Verbal Reduplication for Polarity Emphasis in Japanese[*]

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This paper examines the syntactic and phonological properties of the emphatic reduplication construction (ERC) of verbs, used as an answer to yes/no questions in colloquial Japanese. We propose that the ERC is derived syntactically: a polarity focus feature on Speech Act head triggers movement of a tensed verb to the Speech Act head, and both chain links get pronounced. This analysis offers some support for the copy theory of movement and verb raising analysis in Japanese.

Keywords: verbal reduplication, polarity focus, copy theory of movement

1. Introduction

In Japanese it is usually the case that a single predicate occurs at the end of a simple sentence, but in colloquial Japanese we sometimes come across utterances in which the same inflected predicate occurs twice.[1]

(1) a.　A:　Kore　tabe-ru?
　　　　　　this　　eat-Nonpast
　　　　　　'Will you eat this?'
　　　　B:　Un,　tabe-ru-yo.
　　　　　　yes　eat-Nonpast-SFP
　　　　　　'Yes, I really will eat it.'
　　b.　A:　Kore　tabe-ru?
　　　　　　this　　eat-Nonpast
　　　　　　'Will you eat this?'
　　　　B:　Un,　<u>tabe-ru</u>　　<u>tabe-ru</u>.
　　　　　　yes　eat-Nonpast eat-Nonpast
　　　　　　'Yes, I will, indeed.'

(2) a.　Ah,　atu-i-wa.
　　　　　ah　hot-Nonpast-SFP
　　　　　'Ah, it IS hot.'
　　b.　Ah,　<u>atu-i</u>　　　<u>atu-i</u>.
　　　　　ah　hot-Nonpast　hot-Nonpast
　　　　　'Ah, it IS hot.'

In (1aB) a single inflected verb *tabe-ru* occurs, followed by *yo,* which is a sentence final particle (SFP) indicating

[1] Abbreviations used in this paper are: Nom=nominative, Acc=accusative, Dat=dative, Gen=genitive, Top=topic, T=tense, C=complementizer, Q=question particle, Cop=copula, Pass=passive, Asp=aspect, Neg=negation, Cont=continuative, Prog=progressive, Perf=perfective, Imp=imperative, Ger=gerundive, Adn=adnominal, SFP=sentence-final particle and Cl=classifier.

a speaker's emphasis of his/her assertion.[2] The similar meaning can be expressed by repeating the inflected verb as in (1bB). The occurrence of the emphatic reduplication construction (ERC) is not limited to the answers to yes-no questions. In (2) we see the ERC with adjectives, which occurs independently of the yes/no questions. This paper examines the ERC with verbs in Japanese, as exemplified in (1bB), which has hitherto received little attention in the literature.[3] Focusing mainly on the ERC that is used as an answer to yes/no questions, we will consider how it should be analyzed, and why it is interpreted like SFPs.

This study is conducted within the framework of the Minimalist Program proposed by Chomsky (1995), and we assume the copy theory of movement, according to which movement leaves behind a copy rather than a trace. As Nunes (2004) and Bošković and Nunes (2007) have demonstrated, a copy may be phonetically realized under certain conditions. We will argue that one of the two occurrences of the inflected predicate in the ERC is a copy of the moved element, which is pronounced along with the moved element.

The ERC occurs only in colloquial speech, and it is a main clause phenomenon. In order to account for these properties, we assume that some discourse functions of sentences are encoded syntactically. Specifically we follow Speas and Tenny (2003) and postulate a Speech Act (SA) Phrase in the CP domain. We will claim that head movement of a verbal complex takes place to SA in assertive clauses, and that both the head and the tail of the movement chain are pronounced.

This paper is organized as follows. In section 2 we investigate the prosodic and syntactic properties of the ERC. In section 3 the syntactic structure and the derivation of the ERC will be proposed, and section 4 concludes the paper. In appendix we compare and contrast the ERC with some similar constructions involving verb doubling.

2. Verbal Reduplicants in the ERC

This section examines which forms of verbs can be reduplicated in the ERC and shows that the ERC is constrained syntactically as well as prosodically.

2.1. Tensed Verbs

Both a past-tense form and a nonpast-tense form of a verb can be reduplicated in the ERC as shown in (3Ba, 4Ba), but a verbal stem or tense morpheme alone cannot as in (3Bb, c, 4Bb, c).[4,5]

(3) A: Gohan tabe-ru?
          meal   eat-Nonpast
          'Will you have a meal?'
  B: a.   Un, <u>tabe-ru</u>   <u>tabe-ru</u>.
          yes eat-Nonpast eat-Nonpast
          'Yes, I will, indeed.'
     b. *Un, tabe-tabe-ru.
          yes eat-eat-Nonpast
          'Yes, I will, indeed.'

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[2] The occurrence of SFP in (1aB, 2a) is optional, though the addition of SFP makes the utterance sound more natural in a conversation.

[3] As far as I know, this construction seems to be used more often in Kansai 'western' Japanese than in Standard Japanese. Interestingly, people in Kansai also like to use onomatopoeia in their speech, which are often formed by reduplication.

[4] *Tabe-tabe* 'eat-eat' is used in Kansai area when someone wants to recommend others to eat something. See footnote 13.

[5] *Miti-miti-ru* 'become.full-become.full-Nonpast' is possible, but it is an example not of the ERC, but of a lexicalized verb. See Appendix.

    c. *Un, tabe-ru-ru.
        yes eat-Nonpast-Nonpast
        'Yes, I will, indeed.'

(4) A: Gohan tabe-ta?
           meal   eat-Past
           'Have you had a meal?'

   B: a. Un, <u>tabe-ta</u>   <u>tabe-ta</u>.
        yes eat-Past eat-Past
        'Yes, I really have.'

      b. *Un, tabe-tabe-ta.
        yes eat-eat-Past
        'Yes, I really have.'

      c. *Un, tabe-ta-ta.
        yes eat-Past-Past
        'Yes, I really have.'

It is not the case that any morpheme can be reduplicated. What is reduplicated in the ERC is the inflected verbal complex as a whole.

    Moreover, the ERC is subject to a prosodic constraint, namely, the reduplicants should not be too long.

(5) a. A: Nee, Miyazaki Hayao-no sinsaku   moo   mi-ta?
             hey   Miyazaki Hayao-Gen new.work already see-Past
             'Hey.   Have you seen Miyazaki Hayao's new movie yet?'

        B: Un, mi-ta   mi-ta.
            yes see-Past see-Past
            'Yes, I really have.'

    b. A: Moo   gohan tabe-ta-no?
             already meal   eat-Past-Q
            'Have you finished your meal yet?'

        B: Un, tabe-ta tabe-ta.
            yes eat-Past eat-Past
            'Yes, I really have.'

    c. A: Tukare-ta?
             get.tired-Past
            'Are you tired?'

         B: Un, tukare-ta   tukare-ta.
            yes get.tired-Past get.tired-Past
            'Yes, I'm really tired.'

    d. A: Keesan   matigae-ta-no?
             calculation mistake-Past-Q
            'Did you make a mistake in calculation?'

        B: ?Un, matigae-ta   matigae-ta.
            yes mistake-Past mistake-Past
            'Yes, I made a mistake indeed.'

    e. A: Kare puropoozu-no toki hizamazui-ta-no?
             he   proposal-Gen time kneel.down-Past-Q
            'Did he kneel down when he proposed to you?'

      B: ?Un, hizamazui-ta   hizamazui-ta.

          yes   kneel.down-Past kneel.down.-Past

          'Yes, he really knelt down.'

  f. A: Booto hikkurikaet-ta-no?

          boat   overturn-Past-Q

          'Was the boat overturned?'

      B:??Un, hikkurikaet-ta   hikkurikaet-ta.

          yes overturn-Past   overturn-Past

          'Yes, it really was overturned.'

The examples in (5a-c) are perfectly natural, but (5d) and (5e) sound a little less natural, in which the reduplicant consists of five and six morae respectively, and (5f), the reduplicant of which consists of eight morae, sounds awkward to many speakers.[6] The longer the reduplicant, the less acceptable the resultant ERC will be.

     Compound verbs do not occur easily in the ERC as shown in (6a-c), but this may be attributable to the prosodic factor rather than to their morphological status, since short compound verbs can undergo reduplication as in (7a, b).[7]

(6) a. A: Keesan   yarinaosi-ta-no?

          calculation do.again-Past-Q

          'Did you do calculations again?'

      B: ?Un, yarinaosi-ta   yarinaosi-ta.

          yes do.again-Past do.again-Past

          'Yes, I really did.'

  b. A: Kirin-no   akatyan moo   tatiagat-ta?

          giraffe-Gen baby   already stand.up-Past

          'Has the giraffe calf stood up yet?'

      B: ?Un, tatiagat-ta   tatiagat-ta.

          yes stand.up-Past stand.up-Past

          'Yes, it really has.'

  c. A: Gokiburi-o   tatakitubusi-ta-no?

          cockroach-Acc smash-Past-Q

          'Did you smash a cockroach?'

      B:??Un, tatakitubusi-ta tatakitubusi-ta.

          yes smash-Past   smash-Past

          'Yes, I really did.'

(7) a. A: Sono niku nagai zikan nikon-da-no?

          the   meat long time simmer-Past-Q

          'Did you simmer the meat for a long time?'

