

Non-identical Verb Forms in the Japanese Predicate Doubling Construction*

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In this paper the structure and derivation of the predicate doubling construction in Japanese is investigated. Following Nishiyama and Cho's (1998) analysis based on movement and copy spell-out, we will examine cases in which a form of the first verb is not identical to that of the second, and claim that they involve movement of a part of the clause and pronunciation of a part of the copy left behind. The analysis illustrates the interaction between a copy theory of movement and language specific properties of how tense is pronounced.

Keywords: copy theory of movement, predicate doubling, suru-support

1. Introduction

Since the introduction of Chomsky's (1995) copy theory of movement, which replaces a trace assumed in the EST model with a copy of a fronted phrase in accordance with the Inclusiveness Condition, many researchers have looked into principles governing (non)pronunciation of copies. One of the constructions that has been extensively investigated in various languages due to its relevance to the copy theory is predicate doubling (cf. Nishiyama and Cho (1998), Abels (2001), Cable (2004), Nunes (2004), Landau (2006, 2007), Martins (2007), Vicente (2007, 2009), Aboh and Dyakonova (2009), Trinh (2009)). It is an interesting construction in which the same predicate occurs twice in a single sentence, and it offers empirical support for the copy theory, so long as the occurrence of the second predicate can be reduced to a pronounced copy of the moved predicate. As demonstrated by Nishiyama and Cho (1998), there is a predicate doubling construction in colloquial Japanese as well.¹

- (1) Taro-wa ringo-o mui-ta ni/koto/no-wa mui-ta (ga tabe-na-katta).
Taro-Top apple-Acc peel-past ni/koto/no-Top peel-past but eat-neg-past
'As for Taro's peeling the apple, he did peel it, (but he didn't eat it).'

In (1) the predicate *mui-ta* 'peeled' is repeated. Interestingly, the same verb sometimes occurs in different inflectional forms preceding and following *ni/koto/no-wa*.

- (2) Taro-wa ringo-o muk-u ni/koto/no-wa mui-ta (ga tabe-na-katta).
Taro-Top apple-Acc peel-u ni/koto/no-Top peel-past but eat-neg-past
'As for Taro's peeling the apple, he did peel it, (but he didn't eat it).'

* I am grateful to Noriko Imanishi, Akira Watanabe, Christopher Tancredi and an anonymous reviewer for reading an earlier version of this paper and giving me valuable comments and suggestions. I would also like to thank the audience at a meeting of Tokyo University English Linguistics Circle held on July 31, 2010 for helpful comments and discussions, especially Kinsuke Hasegawa, Hiroshi Hasegawa, Akira Watanabe and Noriko Imanishi. I am thankful to Tomoe Arai, Shunichiro Inada, Sakumi Inokuma, Yuki Ito, Mioko Miyama, Chigusa Morita, and Terue Nakato for helping me with data and for discussions. Fifty students at Tokyo Institute of Technology also provided me with data. Needless to say, all errors are my own.

¹ This construction is used in colloquial Japanese, but not in written Japanese. As Barbiers (2008) observes, syntactic doubling is more frequent and common in standard varieties across languages. Partly due to this, there is considerable variability across speakers regarding acceptability of these sentences. For instance, some speakers do not tolerate the use of *no* in the construction, whereas others find the use of *no* most acceptable and do not tolerate the use of *ni* following a predicate in past tense. Readers are requested to use whichever particle they are comfortable with, when they read example sentences with *ni/koto/no*.

Nishiyama and Cho propose to derive sentences like (1) and (2) by moving a TP, *Taro-wa ringo-o mui-ta/muk-u*, to the left periphery of a sentence, and spelling out its copy as a finite verb at the end of the sentence. Taking Nishiyama and Cho's analysis as a starting point, we will examine new data involving non-identical verb forms preceding and following *ni/koto/no-wa*, and argue that these cases can be successfully explained with some modification of their analysis. This paper aims to offer an empirical piece of evidence for the copy theory of movement.

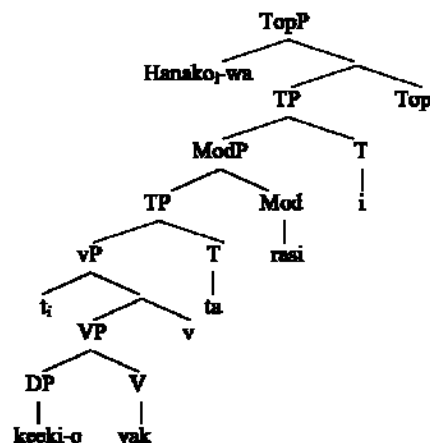
1.1. Background Assumptions

In this paper we assume along with Chomsky (1995) that at some point in the syntactic derivation to LF, Spell-Out sends some elements of the structure already formed to Morphology and PF, and that the interface conditions must be satisfied both at LF and PF. As for pronunciation of chain links, we follow Nunes (2004) and consider that when a chain is formed in the derivation, generally only one of its links can be pronounced, because nondistinct links of a chain fail to be linearized due to Kayne's (1994) Linear Correspondence Axiom (LCA). However, when forms of some links of a chain are altered because of a morphological or phonological requirement, these links cease to be nondistinct, and the pronunciation of multiple links becomes possible.

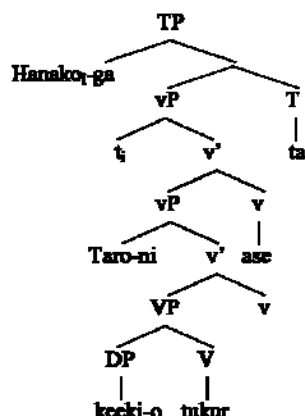
We will also draw on Grohman's (2003) theory of anti-locality of movement and his Condition on Domain Exclusivity. Dividing a clause into three Prolific Domains, which are Θ -domain where thematic relations are created, Φ -domain where agreement properties are licensed, and Ω -domain where discourse information is established, Grohman argues for an anti-locality hypothesis: phrasal movement within a given Prolific Domain is ruled out, unless it is followed by Copy Spell Out (P. 245). According to his Condition on Domain Exclusivity (P. 78), movement within a Prolific Domain is allowed if multiple occurrence of a syntactic object involves two phonetically distinct copies. This condition will help us account for the copy pronunciation of identical verb forms as in (1).

Turning to phrase structures in Japanese, we assume that Case valuation is carried out by Agree as proposed by Chomsky (2000, 2001), and that a subject DP moves to Spec of TP when there is an EPP feature on T. A topic marker *wa* is licensed by Top^0 , but being an affixal particle, it attaches to whatever constituent fills in Spec of TopP. As for verbal morphology, we assume that it is dealt with by some adjacency-based operations in Morphology rather than by V-to-T movement in syntax. (cf. Aoyagi (2006b)) With respect to causatives, we follow Harley (1995) and regard a causative predicate, *sase*, as a v. To illustrate, examples involving a TP-taking modality predicate (3) and a causative predicate (4) are given below.

- (3) Hanako-wa keeki-o yai-ta rasi-i.
 Hanako-Top cake-Acc bake-past likely-nonpast
 'I hear that Hanako baked a cake.'



- (4) Hanako-ga Taro-ni keeki-o tukur-ase-ta.
 Hanako-Nom Taro-Dat cake-Acc bake-cause-past
 ‘Hanako made/let Taro bake a cake.’



1.2. Organization of this Paper

In this paper it will be demonstrated that many properties of the Japanese predicate doubling construction, which look idiosyncratic and construction-specific at first sight, follow from universal principles governing linearization and pronunciation of chain links as well as from Lasnik’s (2000) Stranded Affix Filter at the syntax-phonology/morphology interface. It will also be shown that interpretability of verum focus plays a role at the syntax-semantics interface.

The paper is organized as follows. Section 2 summarizes Nishiyama and Cho’s analysis. In Section 3 the syntactic and morphological properties of the predicate doubling construction are examined, especially with respect to sentences with non-identical verb forms preceding and following *ni/koto/no-wa*. Section 4 presents our analysis of the construction involving movement of a subpart of TP to Spec of TopP and pronunciation of lower chain links. In Section 5 an alternative analysis, which does not rely on movement, is considered. Section 6 concludes the paper.

2. Previous Analysis

Nishiyama and Cho (1998) discuss three types of constructions in Japanese. (5a) illustrates predicate doubling in which *kat-ta* ‘bought’ is repeated, and (5b) is an example of a VP focus construction where a verb preceding particles such as *wa/mo/sae* is not tense-marked, and *suru*-support occurs at the end of the sentence. (5c) is similar to (5a) in allowing a predicate to be repeated but differs from it in using a non-tense-marked form of the first predicate. In addition, (5c) does not permit the use of *wa*.²

- (5) a. John-ga konpyuutaa-o kat-ta-koto-wa kat-ta.
 John-Nom computer-Acc buy-T-koto-Con buy-T
 ‘Indeed, John bought a computer, (but...)’ (Nishiyama and Cho (1998: 463))
- b. John-ga konpyuutaa-o kai-wa/mo/sae si-ta.
 John-Nom computer-Acc buy-at least/also/even do-T
 ‘John at least/also/even bought a computer.’ (Nishiyama and Cho (1998: 475))

² In this section, we use the gloss given by Nishiyama and Cho, though we will give different glosses for some words in the following sections. The biggest difference lies in the treatment of a particle, *wa*, which we take as a topic marker. We will also use past/nonpast instead of perfective/imperfective as tense values, but nothing much hinges on this point. In (5)-(9), Con stands for a contrastive particle, T a tense, Imp an imperfective marker, and Perf a perfective marker.

argue that *u* in (7) is not even a tense marker, and that (7) involves vP movement. This in turn will lead us to assume that no movement is involved in the VP focus construction (5b). Before presenting our analysis, however, we will look at some properties of the predicate doubling construction.

