

Expletive Replacement Reconsidered: Evidence from Expletive Verbs in Japanese*

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1. Introduction

It is argued in Hoshi 1995, and Saito and Hoshi 2000 that the Japanese expletive verb *su* shares the basic properties with the English expletive *there*. These works suggest further that its distribution can be accounted for by the expletive replacement analysis proposed in Chomsky 1986. The aim of this paper is rather modest: it is to confirm these conclusions by further developing the analysis of the Japanese expletive verb.

It has been known that the English existential construction, exemplified in (1), exhibits properties that indicate that the indefinite (associate) NP occupies the subject position in place of the expletive *there*.

- (1) There were linguists in the room

Thus, the indefinite NP *linguists* participates in subject-verb agreement exactly as in (2).

- (2) Linguists_i were t_i in the room

The parallelism between (1) and (2) goes further. For example, when NP-movement as in (2) is illicit, the corresponding existential sentence is ungrammatical. This is illustrated in (3) and (4).

- (3) a. *Linguists_i seem to t_i that Warlpiri is the most fascinating language
b. *There seem to linguists that Warlpiri is the most fascinating language

- (4) a. *Linguists_i seemed that it was likely t_i to be in the room
b. *There seemed that it was likely linguists to be in the room

* While my indebtedness to Günther Grewendorf in my research on scrambling is obvious, I have also benefited much from discussions with him on the topic of complex predicates. I am happy to be able to contribute a paper on this topic to the volume in his honor. The material in this paper is based on joint research with Hiroto Hoshi over the years. His contributions, which are evident in the pages to follow, are gratefully acknowledged. I would also like to thank an anonymous reviewer for detailed, helpful comments on the earlier version of the paper.

Given these observations, Chomsky (1986) proposed that the indefinite NP moves to the subject position and replaces the expletive at LF. The failure of expletive replacement, according to him, results in a violation of Full Interpretation, which requires that every element receive interpretation at the interface levels, LF and PF. Since *there* is void of meaning, its presence at LF is illicit. The expletive replacement is itself NP-movement and hence, (4b) is ruled out due to the SSC effect, precisely as (4a). Chomsky further proposed Last Resort in this context as a principle to exclude (3a) and (3b). The principle states that movement can take place only to satisfy a morphological requirement of the moved item. It prohibits the movement of *linguists* in (3a-b) since the NP is checked for Case at its base position and there is no need for this NP to move to the subject position. (3b), then, violates the Last Resort Principle if expletive replacement takes place, and if not, it is excluded by Full Interpretation.

The analysis just described played an important role in the development of the syntactic theory toward Minimalism. The Last Resort Principle provided the incentive to pursue the economy of derivation, and Full Interpretation is just another name for the economy of representation. However, as the Minimalist model was developed, the Last Resort Principle lost its place within the theory and was eliminated in favor of a more refined theory of feature-checking in Chomsky 1995. The purpose of this paper is neither to discuss this development nor to examine the analysis of the English existential construction. Instead, I will show that the analysis in terms of Last Resort and Full Interpretation successfully extends to expletive verbs in Japanese. This not only adds to the data to be considered in the analysis of expletives but also suggests that there is an insight behind expletive replacement that must be captured even in a more refined analysis.

The following section concerns the distribution of the expletive verb *su* in the Japanese light verb construction. I will first go over the analysis of the construction presented in Saito and Hoshi 2000. Then, I will revise the analysis of one of the constraints on the construction and argue that it can be derived from the Last Resort Principle and Full Interpretation. In Section 3, I will discuss another construction in which this expletive verb appears, i.e., the one in which the topic marker *wa* or a focus particle like *sae* ‘even’ is attached to the regular verb. After updating Hoshi’s (1995) analysis of the distribution of the expletive *su* in this construction, which is in fact in terms of the Last Resort Principle and Full Interpretation, I will show that it has further desirable empirical consequences. Section 4 contains a summary and a brief remark on a consequence of the proposed analysis within the derivational model of syntax.

2. Expletive Verbs in the Light Verb Construction

In Section 2.1, I will go over the properties of the Japanese verb *su* and discuss Sells’ (1989) argument that it can function as an expletive verb. Then, in Section 2.2, I will present and develop the covert head movement analysis proposed in Saito and Hoshi 2000.

2.1. *Su* as an Expletive Verb

The verb *su* mentioned above appears in contexts such as those in (5).

- (5) a. Hanako-ga yama -nobori -o sita (*sita* = *su* + *ta* (past))
 -NOM mountain-climbing-ACC did
 ‘Hanako did mountain-climbing’
- b. Hanako-ga Taroo-ni toti -o zyooto-sita
 -NOM -to land-ACC giving-did
 ‘Hanako gave a piece of land to Taroo’
- c. Hanako-ga Taroo-ni [_{NP} toti -no zyooto]-o sita
 -NOM -to land-GEN giving -ACC did
 ‘Hanako gave a piece of land to Taroo’

In (5a), it is used as the main predicate, very much like the main verb *do* in English. (I will henceforth refer to this *su* as the main verb *su*.) In this case, it takes an agentive subject and an accusative object that typically refers to some action. It may optionally take other arguments such as the goal phrase in (6).

