
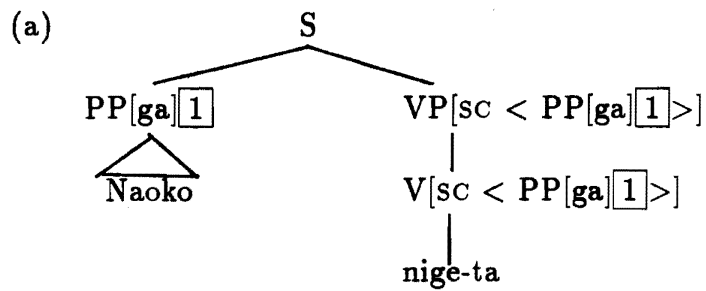
PLR 2 is the rule for the indirect passive, which is unique to Japanese. This rule adds a new argument at the right end of the list, which is to be linked to the Experiencer in SEM. The order of the rest of the arguments is preserved, and I assume that GFs are not affected. GC re-assignment rule (12), however, applies, changing the original GCs; the newly introduced (rightmost) argument will receive [ga], and the SUBJ argument will be marked by [ni] rather than [ga]. One of the crucial differences between PLR 1 and PLR 2 is, then, that the former changes the original GF while the latter does not.

The following are the examples of the active vs. passive sentence pairs with the structures proposed here.¹²

- (13) a. Taroo ga Naoko wo but-ta.
 NOM ACC hit-PAST
 ‘Taroo hit Naoko.’
 b. Naoko ga Taroo ni but-are-ta.
 NOM DAT hit-PASS-PAST
 ‘Naoko was hit by Taroo.’



- (14) a. Naoko ga nige-ta.
 NOM escape-PAST
 ‘Naoko got away.’
 b. Yosio ga Naoko ni niger-are-ta.
 NOM DAT escape-PASS-PAST
 ‘Yosio was adversely affected by Naoko’s getting away.’

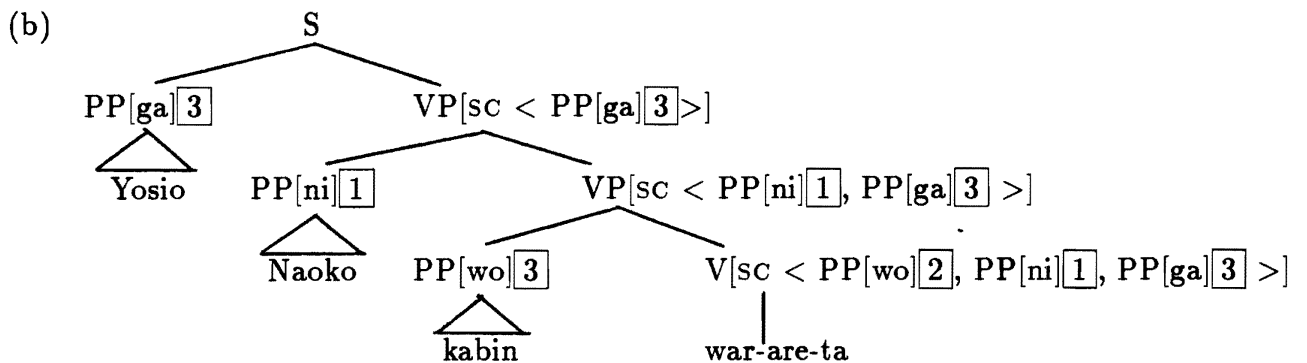
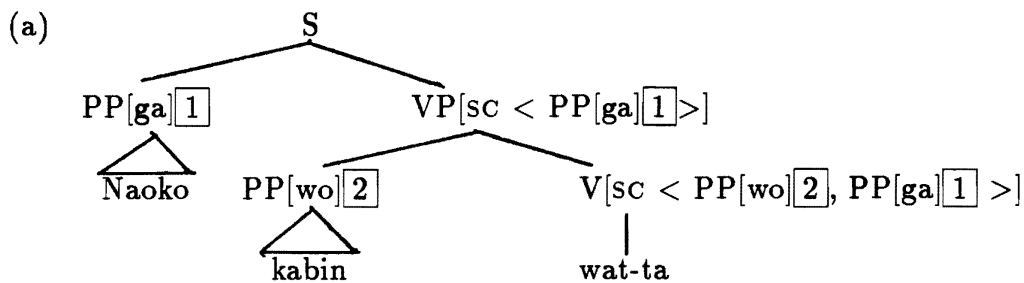


- (15) a. Naoko ga kabin wo wat-ta.
 NOM vase ACC break-PAST

‘Naoko broke the vase.’

