

V-RAISING, *SU*-INSERTION, THE STRANDED SUFFIX FILTER, AND ECONOMY OF DERIVATION*

Tomohiro Fujii
Yokohama National University

1. Introduction

Funakoshi (2014, to appear) proposes that verbs move out of their own projections in Japanese. He observes that ‘verb-stranding’ examples like (1a) have the kind of interpretation that would be expected if the following happens: the verb moves out of VP and then the VP undergoes ellipsis. Under the interpretation in question, the second clause in (1a) is understood to mean: Mari didn’t get back to Japan via LA but she went back there via some place other than LA. This reading is called a ‘null adjunct reading’, because an adjunct has a contribution to the meaning of the sentence although it is not pronounced. Funakoshi also observes that the null adjunct reading goes away when internal arguments of the verb are pronounced, as in (1b). This is, as Funakoshi notes, because arguments alone can be targets of Argument Ellipsis, but adjuncts alone cannot be (Oku 1998). Thus, (1a, b) are analyzed as in (2a, b), respectively.

- (1) a. Hiroshi-wa LA-keiyu-de Nihon-ni kaetta-kedo, Mari-wa
Hiroshi-TOP LA-via-by Japan-to went.back-although Mari-TOP
kaera-nakatta.
go.back-NEG.PAST
‘Although Hiroshi went back to Japan via LA, Mari didn’t go back.’
- b. Hiroshi-wa LA-keiyu-de Nihon-ni kaetta-kedo, Mari-wa Nihon-ni
Hiroshi-TOP LA-via-by Japan-to went.back-although Mari-TOP Japan-to
kaera-nakatta.
go.back-NEG.PAST
‘Although Hiroshi went back to Japan via LA, Mari didn’t go back to Japan.’
- (2) a. Subj [_{VP} Adjunct Object *t_V*] V-NEG.PAST
b. Subj [_{VP} Object *t_V*] V-NEG.PAST

Building on Funakoshi’s Generalization, Hayashi and Fujii (2015b) and Hayashi (2015) (H&F, hereafter) argue that while Native Japanese Verbs (NJV) do move as Funakoshi argues, Verbal Nouns (VNs) stay put. (3) illustrates the VN construction, and (4) indicates what H&F propose as its derivation. Here the predicate does not move out of its projection.

* Thanks go to Kenshi Funakoshi and Shintaro Hayashi for the useful discussions that I had with them. All errors are mine.

- (3) Hiroshi-wa LA-keiyu-de Nihon-ni kikoku si-ta.
 Hiroshi- TOP LA-via-by Japan-to return do-PAST.
 ‘Hiroshi went back to Japan via LA.’
- (4) Hiroshi-wa [_{VNP} Nihon-ni kikoku] si-ta.

As evidence for this analysis, H&F give the contrast between (5a) and (5b). In (5a), *su* is pronounced and the VP-internal items are missing. In (5b), the VN and *su* are pronounced, and only the dependents are missing. H&F argue that (5a)’s capability of supporting a null adjunct reading, taken together with (5b)’s incapability thereof, indicates that the VN must stay inside the elided constituent in the VN construction. The analysis is shown in (6).

- (5) Hiroshi-wa LA-keiyu-de Nihon-ni kikoku si-ta-kedo,
 Hiroshi-TOP LA-via-by Japan-to return do-PAST-although
 ‘Although Hiroshi went back to Japan via LA,’
- a. Mari-wa si-nakatta.
 Mari-TOP do-NEG.PAST
 ‘Mary didn’t <go back to Japan via LA>.’
- b. Mari-wa kikoku si-nakatta.
 Mari-TOP return do-NEG.PAST
 ‘Mary didn’t return <to Japan>.’
- (6) ... Mari-wa [_{VNP} ~~LA-keiyu-de Nihon-ni kikoku~~] si-nakatta

In what follows, we examine two paradigms involving a kind of NJV construction that behaves similarly to the VN construction. The first paradigm is given in (7), where *su* ‘do’, which is apparently pleonastic, is involved. (The second paradigm will be introduced in Section 2.)

- (7) *Context:*
 Hiroshi-mo Mari-mo suguni LA-keiyu-de Nihon-ni kaeru-yooni iwareta.
 both Hiroshi and Mari right.away LA-via-by Japan-to go.back -C was.told
 ‘Both Hiroshi and Mari were told to go back to Japan via LA right away.’
- a. Hiroshi-wa nantoka LA-keiyu-de Nihon-ni kaeri-wa si-ta-kedo,
 Hiroshi-TOP barely LA-via-by Japan-to go.back-TOP do- PAST-although
 Mari-wa ∅ si-nakatt-ta.
 Mari-TOP do-NEG.PAST
 ‘Although Hiroshi managed to go back to Japan via LA, Mari didn’t <go back to Japan via LA>.’