3. Syntactic and Morphological Properties of the Predicate Doubling Construction

3.1. Realization of Arguments

We have seen that a predicate is doubled in the construction, but judgments vary considerably regarding the repetition of its arguments, as noted by Nishiyama and Cho. Among the fifty-five informants I consulted with, twenty-seven people found (10) completely acceptable on the four-scale assessment ranging from completely acceptable to completely unacceptable.

- (10) %Taro-wa hon-o yon-da ni/koto/no-wa hon-o yon-da.
 Taro-Top book-Acc read-past ni/koto/no-Top book-Acc read-past
 ‘As for Taro’s reading the book, he did read it.’

In contrast, repetition of the whole TP sounds redundant, and is not acceptable.

- (11) *Taro-ga hon-o yon-da ni/koto/no-wa Taro-ga (hon-o) yon-da.
 Taro-Nom book-Acc read-past ni/koto/no-Top Taro-Nom book-Acc read-past
 ‘As for Taro’s reading the book, he did read it.’

Thus, in the predicate doubling construction, what precedes the topic marker *wa* includes a subject, object(s), a verb and *ni/koto/no* and what follows it is a finite verb with the optional occurrence of the repeated object(s).

- (12) Subject Objects V ni/koto/no-wa (Objects) V

3.2. Non-identical Verb Forms

3.2.1. Causatives

What kind of verbal forms can appear preceding and following *ni/koto/no* in the construction? As we have seen in (7), Nishiyama and Cho discuss the case with verbs differing in tense values. Now let us consider sentences in which the second verb is more complex. Firstly, the second verb can be causativized for some speakers.⁵ When this happens, the first verb appears with a causative predicate either in the same tense as the second causative predicate, or in default tense.

⁵ There are conservative speakers who do not allow non-identical verb forms discussed in Section 3.2, though they permit non-identical verb forms in tense values as in (7).

- (i) *Hahaoya-wa musuko-ni sono-hon-o yomu koto wa yom-ase-ta.
 mother-Top son-Dat that-book-Acc read koto Top read-cause-past
 ‘The mother made her son read that book.’
 (ii) *Sono-hon-wa kodomotati-ni yoku yomu koto wa yom-are-ru.
 that-book-Top children-Dat often read koto Top read-pass-nonpast
 ‘That book is often read by children.’
 (iii) *John-wa tookuni iku koto wa iki-sugi-ta.
 John-Top far go koto Top go-excessive-past
 ‘John went too far.’

(Potts et al. (2009: 361-362))

In this paper we focus on the liberal variety.

- (13) Hanako-wa Taro-ni kusuri-o nom-ase-ta/nom-ase-ru ni/koto/no-wa
 Hanako-Top Taro-Dat medicine-Acc take-caus-past/bake-cause-ru ni/koto/no-Top
nom-ase-ta (ga byooin-e turete iki-wa si-na-katta).
 take-caus-past but hospital-to take go-Foc do-neg-past
 ‘As for making Taro take medicine, Hanako did make him do it, (but she didn’t take him to the hospital).’

Interestingly, it is also possible to have the first verb without a causative morpheme when it is in default tense (14a), though it is not possible in past tense (14b).⁶

- (14) a. Hanako-wa Taro-ni kusuri-o nom-u ni/koto/no-wa nom-ase-ta.
 Hanako-Top Taro-Dat medicine-Acc take-u ni/koto/no-Top take-caus-past
 b. *Hanako-wa Taro-ni kusuri-o non-da ni/koto/no-wa nom-ase-ta.
 Hanako-Top Taro-Dat medicine-Acc take-past ni/koto/no-Top take-caus-past

Moreover, like (9), when the first verb appears with a causative morpheme, the second verb must do so as well.

- (15) *Hanako-wa Taro-ni kusuri-o nom-ase-ta ni/koto/no-wa non-da.
 Hanako-Top Taro-Dat medicine-Acc take-caus-past ni/koto/no-Top take-past

3.2.2. *Passives*

The same pattern that we have seen with a causative morpheme holds with a passive morpheme as well: when the second verb is passivized, the first verb can be in either tense with a passive morpheme (16), but it has to be in default tense when it is not passivized (17). In addition the second verb must be passivized when the first verb is in a passive form (18).

- (16) Taro-wa Jiro-ni nagur-are-ta/nagur-are-ru ni/koto/no-wa nagur-are-ta
 Taro-Top Jiro-Dat hit-pass-past/hit-pass-ru ni/koto/no-Top hit-pass-past
 (ga koros-are-wa si-na-katta).
 but kill-pass-Foc do-neg-past
 ‘As for being hit by Jiro, Taro was hit by him, (but not killed).’
- (17) a. Taro-wa Jiro-ni nagur-u ni/koto/no-wa nagur-are-ta (ga koros-are-wa si-na-katta).
 Taro-Top Jiro-Dat hit-u ni/koto/no-Top hit-pass-past but kill-pass-Foc do-neg-past
 b. *Taro-wa Jiro-ni nagut-ta ni/koto/no-wa nagur-are-ta (ga...)
 Taro-Top Jiro-Dat hit-past ni/koto/no-wa hit-pass-past but
- (18) *Taro-wa Jiro-ni nagur-are-ta ni/koto/no-wa nagut-ta (ga...)
 Taro-Top Jiro-Dat hit-pass-past ni/koto/no-Top hit-past

⁶ The following examples are not possible because they involve two different predicates, though they share a common root.

- (i) *kabin-wa koware-ru ni/koto/no-wa kowasi-ta.
 vase-Top break-ru ni/koto/no-Top break-past
 ‘As for breaking the vase, they did break it.’
- (ii) *koori-wa toke-ru ni/koto/no-wa tokasi-ta.
 ice-Top melt-ru ni/koto/no-Top melt-past
 ‘As for melting the ice, they did melt it.’

3.2.3. Restructuring Predicates

Thirdly, the second verb can include a restructuring predicate that takes a VP complement.

- (19) a. Watasi-wa hon-o yom-u/yomi-ta-i ni/koto/no-wa yomi-ta-i
 I-Top book-Acc read-u/read-want-i ni/koto/no-Top read-want-nonpast
 ‘As for reading a book, I want to read one.’
- b. Taro-wa sono ringo-o tabe-kake-ru/tabē-kake-ta/tabē-ru/*tabe-ta ni/koto/no-wa
 Taro-Top the apple-Acc eat-begin-ru/eat-begin-past/eat-ru /eat-past ni/koto/no-Top
tabe-kake-ta (ga tabe-kire-na-katta).
 eat-begin-past but eat-finish-neg-past
 ‘As for eating the apple, Taro did start eating it, (but he couldn’t finish it).’
- c. Taro-wa eigo-o hanas-u/hanas-e-ru ni/koto/no-wa hanas-e-ru.
 Taro-Top English-Acc speak-u/speak-can-ru ni/koto/no-Top speak-can-nonpast
 ‘As for speaking English, Taro can speak it.’
- d. Sensei-wa hon-o kak-u/o-kaki-nina-ru ni/koto/no-wa
 teacher-Top book-Acc write-u/honorific-write-honorific-ru ni/koto/no-Top
o-kaki-ninat-ta.⁷
 honorific-write-honorific-past
 ‘As for writing the book, the teacher did write it.’

Like other cases, inversion of the first, less-specified verb form with the second, more-specified verb form is not possible.

- (20) a. *Watasi-wa hon-o yomi-ta-i ni/koto/no-wa yom-u.
 b. *Taro-wa sono ringo-o tabe-kake-ta ni/koto/no-wa tabe-ta.
 c. *Taro-wa eigo-o hanas-e-ru ni/koto/no-wa hanas-u.
 d. *Sensei-wa hon-o o-kaki-ninat-ta ni/koto/no-wa kak-u.

3.2.4. Non-Restructuring Predicates and TP-selecting Modality Predicates

In contrast to the restructuring predicates, a non-restructuring predicate and the embedded verb do not double together: it is possible to repeat the non-restructuring verb alone, but its repetition along with the embedded verb is prohibited.

- (21) Taro-wa Hanako-ga ringo-o tabe-ta to it-ta ni/koto/no-wa (*tabe-ta to) it-ta.
 Taro-Top Hanako-Nom apple-Acc eat-past Comp say-past ni/koto/no-Top eat-past Comp say-past
 ‘As for Taro’s saying that Hanako ate an apple, he did say that.’

Similarly, a TP-taking modality predicate does not allow doubling of itself with its complement.

⁷ According to Potts et al. (2009: 362), non-identical copying is allowed only when expressive elements such as honorifics and antihonorifics are involved. (cf. footnote 5)

- (i) Kyooju-wa yomu koto wa o-yomi-ninat-ta.
 professor-Top read koto Top honorific-read-honorific-past
 ‘The professor read. I hold the professor in high regard.’
- (ii) Aitsu-wa yomu koto wa yomi-yagat-ta.
 that.guy-Top read koto Top read-antihonorific-past
 ‘The guy read. It sucks that the guy read. I hold the guy in low regard.’