- b. Yosio ga Naoko ni kabin wo war-are-ta.
 NOM DAT vase ACC break-PASS-PAST

‘Yosio was adversely affected by Naoko’s breaking the vase.’



Basic changes that the lexical rules (PLR 1 and PLR 2) make in the SUBCAT list of the verbs involved in the examples above can be summarized in the following way:

(13-a) $SC < PP[wo]_{[2]}, PP[ga]_{[1]} > \mapsto (PLR\ 1 + (12))$

(b) $SC < PP[ni]_{[1]}, PP[ga]_{[2]} >$

(14-a) $SC < PP[ga]_{[1]} > \mapsto (PLR\ 2 + (12))$

(b) $SC < PP[ni]_{[1]}, PP[ga]_{[2]} >$

(15-a) $SC < PP[wo]_{[2]}, PP[ga]_{[1]} > \mapsto (PLR\ 2 + (12))$

(b) $SC < PP[wo]_{[2]}, PP[ni]_{[1]}, PP[ga]_{[3]} >$

Note that PLR 2 has a crucial similarity to TILR. That is, both lexical rules introduce a new argument (XARG) at the right end of the SUBCAT list without affecting the original GFs. My point is that these two rules are subsumed by one class of rules that I will term as “SUBCAT Extension Lexical Rule.” The motivation of this analysis again comes from the consideration of zibun-binding.

As I mentioned in section 2, the agentive phrase or PP[ni] can bind a reflexive only in the indirect passive, but not in the direct passive. This asymmetry has long been a topic of discussion, prompting two opposing positions: uniform approaches and non-uniform approaches (cf. Hasegawa (1981a,b), Ishikawa (1985), Gunji (1987), Miyagawa (1989), etc.). However, recall that Topic construction can have a similar reference pattern as the indirect passive. To be more precise, those Base Topics that have undergone TILR show the referential ambiguity between PP[wa] and PP[ga]. See the following examples:

- (16) a. Naoko_i wa koibito_j ga zibun_{i/j} no ie de zisatu-s-ita.
 TOP B. F. NOM self GEN house at suicide-do-PAST
 ‘As for Naoko, her boyfriend committed suicide in her/his house.’
- b. Naoko_i wa musuko_j ga zibun_{i/j} no syasin wo tot-ta.
 TOP son NOM self GEN photos ACC take-PAST
 ‘As for Naoko, her son took his/her pictures.’

If we assume the idea of “SUBCAT Extension Lexical Rule”, the generalization is readily apparent:

- (17) Zibun controller is either
 a PP associated with the GF [SUBJ] or
 a PP that occupies the rightmost position in the SUBCAT list.

Given this generalization, the asymmetry between the direct and the indirect passive finds a straightforward account. The original subject in the direct passive cannot bind a reflexive any more, because PLR 1 which is not a SUBCAT Extension Lexical Rule does change the GFs, depriving the original subject (agentive phrase realized as PP[*ni*].) of the subjecthood. The binder is unambiguously the derived subject PP[*ga*]; in fact, this single PP, and nothing else, satisfies both of the disjunctive clauses in (17). The other two cases, Base Topic and the indirect passive, both involve SUBCAT Extension Lexical Rule. Since this type of rules preserves the original GFs and introduces a new argument at the right end of the list, it ends up with two separate PPs that satisfy each of the clauses in (17) respectively; the consequence is the ambiguity. Thus the idea of SUBCAT Extension Lexical Rule enables us to give a simple unified account of the problem of zibun-binding in Topic construction and in the indirect passive.

Before concluding this section, let me comment on the uniform vs. non-uniform approaches to the passive. The present analysis may seem to be a non-uniform analysis because it posits two different lexical rules. It is still quite possible, however, to capture the commonness or the "passive-hood" in these two rules. First, passivization is basically a process that changes the position of arguments in a SUBCAT list in such a way as to put a new PP in the rightmost position. The difference is only the source of the PP; that is, either from a different position in the same SUBCAT list (= the direct passive) or from nowhere (= the indirect passive). Second, as a consequence of this rearrangement, the original SUBJ no longer receives a nominative case [*ga*] when the GC re-assignment rule (12) has applied; the new rightmost NP gets the case instead. In view of these properties, the direct passive and the indirect passive are almost identical processes except for the origin of the new PP[*ga*].