- b. Hiroshi-wa nantoka LA-keiyu-de Nihon-ni kaet-ta-kedo,
 Hiroshi-TOP barely LA-via-by Japan-to go.back-PAST-although
 *Mari-wa ∅ *si*-nakatt-ta.
 Mari-TOP do-NEG.PAST

‘Although Hiroshi managed to go back to Japan via LA, Mari didn’t {go back to Japan via LA, <go back to Japan via LA> }.’

(7a) involves a slightly different NJV construction than the one we saw in (1), whereas (7b) involves the same type as (1). In the former, a focus particle (Part) attaches to the NJV *kaer* ‘go back’. Like the VN construction in (5a), the focus-marked NJV construction involves *su* ‘do’. Note that the *su*-stranding sentence in (7a) seems to involve phrasal ellipsis of the same sort as the one seen in (1). This is so because a null adjunct reading is possible, as indicated in the translation of (7a). This interpretive property of (7a) leads us to hypothesize that here, a VP-like constituent containing the NJV is elided. By contrast, *su*-stranding gives rise to robust unacceptability in (7b), where the standard NJV construction is an antecedent clause, as noted by Hoshi (2009).¹ Despite *su* looking similar to English *do*, *su*-insertion is not fed by ellipsis of a VP-like constituent. In other words, it looks like *su*-stranding is allowed only when *su* is present in the antecedent.

One way to describe the contrast is to assume that (i) the missing material in (7a) is the same VP as the focus-marked VP in the antecedent, and (ii) a focus particle can be part of an elided material only when it is recoverable. Then, we can accommodate the contrast between (7a) and (7b). The analysis is collaborated by the fact that the same focus-marked constituent can be fronted, as in (8).

- (8) [LA-keiyu-de Nihon-ni kaeri]-wa Hiroshi-wa *t* *si*-nakat-ta.
 LA-via-by Japan-to go.back-TOP Hiroshi-TOP do-NEG.PAST

‘Go back to Japan via LA, Hiroshi didn’t.’

The goal of this paper is to offer a grammar of Japanese that accounts for interactions among V-raising, *su*-insertion and ellipsis by using the above analysis of (7) as a probe into V’s syntactic position. The other key paradigm is introduced in the next section. The organization of the paper is as follows. In Section 2, we consider the relationship between *su*-insertion and an seemingly morphological requirement that seems to regulate application of *su*-insertion. In Sections 3 and 4, we review Hayashi and Fujii’s (2015a) evidence that there is at least one instance of head movement that clearly takes place for a reason independent of the morphological requirement mentioned above. We make a working hypothesis that the same holds for V-raising. The hypothesis leads to the conclusion that *su*-insertion as well as

¹ The sentence is fine if no ellipsis applies. The first clause in (7b) can be followed by (i).

- i. ... Mari-wa LA-keiyu-de Nihon-ni kaeri-wa *si*-nakatta.
 Mari-TOP LA-via-by Japan-to go.back-TOP do-NEG.PAST

‘... Mari didn’t go back to Japan via LA.’

raising of NJVs is EPP-driven. Section 5 points out one problem with the system that we are proposing. To solve the problem, we adopt the possibility of formulating V-raising and *su*-insertion as allowing ‘look ahead’ to see what will happen in the derivation. After briefly discussing where ellipsis rules are built into the proposed grammar in Section 6, Section 7 takes up a data question that is left open in the paper. Section 8 concludes the paper, suggesting a way of doing away with the look-ahead property. An economy-based approach is proposed.

Before proceeding, one comment is in order on the assumption that we make about basic clause structure in Japanese. Throughout this paper, I assume that the basic clause structure in Japanese is “[_{TP} Subj [_{VP} Obj V] T]”, without assuming further (unpronounced) functional heads such as *v*. The reason for doing so is as follows. This helps us to tease apart quite a few possible analytical options on empirical grounds rigorously, without dealing with concerns such as: Can ellipsis apply to both *v*P and VP? Is the phonologically null *v* visible to a suffixation rule? Can *v* be a target of *su*-insertion?, and so on. For the moment, I have to leave all these subtle but important questions for future research.

2. *Su*-Insertion and a Suffixation Requirement

We argue that NJVs stay in-situ when a focus particle attaches to them in (7). We use this observation to investigate the following paradigm, which illustrates interactions between Focus Particle Attachment and *su*-insertion in (9).