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[6] There are some speakers, including an anonymous reviewer, who do not find (5f) awkward. There seems to be a considerable variation among speakers with respect to the use of the ERC. Interestingly, Ghomeshi et al. (2004: 335) observe that a similar constraint is at work with contrastive reduplication for many English speakers, stating that 'BEACON-STREET-Beacon-Street' is more acceptable than 'COMMONWEALTH-AVENUE-Commonwealth-Avenue.'

[7] Martins (2013) observes that reduplication of morphologically complex verbal forms in European Portuguese such as compound verbs (e.g. *fotocopiar* 'photocopy') and verbs derived with stressed prefixes (e.g. *contra-atacar* 'counterattack') is marginal. Though she attributes this to morphological complexity, she points out that they are "complex prosodic" words, so she seems to think that prosody is involved here as well. As for English contrastive reduplication, Ghomeshi et al. (2004) observe that compounds can be reduplicated, giving such examples as 'BOYFRIEND-boyfriend' and 'FIREPLACE-fireplace.'

B: Un, nikon-da   nikon-da.
      yes simmer-Past simmer-Past
      'Yes, I did simmer the meat.'
  b. A: Moo   dasi   nitat-ta?
          already broth boil-Past
          'Has the broth boiled yet?'
     B: Un, nitat-ta   nitat-ta.
          yes boil-Past boil-Past
          'Yes, it has already boiled.'

Note that a subpart of compounds cannot be reduplicated.

(8) a.   *Ni-ni-kon-da.
          simmer-simmer-do.thoroughly-Past
          'I did simmer it.'
    b.   *Ni-kon-kon-da.
          simmer-do.thoroughly-do.thoroughly-Past
    c.   *Ni-kon-da   kon-da.
          simmer-do.thoroughly-Past do.thoroughly-Past

It is possible to reduplicate neither the first V (8a) nor the second V (8b) of the VV compounds, and the reduplication of the second V along with a tense morpheme (8c) is also unacceptable.

     With regard to complex verbs involving the light verb *suru* 'do,' the reduplication of the tensed light verb is preferred over the reduplication of the whole light verb complex.

(9) A: Benkyoo-si-ta-no?
             study-do-Past-Q
             'Did you study?'
   B: a.   Un, si-ta   si-ta.
           yes do-Past do-Past
           'Yes, I really did.'
      b. ??Un, benkyoo-si-ta benkyoo-si-ta.
           yes study-do-Past study-do-Past
           'Yes, I did study.'
      c. *Un, benkyoo-si-ta si-ta.
           yes study-do-Past do-Past
           'Yes, I did study.'
   A':   Benkyoo-o si-ta-no?
            study-Acc   do-Past-Q
            'Did you study?'
(10) A: Moo   yar-anai-tte   yakusoku-su-ru?
             no.more   do-Neg-Comp   promise-do-Nonpast
             'Do you promise that you are not going to do it again?'
    B: a. Un, su-ru   su-ru.
            yes do-Nonpast do-Nonpast
            'Yes, I really do.'
       b. ?Un, yakusoku-su-ru   yakusoku-su-ru.
            yes promise-do-Nonpast promise-do-Nonpast

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'Yes, I do promise.'

As shown in (9Bb) the reduplication of the whole light verb complex does not sound natural for the reason of prosody. However, there is another more economical way of expressing the same meaning, that is, reduplicating the light verb as in (9Ba). Though the verb *su-* in (9Ba) does not match *benkyoo-su-* in (9A), it matches the verb used in (9A'), which is semantically equivalent to (9A).[8] Hence it makes sense to substitute (9Ba) for a longer, less preferred (9Bb) as an answer to (9A) in the ERC. When there is a more economical way of expressing the same meaning, that is chosen over less economical ones.

Note in passing that (9Bc) is ruled out, where the light verb complex *benkyoo-si-ta* is followed by *si-ta*. Reduplication of *benkyoo-si-ta* has to produce (9Bb), and it is not possible to delete a part of the word, *benkyoo*, from the second occurrence of *benkyoo-si-ta* in (9Bb) due to the Principle of Lexical Integrity. The same string is acceptable, if it is interpreted as *benkyoo si-ta si-ta*, in which *benkyoo* is an object with its accusative case marker dropped, followed by the reduplicated *si-ta*.

To sum up, we have shown that simple verbs as well as compound verbs can be reduplicated with a tense affix in the ERC, but that it is not possible to reduplicate only a verbal root or a subpart of a compound verb. Thus the target of reduplication is the inflected verbal complex as a whole. It has also been pointed out that the construction is subject to the prosodic constraint: the inflected predicates consisting of a smaller number of morae yield more acceptable ERC than those consisting of a larger number of morae.

2.2. Elements That Occur Between V and T

In this subsection we will show that causatives, passives, potentials, desideratives, the modal of likelihood, the aspectual *-te i(ru)* forms, polite forms and negative forms can be reduplicated along with V and T in the ERC.

First the reduplication of causative verbs and passive verbs is permitted in the ERC, as indicated by (11) and (12) respectively.

(11) A: Taro-ni   dokusyokansoobun kak-ase-ta?
         Taro-Dat book.report   write-Cause-Past
         'Have you made Taro write up a book report?'
     B: Un, kak-ase-ta   kak-ase-ta.   Ii-no-ga   deki-ta-yo.
         yes write-Cause-Past write-Cause-Past good-thing-Nom make-Past-SFP
         'Yes, I did make him write it up. He wrote a good one.'
(12) A: Kinoo   Sugano ut-are-ta?
         yesterday Sugano hit-Pass-Past
         'Did Sugano give up many hits yesterday?'
     B: Ut-are-ta   ut-are-ta.   5-ten   ire-rare-ta-yo.
         hit-Pass-Past hit-Pass-Past   5-point score-Pass-Past-SFP
         'He really did. He lost five points.'
(13) A: Repooto ippai kak-ase-rare-ta-no?
         report   a.lot write-Cause-Pass-Past-Q
         'Were you made to write many reports?'
     B: ?Un, kak-ase-rare-ta   kak-ase-rare-ta.
         yes write-Cause-Pass-Past   write-Cause-Pass-Past
         'Yes, I was indeed made to write many reports.'

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[8] The semantic equivalence between (9A) and (9A') is so apparent that Kageyama (1993) proposes to derive the light verb construction as in (9A) from an underlying structure as in (9A') by syntactically incorporating an object noun to *su-*.

In (13), the causative morpheme and the passive morpheme occur together in a reduplicant, though it sounds a little awkward due to its length.

Potentials and desideratives can undergo reduplication as well.

(14) a. A: Asosan   mi-e-ru?
         Mt. Aso   see-can-Nonpast
         'Can you see Mt. Aso?'
      B: Un, mi-e-ru   mi-e-ru.
           yes see-can-Nonpast   see-can-Nonpast
           'Yes I really can see it.'
   b. A: Asa   oki-rare-ta?
           morning   get.up-can-Past
           'Were you able to get up in the morning?'
      B: Un, oki-rare-ta   oki-rare-ta.
           yes get.up-can-Past get.up-can-Past
           'Yes, I was able to get up all right.'
(15) A.   Asita   kaimono   ik-u?
          tomorrow shopping   go-Nonpast
          'Will you go shopping tomorrow?'
     B.   Un, iki-ta-i   iki-ta-i.
          yes go-want-Nonpast go-want-Nonpast
          'Yes, I do want to.'

The modal of likelihood, *sooda*, occurs in the ERC, but the shortened form, *soo,* is preferred.

(16) A: Nee, ame   huri-soo?
          hey   rain   fall-likely
          'Hey, is it likely to rain?'
     B: Un, huri-soo(?*da)   huri-soo(?*da).
          yes fall-likely   fall-likely
          'Yes, it's very likely to rain.'

In addition the aspectual auxiliary *-te i(ru)* can be reduplicated in the ERC.

(17) A: Hanako   omedeta   dat-te   sit-te-ru?
             Hanako   expecting Cop-C   know-Cont-Nonpast
             'Do you know that Hanako is expecting a baby?'
     B: a.   Un, sit-te-ru   sit-te-ru.
             yes know-Cont-Nonpast   know-Cont-Nonpast
             'Yes, I do know that.'
        b.   ?Un, sit-te-i-ru   sit-te-i-ru.
             yes know-Cont-be-Nonpast   know-Cont-be-Nonpast
             'Yes, I do know that.'
(18) A: Ne-te-ta?
             sleep-Prog-Past
             'Were you asleep?'

B: a.   Un, ne-te-ta   ne-te-ta.
        yes   sleep-Prog-Past sleep-Prog-Past
        'Yes, I really was sleeping.'

     b.   ?Un, ne-te-i-ta   ne-te-i-ta.
        yes sleep-Prog-be-Past   sleep-Prog-be-Past
        'Yes, I really was sleeping.'

The contracted forms as in (17Ba, 18Ba) yield the better ERC than the non-contracted forms as in (17Bb, 18Bb). Moreover the polite forms can be reduplicated in the ERC.

(19) A: Moo heya soozi-si-ta-no?
        yet   room clean-do-Past-Q
        'Have you cleaned the room yet?'
     B: Yari-mas-u   yari-mas-u.
        do-Polite-Nonpast   do-Polite-Nonpast
        'I will do it immediately.'