- (22) a. Taro-wa sikar-are-ta ni/koto/no-wa sikar-are-ta yooda.
 Taro-Top scold-pass-past ni/koto/no-Top scold-pass-past likely
 ‘As for Taro’s being scolded, it seems that he was really scolded.’
 b. *Taro-wa sikar-are-ta yoono-no-wa sikar-are-ta yooda.
 Taro-Top scold-pass-past likely no-Top scold-pass-past likely
- (23) a. Taro-wa gakko-ni ik-u ni/koto/no-wa it-ta rasii.
 Taro-Top school-to go-u ni/koto/no-Top go-past I hear
 ‘As for Taro’s going to school, I hear that he did go to school.’
 b. *Taro-wa gakko-ni it-ta rasii no-wa it-ta rasii.
 Taro-Top school-to go-past I hear no-Top go-past I hear

Thus a predicate can be doubled along with its complement that is smaller than TP. When its complement is TP or CP, the predicate has to be doubled on its own.

3.2.5. Negation

Finally, let us look at a case involving negation. When one verb is negated, the other verb must be negated as well, irrespective of their order.⁸

- (24) a. Taro-wa tabako-o suwa-na-i ni/koto/no-wa suwa-na-i
 Taro-Top cigarette-Acc smoke-neg-i ni/koto/no-Top smoke-neg-nonpast
 (ga tabako-ga kiraide-mo na-i).
 but cigarette-Nom dislike-also neg-nonpast
 ‘As for Taro’s not smoking, he does not smoke, (but it is not that he does not like cigarettes).’
 b. *Taro-wa hon-o ka-u ni/koto/no-wa ka-u ga
 Taro-Top book-Acc buy-u ni/koto/no-Top buy-nonpast but
yom-u ni/koto/no-wa yoma-na-i.
 read-u ni/koto/no-Top read-neg-nonpast
 ‘(As for buying books, Taro does buy books, but) as for reading them, he does not read them.’
 c. *Taro-wa hon-o yoma-na-i ni/koto/no-wa yom-u.
 Taro-Top book-Acc read-neg-i ni/koto/no-Top read-nonpast

(24c) illustrates the same pattern that we have observed with (9), (15), (18), and (20), but the unacceptability of (24b) is peculiar to the sentences with negation: the first verb cannot be a subpart of the second verb, when negation is involved. This is also true when the second verb is more complex, consisting of a verb root, a causative morpheme, a negative morpheme, and a tense morpheme. In (25) sentences are degraded due to their complexity, but those that involve negation on both verbs are clearly better than those that do not.

- (25) a. ?Hanako-wa Taro-ni keeki-o tukur-ase-nakat-ta ni/koto/no-wa tukur-ase-na-katta.
 Hanako-Top Taro-Dat cake-Acc bake-caus-neg -past ni/koto/no-Top bake-caus-neg-past
 ‘As for not making Taro bake a cake, Hanako didn’t make him bake a cake.’
 b. ?Hanako-wa Taro-ni keeki-o tukur-ase-na-i ni/koto/no-wa tukur-ase-na-katta.
 Hanako-Top Taro-Dat cake-Acc bake-caus-neg-i ni/koto/no-Top bake-caus-neg-past

⁸ For a reason unclear to me, some people judged (24a) and (25a) better with *koto* rather than with *ni*, though they prefer *ni* in other cases.

- c. *Hanako-wa Taro-ni keeki-o tukur-ase-ta ni/koto/no-wa tukur-ase-na-katta.
Hanako-Top Taro-Dat cake-Acc bake-caus-past ni/koto/no-Top bake-caus-neg-past
- d. *Hanako-wa Taro-ni keeki-o tukur-ase-ru ni/koto/no-wa tukur-ase-na-katta.
Hanako-Top Taro-Dat cake-Acc bake-caus-ru ni/koto/no-Top bake-caus-neg-past
- e. *?Hanako-wa Taro-ni keeki-o tukura-nakat-ta ni/koto/no-wa tukur-ase-na-katta.
Hanako-Top Taro-Dat cake-Acc bake-neg-past ni/koto/no-Top bake-caus-neg-past
- f. *Hanako-wa Taro-ni keeki-o tukura-na-i ni/koto/no-wa tukur-ase-na-katta.
Hanako-Top Taro-Dat cake-Acc bake-neg-i ni/koto/no-Top bake-caus-neg-past
- g. *Hanako-wa Taro-ni keeki-o tukut-ta ni/koto/no-wa tukur-ase-na-katta.
Hanako-Top Taro-Dat cake-Acc bake-past ni/koto/no-Top bake-caus-neg-past
- h. *Hanako-wa Taro-ni keeki-o tukur-u ni/koto/no-wa tukur-ase-na-katta.
Hanako-Top Taro-Dat cake-Acc bake-ru ni/koto/no-Top bake-caus-neg-past

This is in contrast to a similar construction in which two verbs can differ in their polarity value.⁹

- (26) a. Nak-u-ni nak-e-na-i sippai-o si-ta.
cry-u-ni cry-can-neg-i mistake-Acc do-past
'I made a mistake, which was so terrible that I couldn't even cry over it.'
- b. Yam-u-ni yama-re-n-u kimoti-o doo su-ru koto-mo deki-na-katta.
stop-u-ni stop-can-neg-u feeling-Acc how do-ru koto-also can-neg-past
'I was not able to do anything about my feelings, which I couldn't stop even if I tried.'
- c. V-ni V-can-neg

This construction takes the fixed pattern indicated in (26c): the first verb followed by *ni* functions as a concessive for the second verb followed by an ability and a negative morpheme. It is not possible to have an affirmative verb in the second position (**naku-ni nak-e-ta*.) The construction is associated with a specific meaning that some action is not possible despite one's will, and unlike the ordinary predicate doubling construction, it does not focus on the truth of the statement. Moreover, it seems less productive than the ordinary predicate doubling construction we have been concerned with. For instance, it is not easy to say ??*miru-ni mir(ar)e-nai* 'cannot see something even if I want to,' though we can readily say *mi-ru ni/koto/no-wa mi-ta* 'As for seeing, I did see it.' Hence we regard (26) as a fixed "construction," an atomic structure which is directly paired with its specific meaning. We have been using the term "predicate doubling construction" to describe the object of our study, but it is not a "construction" in the same sense, because we will show below that many of its properties follow from general principles and thus need not be stipulated. What is important here is the fact that it is not possible to have two verbs of different polarity values in the ordinary predicate doubling construction, in contrast to (26).

3.2.6. Summary

To sum up this section, we have seen that a variety of morphemes can occur with a root predicate preceding and following *ni/koto/no-wa* in the predicate doubling construction,¹⁰ but that their occurrences are not random. The restrictions on the combination patterns of non-identical verb forms can be summarized as follows.

⁹ I am thankful to Tomoe Arie for bringing this construction to my attention.

¹⁰ The elements that are allowed preceding *ni/koto/no-wa* are roughly the same as those that occur with Minami's (1974: 114-138) Class-B particles such as *node* and *tara*, though *masu* is not allowed in the predicate doubling construction.

(i) *Hon-o yomi-mas-u ni/koto/no-wa yomi-mas-u.
book-Acc read-polite-u ni/koto/no-Top read-polite-nonpast
'As for reading the book, I did read it.'

- (27) a. The first verb can be the same as, or in a less specified form than the second verb, but not vice versa. (e.g. (7) vs. (9), (14a) vs. (15), (17a) vs. (18), (19) vs. (20), (24a) vs. (24c))
- b. The verbal root of the first verb must be followed by subsequent morphemes in the same order as in the second verbal complex without skipping any morphemes, except when the first verb is in default tense. (e.g. (13)(14a) vs. (14b), (16)(17a) vs. (17b), (19b))
- c. A predicate cannot be doubled along with a complement that is TP or CP. (e.g. (21), (22), (23))
- d. Both verbs must have the same polarity value. (e.g. (24), (25))

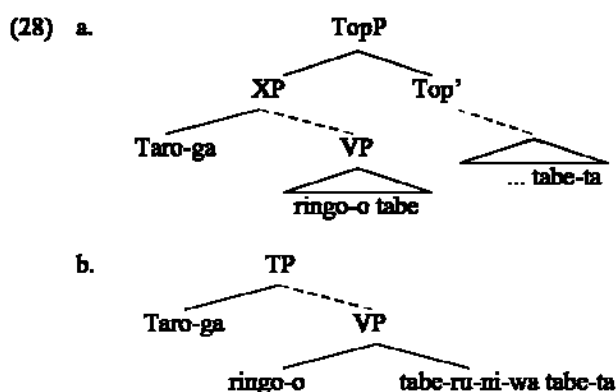
In the next section, we will try to account for these restrictions.

4. Proposal

4.1. Movement Analysis

4.1.1. Constituency: Against Verbal Reduplication Analysis

Let us start our analysis of the construction by establishing its constituent structure. Two possibilities that immediately come to mind are the following:



In (28a) the object and the first verb forms a VP. If movement of VP/TP is involved in deriving the construction, this would be the structure we expect. On the other hand, in (28b) the repeated predicates form a VP with the object. If doubling of the predicate is due to verbal reduplication, (28b) should be a more plausible analysis.

- (29) a. Taro-ga su-ru ni-wa si-ta no-wa [ringo-o tabe-ru] koto da.
 Taro-Nom do-ru ni-Top do-past no-Top apple-Acc eat-ru koto Cop
 ‘What Taro did do was eat an apple.’
- b. ??Taro-ga si-ta no-wa [ringo-o tabe-ru ni/no-wa tabe-ru] koto da.
 Taro-Nom do-past no-Top apple-Acc eat-ru ni/no-Top eat-ru koto Cop
 ‘What Taro did was eat an apple.’

(29a) shows that *ringo-o taberu* can be a focus of a cleft sentence, whereas (29b) indicates that *ringo-o taberu ni/no-wa taberu* can do so only marginally. Though the degraded status of (29b) may be due to factors other than its constituency, the acceptability of (29a) supports the constituent structure in (28a).