- (9) a. Hiroshi-wa LA-keiyu-de Nihon-ni kaer-anakatta. (-*su*, -Part)
 Hiroshi-TOP LA-via-by Japan-to go.back-NEG.PAST
 ‘Hiroshi didn’t go back to Japan via LA.’
- b. *Hiroshi-wa LA-keiyu-de Nihon-ni kaeri si-nakatta. (+*su*, -Part)
 Hiroshi-WA LA-via-by Japan-to go.back do-NEG.PAST
- c. *Hiroshi-wa LA-keiyu-de Nihon-ni kaeri-wa nakatta. (-*su*, +Part)
 Hiroshi-TOP LA-via-by Japan-to go.back-TOP NEG.PAST
- d. Hiroshi-wa LA-keiyu-de Nihon-ni kaeri-wa si-nakatta. (+*su*, +Part)
 Hiroshi-WA LA-via-by Japan-to go.back-TOP do-NEG.PAST

The data show that in the simplex NJV construction, attachment of a focus particle right to the main verb and application of *su*-insertion is in the biconditional relation. That is, when focusing on the two factors, *su* is inserted if and only if a focus particle attaches to the main verb; For this last resort nature of *su*, see, among others, Kuroda 1965, Sakai 1998, Kishimoto 2007, Hatakeyama et al. 2008, Hoshi 2009.² This is reminiscent of the distribution of non-

² It has sometimes been argued that *su* ‘do’ also has a main verb (i.e. theta-role assigning) use (Hoshi 1995, Saito 2006, Takita 2011 and references therein). The characterization of *su*-insertion that will be introduced in (10b) does not exclude the possibility of inserting *su* to a theta-role assigning head.

emphatic *do* with respect to items like negation; cf. Chomsky 1957, Lasnik 1981, 1995 on English *do*.³ What the Japanese data above indicate can be stated as in (10) below.

(10)a. *Suffixation requirement:*

Tense, Negation and affixal predicates such as causative *sase* (Suffs, hereafter) must be suffixed onto NJVs. Furthermore, suffixation of this sort fails if the Suff is not adjacent to the NJV; see (9a, d) vs. (9c).

b. *Su-insertion as a costly last resort operation:*

The apparently pleonastic native verb *su* ‘do’ cannot be inserted to a Suff unless it is required. *Su*-insertion cannot apply when a non-pleonastic NJV can meet the above requirement; see (9b) vs. (9d).

One difficulty we are faced with in analyzing (9) in structural terms is that we cannot easily tell where the NJV is located in these structures. As already hinted at above, ellipsis and movement serve as tests to determine where the NJV is located.

3. The Suffixation Requirement Is Not the Trigger of Head Movement

H&F (2015a), building in part on McCawley and Momoi (1986) and others, argue that the complex head of so-called *te*-complements, which we call *V-te* for short, undergoes overt head movement to the verb of the next higher clause. (11) is an example of benefactive *kure* ‘give’ selecting a *te*-complement.

- (11) Hiroshi-wa [TP PRO LA-keiyu-de Nihon-ni t_V t_T] kaet-te kureta.
 Hiroshi-TOP LA-via-by Japan-to go.back-TE gave
 ‘Hiroshi went back to Japan via LA (for me).’

Postulation of this head movement is motivated by properties of this construction including those illustrated in (12). The *te*-complement is not easy to move or elide, unlike other complement clauses. This is surprising given that clausal complements generally can move and get elided; see how the *te*-complement differs from the *to*-complement shown in (13).

- (12)a. *[LA-keiyu-de Nihon-ni kaet-te] Hiroshi-wa t kure-nakatta.
 LA-via-by Japan-to go.back-TE Hiroshi-TOP give-NEG.PAST
Lit. ‘Go back to Japan via LA, Hiroshi didn’t give.’

³ As the following set of examples shows, the presence of *do* and that of *not* entail each other. (We abstract away from the form of the lexical verb.)

- i. John came.
- ii. *John not came.
- iii. *John did come.
- iv. John did not come.

- b. Hiroshi-wa [LA-keiyu-de Nihon-ni kaet-te] kure-nakatta-kedo,
 Hiroshi-TOP LA-via-by Japan-to go.back-TE give-NEG.PAST-although
 *Mari-wa ∅ kureta.
 Mari-TOP gave
Lit. ‘Mari didn’t give.’
- (13)a. [LA-keiyu-de Nihon-ni kaeru-to] Hiroshi-wa *t* iw-anakatta.
 LA-via-by Japan-to go.back-C Hiroshi-TOP say-NEG.PAST
 ‘That he would go back to Japan via LA, Hiroshi said.’
- b. Hiroshi-wa [LA-keiyu-de Nihon-ni kaeru-to] it-ta-kedo,
 Hiroshi-TOP LA-via-by Japan-to go.back-C say-PAST-although
 Mari-wa ∅ iwa-nakatta.
 Mari-TOP say-NEG.PAST.
 ‘Although Hiroshi said that he would go back to Japan via LA, Mari didn’t say <that she would go back to Japan via LA>.’