As for negative forms, the prosodic factor seems to interfere with the acceptability of the ERCs.

(20) A: Nee, sit-te-ru?   Hanako-ga   omedeta-dat-te.
        hey   know-Cont-Nonpast Hanako-Nom   expect.a.baby-Cop-I.hear
        'Hey, do you know that Hanako is expecting a baby?'
     B: a.   Sira-n   sira-n.
        know-Neg know-Neg
        'I really don't know.'
       b. ?Sira-na-i   sira-na-i.
        know-Neg-Nonpast know-Neg-Nonpast
        'I really don't know.'

(20) shows that nonpast negation is possible in the ERC, though the contracted form sounds better than the non-contracted form.

(21) A: Kinoo   Taro-ni   at-ta   no?
        yesterday Taro-Dat meet-Past Q
        'Did you see Taro yesterday?'
     B: ??Uun, aw-anakat-ta   aw-anakat-ta.
        no   meet-Neg-Past meet-Neg-Past
        'No, I didn't.'
(22) A: Kono hon   yon-da?
        this   book read-Past
        'Have you read this book?'
     B: Yon-de   na-i   yon-de   na-i.
        read-Perf Neg-Nonpast read-Perf Neg-Nonpast
        'I really haven't read it.'

Regarding the negation in past form, the addition of the four morae, *nakat-ta,* to the verbal root seems to give rise to degraded sentences as in (21B). However, note that *ta* can be interpreted as a perfective aspectual marker rather than a past tense marker, depending on context, since it developed from the perfective auxiliary *tari.* (cf. Kuno

(1973)) When this happens as in (22A), it can be answered with a nonpast tense form as in (22B).[9] This sounds better than (21B), probably due to its length. It seems safe to conclude that sequences involving negation can be reduplicated, though it is subject to the prosodic constraint.

To summarize, we have observed that tensed verbal complexes reduplicated in the ERC can contain such elements as causatives, passives, potentials, desideratives, the modal of likelihood, aspectuals, polite forms and negation.

2.3. Elements above TPs

It has been shown above that the modal of likelihood, *soo*, can occur in the ERC.

(23) A: Nee, ame huri-soo?   (=(16))
         hey   rain   fall-likely
         'Hey, is it likely to rain?'
     B: Un, huri-soo(?*da)   huri-soo(?*da).
         yes fall-likely   fall-likely
         'Yes, it's very likely to rain.'

In contrast there are modals that do not occur in the ERC. For example it is not easy to reduplicate such surmise modals as *daroo* and *desyoo* or hearsay modals like *rasii* and *sooda* in the ERC.

(24) A: Asita   ame hur-u-ka-na?
         tomorrow rain   fall-Nonpast-Q-SFP
         'Will it rain tomorrow?'
     B: a. ?*Hur-u-daroo   hur-u-daroo.
           fall-Nonpast-may   fall-Nonpast-may
           'It may rain indeed.'
        b. ?*Hur-u-de-syoo   hur-u-de-syoo.
           fall-Nonpast-Ger-may   fall-Nonpast-Ger-may
           'It may rain indeed.'
        c. ?*Hur-u-rasii   hur-u-rasii.
           fall-Nonpast-I.hear   fall-Nonpast-I.hear
           'I hear it's going to rain indeed.'
        d. ?*Hur-u-sooda   hur-u-sooda.
           fall-Nonpast-I.hear   fall-Nonpast-I.hear
           'I hear it's going to rain indeed.'

These examples are acceptable if a pause is inserted between the two sequences, but they are degraded when there is no pause between them, unlike the case with the ERC, which requires no pause between the two reduplicants.[10] Admittedly they are long, but they sound much worse than, for example (22B), which is of the same length in terms of the number of morae, so prosody is not a whole story behind the unacceptability of (24B).

In addition to these modals, complementizers cannot be reduplicated, either. In embedded clauses, the ERC is not allowed. As shown in (25) the complementizer *no, ka* or *to* cannot undergo reduplication along with Vs. (See Saito (2012) for distinction among them from a cartographic point of view.)

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[9] I am thankful to an anonymous reviewer for helping me clarify the difference between perfect aspect and past tense.
[10] (24Ba, b) do not improve, even if the shortened forms, *hur-u-daro* and *hur-u-desyo* are used instead. It is not possible to shorten the hearsay *sooda* in (24Bd) to *soo,* unlike the likelihood *sooda* in (23).

(25) a. *Taroo-wa Hanako-ga hon-o ka-u-no-(o) ka-u-no-o mi-ta.
 Taro-Top Hanako-Nom book-Acc buy-Nonpast-C-Acc buy-Nonpast-C-Acc see-Past
 'Taro saw Hanako really buy a book.'

 b. *Taroo-ni hannin-o mi-ta-(no)-ka mi-ta-(no)-ka tazune-ta.
 Taro-Dat criminal-Acc see-Past-C-C see-Past-C-C ask-Past
 'I asked Taro if he had really seen the criminal.'

 c. *Taroo-wa hon-o yon-da-to yon-da-to it-ta.
 Taro-Top book-Acc read-Past-C read-Past-C say-Past
 'Taro said that he did read the book.'

Note that the ERC is not permitted in embedded clauses even without an overt complementizer.[11]

(26) a. *Hanako-ga kat-ta kat-ta hon
 Hanako-Nom buy-Past buy-Past book
 'the book that Hanako did buy'

 b. *Hanako-ga si-ta no-wa hon-o yom-u yom-u koto da.
 Hanako-Nom do-Past NO-Top book-Acc read-Nonpast read-Nonpast KOTO Cop.Nonpast
 'What Hanako did was read a book indeed.'

The ERC does not occur in relative clauses as in (26a) or cleft sentences as in (26b).

 Finally let us consider SFPs. It seems that the acceptability of the occurrence of the SFPs within the ERC is subject to idiolectal variation. Some people find it acceptable to reduplicate verbal sequences ending with SFPs, while others think that a pause is necessary in between.[12]

(27) a. A: Taro-wa ki-ta-no?
 Taro-Top come-Past-Q
 'Did Taro come?'

 B: %Un, ki-ta-yo ki-ta-yo.
 yes come-Past-SFP come-Past-SFP
 'Ah, he did come.'

 b. A: Asita zettai ki-te-ne.
 tomorrow without.fail come-Imp-SFP
 'Please come without fail tomorrow.'

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[11] Adjectives and adjectival nouns differ from verbs in appearing in reduplicated form in nominal modifiers.
(i) a. Ohana-ga nagai nagai zoo
 trunk-Nom long long elephant
 'an elephant with a very long trunk'
 b. Hanako-ga daisuki-na daisuki-na obasan
 Hanako-Nom like-Adn like-Adn aunt
 'the aunt that Hanako likes very much'
[12] *Wa* in (27b) is a SFP used typically in women's speech. However, there is another type of expression involving *wa*, which everyone finds acceptable in the ERC.
(i) Situmon-ga de-ru-wa de-ru-wa. Taihendat-ta-yo.
 question-Nom occur-Nonpast-SFP occur-Nonpast-SFP hard-Past-SFP
 'So many questions were asked and I had a hard time answering them.'
This differs from (27b) in that it does not emphasize polarity. Rather it emphasizes the degree of the action expressed by the verb. See section 3.2 for some discussion. Since there is no idiolectal variation, this may be a fixed expression of the form V-*wa* V-*wa*. Some people accept the use of past tense in it, while others do not.
(ii) %Situmon-ga de-ta-wa de-ta-wa.
 questions-Nom occur-Past-SFP occur-Past-SFP
 'So many questions were asked.'

B: %Ik-u-wa   ik-u-wa.
     go-Nonpast-SFP   go-Nonpast-SFP
     'I WILL go.'

c. A: Kono natu-no   atusa-wa   izyooda-ne.
      this   summer-Gen hotness-Top abnormal-SFP
      'It was abnormally hot this summer.'

B: % (Soo)-da-yo-ne   (soo)-da-yo-ne.
      so-Cop-SFP-SFP so-Cop-SFP-SFP
      'Yes, it really was.'

In brief, we have seen that verbal sequences ending with some modals and complementizers cannot be reduplicated, but that those ending with SFPs can be for some speakers.

2.4. Questions, Imperatives and Volitionals

This paper focuses on the ERC which occurs as an answer to yes/no questions. However, for the sake of completeness, let us see what other forms are allowed in the ERC.

First, the question particle *ka* does not occur in the ERC, though some people find the occurrence of *no* acceptable.[13]

(28) a. ?*Soozi   si-masu-ka si-masu-ka?
     cleaning do-Polite-Q do-Polite-Q
     'Will you really do the cleaning?'

b. % Taroo ki-ta-no   ki-ta-no?
     Taro   come-Past-Q come-Past-Q
     'Did Taro come?'

Second, the imperative forms ending with *-e* or *-ro* undergo reduplication.

(29) a.   Nom-e   nom-e.   Dondon   nom-e.
      drink-Imp drink-Imp more.and.more   drink-Imp
      'Drink. Drink more sake.'

b.   Yame-ro yame-ro. Kega-o   su-ru-zo.
      stop-Imp   stop-Imp injury-Acc do-Nonpast-SFP
      'Stop that! You'll get hurt.'