- (6) Taroo-ni sore-o suru koto-wa yurus -are -nai (*suru* = *su* + *ru* (present))
 -to it -ACC do fact -TOP permit-passive-not
 ‘It is not permissible to do that to Taroo’

In (5b), *su* is a category-changing suffix that turns a noun into a verb. This *su* can attach to an unaccusative, unergative, or transitive noun to create the corresponding verb, as shown in (7).¹

- (7) a. Mizu-ga zyoohatu -sita (unaccusative)
 water-NOM evaporation-did
 ‘The water evaporated’
- b. Taroo-ga sanpo -sita (unergative)
 -NOM taking a walk-did
 ‘Taroo took a walk’
- c. Hanako-ga Taroo-o hihan -sita (transitive)
 -NOM -ACC criticism-did
 ‘Hanako criticized Taroo’

(5c) is an example of what is called the ‘Japanese light verb construction’ and represents the case where *su* is used as an expletive verb. As discussed in Grimshaw and Mester 1988, *su* can be void of meaning and the accusative noun *zyooto* ‘giving’ can serve as the predicate in this

¹ See Miyagawa 1989 and Tsujimura 1990 for detailed discussion on the properties of this *su*.

example. It is pointed out by Terada (1990) and others that *su* in examples of this kind can plausibly be analyzed as a main verb because the main verb *su* can sometimes take a goal argument as mentioned above. However, Sells (1988) persuasively argues that there is indeed an expletive *su* based on examples such (8).

- (8) ??Hanako-ga Taroo-ni toti -o zyooto-o sita
 -NOM -to land-ACC giving -ACC did
 ‘Hanako gave a piece of land to Taroo’

This example is degraded because it violates the ban on multiple accusative phrases, known as the ‘double-*o* constraint’. It is shown in Harada 1973 and Shibatani 1973 that this constraint has two separate subtypes. When there are two accusative argument NPs in a simple sentence, the result is hopeless as in (9a).²

- (9) a. *Hanako-ga Taroo-o sake-o nom -aseta
 -NOM -ACC sake-ACC drink-made
 ‘Hanako made Taroo drink sake’
- b. ??Hanako-ga Taroo-o hamabe-o hasir-aseta
 -NOM -ACC beach -ACC run -made
 ‘Hanako made Taroo run on the beach’

On the other hand, the result is only marginal when one of the two accusative NPs is a non-argument. In (9b) *hamabe* ‘beach’ is a locative adverbial and hence, the example is much better than (9a). What Sells points out is that (8) has the grammatical status of (9b) and not of (9a). This implies that one of the accusative NPs in this example is a non-argument. If *su* is a main verb and assigns \square -roles to all arguments, then both of the accusative NPs would be arguments and hence, we would expect a strong violation as in (9a), contrary to the fact. On the other hand, if *su* is an expletive verb and *zyooto* ‘giving’ serves as the predicate of the sentence, the marginal status of the example is correctly predicted. In this case, the only accusative argument in the sentence is *toti* ‘land’. Thus, examples like (8) indicate that *su* indeed can be an expletive verb. And if (8) contains an expletive *su*, we expect this expletive verb to be able to occur in (5c) as well.³

The remaining task is to provide an analysis for the light verb construction. If a head can

² In the Japanese causative construction, the causee can be marked either dative or accusative as shown in (i).

- (i) Hanako-ga Taroo-ni /-o hasir-aseta
 -NOM -DAT/-ACC run -made
 ‘Hanako made Taroo run’

The examples in (9) are perfect if the causee ‘Taroo’ is marked dative instead of accusative.

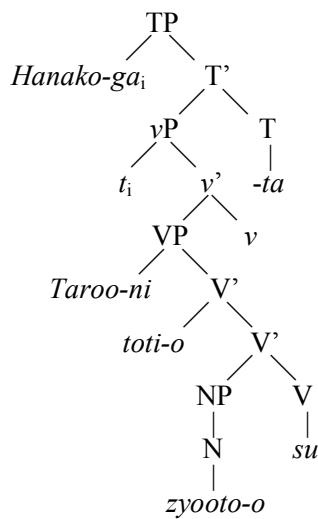
³ If Terada (1990) is correct, (5c) is ambiguous. That is, the verb *su* in this example may be a main verb or an expletive verb.

assign \square -roles only to phrases within its maximal projection, the construction is quite interesting because the \square -role assigning noun heads the accusative object NP and (some of) its arguments appear outside this NP in the surface configuration. The analysis, then, must explain how \square -role assignment is possible in the construction. In particular, it must show how the nominal head *zyooto* ‘giving’ assigns \square -roles to the clausal arguments in (8) and (5c).

2.2. Expletive Verb Replacement in LF

Given this background, it was proposed in Saito and Hoshi 2000 that the \square -role assigning noun in the light verb construction covertly moves to the position of the expletive verb and discharges its \square -roles from that position. Let us consider the structure of (8), shown in (10).

(10)



According to this analysis, the noun *zyooto* ‘giving’ moves to the position of *su* in LF, and discharges its theme role to *toti* ‘land’ and its goal role to *Taroo*.⁴ Note that the expletive verb is replaced (or adjoined to) as a result and does not appear in the LF representation. Although Saito and Hoshi did not consider this crucial, the analysis is thus consistent with Full Interpretation.