Suppose *V-te* always raises to the higher *V*. Then the contrasts between the *te*-complement and the standard *to*-complement are expected; *V-te* is not be part of the fronted constituent (12a), nor can it be part of the elided constituent (12b). To account for this, H&F propose that *kure* ‘give’ has a lexical entry of the following sort.

- (14) *kure*: Verb, [+TP ___], [uT]_(+EPP)

As shown in (14), the item is a verb and selects a TP, and the feature “[uT]_(+EPP)” instructs to overtly attract the closest T element. When a T element raises overtly to the higher V, the V’s uninterpretable T feature is successfully checked off. We thus encode the trigger of *V-te* raising into the grammar in terms of the attractor’s EPP feature.

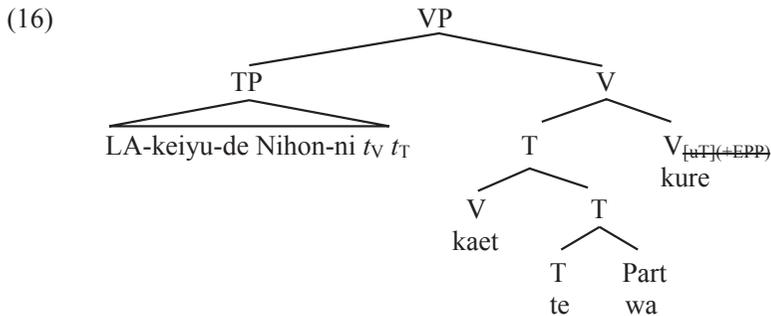
Now we turn to the relevance of this *te* construction to the main point. Notice first that *V-te* and NJVs’ behavior in ellipsis and fronting contexts is identical. They raise out of the elided or fronted constituents that originally contain them. Furthermore, it is worth observing that Vs selecting *te*-complements, unlike Suffis selecting VP, do not get suffixed onto anything. As H&F observe, Focus Particle Attachment to *V-te* does not affect the syntax of the construction.

- (15)a. Hiroshi-wa [TP LA-keiyu-de Nihon-ni kaet-te]-wa (*si-)kure-nakatta.
 Hiroshi-TOP LA-via-by Japan-to go.back-TE-TOP do-give-NEG
 ‘Hiroshi didn’t go back to Japan via LA (for me).’
- b. *[LA-keiyu-de Nihon-ni kaet-te-wa] Hiroshi-wa *t* kure-nakatta.
 LA-via-by Japan-to go.back-TE Hiroshi-TOP give-NEG.PAST
- c. Hiroshi-wa [LA-keiyu-de Nihon-ni kaet-te-wa] kure-nakatta-kedo,
 Hiroshi-TOP LA-via-by Japan-to go.back-TE give-NEG.PAST-although

*Mari-wa \emptyset kureta.
 Mari-TOP gave.

(15a) shows that Focus Particle Attachment to *V-te* does not trigger insertion of *su*. (15b, c) show that the process does not make the *te*-clause capable of being moved or elided either.

Although H&F (2015a) didn't offer a structural analysis of the focus-marked variety of *te*-complements, their account of *V-te* raising, reflected in the lexical entry of *kure* in (14), can be maintained. We assume here that Part, a focus particle, attaches to a head and that when the head raises, the particle also raises. Given this, all the requirements coded in (14) are fulfilled in the derivation shown below. (The main conclusion that we present below does not hinge on these assumptions about the syntax of focus particles, though. We could assume, for instance, that Part, projecting its own projection, gets pied-piped by T when T raises. However, we choose the base-generated head-to-head adjunction structure to make our analysis—especially, our analysis of ellipsis—less complicated.)



The absence of effects of Focus Particle Attachment on *V-te* raising tells us that raising of *V-te* takes place for a reason independent of the suffixation requirement. Here we propose generalizing this ‘EPP-driven head movement’ analysis to *V*-raising in the simplex NJV construction: namely, *V*-raising is solely triggered by the EPP feature of the attractor, as depicted in (17).

(17) [VP ... t_V] V-Suff_{[uP](<EPP>)}

Given what our diagnostic tests tell us, there is no reason to assume that *V-te* raising and *V*-raising are different phenomena. So the simplest assumption is that they are different instances of the same operation.