In addition, V and its object can be preposed, leaving behind a subject and a verbal copy (30), which is expected if the structure of the construction is as in (28a) rather than (28b).

- (30) Ringo-o tabe-ta ni/koto/no-wa Taro-wa tabe-ta (ga oisi-i to-wa
apple-Acc eat-past ni/koto/no-Top Taro-Top eat-past but delicious-nonpast Comp-Top
omowa-na-katta).
think-neg-past
‘As for Taro’s eating the apple, he did eat it, but did not find it delicious.’

Moreover, as we have seen in Section 3.1, there are speakers who permit the repetition of internal arguments.

- (31) %Taro-wa hon-o yon-da ni/koto/no-wa hon-o yon-da. (=10)
Taro-Top book-Acc read-past ni/koto/no-Top book-Acc read-past
‘As for Taro’s reading the book, he did read it.’

It would be difficult to posit the argument DP within a verb formed by reduplication, as in (28b).

These data support the analysis in (28a) where V and its object form a VP. Accordingly, in the next section, we will argue that vP/TP is moved into Spec of TopP in the derivation of the predicate doubling construction.

4.1.2. Movement of a Subpart of TP and Adnominal Epenthesis

In Dutch dialects non-identical doubling of pronouns is possible (32a) in addition to doubling of identical pronouns (32b). Barbiers et al. (2008) observe that with non-identical doubling, when the order of the pronouns is reversed, the sentence becomes ungrammatical (33).

- (32) a. Wat denk je wie ik gezien heb? (Overijssel)
what think you who I seen have
‘Who do you think I have seen?’
b. Wie denk je wie ik gezien heb? (Drenthe)
who think you who I seen have (Barbiers et al. (2008: 77))
(33) *Wie denk je wat ik gezien heb? (Barbiers et al. (2008: 78))

Based on this, they argue that “in a syntactic movement chain, a higher chain link cannot be more specified than a lower chain link,” (P. 78) and propose to analyze pronouns as spell-outs of different layers of a nominal projection.¹¹



According to their proposal, non-identical doubling results as a consequence of partial copying of a lower chain link and spelling out of both chain links.

What we have seen in Section 3 about Japanese predicate doubling is exactly parallel to the pronominal doubling in Dutch dialects.

- (27) a. The first verb can be the same as, or in a less specified form than the second verb, but not vice versa.

¹¹ Their analysis is not inconsistent with Kayne’s (1981) analysis of resumptive pronouns as spell-outs of *wh*-traces, or Hornstein’s (2001) and Kayne’s (2002) ideas of reducing binding theory to movement. While they are concerned with how some features of a tail of a chain are spelled out, resulting in less-specified forms than the head of the chain, their claim is orthogonal to the one made by Barbiers et al., who focus on the size of a constituent that undergoes movement.

In fact, since Japanese is an agglutinative language, the structure of a clause-final predicate is more evident than with Dutch pronouns, and a partial copying analysis fits the construction in question perfectly.

Next let us consider the generalization (27b).

- (27) b. The verbal root of the first verb must be followed by subsequent morphemes in the same order as in the second verbal complex without skipping any morphemes, except when the first verb is in default tense.
- (35) a. Hanako-wa Taro-ni kusuri-o nom-u ni/koto/no-wa nom-ase-ta. (=14a)
Hanako-Top Taro-Dat medicine-Acc take-u ni/koto/no-Top take-caus-past
- b. *Hanako-wa Taro-ni kusuri-o non-da ni/koto/no-wa nom-ase-ta. (=14b)
Hanako-Top Taro-Dat medicine-Acc take-past ni/koto/no-Top take-caus-past
- (36) Hanako-wa Taro-ni kusuri-o nom-ase-ta/nom-ase-ru ni/koto/no-wa
Hanako-Top Taro-Dat medicine-Acc take-caus-past/bake-cause-ru ni/koto/no-Top
nom-ase-ta (ga byooin-e turete iki-wa si-na-katta). (=13)
take-caus-past but hospital-to take go-Foc do-neg-past
'As for making Taro take medicine, Hanako did make him do it, (but she didn't take him to the hospital).'

In (35b) the first verbal complex cannot be *non-da*, with a causative morpheme, *ase*, being skipped. Then why is it that skipping of the same morpheme is allowed in (35a), where the first verb is in default tense? How can we account for the latter half of (27b), a proviso for the generalization, which seems to resist a movement analysis of a partial structure?

The default tense marker, *(r)u*, can attach to a verbal complex, V-cause (36). In addition it can skip a causative morpheme, which occurs between V and tense, and attach to V (35a), in contrast to a past tense morpheme, *ta* (35b). An easy way out of this problem is to regard *(r)u* not as a tense marker. I propose to treat *(r)u*, which occurs with verbs, and *i*, which occurs with adjectives, preceding *ni/koto/no-wa* not as tense morphemes, but as elements that are inserted phonologically to make an adnominal verb/adjective form, even though they happen to have the same phonological form as nonpast tense morphemes.

- (37) a. Hanako-wa kirei-na koto/no-wa kirei-da.
Hanako-Top beautiful-na koto/no-Top beautiful-Cop
'As for Hanako's beauty, she is indeed beautiful.'
- b. *Hanako-wa kirei-da koto/no-wa kirei-da.
Hanako-Top beautiful-Cop koto/no-Top beautiful-Cop

As is clear with nominal adjectives, which have distinctive forms for adnominal use (37a) and conclusive use (37b), what occurs before *koto/no* is an adnominal form.^{12,13} If *(r)u* preceding *ni/koto/no-wa* is not a tense morpheme, then

¹² I am thankful to an anonymous reviewer for these examples.

¹³ As an anonymous reviewer pointed out to me, *ga-no* conversion is not possible in the predicate doubling construction as in (ii), even though it occurs with an adnominal verb.

- (i) Hanako-ga/no ku-ru jikan-o siri-tai.
Hanako-Nom/Gen come-ru time-Acc know-want
'I want to know at what time Hanako will come.'
- (ii) Hanako-ga/*no ku-ru koto/ni/no-wa ki-ta.
Hanako-Nom/Gen come-ru koto/ni/no-Top come-past
'As for Hanako, she did come here.'

This shows that *kuru* preceding *koto/ni/no* is not a subjunctive form, which should license *ga-no* conversion (cf. Watanabe (1996)). Descriptively, in the predicate doubling construction, Case values are determined in the base position, which cannot be changed later in the derivation, though it is possible to suppress them when the DPs are realized in Spec, TopPs. We may be able to relate the unavailability of a genitive subject in (ii) to (iii).

we will be able to treat (35a) as involving movement of vP, a partial structure of TP, and maintain the generalization about the combination pattern of morphemes without exception. Notice that a causative morpheme does not select a TP complement, and treating *nom-u* in (35a) as a tensed form would resist a straightforward movement analysis.

A movement analysis can easily explain how the morphemes should be combined in the first verb (27a, b). Since only constituents in a lower chain link can move, it follows that the order of morphemes in the lower chain link is preserved in the higher chain link, and that skipping of some morphemes in between cannot occur. Without movement, it would be unclear why the same predicate appears twice in the construction, and why only a certain combination of morphemes is allowed.

4.1.3. Derived Structure

So far we have remained silent about the status of *ni/koto/no*. *Koto* and *no* are often analyzed as Complementizers, since they mark the edge of a nominal clause. However, if *koto* and *no* in the construction in question are Complementizers, we have to assume that the predicate doubling construction always involves movement of CP. If so, we will not be able to capture the combination pattern of morphemes in the preposed verbs in a straightforward manner.

Based on his research on Yorùbá, Gbè, Ìgbo, Vātà and Haitian, Manfredi (1993) argues that when a verb moves overtly to a focus position by itself or with its arguments, it is nominalized. Haddican (2007) reports that the same applies to Central and Western Basque and Korean, and claims that “verbal constituents that move to FocP must be [+noun], i.e. be headed by a nominalizing affix” (p. 751). Since *koto* and *no* can be used independently as (pro)nouns (38), we follow Nishiyama and Cho and assume that they function as nominalizers, when they attach to a verbal complex.

- (38) a. *Koto-ga ittan okor-u-to isogasiku-nar-u.*
 event-Nom once happen-nonpast-when busy-become-nonpast
 ‘Once something happens, we become busy.’
- b. *Kimi-no enpitsu-wa boku-no yori naga-i.*
 You-Gen pencil-Top I-Gen-thing than long-nonpast
 ‘Your pencil is longer than mine.’

As for *ni*, we assume that its function in the predicate doubling construction is the same as in (39).

- (39) *Iwa-nu-wa i-u-ni masar-u.*
 saying-neg-Top saying-u-ni superior-nonpast
 ‘Not saying anything is better than saying something.’

In (39), *ni* attaches to *iu*, which functions as a gerund. It is plausible to assume that a phonetically-null form of a nominalizer is involved here. *Ni* in the predicate doubling construction works in the same way. Thus we have three types of nominalizers: *koto*, *no* and \emptyset , and *ni* attaches to a V, which is nominalized by |. These nominalizers package information contained in their target constituent into a propositional topic.