One piece of evidence for this analysis is that the \square -role assigning noun resists any kind of overt movement, a fact reported in Grimshaw and Mester 1988. The cleft sentences in (11) illustrate the generalization.

- (11) a. [_{CP} Op_i [_{IP} Mary-ga John-ni t_i zyooto-o sita] no] -wa toti -o_i da
 -NOM -to giving -ACC did COMP-TOP land-ACC is
 ‘It is a piece of land that Mary gave to John’
 (*Lit.* It is a piece of land that Mary did giving to John.)

⁴ Saito and Hoshi (2000) actually do not assume the *v*-projection and place the subject at the specifier position of VP. Hence, according to their analysis, the raised noun assigns the agent role to *Hanako* as well. I will come back to this point later in this section when the choice becomes relevant.

- b. *_{[CP Op_i [_{IP} Mary-ga John-ni toti -o t_i sita] no]} -wa zyooto-o_i da
 -NOM -to land-ACC did COMP-TOP giving-ACC is
 (*Lit.* It is giving that Mary did a piece of land to John.)

(11a-b) are based on the multiple accusative sentence (8). In (11a), the theme argument *toti-o* ‘land-ACC’ is focused. The example is better than (8) as one of the two accusative NPs is dislocated.⁵ (11b), on the other hand, is derived by focusing the \square -role assigning noun *zyooto-o* ‘giving-ACC’, and the result is hopeless. This readily follows from the covert head movement analysis. The \square -role assigning noun would have to move sideways in order to discharge its \square -roles in this example. Hence, the required \square -role assignment fails to take place.

Similarly, scrambling of the \square -role assigning noun results in ungrammaticality, as shown in (12).

- (12) a. *Hanako-ga zyooto-o_i Taroo-ni toti -o t_i sita
 -NOM giving -ACC -to land-ACC did
 ‘Hanako gave a piece of land to Taroo’
- b. *Zyooto-o_i Hanako-ga Taroo-ni toti -o t_i sita
 giving -ACC -NOM -to land-ACC did
 ‘Hanako gave a piece of land to Taroo’

These examples can be explained in basically the same way as (11b).

This account of (12) is consistent with the (radical) reconstruction properties of scrambling. As shown in detail in Tada 1993 and Nemoto 1993, VP-internal scrambling exhibits strict A-properties and is not subject to LF reconstruction. Thus, (13b) contrasts sharply with (14b).

- (13) a. Hanako-ga (kinoo) karera-ni otagai -o syookaisita
 -NOM yesterday they -to each other-ACC introduced
 ‘Hanako introduced them to each other yesterday’
- b. *Hanako-ga otagai -o_i (kinoo) karera-ni t_i syookaisita
 -NOM each other-ACC yesterday they -to introduced
- c. *Otagai -o_i Hanako-ga (kinoo) karera-ni t_i syookaisita
 each other-ACC -NOM yesterday they -to introduced
- (14) a. Karera-ga otagai -o semeta
 they -NOM each other-ACC blamed
 ‘They blamed each other’

⁵ As noted in Harada 1973 and Shibatani 1973, this kind of improvement is observed with the weak type of “double-o” effect represented by (9b) but not with the strong type shown in (9a).

- b. Otagai -o_i karera-ga t_i semeta
 each other-ACC they -NOM blamed

It was proposed in Saito 1989 on independent grounds that scrambled phrases can be placed back in their initial positions at LF. This offers a possible account for the grammaticality of (14b). But then, the ungrammaticality of (13b) shows that VP-internal scrambling (as opposed to scrambling across the subject) is not subject to this LF reconstruction. Similarly, the ungrammaticality of (13c) indicates that scrambling out of VP proceeds through the edge of VP (or *vP*), and reconstruction applies only to the movement originating from this position. Then, *zyooto-o* ‘giving-ACC’ in (12) is at the edge of VP (or *vP*) at LF, and hence, it must lower to the position of *su* in order to discharge its $\bar{\lambda}$ -roles.

I have so far introduced the covert head movement analysis of Saito and Hoshi 2000. There is another argument presented in favor of this analysis in the paper, and that is where refinement is necessary. I will now turn to this argument.

Grimshaw and Mester (1988) note the following as one of the peculiar properties of the Japanese light verb construction:

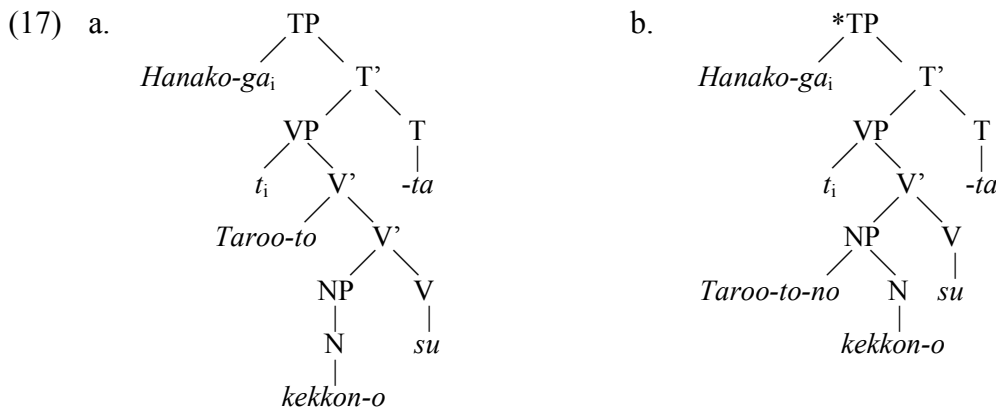
- (15) At least one internal argument of the $\bar{\lambda}$ -role assigning noun must be realized outside the NP it projects.

