Highs and Lows of the Syntax of Agent-Oriented Adverbs in Japanese

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1. Background

In Japanese, Subject-Oriented Adverbials (SOAs) suffixed by the morpheme *mo* such as *orokani-mo* 'stupidly' and *tadasiku-mo* 'correctly' (abbreviated 'Adv-*mo*', henceforth) are forced to have a clausal reading even though they only have a manner reading when they appear without the suffix such as *orokani* 'stupidly' and *tadasiku* 'correctly' (Sawada 1978, Nakau 1980, Kubota 2015). The reading in (1a), a clausal reading, is only available for the *mo*-attached version of the adverb, while the reading in (1b), a manner reading, is only admitted to its counterpart without the morpheme. (1a) conveys the proposition that Taro rightly chose to count the change (rather than, say, choosing to steal the change), whereas (1b) means: Taro chose a right way of counting the change among a number of ways of doing it.

(1) Taroo-wa {a. tadasiku-mo / b. tadasiku} oturi-o kazoeta.
Taro-TOP correctly-*mo* correctly change-ACC counted
a. 'Correctly, Taro counted the change.' (Clausal)
b. 'Taro counted the change correctly.' (Manner)

This fact is explained rather nicely by Kubota (2015), who proposes a semantics of *mo* that captures the fact that the comparison class relevant to the gradable adjective underlying Adv-*mo* (i.e., *tadasii* 'correct' in (1)) is a set of various events including counting the change, receiving the change without counting it, and so on and so forth, assuming Ernst's (2002) characterization of the meanings of clausal and manner readings of Agent-Oriented Adverbs (AOAs), a subclass of SOAs. Kubota proposes that the clausal reading of Adv-*mo* derives from the manner reading by attaching *mo* to Adv. She also proposes that Adv-*mo* attaches to T′ to capture the passive insensitivity of Japanese AOAs (i.e., that AOAs are always surface-subject oriented in Japanese).

The present paper is interested in some aspects of the syntax of Adv-*mo*. Focusing on AOAs, we argue that evidence suggests that Adv-*mo* is potentially attached to v′ or higher domain such as Pass′ and T′ in favor of Ernst's (2002) Semantically Based Theory of adverbs (henceforth, SBT). We also argue that AOAs must be local to T in a way that can be cashed out in terms of Transfer domain (Chomsky 2000, 2001). In section 2 we observe that Adv-*mo* exhibits high as well as low behaviors. In section 3 we try to resolve this conflict by appealing to Chomsky's (2000, 2001) PIC. Section 4 discusses additional issues including the one concerning the licensing head of Adv-*mo*. Section 5 concludes the paper.

2. Apparently Conflicting Properties

There is ample evidence that Adv-*mo* must be attached high in clause structure, as Kubota (2015) claims. First, as the example (2) from Ernst (2015) shows, Adv-*mo* can precede a manner adverbial as in (2a), but it cannot follow it as in (2b).

(2) a. Taro-wa orokani-mo riroseizen-to situmon-ni kotaeta.
Taro-TOP stupidly-*mo* articulately questions-to answered
'Taro stupidly answered the questions articulately.'
b. *Taro-wa riroseizen-to situmon-ni orokani-mo kotaeta.
Taro-TOP articulately questions-to stupidly-*mo* answered
'Taro stupidly answered the questions articulately.'
(Ernst 2015: 1050, (3), with the judgements reported there)

It does not seem to affect the judgements where the object NP is placed. In (3a), it comes in between the AOA and the manner adverb, while in (3b) it comes after the AOA. The manner-AOA order consistently causes low acceptability.

(3) a. Taroo-wa orokani-mo situmon-ni riroseizen-to kotaeta.
Taro-TOP stupidly-*mo* questions-to articulately answered
'Taro stupidly answered the questions articulately.'
b. ??Taroo-wa riroseizen-to orokani-mo situmon-ni kotaeta.
Taro-TOP articulately stupidly-*mo* questions-to answered
'Taro stupidly answered the questions articulately.'