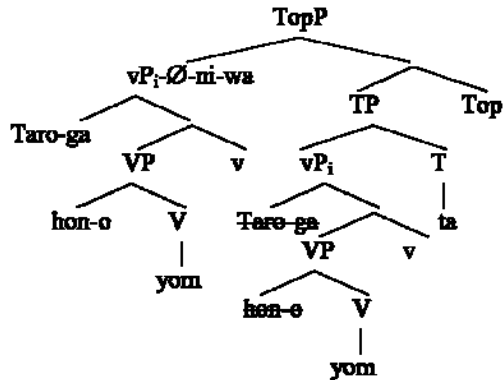
-
- (iii) *Hanako-ga/*no tabe-ta no-wa ringo-o da.*
 Hanako-Nom/Gen eat-past no-wa apple-Acc Cop
 ‘What Hanako ate was an apple.’

If cleft sentences are derived by movement of a focus phrase followed by remnant movement of FinP, as argued by Hiraiwa and Ishihara (2002), it may be that genitive subjects cannot occur in vPs or their extended projections which have undergone movement.

Another issue concerning Case is the difference between nominative case and other cases. As Christopher Tancredi suggested to me, the fact that external arguments cannot be doubled (11) in contrast to internal arguments (10) might be related to licensing of nominative case. I need to leave these issues for future research.

Now let us see some sample derivations.

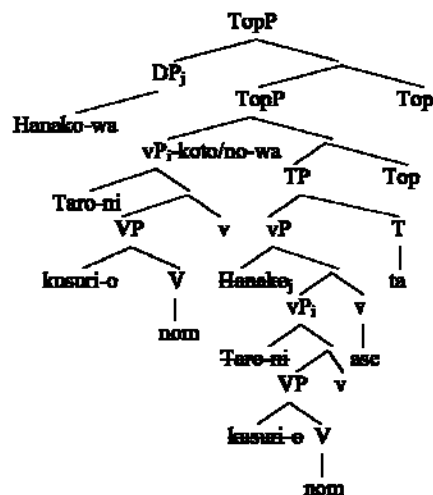
- (40) Taro-ga hon-o yom-u ni-wa yon-da.
 Taro-Nom book-Acc read-u ni-Top read-past
 ‘As for reading the book, Taro did read it.’



Here a vP, *Taro-ga hon-o yom*, is preposed to Spec of TopP, leaving behind a copy. The DPs, *Taro* and *hon*, have their Case valued by Agree before movement, and retain their value throughout the derivation (cf. footnote 13.) The moved vP is nominalized by \emptyset , to which a case marker *ni* is attached. Furthermore, *wa* is added to mark its topichood.

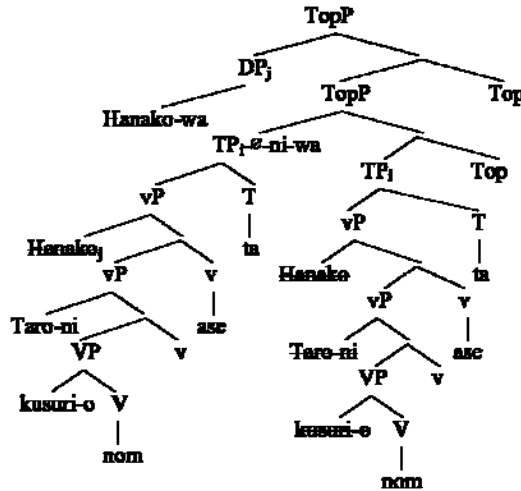
- (41) illustrates movement of a subpart of TP containing a causative morpheme.

- (41) Hanako-wa Taro-ni kusuri-o nom-u koto/no-wa nom-ase-ta.
 Hanako-Top Taro-Dat medicine-Acc take-u koto/no-Top take-caus-past
 ‘As for making Taro take medicine, Hanako did make him do it.’



In (41), driven by a topic feature, the vP consisting of *Taro-ni kusuri-o nom* moves to Spec of TopP. The preposed vP is nominalized by *koto* or *no*, to which a topic marker, *wa* is attached. A topic phrase, *Hanako*, moves independently to a higher Spec of TopP, where it is realized with *wa*.

- (42) Hanako-wa Taro-ni kusuri-o nom-ase-ta ni-wa nom-ase-ta.
 Hanako-Top Taro-Dat medicine-Acc take-caus-past ni-Top take-caus-past
 ‘As for making Taro take medicine, Hanako did make him do it.’



(42) shows movement of a whole TP including a causative morpheme. Here the whole TP is preposed to Spec of TopP, from which *Hanako* moves further to Spec of another TopP. The moved TP is nominalized by a null nominalizer, to which *ni* and a topic marker *wa* are attached. What remains to be explained is how the lower chain link is pronounced.

4.2. Copy Spell-Out

4.2.1. Predicate Doubling vs. Suru-Support

If a copy left behind is unpronounced in (40)-(42), we end up with strings in (43), which are ungrammatical.

- (43) a. *Taro-ga hon-o yom-u ni-wa ta.
 Taro-Nom book-Acc read-u ni-Top past
 b. *Hanako-wa Taro-ni kusuri-o nom-u koto/no-wa (s)ase-ta.¹⁴
 Hanako-Top Taro-Dat medicine-Acc take-u koto/no-Top cause-past
 c. *Hanako-wa Taro-ni kusuri-o nom-ase-ta ni-wa.
 Hanako-Top Taro-Dat medicine-Acc take-cause-past ni-Top

A tense morpheme is stranded in (43a) and a causative morpheme in (43b), so a trigger for pronouncing a predicate copy in (40) and (41) can be attributed to the Stranded Affix Filter (cf. Lasnik (2000)), which precludes unattached affixes.¹⁵ However, (42) does not have any morpheme stranded by TP movement except the two topic markers,

¹⁴ Some people find this acceptable, but their judgment is based on a different construction, which does not emphasize the truth of the proposition. When *ni* is used instead of *koto/no*, (43b) is impossible to everyone.

¹⁵ As pointed out by Kuroda (1990), causative auxiliary, *sase*, need not always attach to another verb.

(i) A: Taro-ni uta-o utaw-ase-ta-nda-tte?
 Taro-Dat song-Acc sing-cause-past-Cop-I hear
 ‘I hear you made Taro sing a song. Is that true?’

B: Un, sase-ta.
 Yes, cause-past
 ‘Yes, I did.’

(Mihara and Hiraiwa (2006: 123))

This is not an affixal causative morpheme, but is a free morpheme. The same can be said with a negative element in (ii). Notice that (ii) and (24a) are totally different in meaning.

which each has a host to attach to in Spec of TopP. We need a mechanism other than the Stranded Affix Filter to force predicate doubling in (42).

The obligatory presence of the doubled predicate can also be demonstrated by the fact that *suru*-support does not help in this construction.

- (44) a. *Taro-wa ringo-o tabe-ta ni/koto/no-wa si-ta.
 Taro-Top apple-Acc eat-past ni/koto/no-Top do-past
 b. *Taro-wa ringo-o tabe-na-katta ni/koto/no-wa si-na-katta.
 Taro-Top apple-Acc eat-neg-past ni/koto/no-Top do-neg-past

Predicate doubling is a key feature of this construction, as its name suggests. Why do predicates have to be doubled? In Japanese, a lexical verb is used in an answer to a Yes-No question.

- (45) Q: Taro-wa gakkoo-e iki-masi-ta-ka?
 Taro-Top school-to go-polite-past-Q
 'Did Taro go to school?'
 a. A: Hai, (Taro-wa) (gakkoo-e) iki-masi-ta.
 yes Taro-Top school-to go-polite-past
 'Yes, he did.'
 b. A: *Hai, si-masi-ta.
 yes do-polite-past
 c. A: ??Hai, soo si-masi-ta.
 yes so do-polite-past
 d. A: Iie, (Taro-wa) (gakkoo-e) iki-mase-n-desi-ta.
 no Taro-Top school-to go-polite-neg-polite-past
 'No, he didn't (go to school).'
 e. A: *Iie, si-mase-n-desi-ta.
 no do-polite-neg-polite-past

In answering a Yes-No question, an inflected verb is repeated with/without other elements as in (45a). Using a *do so* pro-VP form does not help much (45c), and *suru*-support is impossible (45b). As for a negative answer, a verb has to be repeated followed by a negative marker (45d), and *suru*-support cannot be employed (45e).

Laka (1990), based on data in Basque, a language with an affirmative polarity particle in addition to a negative particle, argues that a polarity head, Σ , always occurs in an answer to a Yes-No question. Following Laka, let us assume that a reply to a Yes-No question expresses a polarity value. If a polarity value can be carried by a lexical verb but not by a dummy verb in a reply to a Yes-No question in Japanese, it is natural that the same holds true with the predicate doubling construction, for its discourse function is to focus the truth of the proposition, as we will see in Section 4.2.3. On the other hand, in English, a short answer to a Yes-No question involves *do* or other auxiliaries rather than a lexical verb, and likewise, the polarity focus is expressed by focus pitch on these auxiliaries.¹⁶ We will come back to this correlation in Section 5.

Let us look at another context where *suru*-support is not applicable.

-
- (ii) Taro-wa tabako-o suwa-na-i koto-wa na-i.
 Taro-Top cigarette-Acc smoke-neg-i koto-Top neg-nonpast
 'It is not the case that Taro doesn't smoke.'

¹⁶ In Section 4.2.3 we will follow Han and Romero (2004) and introduce the term "verum focus."

- (i) Noa DOESN't play tennis when the ground is WET. (But) She REALLY DOES play tennis when the ground is DRY.
 (Han and Romero (2004: 190))

- (46) a. Taro-ga hon-o yomi, Jiro-mo (hon-o) yon-da.
 Taro-Nom book-Acc read, Jiro-also book-Acc read-past
 ‘Taro read a book, and Jiro did so, too.’
 b. *Taro-ga hon-o yomi, Jiro-mo si-ta.
 Taro-Nom book-Acc read, Jiro-also do-past
 c. Taro-ga hon-o yomi, Jiro-mo soo si-ta.
 Taro-Nom book-Acc read Jiro-also so do-past

With clausal coordination, predicate doubling is necessary (46a). *Suru*-support is impossible (46b), though *do so* substitution is allowed (46c). Unlike *do*-support in English, *suru*-support does not occur in this case. Instead a predicate doubles itself.