The examples in (16) illustrate this generalization.

- (16) a. Hanako-ga Taroo-to kekkon -o sita
 -NOM -with marriage-ACC did
 ‘Hanako married Taroo’
- b. ?Hanako-ga [_{NP} Taroo-to -no kekkon] -o sita
 -NOM -with-GEN marriage-ACC did

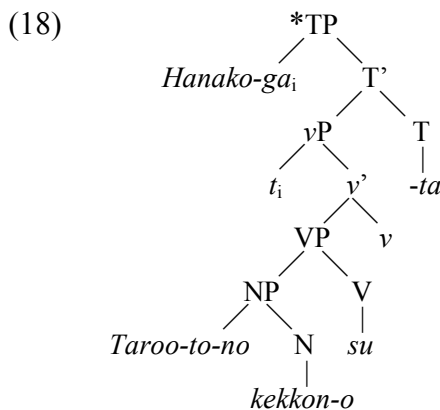
(16a) receives a straightforward interpretation as a regular instance of the light verb construction with the expletive *su*. (16b), on the other hand, is marginally allowed but only with the main verb interpretation of *su*. It roughly means that there is a specific act of getting married with Taroo and Hanako did it. Grimshaw and Mester, hence, consider (16b) to be ungrammatical as an instance of the light verb construction. This example contradicts the generalization in (15) since only the external argument *Hanako* is realized outside the NP headed by *kekkon* ‘marriage’.

Saito and Hoshi (2000) argued that the generalization in (15) follows from the Last Resort Principle. The structures they posit for (16a-b) are shown in (17a-b) respectively.



It is assumed here that the subject *Hanako* is generated in VP Spec. In (17a), *kekkon* ‘marriage’ moves covertly to the position of the expletive verb and assigns \square -roles to *Taroo* as well as to *Hanako*. In (17b), on the other hand, *kekkon* discharges its internal \square -role to *Taroo* within the NP. In this case, there is no motivation for the \square -role assigning noun to move to the position of *su* because a noun, as opposed to a verb, only optionally assigns its external \square -role. The movement is, therefore, excluded by the Last Resort Principle and consequently, the subject *Hanako* fails to receive a \square -role.

This analysis, however, cannot be maintained under the hypothesis that v assigns the external \square -role. The structure of (16b) would then be as in (18).



In this structure, *Hanako* and *Taroo* receive \square -roles in their base positions from v and *kekkon* ‘marriage’ respectively, and hence, \square -role assignment takes place properly even in the absence of the covert movement of the \square -role assigning noun. In Saito 2001, I tentatively assumed that the \square -role assigning noun assigns the external \square -role together with v . Then, *kekkon* must and hence, can move to the position of v in order to discharge the external \square -role, but this movement violates the head movement constraint. Although this account provides a technical solution to the problem, it begs the question because it after all assumes that an external \square -role is assigned by a lexical head.

There is an obvious, straightforward alternative analysis for the illicitness of (18). Since all arguments are successfully assigned \square -roles, there is nothing wrong with the \square -role assignment. But because the \square -role assigning noun discharges its \square -role at the base position, there is no reason for it to replace the expletive verb. Consequently, the expletive verb remains at LF in violation of Full Interpretation. According to this slightly modified analysis, (16b) is excluded in precisely the

same way as the English (3b), repeated below as (19).

(19) *There seem to linguists that Warlpiri is the most fascinating language

Since the indefinite NP *linguists* is checked for Case at its base position, the Last Resort Principle prevents it from replacing the expletive *there*. In the case of (16b), since the \square -role assigning noun *kekkon* ‘marriage’ discharges its \square -role at its base position, again, the Last Resort Principle prohibits it from replacing the expletive verb *su*. As the result, both (19) and (16b) are excluded by Full Interpretation.

The grammatical (16a) parallels (1), repeated in (20).

(20) There were linguists in the room

In this example, *linguists* moves to the position of the expletive *there* in order to be checked for Case. Similarly, in (16a), *kekkon* moves to the position of the expletive verb *su* in order to discharge its \square -role. Because of these independently motivated movements, the expletives are successfully replaced in both (20) and (16a).

If the slight revision of the analysis of (16b) presented above is correct, then the Japanese light verb construction provides evidence not only for the Last Resort Principle but also for the necessity of expletive replacement to satisfy Full Interpretation. In the following section, I will consider another construction with the expletive *su* that points to the same conclusion.

3. Expletive Verbs in the VP Focus Construction

The verb *su* occurs also when the regular verb is followed by the topic marker *wa* or a focus particle like *mo* ‘also’ and *sae* ‘even’. This is illustrated in (21b-d).