4. *Su*-Insertion Is EPP-Driven

The hypothesis that *V*-raising, or NJV-raising more precisely, is EPP-driven has a consequence for analysis of *su*-insertion. Recall that according to the VP-ellipsis and VP-fronting data given in (7) and (8), “*V-Part*” may stay inside the elided or fronted constituent without raising to Neg, as in (18).

(18) [VP ... V-Part] *si*-Suff

Given the analysis of the simplex NJV construction in (17), the grammaticality of the representation given in (18) forces one to assume that *su*-insertion does satisfy “[uV_{(+EPP)】” on Suff. In other words, *su*-insertion, as well as V-raising, is EPP-driven. This conception of *su*-insertion, in turn, leads to a specific formulation of the nature of the requirement of Suff. To revising (10a), we propose the Stranded Suffix Filter (SSF), borrowing from Lasnik (1981).}

(19) *Stranded Suffix Filter:*

Suffs (i.e. Tense, Negation, and affixal predicates such as causative *sase*) have the feature [NV[^]]. *Suff_{[NV[^]]} if Suff is not suffixed onto a native verb that is linearly left adjacent to it at surface structure.

By “filter” and “surface structure”, I mean that this requirement never triggers narrow-syntactic operations. Under this assumption, here is how the system works. Either V-raising or *su*-insertion may apply if and only if there is Suff that has an unchecked EPP feature. If there is no unchecked EPP feature, neither movement nor *su*-insertion applies. Representations created by syntax are evaluated with regard to surface constraints including the SSF at surface structure. For the sake of concreteness, we show the lexical entry for present tense *ru* and a sample derivation in which V-to-T movement applies.

(20) *ru*: T_[-past], [+VP], uV_(+EPP), [NV[^]]

(21)

```

graph TD
    TP --> VP
    TP --> T
    VP --> t
    T --> V
    T --> T2["T[uV(+EPP), [NV^]]"]
  
```

It should be noted that since V is a native Japanese verb in (21), the output representation obtained through V-to-T raising satisfies the SSF. Furthermore, it should also be noted that the system does not allow a Suff to attract V and trigger *su*-insertion, because by assumption a Suff has only one active EPP feature. Thus, the following never happens: when V bears a focus particle, “V-Part” raises to a Suff to meet the EPP requirement and then *su*-insertion rescues the stranded Suff.

This said, we are finally in a position to outline an empirical problem posed by (9) in the next section.

5. V-Raising and *Su*-Insertion As Peeking Rules

Let us review how the paradigm in (9), repeated here as (22), are analyzed under the current assumptions.

- (22) a. Hiroshi-wa LA-keiyu-de Nihon-ni kaer-anakatta.
 Hiroshi-TOP LA-via-by Japan-to go.back-NEG.PAST
 ‘Hiroshi didn’t go back to Japan via LA.’
- b. *Hiroshi-wa LA-keiyu-de Nihon-ni kaeri si-nakatta.
 Hiroshi-WA LA-via-by Japan-to go.back do-NEG.PAST
- c. *Hiroshi-wa LA-keiyu-de Nihon-ni kaeri-wa nakatta.
 Hiroshi-TOP LA-via-by Japan-to go.back-TOP NEG.PAST
- d. Hiroshi-wa LA-keiyu-de Nihon-ni kaeri-wa si-nakatta.
 Hiroshi-WA LA-via-by Japan-to go.back-TOP do-NEG.PAST

First, take the ungrammaticality of (22c). Though it is consistent with what the theory predicts, the data is not very informative for evaluating the theory. This is so because, regardless of whether “V-Part” moves or not, Neg fails to satisfy the SSF in any possible derivation that would give rise to this string of morphemes.

Second, the grammaticality of (22a) is explained straightforwardly. The analysis is given in (23a). (Predicted grammaticality judgments are indicated in parentheses.) V raises to Neg to check the EPP feature and that creates a context in which Neg respects the SSF. Note that we predict V cannot stay inside VP due to the EPP of Neg, as in (23b). (Suffixation may succeed here if ‘adjacency’ is linear adjacency.) This prediction, however, is hard to test because the ellipsis test and fronting test both yield a situation where Neg is stranded. The derivations then violate the SSF anyway, similarly to what we saw for (22c).

(23) *Possible derivations for grammatical (22a)*

- a. (✓)_[VP ... t] [_{Neg} V-Neg]
- b. (*)_[VP ... V] [_{Neg} Neg] (EPP is left unchecked)

Thirdly, turn to the ungrammaticality of (22b). Two potential derivations are given below. (24a) is correctly predicted to be ungrammatical because V-raising and *su*-insertion must not both apply in the current theory. It should be noted that (24b) poses a problem; if nothing additional is said, (24b) incorrectly leads to a grammatical output representation. The EPP and the SSF are both satisfied.