Compared to *do*-support, the application domain of *suru*-support seems to be very limited. Miyagawa (1998) observes that it applies when a verb is separated from a tense morpheme, a passive morpheme, a negative morpheme, or some other lexical verbs such as *tak* ‘want’ and *hajime* ‘begin’ by a focus particle (47). Hirata (2010) argues that it is also triggered by a phonetically null polarity head (48).

- (47) a. John-ga keeki-o tabe-mo *(su)-ru
 John-Nom cake-Acc eat-also do-nonpast
 ‘John also eats a cake.’ (Miyagawa (1998: 428))
 b. Kono ronbun-wa yomi-mo *(s)-are-na-i
 this paper-Top read-also do-pass-neg-nonpast
 ‘This paper is not also/even read.’ (Miyagawa (1998: 429))
 c. Kono hon-o yomi-sae *(si)-na-i
 this book-Acc read-even do-neg-nonpast
 ‘I won’t even read this book.’ (Miyagawa (1998: 429))
 d. [piano-o narai-mo] *(si)-tai si, ...
 piano-Acc learn-also do-want-nonpast and
 ‘I also want to learn piano, and...’ (Miyagawa (1998: 430))
- (48) Gorira-ga [ringo-o tabe-sae si- | & mizu-o nomi-sae si-nakat]-ta.
 gorilla-Nom apple-Acc eat-even do water-Acc drink-even do-neg-past
 ‘The gorilla even ate an apple and didn’t drink water.’ (Hirata (2010: 84))

What characterizes *suru*-support in contrast to *do*-support is the presence of a lexical verb that is separated from its extended projection in Grimshaw’s (1997) sense by a focus particle. In (45b, e) *suru*-support does not apply because there is no verb to trigger it. As for clausal coordination in (46b), it does not take place because the verb *yomi* belongs to a different clause and there is no focus particle to induce its application.¹⁷ It is not sufficient to assume that *suru*-support, like *do*-support, is triggered by a stranded affix, for it cannot account for the obligatory presence of a lexical verb. Following Mihara and Hiraiwa (2006), let us consider that *suru* as a dummy verb is not a V, but is a realization of *v*. It appears only when a focus particle is adjoined to VP, and thus intervenes between a lexical V and the higher projection.¹⁸ Then we can derive the fact that *suru* occurs in tandem with a lexical verb, but not in (45b, e) or (46b). When there is no V present in a structure, there is no *v*, either.

¹⁷ Once *suru* is inserted, it can be separated from a lexical verb by VP-preposing.

(i) Hon-o yomi-sae Taro-wa si-ta.
 book-Acc read-Foc Taro-Top do-past
 ‘Even read the book, Taro did.’

¹⁸ Aoyagi (2006a, b) observes that focus particles can be adjoined to XPs cross-categorially.

(i) tabe-sase-sae si-ta
 eat-cause-even do-past

In (i) a focus particle is adjoined to vP headed by a causative *sase*. I assume that vPs can be iterative.

We have seen in Section 2 that Nishiyama and Cho analyze *suru*-support as a spell-out of a VP copy left behind by VP movement. However, we cannot adopt their analysis, since we have argued that vP movement is involved in some predicate doubling constructions. We cannot differentiate predicate doubling and *suru*-support by the size of a moved constituent, TP or vP, as Nishiyama and Cho do. Instead we follow Kubo (1992) and Aoyagi (2006b), and assume that no movement is involved in the VP focus construction, where *suru*-support occurs.

When *suru*-support is not applicable, predicate doubling plays the role of supporting affixes at PF, which is more economical in Japanese. In (45a, d) and (46a), a lexical verb occurs so that a root tense can be connected to it. Going back to (41), which is repeated here as (49) without a phrase structure tree, the whole verbal complex is pronounced, even though the causative and tense morphemes are the only elements that have been left behind by vP preposing.

- (49) Hanako-wa Taro-ni kusuri-o nom-u koto/no-wa nom-ase-ta. (=41)
 Hanako-Top Taro-Dat medicine-Acc take-u koto/no-Top take-caus-past
 ‘As for making Taro take medicine, Hanako did make him do it.’

Here the causative morpheme needs a host to attach to, so the lexical verb *nom* in a copy of the preposed vP is pronounced. Since this doubling occurs only to satisfy the Stranded Affix Filter, other elements in the copy such as *Hanako-ga*, *Taro-ni*, and *kusuri-o* remain unpronounced, because two nondistinct links of a chain cannot be linearized.^{19,20}

4.2.2. Pronouncing the copy of TP

As for (42), repeated here as (50), which involves copying of a whole TP, there is no tense that needs to be attached to a lexical verb, since the structure left behind consists of only a Topic head. (See the phrase-structure tree in Section 4.1.3, which is not repeated here for reasons of space.)

- (50) Hanako-wa Taro-ni kusuri-o nom-ase-ta ni-wa nom-ase-ta. (=42)
 Hanako-Top Taro-Dat medicine-Acc take-caus-past ni-Top take-caus-past
 ‘As for making Taro take medicine, Hanako did make him do it.’

How can we account for partial spelling out of a copy of TP? As Nishiyama and Cho suggest, it may be due to a predication requirement. However, here I would like to explore another possibility and relate it to Grohman’s (2003) theory of anti-locality of movement.

¹⁹ Speakers who permit doubling of the internal arguments (10) seem to have a weaker economy principle in determining how much of a copy should be pronounced. Even such speakers adhere to the nondistinctiveness condition of chain links, since an external argument cannot be repeated (11).

²⁰ Nunes (2004:55-57) proposes that predicate doubling in Japanese involves verb movement to Foc⁰ via T and the remnant TP movement to Spec, FocP. Though it works well with TP movement cases, it does not seem to be able to account straightforwardly for cases involving movement of a subpart of TP such as (49). According to his analysis, the verb raises up to Foc⁰ by adjoining to intervening heads. Once the verbal complex [V+v+cause+T] reaches Foc⁰, it gets reanalyzed with Foc⁰ as a single morphological unit and becomes invisible to the LCA. Chain Reduction does not apply to its chain and both chain links survive. At the same time remnant vP is moved to Spec of FocP, leaving a causative and a tense morpheme behind. Then even if its copy is deleted by Chain Reduction, there are a causative morpheme and a tense morpheme remaining in TP, which need to be pronounced. The sentence ends up with the following pronunciation: *Hanako-wa Taro-ni kusuri-o nom-u ni-wa nom-ase-ta (s)ase-ta*, with doubling of the causative and tense morpheme at the end. One might argue that [V+v] moves to Foc⁰, skipping over a causative and a tense morpheme. If so, it is necessary to show why such movement is allowed without violating the Head Movement Constraint. Another possibility is to assume that TP is moved even if the preposed verbal complex does not include a tense morpheme. If so, it would be necessary to give an independent account for the possible ordering of morphemes allowed in preposed predicates. Our analysis can neatly handle non-identical doubling without such complications.

In (50) TP moves to Spec of TopP, which is in the Ω -domain in Grohman's terms. TP constitutes a Φ -domain, and movement from positions within TP should be to a position in a different Prolific Domain in accordance with his anti-locality hypothesis. Notice that it is not implausible to regard TP itself as an element in the Ω -domain. If so, movement of TP to Spec of TopP would be movement within the same Prolific Domain. The fact that this type of movement is not observed very often across languages can probably be due to anti-locality.

According to Grohman's Condition on Domain Exclusivity, movement within the same Prolific Domain is allowed, if its copy in the lower chain link is spelled out as phonologically distinct from a moved object. When TP is moved, its copy cannot be pronounced totally because of the LCA; in order to obtain successful linearization of a structure, it has to be distinct from the higher chain link so that the LCA will not regard them as identical. How should the copy be pronounced so that it would be distinct from the higher chain link but its status as TP would be preserved? The best way is to pronounce its head, T. Since a tense morpheme cannot occur by itself, the whole verbal complex is pronounced at the tail of a chain in the end. In this way we can account for the doubling of predicates even when the whole TP is moved.

In section 3.2.4 we have seen that a predicate cannot be doubled along with its complement that is TP or CP (27c).

- (51) Taro-wa Hanako-ga ringo-o tabe-ta to it-ta ni/koto/no-wa
 Taro-Top Hanako-Nom apple-Acc eat-past Comp say-past ni/koto/no-Top
 (*tabe-ta to) it-ta. (= (21))
 eat-past Comp say-past
 'As for Taro's saying that Hanako ate an apple, he did say that.'

This follows from economy principles. The Stranded Affix Filter is satisfied in (51) without repetition of *tabe-ta to* because the clause-final tense is attached to the lexical verb, *iu*. Since there is no need to pronounce the embedded predicate, economy dictates that it should be unpronounced. On the other hand, when the embedded complement is vP as in (50) above, the embedded verb forms a complex predicate with the restructuring predicate, so the complex predicate as a whole can be doubled. Thus the fact that a TP or CP complement cannot be doubled with the matrix predicate is derived from economy considerations.

4.2.3. *Verum Focus*

As we have already mentioned several times, the discourse function of the predicate doubling construction is to emphasize the truth of its proposition. To see this, let us first consider a VP focus construction, which crucially differs from predicate doubling in its function in discourse.