4. NI-CAUSATIVE AND BENEFACTIVE

In this section I will compare the passive structure with other derived structures in Japanese and argue about their similarities, giving some tentative lexical rules for them. It is generally assumed that the passive, the causative, and the benefactive are structurally very similar (cf. Inoue (1976), Hasegawa (1981a), Gunji (1987) among others). They all involve the complex verbs consisting of a verb stem attached by a morpheme ((*r*)are, (*s*)ase, or (*i*)temorau) that determines the property of the complex verbs, either passive, causative, or benefactive. Besides, in all of these structures, the "non-subject" or non-nominative argument is the agent of the main action; the nominative argument is not directly involved in the action itself, but is in some non-agentive relation to the action (either as the adversely affected, as the causer, or as the benefitted). In the Transformational Grammar of the 1970's, all of these structures were derived from complex (i.e. multi-clause) structures

through a series of transformations such as Raising, S-Pruning, Equi-NP Deletion, etc. And in these underlying structures, the agentive argument was the subject of the embedded S (cf. Inoue (1976), Kuno (1973), Kuroda (1978) among others).

Japanese causativization is characterized by the causative morpheme (s)ase, which is attached to a verb stem. The causer is marked by [ga], and the causee, which corresponds to the agent of the action to be caused, is marked by either [wo] or [ni].¹³ The following are some examples of the causative sentences:

- (18) a. Naoko ga deteiku.
 NOM go away
 'Naoko goes away.'
- b. Taroo ga Naoko ni/wo deteik-ase-ta.
 NOM DAT/ACC go-away-CAUS-PAST
 'Taroo let/made Naoko go away.'
- (19) a. Naoko ga musuko wo homeru.
 NOM son ACC praise
 'Naoko congratulates her son.'
- b. Taroo ga Naoko ni/*wo musuko wo home-sase-ta.
 NOM DAT/*ACC son ACC praise-CAUS-PAST
 'Taroo let/made Naoko congratulate her son.'

The benefactive sentence is characterized by the semantic overtone that the action involved benefitted the subject in some way. Structurally, it is very close to the NI-causative and the passive. It is formed by benefactive morpheme (i)temorau that attaches to a verb stem, and the agent of the embedded (beneficent) action is marked by [ni], instead of [ga]; the PP marked by [ga] is the beneficiary. This overtone of "benefit" is quite contrastive with the overtone of "adversity" associated with the indirect passive. The beneficiary, or PP[ga], may be actively involved in realizing the action, i.e. by asking the favor, but it is not necessarily the case. It can be benefitted by chance or by the agent's voluntary action.

- (20) a. Naoko ga deteiku.
 NOM go away
 'Naoko went away.'
- b. Taroo ga Naoko ni deteit-temorat-ta.
 NOM DAT go-away-BENE-PAST
 'Taroo benefitted from Naoko's having gone away.'

- (21) a. Ozi ga isan wo nokosu.
 uncle NOM heritage ACC leave
 'The uncle leaves a fortune.'
- b. Naoko ga ozi ni isan wo nokos-itemorat-ta.
 NOM uncle DAT heritage ACC leave-BENE-PAST
 'Naoko benefitted from her uncle's leaving her a fortune.'

I claim that the NI-causative and the benefactive are derived in essentially the same way as the indirect passive; their derivation is basically a lexical process. The rule involved is a SUBCAT Extension Lexical Rule followed by the GC re-assignment rule (12). That is, it introduces a new argument in the right end of the SUBCAT list, preserving the original arrangement of GFs. The difference among these three constructions resides mainly in the semantic roles of the arguments involved.

The followings are the tentative lexical rules for the NI-causative and the benefactive:

(22) NI-Causative Lexical Rule (NCLR)

$$\begin{array}{c}
 \text{base} \\
 \left[\begin{array}{l}
 \text{PHON } \boxed{1} \\
 \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [\boxed{2}] \rangle \\
 \text{SEM} \mid \text{CONT} \left[\begin{array}{l}
 \text{RELN } \boxed{4} \\
 \text{AGENT } \boxed{2} \\
 \vdots
 \end{array} \right]
 \end{array} \right] \mapsto \\
 \\
 \text{causative} \\
 \left[\begin{array}{l}
 \text{PHON } f_{\text{CAUS}} (\text{sase}, \boxed{1}) \\
 \text{SYN} \mid \text{LOC} \mid \text{SUBCAT} \langle \dots, [\boxed{2}], [\text{XARG}] \boxed{3} \rangle \\
 \text{SEM} \mid \text{CONT} \left[\begin{array}{l}
 \text{RELN} \qquad \qquad \text{CAUSE}(\boxed{4}) \\
 \text{CAUSER} \qquad \qquad \boxed{3} \\
 \text{CAUSEE-AGENT} \qquad \boxed{2} \\
 \vdots
 \end{array} \right]
 \end{array} \right]
 \end{array}$$

CONDITION: This rule must be followed by GC Reassignment Rules (12).