(24) *Possible derivations for ungrammatical (22b) (To be revised)*

- a. (*)_[VP ... t] [_{Neg} V *si*-Neg] (Only one EPP feature is active)
- b. (✓)_[VP ... V] [_{Neg} *si*-Neg]

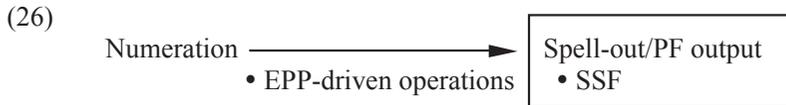
What is lacking in the theory? It is a device that allows us to encode the Last Resort character of *su*-insertion. *Su* can be inserted into a Suff only when its suffixation potentially fails. In (24b), even though there is nothing that would potentially block suffixation, *su* gets inserted.

Given this, we stipulate:

(25) *EPP-driven rules as peeking rules*

The grammar first tries checking off the EPP feature of a Suff by applying V-raising. If the application of V-raising gives rise to a structure that creates no stranded Suff, it applies V-raising. If, by contrast, the application of V-raising results in there being a stranded Suff (e.g. when V bears Part), then the grammar does not apply V-raising and apply *su*-insertion instead.

Formulated this way, EPP-driven rules can be called ‘peeking rules’ in the sense of Harada (1973). In more modern terms, the grammar allows ‘look ahead’ to see what will happen after Spell-out or in PF output when applying narrow-syntactic rules, as in (26).



Once we assume (25), the fact can be made to follow. In (27b), application of *su*-insertion should be blocked since V-raising followed by suffixation produces a legitimate output representation.

(27) *Possible derivations for ungrammatical (22b) (Revised)*

- a. (*)_[VP ... t] _[Neg V si-Neg]
- b. (*)_[VP ... V] _[Neg si-Neg] (*Su*-insertion is preempted by V-raising)

Finally, let us turn to the grammaticality of (22d). Here too, we consider two derivations: (28a, b). The current assumptions lead us to predict that (28a) is grammatical. (25) dictates that the EPP feature of Neg triggers *su*-insertion rather than V-raising, because “[_{Neg V-Part Neg]”, which V-raising would lead to, is an illegitimate surface structure. As for (28b), it is grammatical because V-raising and *su*-insertion both apply. This does not happen since Neg has only one EPP feature. (Note, though, we haven’t, though, tested if V-Part *never* raises out of VP. We turn to the issue later in Section 7.)}

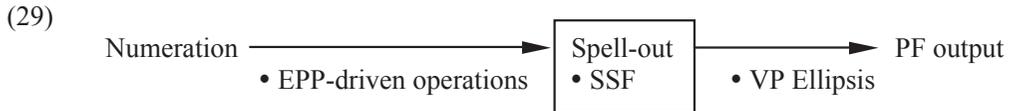
(28) *Possible derivations for ungrammatical (22d)*

- a. (✓)_[VP ... V-Part] _[Neg si-Neg]
- b. (*)_[VP ... t] _[Neg V-Part si-Neg]

Summarizing this section, we first formulated the obstacle that makes it difficult to offer an initial account of (9), i.e. how (24b) can be blocked. We proposed a way out by proposing that V-raising and *su*-insertion, now both characterized to be EPP-driven, are peeking rules. In Section 8, we introduce the notion of economy of derivation to account for the data without making recourse to look ahead. Before so doing, we briefly discuss the status of Ellipsis in the grammar in Section 6 and deal with the question of how to test the prediction made in (28b) in Section 7.

6. Where Does Ellipsis Apply?

As far as the facts considered so far are concerned, Ellipsis does not seem to bleed head raising [(1a)] or feed *su*-insertion [(7b)]. We can make this follow by assuming that head movement and *su*-insertion apply by Sell-Out while VP-ellipsis is PF deletion in Japanese. This assumption, though it is a stipulation, enables us to prevent ellipsis from affecting application of V-raising and *su*-insertion.



7. Optional Raising of “V-Part”?

As we noted in (28b) (=30)), we predict that “V-Part” never raises. Unfortunately, the available data do not allow us to draw a firm conclusion. I briefly discuss how this is so below.

(30) (*)_[VP ... t] [_{Neg} V-Part *si*-Neg]

To test our prediction, we consider the following discourse. The example in question minimally differs from the *su*-stranding ellipsis example in (7), which we saw allow the null adjunct reading.