- (52) Taro-wa ringo-o muki-wa si-ta (ga tabe-na-katta).
 Taro-Top apple-Acc peel-Foc do-past but eat-neg-past
 'Peel the apple, Taro did, (but he didn't eat it).'

Because of the use of a focus particle, *wa*, V or its extended projection, VP or TP, is focalized. In addition, it has an adversative implicature ('but' effect), and implicates a contrast between the event denoted by the focused VP and some discourse-given alternatives; in (52), for instance, in contrast to apple peeling, it is implicated that other events such as apple eating, did not take place.

On the other hand, the characteristic property of the predicate doubling construction is that the speaker of the sentence insists on the truth of its proposition.

- (53) Taro-wa ringo-o mui-ta ni/koto/no-wa mui-ta (ga tabe-na-katta).
 Taro-Top apple-Acc peel-past ni/koto/no-Top peel-past but eat-neg-past
 ‘As for Taro’s peeling the apple, he did peel it, (but he didn’t eat it).’

In (53) the content of the stated proposition that Taro peeled the apple is confirmed by the speaker to be true. To borrow a term from Han and Romero (2004:190), the construction has verum focus, and is true “if the speaker (or the sum of the speaker and the addressee) is certain that *p* (proposition, [YI]) should be accepted as true and added to the common ground.” The VP focus construction exemplified in (52), in contrast, does not have verum focus.

Like the VP focus construction, the predicate doubling construction has an adversative implicature. For example, (53), in addition to emphasizing the truth of the proposition that Taro peeled the apple, implicates that other plausible propositions (e.g. that he ate the apple) do not hold. Because this contrast is felt strongly, Nishiyama and Cho treat *wa* in the construction as a focus marker. However, as Vicente (2007) argues based on the observation of predicate doubling in Spanish and Brazilian Portuguese, this ‘but’ effect should rather be regarded as a product of conversational implicature, because it is cancelled when there is a focused element in the construction.

- (54) Taro-wa RINGO-O mui-ta ni/koto/no-wa mui-ta (*ga tabe-na-katta).
 Taro-Top apple-Acc peel-past ni/koto/no-Top peel-past but eat-neg-past
 ‘As for Taro’s peeling the APPLE, he did peel it.’

It is not clear how such cancellation of the ‘but’ effect can be explained, if the contrast is attributed to the focus particle, *wa*. Hence we treat *wa* preceding *ni/koto/no* as a topic marker.²¹

There are predicate doubling constructions with verum focus in other languages, and some of them cited below have been reported to have the adversative implicature as well.²²

- (55) a. Comprar, Juan ha comprado un libro, pero no lo ha leído. (Spanish)
 buy.INF Juan has bought a book but not CL has read
 ‘As for buying, it is true that Juan has bought a book, but he never read it afterwards.’
 (Vicente (2007: 64))
- b. Lavar o carro, o João lavou (mas...) (Brazilian Portuguese)
 wash.INF the car the João washed but
 ‘As for washing the car, João washed it (but still...)’
 (Bastos’s (2002) example cited by Vicente (2007: 65))
- c. Kifizetni, KIFIZETTE Péter a jegyét (de...) (Hungarian)
 PV.pay.INF PV.paid.3sg Péter the ticket.Acc but
 ‘As for paying, Péter did pay for his ticket (but, in the end, he might not have taken it).’
 (Vicente (2007: 170))
- d. Videt’(-to) ja ee davno ne videla, ... (Russian)
 see.INF(-PTCL) I.Nom her.Acc long neg see.past.fem.s
 ‘As for seeing her, it’s been a long time since I saw her, ...’
 (Aboh and Dyakonova (2009: 1039))

We have observed in Section 3.2.5 that both verbs in the predicate doubling construction must have the same polarity value (27d). We think this is due to the discourse function of the construction.

²¹ I am thankful to Akira Watanabe for pointing out to me that verum focus is compatible with a topic marker *wa*.

²² In the glosses, CL stands for a clitic, PV a preverb, and PTCL a particle.

- (56) a. Taro-wa tabako-o suwa-na-i ni/koto/no-wa suwa-na-i
 Taro-Top cigarette-Acc smoke-neg-i ni/koto/no-Top smoke-neg-nonpast
 (ga tabako-ga kiraide-mo na-i). (=24a)
 but cigarette-Nom dislike-also neg-nonpast
 ‘As for Taro’s not smoking, he does not smoke, (but it is not that he does not like cigarettes).’
- b. *Taro-wa hon-o ka-u ni/koto/no-wa ka-u ga
 Taro-Top book-Acc buy-ru ni/koto/no-Top buy-nonpast but
yom-u ni/koto/no-wa yoma-na-i. (=24b)
 read-u ni/koto/no-Top read-neg-nonpast
 ‘(As for buying books, Taro does buy books, but) as for reading them, he does not read them.’
- c. *Taro-wa hon-o yoma-na-i ni/koto/no-wa yom-u. (=24c)
 Taro-Top book-Acc read-neg-i ni/koto/no-Top read-nonpast

We have already claimed that (56c) is ruled out by our movement analysis, because a preposed predicate is predicted to be the same as, or a proper subpart of, the second predicate. On the other hand, (56b) should be a syntactically well-formed sentence, for it is generally possible to prepose VP out of a negative sentence, as we see in English (57a) and Italian (57b).

- (57) a. I wanted to finish the paper by the end of May, but finish the paper, I couldn’t.
 b. Andato a casa, Gianni non è. (Italian)
 gone home Gianni not has (lit. is) (Cinque (1990: 85))

Here the discourse function of the predicate doubling construction comes into play. Since it is used to emphasize the polarity value of the proposition, it is natural that there be difficulty at the interface with semantics in interpreting two verbs with different polarity values in the same sentence: a predicate with a [+negative] polarity value must be doubled by a predicate with the same value in order to be properly interpreted in a construction with a verum focus.^{23,24} (56b) is ruled out because the preposed verb does not carry a [+negative] value, even though the sentence-final verb is [+negative]. In contrast, a predicate with a [+past] tense feature is not incompatible with a predicate with unspecified tense value, because the focus of the construction is not tense. Note that it is not necessary for semantics to know how a copy is pronounced at PF. Whether the preposed predicate is [+negative] or not can be read off the syntactic structure, as well as whether the predicate in the theta-position is [+negative] or not. Thus the verum focus of the construction functions as a filter at the semantic interface in ruling out uninterpretable sentences.

In this section, we have argued for a movement analysis for the predicate doubling construction, which was originally put forth by Nishiyama and Cho. Specifically, non-identical predicate doubling has been examined and shown to involve movement of a partial structure of TP such as vP. We have also seen that *suru*-support differs from *do*-support in English, and claimed that when *suru*-support is not applicable, predicate doubling occurs so that an affix can be attached to a lexical verb. Finally, it was shown that sentences that do not satisfy the construction-specific discourse property of focalizing the truth of the proposition are ruled out at the semantic interface.

²³ It may be that a preposed vP does not contain a polarity head, and is thus unspecified for a polarity value. We assume that a crucial value is [+negative], and that a predicate with a [-negative] value can cooccur with a predicate with no polarity value.

²⁴ There are a few people who find (25e) not so bad, which is surprising, if the movement analysis is correct. It seems that with these speakers, the need to pronounce every element in the verbal complex from V to T is overridden by economical preference: the fewer morphemes to pronounce, the better. The crucial morphemes that cannot be dropped are V, which is a head of the verbal complex, Neg, in order to interpret verum focus, and T, which is a head of the lower chain link. Since a causative marker is the only element that can be dropped, it is dropped in the speech of these people.

5. An Alternative Analysis

We have argued that the predicate doubling construction involves movement and copy spell-out. However, an alternative analysis is possible, under which a topic phrase is generated at Spec of TopP from the beginning.²⁵ In this section we compare and contrast the two analyses.

Instead of moving vP to Spec of TopP, as we have discussed with (40), it is possible to base-generate the phrase, *Taro-ga hon-o yomu* at Spec of TopP.

(58) [_{TopP} [Taro-ga hon-o yom-u ni/koto/no-wa] [_{TP} ~~Taro-ga hon-o~~ yon-da]]

This reminds us of Den Dikken et al.'s (2000) analysis of pseudoclefts. They propose to derive a type of specificational pseudocleft construction in English as follows.

(59) [_{TopP} [What Mary didn't buy] [_{Top} is/was] [_{TP} ~~she didn't buy~~ any wine]]

An interrogative is generated in Spec of TopP and deletion takes place in the TP complement of Top⁰, which denotes an answer to the interrogative. Everything in the TP is deleted except a focus-bearing element. This analysis can account for various properties of the construction including NPI connectivity and the irreversibility of the *wh*-clause and the counterweight.

Similarly, in the case at hand, deletion of *Taro-ga* and *hon-o* takes place in accordance with the economy principles. The lexical verb, *yon-da*, cannot be deleted due to its verum focus. As is evident from answers to Yes/No questions (45), the verum focus in Japanese is expressed by lexical verbs.

This base generation analysis of the predicate doubling construction differs from the movement analysis in several respects. Obviously, the first issue is whether movement is involved or not. Unfortunately, however, the data are not clear-cut enough to help us choose one over the other. Aoyagi (2006a: footnote 1) gives (60) and claims that the same predicate need not occur in the construction in question.

(60) Chelswu-wa sake-o non-da koto-wa biiru-o 1,2-hai yat-ta (ga...)
 Chelswu-Top liquor-Acc drink-past koto-Top beer-Acc 1 or 2-glass do-past but
 'As far as drinking goes, Chelswu had a glass of beer or two, (but...)'