These facts can be taken as strong evidence for SBT, as Ernst (2015) argues.[1] According to the theory, a clausal adverb must take a constituent of the semantic type *Event* and then return a constituent of the same type. The assumption that manner adverbs must be combined with a constituent of the lower semantic type, *Specified Event*, explains the low acceptability of (2b) and (3b). (2a) and (3a) have no problem because a constituent containing a manner adverb, which is of the type *Specified Event* may undergo semantic type raising to *Event*.[2] At any rates, the fact that Adv-*mo* cannot appear below manner adverbs is observed in Japanese, and this follows from semantic considerations of the sort proposed in SBT.

Ernst (2002: 256) argues that "only event-internal modification is possible" within VP. This amounts to saying that type raising cannot apply within VP. Putting aside the question of why that should be the case, an interaction between Adv-*mo* and focus particles such as *sura* and *sae* 'even' shows that Adv-*mo* cannot occur in the low range. Consider (4) below. Our first intuition is that (4a) has a reading in which the manner adverb *riroseizen-to* is focused while

[1] A partial concept of the SBT that is relevant to the current discussion is given below. AOAs are defined as a kind of predicational adverbs.
(i) Arguments of Predicational adverbs must be FEOs; compositional rules for adverbs are (in effect) ordered according to the FEO Hierarchy, in that lower FEOs are composed earlier than higher ones (Ernst 2002: 53, (2.32b)).

[2] The FEO (Fact-Event Objects) hierarchy is given below (Ernst 2002: 53, (2.33)).
(i) Speech-Act > Fact > Proposition > Event > Specified Event

(4b) does not have a reading in which the AOA *orokani-mo* is focused.

(4) a. Taroo-ga RIROSEIZEN-TO situmon-ni kotae {-sura/-sae} sita.
Taro-NOM articulately questions-to answer-even did
'Taro even answered to the questions articulately.'
b. *Taroo-ga OROKANI-MO situmon-ni kotae {-sura/-sae} sita.
Taro-NOM stupidly-*mo* questions-to answer-even did
'Taro stupidly even answered to the questions.'

If *sura/sae* is a focus operator that is adjoined to a verb phrase and they must c-command their associate, this can be taken to suggest that Adv-*mo* cannot occur within the syntactic domain that the focus particle is attached to; see Erlewine (2016) and references cited therein for discussion on the c-command requirement in focus association. (5) summarizes this, even though we have to leave the exact label of the phrase open because there is no knowing exactly which constituent the focus particle is combined with.

(5) [$_{\text{Verb Phrase}}$ … ***Adv-*mo*** …]

It should be noted that there are other facts suggesting that Adv-*mo* cannot appear low in clause structure. Causative complements are one of those domains, as exemplified in (6). The reading shown in (6a), where Adv-*mo* is construed with the causer *tentyo* 'manager', is easy to obtain while the reading shown in (6b), where correctness is attributed to the causee *Taroo* is at least hard to obtain.

(6) Tentyo-wa Taroo-ni tadasiku-mo oturi-o kazoe-saseta.
manager-TOP Taro-DAT correctly-*mo* change-ACC count-CAUS.PST
a. 'It was correct of the manager to have Taro count the change.'
b. *'The manager had Taro count the change and it was correct of Taro to do it.'

Given that Adv-*mo* is always a clausal adverb and that clausal adverbs may occur below T (Ernst 2002: 302), one might think that *tadasiku-mo* 'correctly' can modify the embedded clause. This however does not seem to be the case. Let us regard this as another instance of high behavior of Adv-*mo*. (7) is its schematic representation, assuming causative complements are vP (Murasugi and Hashimoto 2004, Harley 2008).

(7) [$_{\text{TP}}$ … **Adv-mo**… [$_{\text{VP}}$ [$_{\text{vP}}$ … ***Adv-mo**…] *sase*] T]

Note that (7) is compatible with Kubota's (2015) assumption that Adv-*mo* must be attached to T′. (Kubota's motivation for this assumption will be discussed in Section 3.4.)

There is, however, a case in which Adv-*mo* behaves as if it were attached as low as v′. The relevant fact has to do with passive sensitivity. Before discussing Japanese data, let us review a standard, Ernst-style analysis of the phenomenon.

Consider the English examples in (8), which illustrate passive-sensitivity of SOAs (McConnell-Ginet 1982, Ernst 2002). In (8a), reluctance can only be attributed to *Joan*. In (8b), the same adverb can be construed with *Mary* but not *Joan* Note that, as McConnell-Ginet (1982) and other works observe, when the adverb occurs in-between the passive auxiliary and passivized verb as in (8c), it can be interpreted as either patient-oriented (*Mary*) or agent-

oriented (*Joan*).