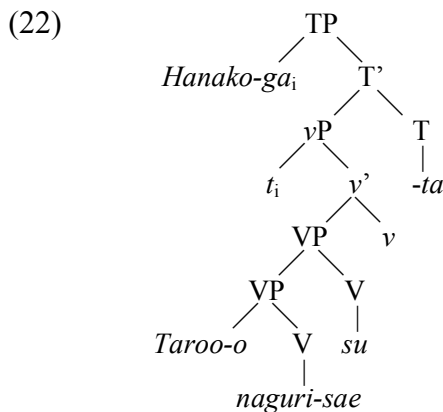
- (21) a. Hanako-ga Taroo-o nagutta
 -NOM -ACC hit
 ‘Hanako hit Taroo’
- b. Hanako-ga Taroo-o naguri-wa sita
 -NOM -ACC hit -TOP did
 ‘Hanako did hit Taroo’
- c. Hanako-ga Taroo-o naguri-mo sita
 -NOM -ACC hit -also did
 ‘Hanako also hit Taroo’

- d. Hanako-ga Taroo-o naguri-sae sita
 -NOM -ACC hit -even did
 ‘Hanako even hit Taroo’

Kuroda (1965), who first discussed this phenomenon, postulated a rule of *si*-insertion, similar to *do*-support in English. Hoshi (1995), on the other hand, reconsiders the phenomenon based on the properties of the verb *su* discussed in the preceding section. He proposes in fact to explain the distribution of the expletive *su* in this construction in terms of the Last Resort Principle and Full Interpretation. In Section 3.1, I will discuss the basic properties of this construction, focusing on the particle *sae* ‘even’, and introduce Hoshi’s analysis. Then, in Section 3.2, I will present independent evidence for the analysis and thereby confirm the conclusion that Last Resort and Full Interpretation both play crucial roles in the explanation of the phenomenon.

3.1. The Illicitness of VP-scrambling with Expletive *su*

Given that *su* can function as a main verb or an expletive verb, as was shown in the preceding section, it is tempting to analyze the occurrences of *su* in (21) as instances of these. The analysis in terms of the main verb *su* seems straightforward. (21d), for example, can have the following structure:



This is identical to the structure of the sentences with the main verb *su* discussed in the preceding section except that the complement of *su* is a VP instead of an NP.⁶

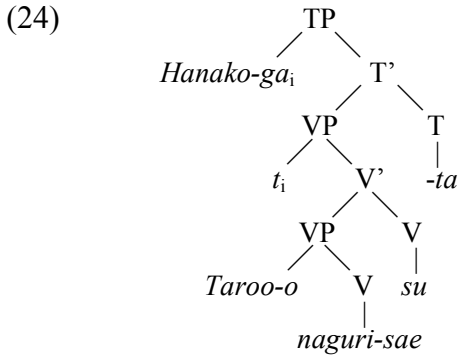
Examples such as (21b-d) have drawn much attention in part because they allow VP-scrambling. Thus, the VP headed by *naguri-sae* ‘hit-even’ in (21d) can be preposed as shown in (23).

- (23) [_{VP} Taroo-o naguri-sae] Hanako-ga *t*_{VP} sita
 -ACC hit -even -NOM did
 ‘Hanako even hit Taroo’

⁶ The examples in (21b-d) are ungrammatical without the particles *wa*, *mo*, and *sae*. I assume that this is due to a property of *su* that it can only be merged with nominal categories and phrases with topic/focus particles. This suggests that those particles are nominal in some sense.

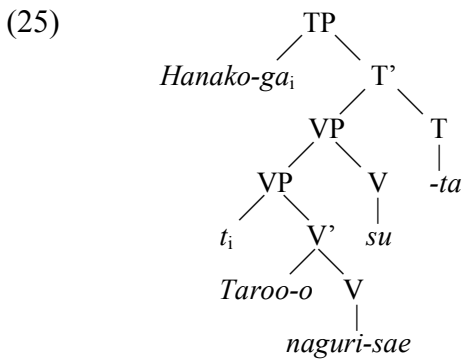
Nothing seems to prevent this VP-scrambling if (21d) has the structure in (22).

Hoshi (1995) argues that there is another possible analysis for examples like (21b-d), that is, that the *su* in these examples may be an expletive verb. Given that *su* can function as an expletive verb in the light verb construction, this would be the null hypothesis. More specifically, he proposes that (21d) may have the structure in (24) with the expletive *su*.



Hoshi (1995), like Saito and Hoshi (2000), assumes that external \square -roles are assigned by lexical heads and not by *v*. The verb *nagur* ‘hit’ assigns its theme role to *Taroo* in its base position and covertly moves the position of *su* in order to discharge its agent role to the trace of *Hanako*.⁷

Hoshi specifically argues that (25) is not a possible structure with the expletive *su*.



Since *nagur* ‘hit’ assigns all of its \square -roles in the base position, there is no reason for it to move to the position of *su*. Hence, the Last Resort Principle prohibits the movement, and the expletive *su* remains at LF. Hoshi proposes that the structure is consequently excluded by Full Interpretation.