(60) shows that the base generation analysis is independently necessary,²⁶ but it is not clear whether it is feasible to treat examples like (60) and the construction we have been dealing with in the same way.

Nishiyama and Cho (1998) report that the first verb cannot be separated from the second verb by a clausal boundary.²⁷

(61) *[John-ga konpyuutaa-o kat-ta]_i koto-wa [boku-wa [_i kat-ta-to] omou].
 John-Nom computer-Acc buy-past koto-Foc I-Top buy-past-Comp think
 'As for John's buying a computer, I think he bought it.' (Nishiyama and Cho (1998:466))

This is contrasted with VP-preposing, which is unbounded.

²⁵ I am indebted to Akira Watanabe for suggesting this possibility to me.

²⁶ I find (60) marginal at best. Whether a speaker allows a so-called "genus-species effect" or not seems to be highly variable across speakers in other languages as well. While Aoyagi observes that Korean does not allow the genus-species effect, Cable (2004) reports that some speakers do. As for Spanish, Vicente (2009) reports that not all speakers disallow the genus-species cleft construction, but he suggests that those who permit it derive the construction differently from those who do not.

²⁷ Cable (2004) claims that in Yiddish, the semantic relationship between a preposed predicate and the associated constituent is clause bounded, even though long-distance movement of the predicate is possible.

- (62) [Konpyuutaa-o kai]_i-wa/sae [boku-wa [John-ga *t_i* si-ta-to] omou]
 compyuter-Acc buy-Foc/even I-Top John-Nom do-past-Comp think
 ‘Buy a computer, I think John did.’ (Nishiyama and Cho (1998: footnote 4))

Actually I do not find (61) so bad, though it may be difficult to identify a gap of a preposed constituent, for *kat-ta* can be mistakenly construed as predicated to *boku-wa*. (63) sounds good to me where a predicate is changed so that a gap can be identified more easily.

- (63) [Ame-ga hut-ta]_i ni/koto/no-wa [jituwa boku-wa [*t_i* hut-ta-to] omou].
 rain-Nom fall-past ni/koto/no-Top in fact I-Top fall-past-Comp think
 ‘In fact, I think it did rain.’

Note that the construction obeys the Complex NP Constraint and the Coordinate Structure Constraint.

- (64) a. *[Ame-ga hut-ta]_i ni/koto/no-wa boku-wa [[*t_i* hut-ta] jikan-o] sira-na-i.
 rain-Nom fall-past ni/koto/no-Top I-Top fall-past time-Acc know-neg-nonpast
 ‘I do not know the time when it really rained.’
 b. *[Ame-ga hut-ta]_i ni/koto/no-wa boku-wa [*t_i* huri, kaze-mo hui-ta-to] omou.
 rain-Nom fall-past ni/koto/no-Top I-Top fall wind-also blow-past-Comp think
 ‘I think it really rained and the wind also blew.’

Admittedly the data are murky, but to the extent that subjacency is respected, it may be taken as an advantage of the movement analysis, though it is conceivable to add some locality constraints to the base generation analysis.

Another difference between the two analyses is found in the account of predicate doubling. In the movement analysis, it takes place to satisfy the Stranded Affix Filter, when *suru*-support cannot. In contrast, the base generation analysis relates it to the discourse function of the construction, i.e. *verum focus*. As we have seen in Section 4.2.1, in English, *verum focus* is expressed with emphatic forms of auxiliaries, and accordingly, lexical verbs are not repeated (65a).

- (65) a. Go to school, John did.
 b. Gakko-e iki-wa Taro-wa si-ta.
 school-Dat go-Top Taro-Top do-past
 ‘Go to school, Taro did.’
 c. Taro-wa gakko-e ik-u ni/koto/no-wa it-ta.
 Taro-Top school-Dat go-u ni/koto/no-Top go-past
 ‘As for going to school, Taro did go to school.’

If the difference between (65b) and (65c) can be reduced to the absence/presence of *verum focus*, as we have discussed in Section 4.2.3, predicate doubling in (65c) follows straightforwardly from the base generation analysis, without having to examine whether *suru*-support is applicable or not when copy spell-out is computed.

Though the base generation analysis seems to work well with English and Japanese, Korean presents a problem for it. In Korean predicate doubling construction, which is quite similar to its Japanese counterpart in other respects, a dummy verb, *hata*, can occur (66b) as well as a lexical verb (66a).²⁸ On the other hand, Sohn (1999: 252-253) reports that Yes/No questions in Korean are answered with lexical verbs only (67).²⁹

²⁸ I regard *ki* as a nominalizer, following Nishiyama and Cho. Aoyagi (2006a) takes *ki* not as an equivalent to *koto/no* but as an element inserted for morphological closure. Hence he does not regard (66a) as Korean equivalents to Japanese predicate doubling construction.

²⁹ Sohn notes that when compound verbs consisting of a verbal noun and *hata* are used in Yes/No questions, *hata* can

- (66) a. John-i computer-lul sa-ss-ki-nun sa-ss-ta. (Korean)
 John-Nom computer-Acc buy-past-ki-Foc buy-past-Mood
 b. John-i computer-lul sa-ss-ki-nun hae-ss-ta.
 John-Nom computer-Acc buy-past-ki-Foc do-past-Mood (Nishiyama and Cho (1998: 463))
- (67) A: Milan.i nun onul achim ilccik il-e na-ss-ni?
 Milan Top/Contrast today morning early rise-INF appear-past-Q
 ‘Did Milan get up early this morning?’
 B: ilccik il-e na-ss-e.
 early rise-INF appear-past-intimate
 ‘Yes, she did.’ (Sohn (1999: 405))

The predicate doubling in Korean follows from the analysis based on verum focus, but something more needs to be said about the occurrence of *hata*. It seems that the morphological properties as well as the semantic properties of dummy verbs need to be considered to account fully for the crosslinguistic variation of the construction.

An advantage of the base generation approach is the fact that nominalized phrases can be base-generated in Spec of TopPs. Under the movement analysis, it is not quite clear how nominalization takes place within syntax, though it may not be so problematic if we assume Halle and Marantz’s (1993) theory of Distributed Morphology.

Crucially, the movement analysis fares better with the data involving non-identical verb forms.

- (68) [Jiro-ga Taro-ni nagur-u] ni/koto/no-wa nagur-are-ta.
 Jiro-Nom Taro-Dat hit-u ni/koto/no-Top hit-pass-past
 ‘As for Jiro’s being hit by Taro, he was hit by Taro.’

In (68) DPs in Spec of TopPs need to be related to the main predicate following *ni/koto/no-wa* in order to be properly Case-marked. It is not possible to generate *Jiro-ga Taro-ni naguru* independently of the main predicate, *nagurareta*. The movement analysis handles this by valuing Case features of the DPs by Agree in the base position, but in order to account for this under the base generation analysis, some mechanism needs to be added to relate the topic phrase to the TP-internal position. Therefore, as far as the liberal variety is concerned, we think the movement analysis is better equipped. Whether the same holds true with the conservative variety awaits further study.

6. Conclusion

In this paper, we have examined the predicate doubling construction in Japanese. This is a marked construction, but many of its properties are shared by similar doubling constructions. We have seen that a partial movement analysis proposed for Dutch pronominal doubling can be adapted for cases involving non-identical verb forms. On the other hand, doubling of a tensed predicate has been shown to follow from TP movement and a predication requirement, or a requirement that a copy left by movement within the same Prolific Domain be spelled out distinctly from a higher chain link. Under both partial movement and full TP movement, copy spell-out plays a crucial role. This is a last-resort operation, which is triggered so as to satisfy morphological requirements of the language.

One of the problems we have not been able to address in this paper is the reason why the construction has verum focus. We have simply stipulated it, but there may be a possibility of deriving this via movement of a Polarity Phrase. It would be worth exploring, if the different behavior of *(r)u* and *ta* in the preposed predicate can be captured in a way that does not refer to the difference between vP movement and TP movement.

In addition, we have not dealt with language-internal variation across speakers and how each variety can be parameterized. It may be possible that the base generation analysis suits better for some varieties, while the movement analysis fits others. Moreover, we have not been able to examine cross-linguistic variation of the

be used in answers, just as in Japanese.

construction. Predicate doubling is observed in many languages, and some of them look very similar to the one in Japanese.

- (69) a. John-i computer-lul sa-ss-ki-nun sa-ss-ta. (Korean) (=66a)
 John-Nom computer-Acc buy-past-ki-Top buy-past-Mood
 ‘As for John’s buying a computer, he did buy one, (but...)’
 (Nishiyama and Cho (1998: 463))
- b. O João comprou o carro, comprou. (European Portuguese)
 the João bought the car, bought
 ‘John did buy the car.’ (Martins (2007: 81))

It would be interesting to examine why some languages but not others employ predicate doubling as a repair strategy, when a predicative phrase or its extended projection is proposed.

Our analysis endorses a non-lexicalist view of lexical insertion. If lexical items are inserted as inflected forms into syntactic structure as proposed by Chomsky (1995), it would be difficult to deal with the construction with non-identical verb forms or predicate doubling, unless lexical insertion is endowed with a very powerful look-ahead ability.

Our analysis also offers an empirical support for Chomsky’s copy theory of movement. Lower chain links are not usually pronounced, but we have seen that a lower chain link is partially pronounced in the Japanese predicate doubling construction. Our analysis of this marked construction makes use of a structure left behind by movement. If there is only a trace, which lacks internal structure, it is difficult to formulate such an analysis. Thus the copy theory of movement is not only conceptually preferable, but it is also empirically motivated.

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