The *-te* imperative, which is probably a shortened form of V-*te kudasai* 'please V,' is a target of reduplication as well.

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[13] While it is impossible to reduplicate a verbal complex with the question particle *ka* in the ERC, reduplication is possible when yes/no questions are expressed with rising intonation without any question markers.
(i) a.   Ima-no   mi-ta   mi-ta?
      now-Gen   see-Past see-Past
      'Did you see what had just happened?'
  b.   Ima-no   mi-ta-?*ka/ %no mi-ta-?*ka/ %no?
      now-Gen   see-Past-Q   see-Past-Q
      'Did you see what had just happened?'
  c.   Nee sit-te-ru   sit-te-ru?   Hanako-ga   omedeta-dat-te.
      hey   know-TE-Nonpast know-TE-Nonpast Hanako-Nom expect.a.baby-Cop-I.hear
      'Hey, do you know that Hanako is expecting a baby?'

(30)　Mi-te　　　mi-te.　　　Akatyan-ga arui-ta-yo.
　　　　look-Imp　look-Imp　baby-Nom　walk-Past-SFP
　　　　'Look at that!　The baby has walked.'

In addition the imperative modal, *nasai,* can be reduplicated along with V.[14]

(31) a.　Iki-nasai　iki-nasai.
　　　　　go-Imp　　go-Imp
　　　　　'Go there by all means.'
　　 b.　Tabe-nasai　tabe-nasai.
　　　　　eat-Imp　　　eat-Imp
　　　　　'Go ahead and eat.'

The negative imperative form with *na* also occurs in the ERC.[15]

(32)　Osu-na　　　　　osu-na.
　　　　push-Neg.Imp　　push-Neg.Imp
　　　　'Don't push me.'

Finally, volitionals can be reduplicated.

(33) a.　Toranpu　si-yo(?o)　si-yo(?o).
　　　　　cards　　　play-let's　play-let's
　　　　　'Let's play cards!'
　　 b.　Soozi?　Si-masyo(?o)　si-masyo(?o).
　　　　　cleaning　do-let's　　　do-let's
　　　　　'Cleaning? Let's do it.'

Here again, *si-yo* and *si-masyo*, the shortened forms of *si-yoo* and *si-masyoo*, are more acceptable in the ERC than the non-contracted forms.

　　　This subsection has shown that questions do not undergo reduplication, though some find the reduplication of questions ending with *no* acceptable. In contrast, imperatives and volitionals can be reduplicated.

2.5.　Summary

　　　The data we have observed so far can be summarized as follows.

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[14] *Nasai* can be deleted in Kansai dialect.
(i) a.　Iki iki.
　　　　go　go
　　　　'Go.'
　　 b.　Tabe　tabe
　　　　　eat　　eat
　　　　　'Help yourself.'
[15] Here *osu* is a subjunctive form, since *osi-ta-na* (push-Past-Neg.Imp) is not acceptable as a negative imperative.
Optatives, on the other hand, do not occur in the ERC, though a subjunctive also seems to be involved in this case.
(ii) ?*Asita　　　hare-masu-yooni　　　hare-masu-yooni.
　　　tomorrow　be.sunny-Polite-Optative　be.sunny-Polite-Optative
　　　'May it be sunny tomorrow.'
Obviously the prosodic factor is at stake here, but we leave the properties of subjunctives in the ERC for future research.

(34) a.　V + T

　　　b.　V + (s)ase + T　　　　　　　[causative]

　　　c.　V + (r)are + T　　　　　　　[passive]

　　　d.　V + (s)ase + rare + T　　　　[causative + passive]

　　　e.　V + e + T / V + rare + T　　　[potential]

　　　f.　V + ta + T　　　　　　　　　[desiderative]

　　　g.　V + soo(??da)　　　　　　　[likelihood]

　　　h.　V + te + (i) + T　　　　　　[aspect]

　　　i.　V + mas + T　　　　　　　　[polite]

　　　j.　V + (te) + na + T　　　　　　[negation]

　　　k. ?*V + T + daroo/desyoo/rasii/sooda　　[surmise, hearsay]

　　　l.　*V + T + no/ka/to　　　　　[complementizers in embedded clauses]

　　　m.% V + T + yo/wa /yo-ne　　　[SFP]

　　　n. ?*V + T + ka　　　　　　　　[question particle in matrix clauses]

　　　o. % V + T + no　　　　　　　　[question particle in matrix clauses]

　　　p.　V + ro/e/te/nasai　　　　　　[imperative]

　　　q.　V + yo(o)/masyo(o)　　　　　[volitional]

　　What can/cannot be reduplicated in the ERC? First, a verbal sequence ending with T undergoes reduplication, as seen in (34a-j). When a verbal sequence including T is followed by a modal (34k) or a complementizer (34l), reduplication is not allowed. Reduplication of verbal sequences ending with SFPs (34m) is also not allowed, though some find it possible. The question particles cannot be reduplicated (34n), though *no* can be for some speakers (34o). When V is not marked for tense as in imperatives and volitionals (34p, q), the sequence can be reduplicated. Why is it that this pattern holds with the ERC? Any account of the ERC must address this question.

　　Another property we must explain concerning the ERC is that reduplication must apply to a whole verbal complex. Partial reduplication is not permitted.

(35) a.　*Un,　tabe-tabe-ru.　　　(=(3Bb))

　　　　　yes　eat-eat-Nonpast

　　　　　'Yes, I will, indeed.'

　　　b.　*Un,　tabe-ru-ru.　　　　(=(3Bc))

　　　　　yes　eat-Nonpast-Nonpast

　　　　　'Yes, I will, indeed.'

　　　c.　*Tabe-tabe-sase-ta.

　　　　　eat-eat-Cause-Past

　　　　　'I did make him eat it.'

　　　d.　*Tabe-sase-tabe-sase-ta.

　　　　　eat-Cause-eat-Cause-Past

　　　　　'I did make him eat it.'

　　　e.　*Tabe-sase-sase-ta.

　　　　　eat-Cause-Cause-Past

　　　　　'I did make him eat it.'

　　　f.　*Tabe-sase-ta-sase-ta.

　　　　　eat-Cause-Past-Cause-Past

　　　　　'I did make him eat it.'

　　　g.　*Hanako-wa　zibun-ga　ringo-o　tabe-ta-tabe-ta-to　　it-ta.

　　　　　Hanako-Top　self-Nom　apple-Acc　eat-Past-eat-Past-C　say-Past

'Hanako said that she did eat an apple.'

  h. *Ringo tabe-ta tabe-ta-no?

     apple   eat-Past eat-Past-Q

     'Have you eaten the apple?'

As demonstrated in (35), such sequences as V-V-T, V-T-T, V-V-Cause-T, V-Cause-V-Cause-T, V-Cause-Cause-T, V-Cause-T-Cause-T and V-T-V-T-C are all ruled out. Reduplication must target the whole verbal complex, and for some speakers the complex may include SFPs or *no*.

    In the next section we will propose the derivation of the ERC to account for these properties.

3. Analysis

3.1. Movement and Copy Spell-Out

    We argue that the ERC is syntactically derived.[16] Specifically, we claim that it is derived by movement of a tensed verb to the right periphery and that we obtain reduplication as a result of pronouncing both of its chain links.

    We have observed in section 2.3 that the ERC occurs only in matrix clauses, and not in embedded clauses. One way of dealing with this restricted distribution of the ERC is to assume that there is an extra projection in matrix clauses, which does not exist in embedded clauses. What kind of projection can this be? Recall that the ERC occurs only in colloquial speech and that it is used to emphasize assertion. Then it may not be unreasonable to relate this projection to speech acts. Speas and Tenny (2003) propose to postulate a Speech Act Phrase (SAP) in the left periphery of clauses, which could be seen as a modernized version of Ross's (1970) performative analysis.[17] (See Miyagawa (2012) Saito (2013a, b) and Haegeman and Hill (2013) among others for SAPs.)

    Let us suppose that SAP is available only in the left/right periphery of matrix clauses. In Japanese SA head occurs at the right periphery of clauses because it is a head-final language.

(36)   Mikan-o   tabe-ta.

       orange-Acc eat-Past

       'I ate an orange.'
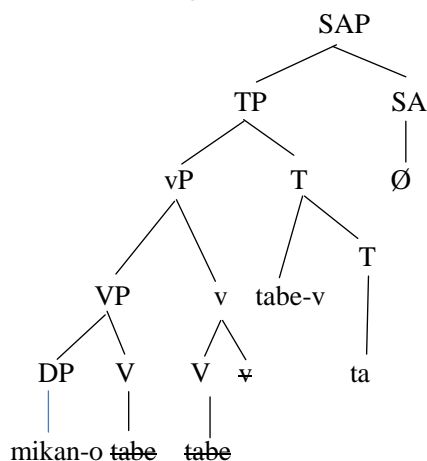
In (36) SAP is located above TP. Mihara (2011, 2012) argues that V raises up to Force in the CP domain to be realized as a conclusive form. However, let us propose instead that V does not raise up to Force in ordinary

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[16] See Appendix for various differences between the ERC and lexical reduplication.