(23) Benefactive Lexical Rule (BNLR)

$$\begin{array}{c}
 \text{base} \\
 \left[\begin{array}{l}
 \text{PHON } \boxed{1} \\
 \text{SYN | LOC | SUBCAT } \langle \dots, [] \boxed{2}, \rangle \\
 \text{SEM | CONT } \left[\begin{array}{l}
 \text{RELN } \boxed{4} \\
 \text{AGENT } \boxed{2} \\
 \vdots
 \end{array} \right]
 \end{array} \right] \mapsto \\
 \\
 \text{benefactive} \\
 \left[\begin{array}{l}
 \text{PHON } f_{\text{BENE}} (\text{temorau}, \boxed{1}) \\
 \text{SYN | LOC | SUBCAT } \langle \dots, [] \boxed{2}, [\text{XARG}] \boxed{3} \rangle \\
 \text{SEM | CONT } \left[\begin{array}{l}
 \text{RELN } \text{BENE}(\boxed{4}) \\
 \text{BENEFICIARY } \boxed{3} \\
 \text{BENEFACITOR } \boxed{2} \\
 \vdots
 \end{array} \right]
 \end{array} \right]
 \end{array}$$

CONDITION: This rule must be followed by GC Reassignment Rules (12).

An argument involving the reflexive serves to further prove the structural similarity among the indirect passive, the NI-causative, and the benefactive. That is, as in the indirect passive, the NI-causative and the benefactive allow both the PP[ga] and the PP[ni] to bind the reflexive *zibun*, resulting in ambiguity. See the following examples:

- (24) a.* Kyoko_i ga Yosio_j ni zibun_{i/j} no kuruma de
 NOM DAT self GEN by car
 Amerika e ik-are-ta.
 to America go-PASS-PAST
 ‘Kyoko was adversely affected by Yosio’s going to the U. S. by her/his car.’
- b. Kyoko_i ga Yosio_j ni zibun_{i/j} no kuruma de
 NOM DAT self GEN by car
 Amerika e ik-ase-ta.
 to America go-CAUS-PAST
 ‘Kyoko let/made Yosio go to the U. S. in by her/his car.’
- c. Kyoko_i ga Yosio_j ni zibun_{i/j} no kuruma de
 NOM DAT self GEN by car
 Amerika e it-temorat-ta.
 to America go-BENE-PAST
 ‘Kyoko benefitted from Yosio’s going to the U. S. by her/his car.’

This ambiguity in the reference of the reflexive is the direct consequence of the SUBCAT Extension Lexical Rule, as I have shown in the previous section. Since this type of lexical rules does not alter the original GFs, the original subject (agent) retains the GF [SUBJ].

The newly introduced argument XARG is the rightmost argument in the SUBCAT list. It follows from the generalization (17) that both the PP[SUBJ] and the XARG (marked by [ga]) can bind the reflexive; the result is the ambiguity.

5. CONCLUSION

In this paper I have proposed a new lexical approach to the passive sentences in Japanese in the basic framework of HPSG. The proposals center around the idea "SUBCAT Extension Lexical Rule" that I have introduced. The main claim is that the lexical rule deriving the indirect passive is a SUBCAT Extension Lexical Rule, while the rule deriving the direct passive is not. Since SUBCAT Extension Lexical Rules add one argument at the right end of the SUBCAT list without altering the original GFs of the arguments, the original subject (= Agent) of the indirect passive retain the GF SUBJ; on the other hand, the lexical rule of the direct passive takes the GF off from the original subject (= Agent), demoting it to a oblique function. This difference, I claim, results in the asymmetry of the reflexive binding in the passive, which has induced long discussion in the literature.

The concept of SUBCAT Extension Lexical Rule also enables us to connect the indirect passive with such derived structures as the NI-causative and the benefactive; they are all derived by this type of lexical rules. In particular, this approach provides a straightforward account of the referential ambiguity of the reflexive shared by all these three structures.

