Verb doubling and sideward movement in Japanese
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Introduction: This paper aims to show how the structure of what we call verb doubling in Japanese illustrated in (1) is syntactically derived. To the best of our knowledge, (1) has never been discussed in the generative literature on Japanese syntax, although Nishiyama & Cho (1998) extensively discuss the structure of (2) and its derivation. In the sequence of \([V_1 \, niwa \, V_2]\) in (1), where \(V_1\) and \(V_2\) must be identical, we assume that \(niwa\) is a complex particle consisting of the postposition \(ni\) ‘to’ and the contrastive (= \(\text{CON}\)) particle \(wa\).

(1) John-ga pizza-o taberu niwa tabe-ta (ga, …)
    -NOM pizza-ACC eat to-CON eat-PAST (but, …)
    ‘Indeed, John ate pizza, (but …)’

(2) [TP John-ga pizza-o tabe-nu] koto-wa tabe-ta (ga, …)
    -NOM pizza-ACC eat-PRES fact-con eat-PAST (but, …)
    ‘Indeed, John ate pizza, (but …)’

(1) and (2) are quite similar, but (1) has several syntactic properties strikingly different from (2). Examine (3), where the sequence of \([\text{OBJ} \, V_1]\) in (1) can be preposed (= (3a)), but not in (2) (= (3b)) (Nishiyama & Cho 1988).

(3) a. [pizza-o taberu], niwa John-ga t_i tabe-ta (cf. (1))
    pizza-ACC eat to-CON -NOM eat-PAST

b. *[pizza-o tabe-nu], koto-wa John-ga t_i tabe-ta (cf. (2))
    pizza-ACC eat-PRES fact-con -NOM eat-PAST

Nishiyama & Cho (1988) argue that in (2) the whole TP is moved to the Spec of Foc(us)P, indicating that the preposed material with the tense marker in (3b) cannot be a constituent. By contrast, in (3a), the preposed material can be regarded as VP. The fact that the past tense morpheme -\(ta\) cannot be attached to \(V_1\) in (1) (= (4a)) indicates that \(tabe\) ‘eat’ in (1) is a non-finite form, even though it is morphologically the same with the present tense form. This sharply contrasts with (2), where the past tense morpheme -\(ta\) can be attached to the verb (= (4b)).

(4) a. *John-ga pizza-o tabe-ta niwa tabe-ta (cf. (1))
    -NOM pizza-ACC eat-PAST to-CON eat-PAST

b. John-ga pizza-o tabe-ta koto-wa tabe-ta (cf. (2))
    -NOM pizza-ACC eat-PAST fact-con eat-PAST

VP-constituency and Do-support: Given that the preposed material in (3a) is VP, a question arises as to why su ‘do’-support does not occur in verb doubling constructions (cf. Nishiyama & Cho 1988). Consider the following examples, where -sae ‘even’, which takes scope over VP, is attached to it, so that the adjacency relation between V and T are blocked by the intervening -sae ‘even’. Dummy verb su ‘do’ is thus inserted (= (5a)) and VP with -sae ‘even’ can be preposed to the sentence-initial position (= (5b)).

(5) a. John-ga [VP pizza-o tabe] sae si-ta
    -NOM pizza-ACC eat even do-PAST
    ‘John even ate pizza.’

b. [VP pizza-o tabe] sae John-ga si-ta
    pizza-ACC eat even -NOM do-PAST

Notice that verb doubling and do-support are in complementary distribution: verb doubling does not occur when do-support is possible (= (6a)), while do-support never occurs in the context of verb doubling (= (6b)). This indicates that \(niwa\) does not block the adjacency relation between V and T.

(6) a. *John-ga [VP pizza-o tabe]-sae tabe-ta
    -NOM pizza-ACC eat-even eat-PAST

b. *John-ga [VP pizza-o taberu] niwa si-ta
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- NOM pizza-ACC eat to-CON do-PAST

**Verb doubling and Sideward movement:** Thus, the problem to be resolved here is how the verb doubling structure can be generated without triggering su-support. One possibility would be that V₁ and V₂ are separately introduced from the lexicon (LEX) and just happen to be the same for some semantic reason. Since V₁ and V₂ must share the same object NP, the object selected by V₂ is supposed to be a null pronoun (= pro), which is co-indexed with the overt NP pizza-ACC, but not c-commanded by the preceding NP.

(7) John-ga [vP piza-o taberu] niwa pro₁ tabe-ta

- NOM pizza-ACC eat to-CON eat-PAST

However, this is incongruous with the fact that pro can be a bound variable: it must be c-commanded by a quantified NP.

(8) John-ga [vP dono piza-mo₁ taberu] niwa pro₁ tabe-ta

- NOM every pizza-also eat to-CON eat-PAST

‘Indeed, John ate every pizza.’

The well-formedness of (8) leads us to conclude that pro does not occur in the verb doubling construction, suggesting that both V₁ and V₂ are not introduced from LEX independently.

Alternatively, we would like to propose that sideward movement (Nunes 2004) is involved in verb doubling in Japanese. Consider the following steps for the derivation for (1), where English translations are used for ease of reference.

(9) (i) Merge (pizza, eat) = [vP pizza eat]  (ii) Merge (John, VP₁) = [vP₁ John [vP₁ pizza eat]]

(iii) Copy VP₁ = [vP₁ pizza eat]  (iv) Merge (VP₁, niwa) = [vP₂ [vP₁ pizza eat] niwa]

(v) Merge (VP₂, vP₂) = [vP₂ [vP₁ pizza eat] niwa] [vP₁ John [vP₁ pizza eat]]

(vi) Merge (vP₂, Foc) = [vP₂ [vP₁ pizza eat] niwa] [vP₁ John [vP₁ pizza eat]] Foc

(vii) Merge (VP₁, FocP) = [vP₁ pizza eat] [vP₁ John [vP₁ pizza eat]] Foc

(viii) Merge (FocP, T) = [vP₁ pizza eat] [vP₁ John [vP₁ pizza eat]]

(ix) Merge (John, T) = [vP₁ John [vP₁ pizza eat] niwa] [vP₁ John [vP₁ pizza eat]]

(x) Merge (eat, T) = [vP₁ pizza eat] [vP₁ John [vP₁ pizza eat]]

The multiple occurrences of VP₁ can get deleted in PF as shown in (10).

(10) [vP₁ John [vP₁ pizza eat] niwa] [vP₁ John [vP₁ pizza eat]] Foc]

Given that the complex particle niwa is merged with the non-finite VP₁, the adjacency relation the verb eat and T are not obliterated and thus su-support does not occur. Since the lowest VP₁ gets deleted after eat is merged with T, two verbs can be identical in the derivation of sideward movement. The same is true of the verb doubling construction in (2): CP is copied after the noun koto ‘fact’ is merged with CP (= [NP [CP [vP₁ John pizza eat] T] C] koto), with which the contrastive marker wa is further merged, suggesting that unlike Nishiyama & Cho (1998), we do not have to maintain that TP movement is involved in verb doubling in Japanese.

**References:**