[17] Ross's analysis has been criticized because it posits a Deep Structure with specific predicates such as "I tell you," "I ask you" and "I request." Speas and Tenny's analysis circumvents the problems of the perfomative analysis, for it does not contain such predicates.

declarative sentences, but that it only raises up to T and that the declarative sentences ending with a conclusive verb contain a phonetically null element Ø in SA, which selects TP. This element marks that the sentence is assertive.[18]

The status of head movement as a syntactic movement has been questioned by Chomsky (2001), Koopman and Szabolsci (2000), Mahajan (2003) and Harley (2004) among others, but recent research by Lechner (2007, 2009), Vicente (2009) and Roberts (2010) demonstrate that it is syntactic. Related to this is an issue of whether verb raising exists in Japanese. Following Otani and Whitman (1991), Koizumi (1995/1999), Miyagawa (2001), Hatakeyama, Honda and Tanaka (2008), Mihara (2011, 2012) and Funakoshi (2012) among others, but contra Fukui and Takano (1998), Fukui and Sakai (2003) and Aoyagi (2006), we assume that V raises to higher functional projections in syntax. In (36) V raises up to T via v by head movement and the head of the chain created by this movement is pronounced at T.[19]

Now let us examine some possible answers to yes/no questions.

(37) A: Moo   gohan tabe-ta?
            yet   meal   eat-Past
            'Have you finished your meal?'
     B: a. Un, TABE-TA.
            yes eat-Past
            'Yes, I HAVE.'
        b. Un, tabe-ta-YO/TABE-TA-yo.
            yes eat-Past-SFP/eat-Past-SFP
            'Yes, I HAVE.'
        c. Un, tabe-ta tabe-ta.
            yes eat-Past eat-Past
            'Yes, I HAVE.'

Vermeulen (2012) observes that a natural answer to yes/no questions consists of an inflected verb with an emphatic stress as in (37Ba), and when the SFP *yo* occurs with it, the stress can be either on the verb or on the SFP as in (37Bb). These are the phonological manifestations of polarity focus, which confirms or falsifies the truth of the proposition expressed.[20] We propose that another way of expressing polarity focus is to use the ERC as in (37Bc).[21] Let us assume that a polarity focus feature occurs on Ø in SA, when a sentence is used as an answer to a yes/no question, and that this polarity focus feature triggers movement of an inflected V to Ø.
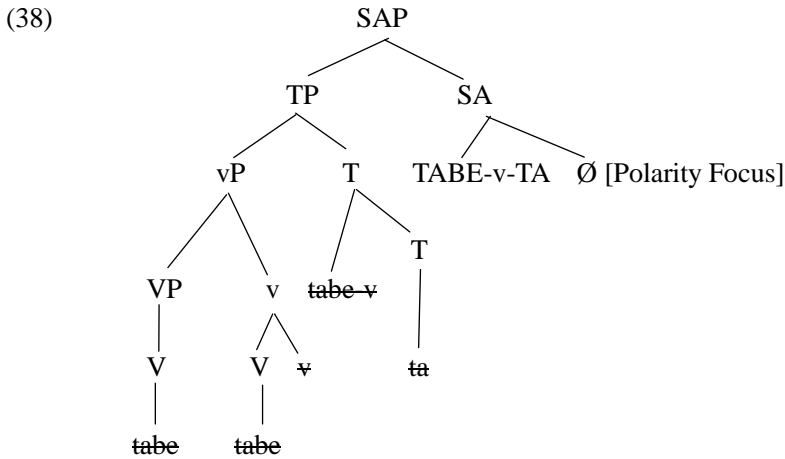
The partial phrase structure for (37Ba) is as follows.

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[18] Since this is an assertion marker, it does not occur in sentences ending with such TP-selecting modals as *daroo/desyoo/rasii/sooda*. I am thankful to an anonymous reviewer for pointing this out to me.

[19] We do not go into how V-to-T movement is triggered in Japanese in this paper.

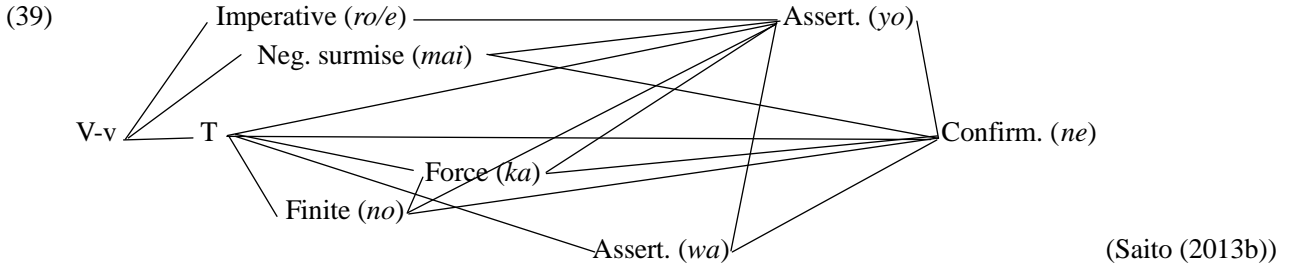[20] Vermeulen calls it verum focus. Similarly, Lohnstein and Stommel (2009) discuss verum focus in German, and observe that it shows up when C or a finite V in the left periphery bears a pitch accent.

[21] Kandybowicz (2013) observes that Nupe also expresses emphatic assertion either by employing a clause-final discourse particle or by verb reduplication.
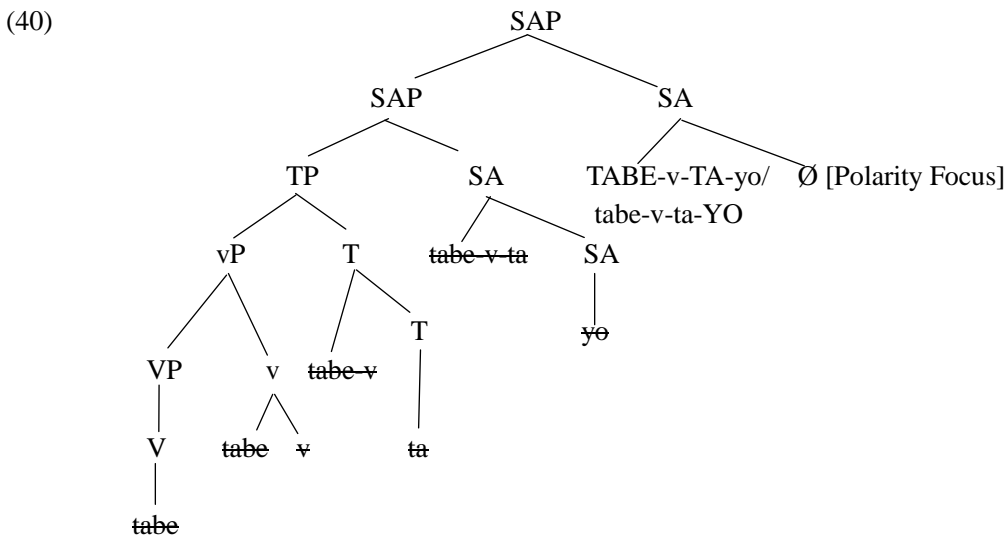
(38)

```
                    SAP
                  /     \
                TP        SA
              /    \     /    \
            vP      T  TABE-v-TA  Ø [Polarity Focus]
           /  \    / \
         VP    v  T
         |    / \  |
         V   V  v  T
         |   |  |  |
         V  tabe-v ta
         |   |
       tabe tabe
```

In (38) V moves up to T as in usual declarative clauses. Moreover, due to the polarity focus feature in Ø, further movement takes place, adjoining the verbal complex to Ø. The polarity focus feature on Ø is phonologically manifested as an emphatic stress on the verbal complex *tabe-v-ta*.

As for SFPs, we follow Saito (2013a, b) in identifying them as SAs. Saito discusses the distribution of SFPs and claims that the position of SAs is not fixed, but is determined by pragmatic considerations.

(39)

```
           Imperative (ro/e) ——————————— Assert. (yo)
             Neg. surmise (mai) ←
  V-v ∠  T                                    Confirm. (ne)
             Force (ka)
           Finite (no)
                       Assert. (wa)
```
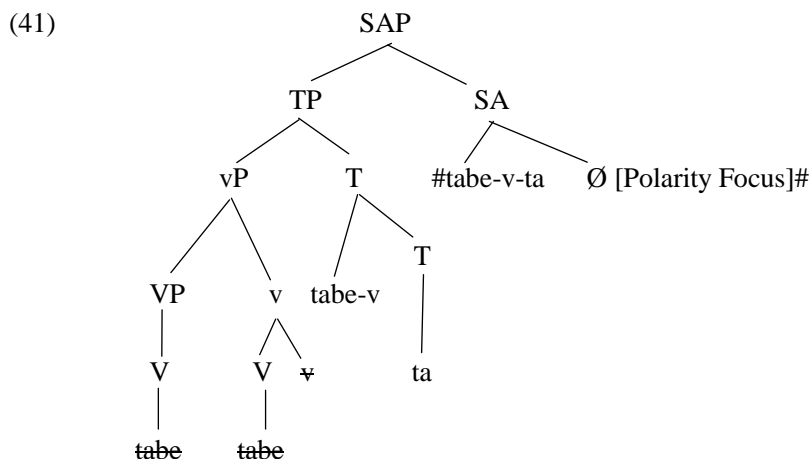   (Saito (2013b))

As demonstrated in (39), SAs, *yo* and *ne* do not impose any selection restrictions. They can occur with TP, ModalP, FinP, ForceP or SAP, and their occurrence is regulated by pragmatic needs. Note that SAPs can be iterated. On the other hand, *wa* selects only TPs.