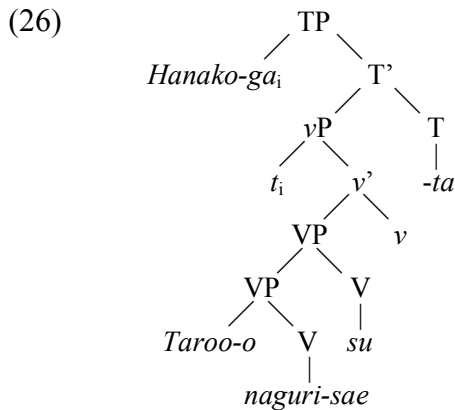
The analysis introduced above makes an interesting prediction, as Hoshi notes. If the structure in (25) were possible, VP-scrambling should be allowed even with the expletive *su*. Nothing seems to prevent the scrambling of the lower VP in (25). On the other hand, if (24) is the only option with the expletive *su*, VP-scrambling should be impossible. If the lower VP in (24) is scrambled, the verb *nagur* ‘hit’ is no longer in the c-command domain of the expletive *su*. Hence, it would have to move sideways to the position of *su* in order to assign its external role to the

⁷ Note that the structure in (24) may be possible also with the main verb *su*. In that case, the verb *su* assigns the agent role to the subject.

trace of *Hanako*. Hoshi's analysis predicts, then, that although examples like (21d) are ambiguous between the main verb and the expletive verb interpretations of *su*, once VP-scrambling applies, only the former interpretation obtains. Hoshi states that this prediction is indeed borne out. That is, the main verb interpretation of *su* is forced in (23) but not in (21d).

Although Hoshi's analysis is complete, one drawback is that it is somewhat difficult to distinguish the main verb and the expletive verb interpretations of *su* in examples like (21d) and (23). It is therefore desirable to examine examples where the distinction comes out more clearly. In the following subsection, I will consider the illicit cases of VP-scrambling discussed in Hoji, Miyagawa and Tada 1989, and argue that they constitute evidence for Hoshi's analysis. But before I move on to this, I will briefly update the analysis assuming that *v* is the external \square -role assigner.

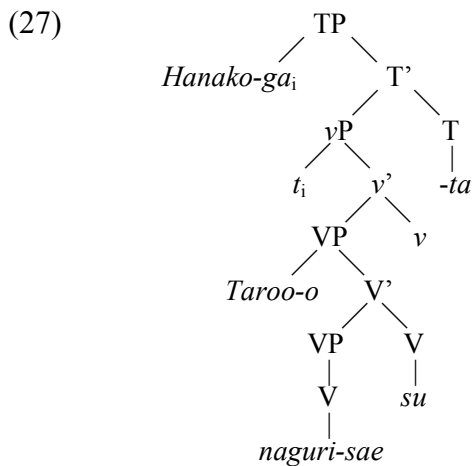
The required modification is straightforward. If *v* assigns the external \square -role, the structure in (25) would be as in (26).



This is disallowed according to Hoshi's analysis. The verb *nagur* 'hit' discharges its theme role at its base position and has no reason, therefore, to move to the position of *su*. The expletive verb remains at LF and the structure is ruled out by Full Interpretation.⁸

It is then necessary to place an internal argument within the projection of the expletive verb *su*, exactly as in the case of the light verb construction. The structure is shown in (27).

⁸ Note that (26) is identical to (22), the structure of (21d) with the main verb interpretation of *su*. If *su* is the main verb, it satisfies Full Interpretation and need not be replaced. Hence, there is nothing wrong with the structure in this case.



Here, the verb *nagur* ‘hit’ must and hence, can move to the position of *su* in order to discharge its theme role, and as a result, the expletive verb is successfully replaced. (21d), thus, has the structure in (22) with the main verb *su* and that in (27) with the expletive *su*. The appropriate structure depends on which *su* is included in the numeration.

The prediction that VP-scrambling is illicit with the expletive *su* remains the same. In the case of (27), *Taroo-o* and *naguri-sae* ‘hit-even’ do not form a constituent. But since multiple scrambling is allowed in Japanese, the object NP and the VP dominating *naguri-sae* could scramble to the sentence-initial position separately. This is ruled out because the verb would have to lower to the position of *su* in LF in order to discharge its theme role. Consequently, the object fails to receive a $\bar{\lambda}$ -role and the expletive verb fails to be replaced. Thus, VP-scrambling in this configuration is ruled out in exactly the same way as the scrambling of the $\bar{\lambda}$ -role assigning noun in the light verb construction. A parallel example of the light verb construction, (12b), is repeated below as (28).

- (28) *Zyooto-o_i Hanako-ga Taroo-ni toti -o *t_i* sita
 giving -ACC -NOM -to land-ACC did
 ‘Hanako gave a piece of land to Taroo’

3.2. VP-scrambling in Unaccusative and Passive Sentences

Clear evidence for Hoshi’s analysis discussed above can be found in Hoji, Miyagawa and Tada 1989 (henceforth, Hoji, et al.). They discuss illicit cases of VP-scrambling such as those in (29)-(31) and propose to rule them out by the proper binding condition.

- (29) a. Hanako-ga Taroo-o naguri-sae sita
 -NOM -ACC hit -even did
 ‘Hanako even hit Taroo’
- b. *Naguri-sae_i Hanako-ga Taroo-o *t_i* sita
 hit -even -NOM -ACC did

- (30) a. Ame-ga huri-sae sita
rain -NOM fall -even did
'It even rained'
- b. *Huri-sae_i ame-ga t_i sita
fall -even rain-NOM did
- (31) a. Hanabi -ga utiage-rare -sae sita
firework-NOM set off-passive-even did
'They even set off fireworks'
- b. *Utiage-rare -sae_i hanabi -ga t_i sita
set off-passive-even firework-NOM did

It looks like the verbs are preposed by themselves in the ungrammatical examples in (29)-(31). But the examples can be derived by VP-scrambling, as Hoji, et al. point out. A possible derivation of (29b) is shown in (32).