(31) *Context*:

Hiroshi-mo Mari-mo suguni LA-keiyu-de Nihon-ni kaeru-yooni iwareta.
 both Hiroshi and Mari right.away LA-via-by Japan-to go.back -C was.told

‘Both Hiroshi and Mari were told to go back to Japan via LA right away.’

Hiroshi-wa nantoka LA-keiyu-de Nihon-ni kaeri-wa si-ta-kedo,
 Hiroshi-TOP barely LA-via-by Japan-to go.back-TOP do- PAST-although
 Mari-wa kaeri-wa si-nakatt-ta.
 Mari-TOP go.back-TOP do-NEG.PAST

‘Although Hiroshi managed to go back to Japan via LA, Mari didn’t go back to Japan.’

Speakers’ judgments vary. Some report that (31) does not easily allow a null adjunct reading, as expected by the theory, and some others that it does allow such a reading, contrary to the prediction. Admitting that more research is needed, I leave the issue for future investigations.

8. Economy Considerations: In Place of Conclusion

Thus far I have developed a grammar of Japanese that can account for the data given in (7) and (9). Funakoshi’s Generalization and H&F’s (2015a) study of *te*-complement construction

led us to assume that V-raising and *su*-insertion are EPP-driven, but not driven by the SSF, and that the grammar decides which to apply, movement or insertion, by allowing look ahead to see whether an SSF violation will arise. Borrowing from Harada (1973), we call such rules peeking rules.

Before concluding the paper, we attempt to achieve what the peeking rules do without making recourse to them. We propose that economy of derivation does the job. The idea is that we can do away with ‘look ahead’ by proposing that V-raising is more economical than *su*-insertion. (See Hornstein 2001, who proposes to deal with the complementary distribution of reflexives and pronouns in terms of the kind of economy principle that we use here; cf. Chomsky 1991) Recall that look ahead is needed to rule out (27b), repeated here.

(32) (*)_[VP ... V] [_{Neg} *si*-Neg]

In the version of the theory proposed above, the grammar first “tries” raising V, instead of inserting *su*. Since this “first attempt” successfully creates an SSF-compatible representation, then it must actually apply V-raising. Only if the first attempt fails, *su*-insertion may apply. Thus, *su*-insertion, when it is not required, is prohibited. Therefore, (32) is barred.

The essence of this explanation can be captured in terms of economy. Let us layout some core assumptions, which allow the grammar to choose a derivation where V-raising applies (call it D_{VR}) over the one where *su*-insertion applies (call it D_{SI}).

- (33) a. When [_uV_(+EPP)] is encountered in the course of derivation, either V-raising or *su*-insertion may apply
- b. In order for two derivations to count as D_{VR} and D_{SI}, they must only differ with regard to whether a [_uV_(+EPP)] feature is checked by V-raising or *su*-insertion. The presence of a focus particle makes a difference. If either D_{VR} or D_{SI} involves a Part, the other does, and if either of them does not, the other does not either.
- c. D_{VR} and D_{SI} must both be convergent, which means that D_{VR} and D_{SI} must both satisfy the SSF.

Armed with these assumptions, let us present some sample derivations to show how to rule out “[_{VP ... V}] *si*-Neg” in (34) and how to rule in “[_{VP ... V}-Part] *si*-Neg” in (35).

- (34) i. [_{VP ... V}] Neg_{[_uV_(+EPP)], [_{NV}^]}
- ii. D₁: [_{VP ... t}] V-Neg_{[_uV_(+EPP)], [_{NV}^]} (V-raising)
- ii'. D₂: [_{VP ... V}] *si*-Neg_{[_uV_(+EPP)], [_{NV}^]} (*Su*-insertion)
- iii. Both (ii) and (ii') satisfy the SSF. D₁ and D₂ both converge.
- iv. D₁ is selected over D₂ because V-raising is cheaper.

- (35) i. $[_{VP} \dots V\text{-Part}] \text{Neg}_{[uV(+EPP)], [NV^{\wedge}]}$
 ii. $D_1: [_{VP} \dots t] V\text{-Part} \text{Neg}_{[uV(+EPP)], [NV^{\wedge}]}$ (V-raising)
 ii'. $D_2: [_{VP} \dots V\text{-Part}] \text{si-Neg}_{[uV(+EPP)], [NV^{\wedge}]}$ (*Su*-insertion)
 iii. (ii) fails to satisfy the SSF. *Su*-insertion cannot fix its ill-formedness because the EPP is already checked off. D_1 fails to converge. Only D_2 does. No economy consideration is invoked.