Now let us consider (37Bb), in which the SFP, *yo*, occurs in an answer. Here we assume that SAPs occur recursively as in (40).

(40)

```
                        SAP
                      /     \
                  SAP         SA
                /    \       /    \
              TP      SA  TABE-v-TA-yo/   Ø [Polarity Focus]
             /  \    / \   tabe-v-ta-YO
           vP    T tabe-v-ta SA
          /  \  / \          |
        VP    v T            yo
        |    /\  |
        V  tabe v ta
        |
      tabe
```

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The polarity focus feature on Ø triggers movement of the verbal complex, *tabe-v-ta-yo*, to Ø, and an emphatic stress occurs either on the inflected verb as in *TABETA-yo* or on the SFP as in *tabeta-YO*, as phonological realizations of the polarity focus feature.

And finally let us look at the derivation of the ERC in (37Bc).

(41)

```
                          SAP
                     ┌─────┴─────┐
                    TP           SA
                  ┌──┴──┐      ┌──┴──────────┐
                 vP     T   #tabe-v-ta   Ø [Polarity Focus]#
              ┌───┴──┐  ┌──┴──┐
             VP      T       T
                  ┌──┴──┐    │
                 VP  v  tabe-v ta
              ┌───┴───┐  │
             VP      v  ta
          ┌───┴──┐ ┌─┴─┐
         VP     v  V   v̶
         │         │
         V         V
         │         │
        V  V       ta
        │  │
      tabe tabe
```

As we have seen with (38) and (40), due to the polarity focus feature in Ø, the verbal complex adjoins Ø. Unlike the cases with (38) and (40), however, we argue, following Nunes (2004), that both the head of the chain in SA, *tabe-v-ta-Ø*, and the tail of the chain in T, *tabe-v-ta*, are pronounced because of the morphological fusion of *tabe-v-ta-Ø* in SA into a single terminal element.

Nunes (2004) argues that deletion of copies takes place so that terminals can be linearized. Specifically, no linear order can be determined for structures containing chains because any material intervening between the two links of a chain asymmetrically c-commands and is asymmetrically c-commanded by the same element, i.e. the links of the chain, in violation of Kayne's (1994) Linear Correspondence Axiom (LCA). In ordinary cases links of a chain other than the head get deleted because of economy principles. However, Nunes claims that when an adjunction structure undergoes morphological fusion and becomes a single terminal element, it becomes invisible to the LCA because the LCA does not apply word-internally.

In (41), the polarity focus feature triggers morphological fusion of *tabe-v-ta-Ø* into a single unit, #*tabe-v-ta-Ø*#, which is disregarded by the LCA. The only visible chain link is the copy left in T, *tabe-v-ta*, so it must not be deleted. The linear order of the reanalyzed #*tabe-v-ta-Ø*# is determined by the position of SA. As a result, both the lower chain link in T, *tabe-v-ta*, and the morphologically reanalyzed higher chain link in SA, #*tabe-v-ta-Ø*# get pronounced. But how can we tell that a constituent is morphologically reanalyzed?

Nunes claims that "the more complex a constituent, the smaller the likelihood that it will undergo morphological reanalysis and become invisible to the LCA" (p. 43).

(42) a. Yo lo   iba   a hacerlo.   (Argentinean Spanish (dialect II))
         I   it$_{Cl}$ went to do.it$_{Cl}$
         'I was going to say it to him.'
     b. Yo se   lo   iba   a decir.
         I him$_{Cl}$ it$_{Cl}$ was.going to say
         'I was going to say it to him.'
     c. Yo iba   a decirselo.
         I was.going to say.him$_{Cl}$.it$_{Cl}$
         'I was going to say it to him.'

d. *Yo se lo iba a decirselo.
   I him$_{Cl}$ it$_{Cl}$ was.going to say.him$_{Cl}$.it$_{Cl}$
   'I was going to say it to him.' (Nunes (2004: 45))

(43) a. I BOOK [LOSE]$_{hn}$ (Brazilian Sign Language)
   'I LOST the book.'

b. I LOSE BOOK [LOSE]$_{hn}$
   'I LOST the book.'

c. JOHN MARY [$_a$LOOK$_b$]$_{hn}$
   'John LOOKED at Mary.'

d. *JOHN $_a$LOOK$_b$ MARY [$_a$LOOK$_b$]$_{hn}$
   'John LOOKED at Mary.' (Nunes and Quadros (2008: 182))

In a dialect of Argentinean Spanish, clitic doubling occurs as in (42a), and clitic clusters are possible as in (42b, c). However, (42d) is not acceptable. Nunes argues that this is because the cluster *se lo* is morphologically too heavy to undergo fusion, so all of the links of the clitic cluster is visible to the LCA. Hence the lack of deletion of the lower links prevents the structure from being linearized. Similarly, in Brazilian Sign Language, which is a head-initial language, a verb occurs sentence-finally when it is emphatically focused as in (43a), and it can be doubled as in (43b), just as in the ERC in Japanese.[22] However, when a verb bears subject and object agreement morphology, as annotated by indices in (43c), it cannot be reduplicated (43d). Again, this contrast is attributed to the morphological complexity of [$_a$LOOK$_b$]$_{hn}$ by Nunes and Quadros (2008), who argue that linearization is impossible in (43d) because the sentence-final verb fails to undergo fusion with the E(mphatic)-Focus head.

    Turning back to the Japanese ERC, is there any evidence that indicates that the sequence in SA is morphologically reanalyzed? As we have discussed in section 2, the contracted forms are preferred over non-contracted forms in the ERC.

(44) a. Un, huri-soo(?*da) huri-soo(?*da). (=(16B))
   yes fall-likely fall-likely
   'Yes, it's very likely to rain.'

b. Un, sit-te-ru sit-te-ru. (=(17Ba))
   yes know-Cont-Nonpast know-Cont-Nonpast
   'Yes, I do know that.'

b'. ?Un, sit-te-i-ru sit-te-i-ru. (=(17Bb))
   yes know-Cont-be-Nonpast know-Cont-be-Nonpast
   'Yes, I do know that.'

c. Sira-n sira-n. (=(20Ba))
   know-Neg know-Neg
   'I really don't know.'

c'. ?Sira-na-i sira-na-i. (=(20Bb))
   know-Neg-Nonpast know-Neg-Nonpast
   'I really don't know.'

d. Toranpu si-yo(?o) si-yo(?o). (=(33a))
   cards play-let's play-let's
   'Let's play cards!'

e. Soozi? Si-masyo(?o) si-masyo(?o). (=(33b))
   cleaning do-let's do-let's
   'Cleaning? Let's do it.'

---

[22] *Hn* indicates that it occurs with the non-manual marking of headnod.

We take this fact as indication of morphological reanalysis. If a reduplicant is too heavy and cannot fuse with Ø, the structure fails to be linearized properly. The contracted forms can undergo morphological fusion with Ø more easily because they have already undergone contraction, another morpho(-phono)logical operation. We have posited a prosodic constraint, barring reduplicants which are too long, but it may be attributable to the non-applicability of morphological reanalysis in SA as well.

In section 2.5 it has been pointed out that the whole verbal complex must be reduplicated. This follows naturally from our analysis, since the verbal complex in T as a whole adjoins to Ø.[23]

With respect to Ø, it selects TP just like *wa*. We have observed in section 2.5 that a verbal sequence ending with T can be reduplicated in the ERC. This is due to the selectional property of Ø, which takes TP and marks it as assertion. This element can also take SAP, as we have seen in (40). People who allow reduplication of a verbal sequence ending with SFPs have the option of reanalyzing *tabe-v-ta-yo-Ø* in (40).[24] As Nunes notes, morphological complexity is defined in each language. So it is not surprising that some liberal speakers allow morphological reanalysis more readily than others. Interestingly, even these people do not seem to allow reduplication of stressed verbal sequences.

(45) a. ?*Ki-ta-YO   ki-ta-YO.
         come-Past-SFP come-Past-SFP
         'It did come.'
     b. ?*KI-TA-yo   KI-TA-yo.
         come-Past-SFP come-Past-SFP
         'It did come.'

Once a polarity focus feature is realized as an emphatic stress, there is no need to go through all the trouble of morphological fusion to produce the ERC.

The nonoccurrence of such modals as *daroo/desyoo/rasii/sooda* in the ERC is also explained by the property of Ø. Since it marks assertion, it is incompatible with ModalPs.

There are some pieces of evidence that support the proposed structure of the ERC in (41): it consists of a single clause, and it is not two clauses put together.

(46) a.   [SAP [TP Gohan tabe-ta] tabe-ta]
     b.   [Gohan tabe-ta] [~~Gohan~~ tabe-ta]

We have noted above that the ERC does not require a pause between the two reduplicants. This follows from a mono-clausal analysis as in (46a), but not from a double-clausal analysis as in (46b).

In addition, it is not clear how the identity of the two verbs is licensed under the double-clausal analysis. The whole verbal complex has to be repeated in the ERC, but it should be possible to derive (47a, b) under the double-clausal analysis, if no extra assumption is added to the effect that the two identical clauses should be merged first.