Another advantage of this approach is that it captures the similarity between the indirect passive and the other two structures mentioned above on the one hand, and the topic construction (of one type) on the other; they all involve SUBCAT Extension Lexical Rules. Of course, one must note that there is a crucial difference between these two. Topic Introduction Lexical Rule (TILR) is a secondary optional rule; the other lexical rules (PLR 1 and 2, CNLR, and BNLR) must precede this rule, and every output of these four lexical rules can undergo this rule. That is, the direct passive, the indirect passive, the causative, and the benefactive can be topicalized in the Base Topic type. Another important difference is that the output of TILR must undergo Topic Case Assignment Rule, while the other rules obligatorily induce the GC re-assignment rule (12). Aside from these points, the indirect passive, the NI-causative, the benefactive, and the Base Topic structures share essentially the same type of derivational rules, which explains the ambiguity in the reflexive binding common to all these four structures. Thus, the greatest advantage of this approach is the generality; it can cover not just one structure "passive" but three more constructions that show syntactic similarities.

Besides, the holistic character of HPSG (i.e. incorporating phonological, syntactic, and semantic information) along with the adoption of lexical rules allows a very simple syntactic representation. The difference among the four structures in question can be captured by referring directly to the semantic feature specifications.

NOTES

1. Throughout this paper I use the term "original" to refer to the structure before the application of a lexical rule.
2. To be precise, the passive of either type often bears this connotation. Despite the gloss that I give to the indirect passive as opposed to the direct passive, I hold the view that this connotation is outside the "semantics" of the passive. For more discussion on this matter, see Howard and Niyekawa-Howard (1976).
3. For several reasons I divide relational morphemes [ga], [wo], [e], [to], etc. into two classes: case markers and postpositions. Case marker signals the grammatical case (GC) such as NOM, ACC, DAT of subcategorized NPs, while postposition indicates the function of adjuncts. In that sense, postpositions correspond to the English prepositions. In the gloss of the examples, I will use GCs for case markers and the English prepositions for postpositions. For more argument on this division, cf. Miyagawa (1989:32-34)
4. For the transformational approaches on the passive construction in Japanese, refer to Kuroda (1978), Kuno (1973), Inoue (1976) among others; for the lexical approaches, Hasegawa (1981a,b), Farmer (1980, 1984), Ishikawa (1985), Miyagawa (1989); for the phrase structure approach, Gunji (1987).
5. These rules are partly based on Case Linking Rules of Farmer (1980, 1984).
6. GA also marks the object in some structures. Miyagawa (1989) refers to the verbs of this type as ergative verbs. This case marker also has a function termed as "exhaustivization", which is in a way analogous to "topicalization." I do not discuss these multi-functions of GA in this paper; I simply note that these two cases are different from the ordinary NOM-case of GA.
7. I use Topic (with capital T) to refer to the GF topic and the NP or PP associated with this function.
8. Gunji (1987) analyzes any type of Topic as an adjunct. When it is a gapped Topic, the SLASH feature connects it with the gap; when it is not related to any gap, it simply does not contribute to the FOOT features percolation. Though in some analyses the type of Topic in (19-a) seems to be assigned a vaguely more important status than an adjunct, its role is not clear in terms of the subcategorization.
9. There are some morphological variations. Some adjuncts can be marked by the combination of the original postposition and [wa]; some can be marked by [wa] alone. See also Gunji (1987:168-169).

10. Obviously, the selection of XARG is subject to some semantic and pragmatic restrictions. There must be some relation between XARG and the rest of the sentence. See also Kitagawa (1982) and Farmer (1984).
11. The concept "experiencer" used to refer to the function of XARG is borrowed from Miyagawa (1989).
12. For the expository purpose I use tree structures here. Most of the features other than SUBCAT are suppressed because they are not crucial now.
13. The difference between the NI-causative and the WO-causative has been the focus of argument. It is generally assumed that only "self-controllable" actions are possible in the NI-causative. They are syntactically different as well; transitive verbs can be causativized only in the NI-causative. This feature has also been associated with the surface constraint that restricts the two occurrence of [wo]. Another difference is the passivizability; the WO-causative, but not the NI-causative, can be passivized. In any case the causative structure requires an extensive study, which is beyond the scope of this paper. Here I will speak of the NI-causative alone, without even attempting to discuss the difference between the NI-causative and the WO-causative.

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