Thus, in this theory, even though “ $[_{VP} \dots V] \text{si-Neg}$ ” and “ $[_{VP} \dots V\text{-Part}] \text{Neg}$ ” are both unacceptable, they are excluded for totally different reasons: the former is blocked by convergence of “ $[_{VP} \dots t] V\text{-Neg}$ ”, while the latter is blocked by not being convergent.

Viewed this way, the Japanese data given in (7) and (9) can be taken as an indication of usefulness of economy considerations.

References

- Chomsky, Noam (1957) *Syntactic Structures*, The Hague, Mouton.
 Chomsky, Noam (1991) “Some Notes on Economy of Derivation and Representation,” In R. Freidin, ed., *Principles and Parameters in Comparative Grammar*, Cambridge, Mass.: MIT Press, 417–454.
 Funakoshi, Kenshi (2014) *Syntactic Head Movement and Its Consequences*, Ph.D. dissertation, University of Maryland.
 Funakoshi, Kenshi (to appear) “Verb-Stranding Verb Phrase Ellipsis in Japanese,” *Journal of East Asian Linguistics*.
 Harada, Shin-Ichi (1973) “Counter Equi NP Deletion,” *University of Tokyo Research Institute of Logopedics and Phoniatrics Annual Bulletin* 7, 113-147. [Reprinted in 2000. In N. Fukui, ed., *Syntax and Meaning: S. I. Harada Collected Works in Linguistics*, Taishukan, Tokyo, 181–216.
 Hatakeyama, Yuji, Kensuke Honda and Kosuke Tanaka (2007) “Verb Movement in Japanese Revisited,” *Journal of Japanese Linguistics* 24, 89–103.
 Hayashi, Shintaro (2015) *On Head Movement in an Agglutinative SOV Language*, Ph.D. dissertation, Yokohama National University.
 Hayashi, Shintaro, and Tomohiro Fujii (2015a) “String Vacuous Head Movement: The Case of V-*te* in Japanese,” *Gengo Kenkyu* 147, 31–56.
 Hayashi, Shintaro, and Tomohiro Fujii (2015b) “Predicate Ellipsis, Null Adjuncts, and Predicate Raising in Japanese,” Paper read at the 51st Annual Meeting of the Chicago Linguistic Society, April 2015.
 Hoshi, Koji (2009) “On the Lack of VP-ellipsis in Japanese and Its Ramification in Cross-linguistic Perspective,” *Language, Culture and Communication* 41, 1–29.
 Hornstein, Norbert (2001) *Move! A Minimalist Theory to Construal*, Blackwell, Maiden.
 Hoshi, Hiroto (1995) *Passive, Causative, and Light Verbs: A Study on Theta Role Assignment*, Ph.D. dissertation, University of Connecticut, Storrs.
 Kishimoto, Hideki (2007) “Negative Scope and Head Raising in Japanese,” *Lingua* 117, 247–288.
 Kuroda, S.-Y. (1965) *Generative Grammatical Studies in the Japanese Language*. Ph.D. dissertation, MIT.

- Lasnik, Howard (1981) "Restricting the Theory of Transformations: A Case Study," In N. Hornstein and D. Lightfoot, eds., *Explanations in Linguistics*, Longmans, London, 152–73.
- Lasnik, Howard (1995) "Verbal Morphology: *Syntactic Structures* Meets the Minimalist Program," In H. Campos, P. Kempchinsky, eds., *Evolution and Revolution in Linguistic Theory: Essays In Honor of Carlos Otero*, Georgetown University Press, Washington, DC, 251–275.
- McCawley, James D., and Katsuhiko Momoi (1986) The constituent of *-te* complements. *Papers in Japanese Linguistics* 11, 1-60.
- Oku, Satoshi (1998) "LF Copy Analysis of Japanese Null Arguments," In: M.C. Gruber, D. Higgins, K. S. Olson and T. Wysocki, eds., *CLS* 34, 229–314.
- Saito, Mamoru (2006) "Expletive Replacement Reconsidered: Evidence from Expletive Verbs in Japanese," In P. Brandt and E. Fuss, eds., *Form, Structure, and Grammar: A Festschrift Presented to Günther Grewendorf on Occasion of His 60th Birthday*, Akademie Verlag, Berlin, 255–273.
- Sakai, Hiromu (1998) "Feature Checking and Morphological Merger," In D. J. Silva, ed., *Japanese/Korean Linguistics* 8, CSLI Publications, Stanford, 189-201.
- Takita, Kensuke (2011) *Cyclic Linearization and Constraints on Movement and Ellipsis*, Ph.D. dissertation, Nanzan University.