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[23] We do not consider excorporation as a viable option in this situation.

[24] People who allow reduplication of the question particle, *no*, probably regard it as a kind of SFP. In fact *no* can be used as SFP in declarative sentences.
(i) Kinoo   hon-o   yon-da   no.
     yesterday book-Acc   read-Past SFP
     'I read a book yeaterday.'
See Kuwabara (2010) for a different view that *no* occupies Fin while *ka* occupies Force.

(47) a. *Gohan tabe-nakat-ta tabe-ta.
          meal   eat-Neg-Past eat-Past
          (literally) 'I have not eaten my meal, I have.'
    b. *Gohan tabe-ta   ne-ta.
          meal   eat-Past sleep-Past
          'I have eaten my meal and went to bed.'

On the other hand, the ungrammaticality of (47a, b) can be explained under our analysis. We do not need to postulate a morphological reduplication rule for the ERC. The identity of two verb forms follows from head movement and copy spell-out, which are both available in UG.

Moreover, no material can intervene between the reduplicated verbs in the ERC.

(48) A: Gohan tabe-ta?
          meal   eat-Past
          'Have you finished your meal?'
    B: Un, tabe-ta*(,) ippai tabe-ta.
          yes eat-Past   much eat-Past
          'Yes I have had a big meal.'

If some material intervenes between the two as in (48B), a pause is necessary between the two sentences. The inadmissibility of any material between the two verbs can be explained in our mono-clausal structure. If head movement of an inflected V targets SA, an adjunct to SAP should be linearized to the left of TP (or to the right of SA), and Spec of SAP also comes to the left of TP, so there is no position to host any material between the two verbs in the ERC.

It will be shown in Appendix that *rendaku* is not available in the ERC. This is also readily accountable in our analysis, for the two reduplicated verbal complexes occur in different positions and they do not form a word.

To recapitulate, we have proposed an analysis of the ERC based on the copy theory of movement. We have argued that the polarity focus feature on Ø SA head triggers both the movement of a verbal complex to Ø and the morphological reanalysis of the verbal complex with Ø. The head of the verbal chain in SA becomes exempt from the LCA, and both links of the chain created by the polarity focus feature get pronounced as a result.

3.2. *Some Notes on the ERC That Does Not Express Polarity Focus*

The aim of this paper is to describe and to give an account for the ERC that expresses polarity focus in an answer to yes/no questions, but it is not always the case that the ERC carries polarity focus. In this subsection we briefly go over the ERC that occurs independently of yes/no questions.

The interpretation of non-polarity-focus ERC varies in accordance with types of verbs that undergo reduplication. When a stative verb is reduplicated as in (49a), it expresses that the denoted state holds in many cases. When used with an activity verb as in (49b), the ERC emphasizes the degree of action expressed by the verb.[25] The ERC indicates the repetition of action or change when used with an achievement verb or an

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[25] Sometimes the polarity focus ERC also yields degree emphasis.
(i) A: Osake   non-da?
          alcohol drink-Past
          'Did you drink?'
    B: Un, non-da   non-da.
          yes drink-Past drink-Past
          'Yes, I did drink a lot.'
(ii) A: Biiru-o   ippon   non-da?
          beer-Acc one.Cl drink-Past

accomplishment verb (49c, d).

(49) a. Sore a-ru   a-ru.
         it   be-Nonpast be-Nonpast
         'Things like that often occur.'

     b. Taroo-ga sake(-o)   non-da   non-da.
         Taro-Nom sake-Acc drink-Past drink-Past
         'Taro drank so much sake.'

     c. Denki(-ga) kie-ru   kie-ru.
         light-NOM   go.off-Nonpast go.off-Nonpast
         'The light went off many times/The light is about to go off.'

     d. Ie(-o)   tate-ta   tate-ta.
         house-Acc   build-Past build-Past
         'I built many houses.'

Like the polarity-focus ERC, the non-polarity-focus ERC can be paraphrased with expressions involving a SFP as in (50).

(50)   Sore a-ru-naa.
         it   be-Nonpast-SFP
         'Things like that often occur.'

The typical examples of the polarity-focus ERC take a form of reduplicated verbal complexes following the approval marker, *un* 'yes.' It is not natural to repeat the argument of the verb used in a question as in (51), because old information should be left unsaid, Japanese being a pro-drop language.

(51) A: Nee, basu ki-ta?
         hey bus   come-Past
         'Has the bus come?'

     B: Un, (?*basu) ki-ta   ki-ta.
         yes bus   come-Past come-Past
         'Yes, the bus HAS come.'

On the other hand, arguments of verbs can occur in the non-polarity-focus ERC, and it is often accompanied by case marker drop as in (49). This is not surprising, since case marker drop occurs in colloquial speech, and it does so more freely in Kansai Japanese than in Standard Japanese just as the ERC.

Masunaga (1988) claims that case markers can drop when the NP is "deemphasized" or "defocused."

(52) a. Hanako-{o/???Ø} yon-da.
         Hanako-Acc   invite-Past
         'I/He/She invited Hanako.'

       'Did you drink a bottle of beer?'
    B: Un, non-da   non-da.
       yes drink-Past drink-Past
       'Yes, I did drink it.'
In (i) the degree of action is emphasized as well as polarity. In contrast, in (ii) where the degree of action is predetermined by context, only the polarity focus interpretation is available. Note the similar effect obtains with VP preposing in English. The following example expresses polarity focus as well as degree emphasis.
(iii)   John wanted to drink yesterday, and drink he did.

b. Hanako Ø yon-da {zo/yo}.
    Hanako   invite-Past   SFP
    'I/He/She invited Hanako.'   (Masunaga (1988: 147))

When SFP occurs with a verb, the verb is focused in a sentence. Since the object does not bear emphasis/focus in (52b), its case marker can drop. We see the same effect in (49) where the verb is emphasized by reduplication.

Furthermore the emphasis on V in the ERC helps us account for the fact that *wh*-questions are incompatible with the ERC.

(53) a. *Nani(-o)   tabe-ta   tabe-ta?
          what-Acc   eat-Past eat-Past
          'What did you really eat?'
     b. *Dare(-ga)   ki-ta   ki-ta?
          who-Nom   come-Past   come-Past
          'Who did come?'

With or without a case marker, (53a, b) are not acceptable because while a *wh*-word has to bear focus in *wh*-questions, V needs to be focused in the ERC. The examples in (53) are ruled out due to a conflict between the two elements in information structure.

It is not clear at the moment whether a unified analysis is possible for both the ERC with and without polarity focus. Though there are some differences between the two types, especially in terms of interpretation, they share many properties: (i) they are both main clause phenomena, (ii) they both occur in colloquial speech, (iii) they can both be paraphrased by SFP-final sentences, (iv) the target of reduplication is an inflected verbal complex in both types, and (v) the reduplication of long forms is less acceptable in both types. It may be the case that a feature other than the polarity focus resides with Ø and triggers movement in the non-polarity-focus ERC, or that some functional head other than Ø with an emphasis feature exists in the propositional domain along the lines proposed for Nupe by Kandybowicz (2013). Or the same syntactic structure may be posited for both types of the ERC with the interpretational differences attributed to some semantic interpretation rules, which seems to work well with the fact that both interpretations can co-occur (see footnote 25). We would like to leave this for future research.

4. Concluding Remarks

In this paper we have examined the ERC in Japanese. After demonstrating that it is a main clause phenomenon and that a whole verbal complex needs to be reduplicated, we have proposed that it is derived by moving a verbal complex in T to a phonologically-null Ø in SA. Our claim is that Ø occurs in declarative sentences as an assertion marker, and that a polarity focus feature on it triggers movement of a verbal complex to it. The same feature can optionally cause the morphological reanalysis of the structure that occurs under SA, which renders the higher chain link invisible to the LCA, as proposed by Nunes (2004). Hence the copy left behind by movement in T is pronounced in addition to the reanalyzed strings in SA.

Our analysis is relatively simple because Japanese is a head-final language. Martins (2013) and Nunes and Quadros (2008) propose a syntactic analysis of the ERC in European Portuguese and Brazilian Sign Language respectively, but since they are head-initial languages, more complicated sequences of movement are necessary in order to derive the correct word order. European Portuguese (but not Brazilian Portuguese), Galician, Nupe, American Sign Language and Brazilian Sign Language have been reported to employ verb reduplication to express emphatic assertion. What allows verbal reduplication in these languages but not in others is an important topic we leave for future research.

We have argued for postulating a syntactic projection for assertion, but of course it does not mean that syntax takes over all the load of pragmatics. For example question sentences can be used not only to ask for information,

but also as request, invitation and even as strong assertion. What we have wanted to show in this paper is that the syntactic properties of the ERC can be explained successfully if a small portion of labor is shifted from pragmatics to syntax. We would like to explore more phenomena that can be handled this way.

If our analysis is on the right track, it will provide novel evidence for verb raising in Japanese. We have shown that reduplication in the ERC is syntactic in nature, and it is not clear how such reduplication can be handled without positing head movement. Before jumping to conclusions, however, we need to reexamine arguments carefully that have been put forth to argue against verb raising in Japanese.