- (32) [_{VP} t_j naguri-sae] [Hanako-ga [Taroo-o_j t_{VP} sita]]
hit -even -NOM -ACC did

The object *Taroo-o* is first scrambled out of the VP headed by *naguri-sae*, and then, the remnant VP is scrambled to the sentence-initial position. Similarly, (30b) can be derived as in (33).

- (33) [_{VP} t_j huri-sae] [ame-ga_j [t_{VP} sita]]
fall -even rain-NOM did

Since *hur* 'fall' is unaccusative, Hoji, et al. assume that the subject *ame* 'rain' originates in its complement position and moves to the specifier position of TP. After this NP-movement applies, the VP headed by *huri-sae* is scrambled over the subject.

Although the ungrammatical examples in (29)-(31) can be derived by VP-scrambling, the preposed VPs contain unbound traces as can be seen in (32) and (33). The VP in (32) contains a trace of scrambling and that in (33) a trace of NP-movement. Hoji, et al. then argue that the examples violate the proper binding condition, which requires that traces be bound. This account may be tenable in the case of (29) because it has been argued that traces of scrambling exhibit strict proper binding effect.⁹ On the other hand, a question can be raised for this account of (30) and (31) since there is evidence that traces of NP-movement are not subject to the proper binding condition. If they were, examples of VP-preposing such as those in (34) would be incorrectly excluded.

- (34) a. They said the ball might fall into a ditch, and fall into a ditch, it did
b. Mary said she would be praised by the critics, and praised by the critics, she was

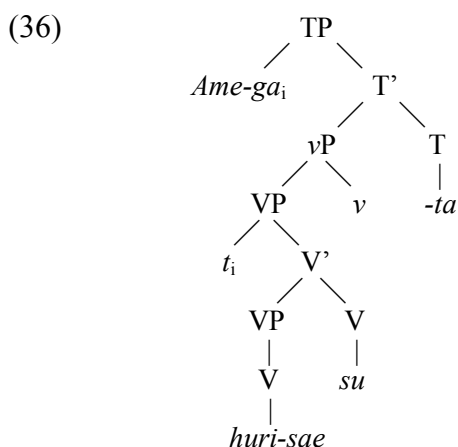
⁹ For relevant discussion on this point, see Saito 2003 and the references cited there.

The structures of the second conjuncts of (34a-b) are shown in (35a-b) respectively.

- (35) a. [_{VP} fall t_i into a ditch] [_{it_i} did t_{VP}]
 b. [_{VP} praised t_i by the critics] [_{she_i} was t_{VP}]

Since *fall* is unaccusative, *it* in (35a) originates in the complement position of the verb and moves to TP Spec. Then, the preposed VP contains the trace of this NP-movement. A similar situation obtains in (35b), where a passive VP is preposed.¹⁰

It is clear at this point that an alternative analysis is required for (30b) and (31b). And Hoshi's analysis of the VP focus construction readily serves this purpose. Note first that the examples in (30) and (31) lack an agentive subject. Since the main verb *su* requires an agent, the *su*'s in these examples cannot be main verbs but must be instances of the expletive *su*. Then, the structure of (30a), for example, is as in (36).

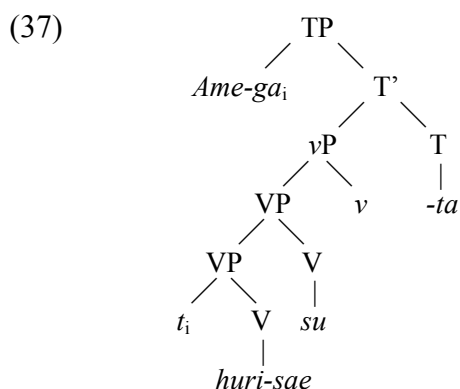


Here, it is crucial that *ame* 'rain' is merged at the spec position of the expletive *su*. Then, *hur* 'fall' must and therefore, can move to the position of *su* in order to discharge its \square -role. As a result, the expletive verb is successfully replaced and there is no violation of Full Interpretation.

If (36) is the structure for (30a), the ungrammaticality of (30b) follows. When the VP headed by *huri-sae* is scrambled, the verb can no longer move to the position of *su* in LF because this would require lowering. Consequently, *ame* 'rain' fails to receive a \square -role and the expletive *su* remains in violation of Full Interpretation. Note that this account for (30b) is possible because of Full Interpretation. If an LF representation could contain an expletive verb, the structure in (37) would be possible for (30a).

¹⁰ NP-traces and Wh-traces exhibit different patterns in this respect. Thus, Maggie Browning (personal communication, 1986) points out that (ib) is hopeless and contrasts sharply with (ia).