As already mentioned in section 3.2, we have not accounted for the behavior of the non-polarity-focus ERC. The ERC involving adjectives and adjectival nouns has not been dealt with, either. There is much work to be done, but research in this area seems to provide interesting clues for uncovering the nature of speech acts, polarity focus, emphasis and verb raising.

Appendix: Constructions That Look Similar to the ERC

This appendix reviews constructions that look like the ERC to see if they can be unified with it.

1. Lexical Reduplication

There are words in Japanese which are formed by reduplication of verbs.

(54) a.   osoru 'fear' + osoru → osoruosoru 'timidly'; ozu 'fear' + ozu → ozuozu 'timidly'; naku 'cry' + naku → nakunaku 'tearfully'; kawaru 'take somebody's place' + kawaru → kawarugawaru 'by turns'; kaesu 'repeat' + kaesu → kaesugaesu(mo) 'indeed'; masu 'increase' + masu → masumasu 'increasingly'

   b.   kasane 'repeat' + kasane → kasanegasane 'repeatedly, over and over again'; hanare 'separate' + hanare → hanarebanare(ni) 'separated'; tiri 'scatter' + tiri → tiriziri(ni) 'scattered'; omoi 'think' + omoi → omoiomoi 'each in his own way'

   c.   hore 'fall in love' + hore → horebore-suru(yoona) 'charming'; aki 'get tired' + aki → akiaki-suru 'get tired'; uki 'be merry' + uki → ukiuki-suru(yoona) 'cheerful'; waku 'be excited' + waku → wakuwaku-suru 'exciting'

A verb in a nonpast-tense conclusive form can be reduplicated to make an adverb as in (54a). The reduplication of a continuative (*renyookei)* verb also forms an adverb (54b). The reduplicated continuative verbs sometimes combine with a light verb *su(ru)* to form verbs or adjectives as in (54c).[26]

Historically the reduplication of the conclusive form of verbs was older than *renyookei* reduplication. According to Aoki (2009), the conclusive reduplication, but not the *renyookei* reduplication, existed in Old Japanese.

(55)   後れ居て恋ひつつあらずは田子の浦の海人ならましを玉藻刈る刈る
       Okureite koitutuarazuwa Tagonourano ama naramasio tamamo <u>kar-u</u>   <u>kar-u</u>.
                                                                  reap-Nonpast   reap-Nonpast
       'I would rather be a diver at Tagonoura and reap algae than wait for your return, yearning for you.'
                                                       (*Manyoosyuu* 12:3205, cited from Aoki (2009); translation mine)

In Old Japanese, the conclusive reduplication retained its verbal properties, though it gradually began to occur in embedded clauses, and acquired adverbial properties as well. What we see in (54a) are the lexicalized relics of conclusive reduplication that acted as adverbials. *Renyookei* reduplication, on the other hand, appeared in Early

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[26] *Sirazusirazu* 'unknowingly' is formed by reduplicating imperfective (*mizenkei*) form of V and negation.

Middle Japanese. It was used as adverbials from the beginning, and it came to be used more often than conclusive reduplication in Late Middle Japanese.

The verbal reduplication found in the ERC differs from lexical reduplication in several respects. First, the past-tense verbs can be reduplicated in the ERC, but there are no such words as *naitanaita* (intended to mean 'tearfully'). Second, *rendaku* sometimes occurs in lexical reduplication as in *kawarugawaru*, but it does not in the ERC.

(56) Singoo   kawar-u   kawar-u/*gawar-u.   Hayaku ik-oo.
       traffic.light change-Nonpast change-Nonpast/change-Nonpast quickly go-let's
       'The traffic light is changing. Let's go quickly.'

Third, reduplication in the ERC does not form adverbs unlike lexical reduplication of verbs. For example, *kawar-u kawar-u* in (56) cannot be interpreted as an adverb.

Finally, the lexical reduplication of verbs as in (54) is not productive. We cannot just repeat any verb, say *warau* 'laugh' to make up a new adverb, **warauwarau* (intended to mean 'laughingly'). The words in (54) are lexical in the sense that they are listed in the lexicon and have to be memorized one by one, for they have undergone a semantic shift. On the other hand, the ERC is productive, and various types of verbs can be reduplicated in it. For instance, unergative verbs (57a), unaccusative verbs (57b) and transitive verbs (57c) can all be targets of reduplication in the ERC.

(57) a. A: Kinoo   ippai hasit-ta?
             yesterday much   run-Past
             'Did you run a lot yesterday?'
     B: Un, hasit-ta   hasit-ta.
             yes run-Past run-Past
             'Yes, I really did.'
  b. A: Moo imagoro Kobe-ni tui-ta-ka-na?
             yet   by.now   Kobe-to   arrive-Past-Q-SFP
             'I wonder if they have arrived in Kobe yet.'
     B: Un, tui-ta   tui-ta.
             yes arrive-Past arrive-Past
             'Yes, they HAVE.'
  c. A: Kono hon   yon-da?
             this   book read-Past
             'Have you read this book?'
     B: Yon-da   yon-da.
             read-Past read-Past
             'Yes, I really have.'

In terms of aspect, stative verbs (58a) as well as activity verbs (58b), achievement verbs (58c) and accomplishment verbs (58d) can occur in the ERC.

(58) a. A: Biiru ar-u?
             beer   be-Nonpast
             'Is there beer left?'
     B: Ar-u   ar-u.
             be-Nonpast be-Nonpast
             'Yes, there really is.'

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b. A: Biiru   nom-u?
       beer   drink-Nonpast
       'Do you want to drink beer?'
   B: Un, nom-u   nom-u.
       yes drink-Nonpast   drink-Nonpast
       'Yes, I really do.'

c. A: Denki kie-ta?
       light   go.off-Past
       'Has the light gone off?'
   B: Un, kie-ta   kie-ta.
       yes go.off-Past go.off-Past
       'Yes, it HAS gone off.'

d. A: Ie   tate-ta?
       house   build-Past
       'Did you build a house?'
   B: Un, tate-ta   tate-ta.
       yes build-Past build-Past
       'Yes, I really did.'

In addition, we have already seen that compound verbs can be reduplicated in the ERC in principle. As we have argued in this paper, the reduplication in the ERC is not lexical, but syntactic in nature.

2.   Renyookei *Reduplication*

   Renyookei 'continuative form' reduplication differs from the ERC in reduplicating the *renyookei* form of verbs rather than the conclusive form.

(59)   Taroo-wa yasumi yasumi arui-ta.
       Taro-Top rest   rest   walk-Past
       'Taro walked, taking a break on the way.'

By definition tense cannot appear in *renyookei* reduplication, so we cannot replace *yasumi yasumi* in (59) with *yasun-da yasun-da* (rest-Past rest-Past). This leads to the distributional difference between the *renyookei* reduplication and the ERC: since *renyookei* form lacks tense, it has to occur in an adverbial clause and it cannot occur at the end of a matrix clause. Moreover, though it is productive, stative verbs (*ari ari (be be)) and achievement verbs (*kie kie (go.off go.off)) are not compatible with *renyookei* reduplication, because it has to be interpreted as repetition of action.

3.   *V-*te *Reduplication*

   -Te form can be reduplicated as in (60), but like *renyookei* reduplication, it only functions as adverbials.

(60)   Taroo-ga nai-te   nai-te   komat-ta-yo.
       Taro-Nom cry-TE   cry-TE   troubled-Past-SFP
       'I didn't know what to do because Taro cried so much.'

V-*te* reduplication emphasizes the action represented by V, but it does not emphasize assertion, as the ERC used in an answer to yes/no questions does. Note that V-*te* V T is not allowed (**nai-te nai-ta.* (cry-TE cry-Past)). With

respect to the restrictions on the aspectual properties of verbs, stative verbs (*at-te at-te (be-TE be-TE)), unlike other types of verbs, are disallowed in the construction.

4. V-ni-V Construction

Kageyama (1993) discusses the V-*ni*-V construction and claims that it is derived by the following rule in syntax: $[\mu]_v \rightarrow [\mu\text{-}ni\ \mu]_v$: μ (morae) ≥ 2.

(61)   Taroo-wa sake-o   nomi-ni non-da.
        Taro-Top   sake-Acc drink-NI drink-Past
        'Taro drank so much sake.'

As he observes, the construction is interpreted as repetition or continuation of action represented by V, and the stative verbs (62a), achievement verbs (62b) and accomplishment verbs (62c) do not occur in it.

(62) a. *Kane-ga   ari-ni   ar-u.
           money-Nom   be-NI   be-Nonpast
           'There is so much money.'
     b. *Sensoo-de hito-ga   sini-ni   sin-da.
           war-in   people-Nom die-NI   die-Past
           'So many people died in the war.'
     c. *Santyoo-ni   nobori-ni   nobot-ta.
           top.of.a.mountain-to climb-NI   climb-Past
           'I climbed to the top of a mountain.'   (Kageyama (1993: 90))

5. Summary

We have gone over such verb doubling constructions as lexical reduplication, *renyookei* reduplication, V-*te* reduplication and V-*ni*-V construction. One of the most salient properties of the ERC is that it emphasizes assertion in declarative sentences, and that it is interpreted to bear polarity focus when used in an answer to yes/no questions. None of the constructions above share this property. Hence we conclude that they cannot be analyzed in the same way as the ERC.

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