- (i) a. ?... ready to marry John, I wonder whether Mary is
 b. *... ready to marry t_i , I wonder who_i Mary is



The verb *hur* assigns its $\bar{\lambda}$ -role at the base position and hence, does not replace the expletive. But this is, in relevant respects, the structure assumed in Hoji, et al., and as we have seen, it predicts incorrectly that VP-scrambling is possible. Thus, Full Interpretation plays a crucial role in the explanation of (30b), in addition to the Last Resort Principle.

4. Summary and Another Consequence

In Section 2, I discussed the analysis of the Japanese light verb construction proposed in Saito and Hoshi 2000, and examined the distribution of the expletive verb *su* in this construction. One of the conclusions is that Grimshaw and Mester's (1988) constraint in (15), repeated below in (38), is to be explained not only by the Last Resort Principle but also by Full Interpretation.

- (38) At least one internal argument of the $\bar{\lambda}$ -role assigning noun must be realized outside the NP it projects.

In Section 3, I updated Hoshi's (1995) analysis of the distribution of the expletive verb in the VP focus construction and presented further evidence for it. The theoretical consequence remains the same: both the Last Resort Principle and Full Interpretation play crucial roles in the analysis. Thus, the discussion in this paper provides strong support for the expletive replacement analysis proposed in Chomsky 1986. As stated at the outset of this paper, the purpose here is not to defend the expletive replacement analysis of the English existential construction against the recent, more refined analysis, say, in Chomsky 1995. It is rather to suggest that there is an insight in the analysis that needs to be reconsidered and reexamined in future research. I also hope that the discussion in this paper will stimulate further research on Japanese expletive verbs to advance the theory.

Before I conclude this paper, I would like to briefly point out a consequence of the proposed analysis for the derivational model of syntax, put forward in Bobaljik 1995 and Nissenbaum 2000, among many others. Based on the idea of cyclic interpretation and cyclic Spell-out, it is proposed in these works that covert movement can be interwoven with overt movement. For example, Bobaljik suggests that covert movement applies basically in the same way as overt movement except that the phonetic features are interpreted at the initial site instead of the landing site. If this conception of covert movement is adopted, then the analysis presented above for (30b), for

example, must be slightly modified.

Let us consider (36), i.e., the structure of (30a), again. It was assumed above that overt movement precedes covert movement, and hence, VP-scrambling blocks the LF expletive replacement by the verb *hur* ‘fall’. But if covert movement can precede overt movement, another derivation must be considered. That is, the verb can first move to the position of the expletive *su*, leaving behind its phonetic features. Then, the VP can be scrambled to the sentence-initial position. There is no obvious violation of the Last Resort Principle or Full Interpretation with this derivation.

I would like to suggest that the derivation just described is excluded by the proper binding condition.¹¹ That is, the preposed VP contains the trace left by the covert movement of *hur* ‘fall’ and this trace violates the condition. This account is consistent with, and hence, provides support for the recent discussion in defense of the proper binding condition in Kuno 2001 and Saito 2003. As noted above, there is evidence that NP-traces are not subject to this condition. At the same time, it is suggested in Lasnik 1999, and Saito and Hoshi 2000, among others, that NP-movement does not leave a trace. The basic idea is that if \square -role assignment can take place in the course of the derivation, then there is no feature of the NP that must be represented at the initial site. This can probably be best illustrated with (36). The verb *hur* ‘fall’ can first move covertly to the position of the expletive *su*, and assign the theme role to *ame* ‘rain’ in the Spec position. Then, *ame*, having already been assigned a \square -role, can move to TP Spec overtly. There is evidently no need to postulate a trace in the initial position. And if there are no NP-traces, they could not be subject to the proper binding condition.

On the other hand, Wh-traces exhibit the proper binding effect as shown in (39).

(39) *[Which picture of t_i]_j does John wonder who_i Mary likes t_j

In this example, *who* is extracted out of *which picture of whom* to the embedded CP Spec and then, the remnant *which picture of t* moves to the matrix CP Spec. The latter movement violates Subadjacency, but the example is much worse than a normal Wh-island violation, which suggests that the unbound trace is the main source of ungrammaticality. This is expected because a Wh-phrase needs to be represented both at the initial site and at the landing site. Its phonetic features and its operator feature are interpreted at the landing site. And the initial site must have those features that make it possible to interpret the Wh-phrase (or its trace) as a variable. Thus, a trace is necessary in order for Wh-movement to create an operator-variable chain with a variable at its

¹¹ The condition is reformulated as a constraint on the application of Merge in Ausin 1998 and Saito 2003. The proposal in the latter work is that Merge applies only to ‘complete constituents’, which is defined as in (i).

- (i) \square is a *complete constituent* =_{def} (1) \square is a term, and
 (2) if a position within \square is a member of a chain \square then every position of \square is contained within \square .

But I will keep referring to the proper binding condition as a condition on traces for ease of exposition.

tail.

By the same logic, the covert movement of *hur* ‘fall’ in (36) must form a chain. The verb must be represented at the landing site so that it can replace the expletive *su*. And it must also be at the initial site because that is where its phonetic features are interpreted. Hence, the movement must leave a copy (or a trace) behind, and we would expect the movement to be constrained by the proper binding condition. Note that the present analysis does not predict that head movement always exhibits the proper binding effect. It does when the moved head must be represented both at the initial site and at the landing site. If this approach is on the right track, the expletive verb replacement offers important data for the investigation of the proper binding effect as well.

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