(8) a. Joan reluctantly instructed Mary. (the agent of *reluctantly* = Joan)
b. Mary reluctantly was instructed by Joan. (the agent of *reluctantly* = Mary)
c. Mary was reluctantly instructed by Joan. (the agent of *reluctantly* = Joan, Mary)

Ernst assumes that SOAs contain PRO and that the null element is controlled by a higher argument DP via c-command, as seen in (9).

(9) Structural condition on subject-oriented interpretation:
The DP (in an A-position) denoting subject-oriented adverbs' agentive argument must c-command the adverb. (Ernst 2002: 107, (3.54))

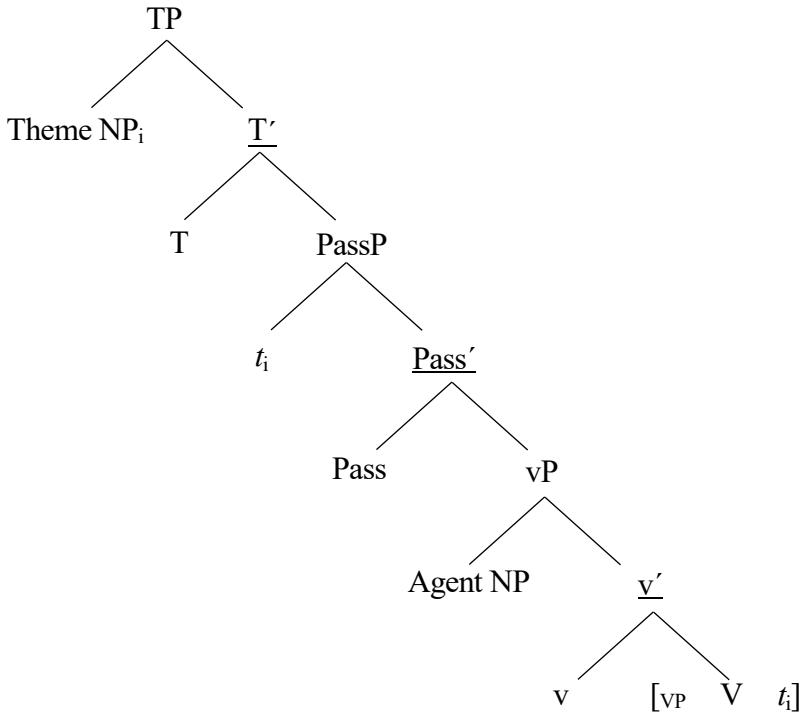
The core idea is that only in (7c) can the SOA be c-commanded by the underlying subject position as well as the derived subject position.

In passing, the variability of agent choice for SOAs is not limited to that in passives. An insightful observation is made by Matsuoka (2013) for English locative constructions. In (10a) the SOA *reluctantly* can be interpreted ambiguously when it appears between the object *Bill* and the PP *to the doctor*. Either *John* or *Bill* can be reluctant. This does not hold with (10b), however; here *cleverly* appears in between the object and the PP. Who is reluctant in (10b) is only *John*, not *Bill*. Matsuoka (2013) claims that the VP of (10a) composes a Larsonian-shell type double Pred(icational) structure where the verb *sent* is initially merged with $Pred_2P$ containing the PP *to the doctor*; and then re-merged with $Pred_1$. The spec of $Pred_2P$ is occupied by PRO that is controlled by the object *Bill* via c-command, which gives rise to the agent reading of *Bill* in (10a).

(10) a. John sent Bill reluctantly to the doctor. (the agent of *reluctantly* = John, Bill)
(Matsuoka 2013: 594, (21a))
b. John sent Bill cleverly to the doctor. (the agent of *reluctantly* = John)
(Matsuoka 2013: 595, (26b))

Focusing on agent choice in passives, let us now see how the paradigm in (8) is accounted for by (9). An Ernst-style account of the ambiguity of passives like (8c) runs as follows. Let us assume, as Ernst does, that in passives, the patient argument moves to [Spec, TP] through [Spec, PassP] while the agent argument or null element associated with the *by*-phrase is located in [Spec, vP]. If we further assume (contra Kubota 2015) that an SOA can be adjoined to T′, Pass′ or v′, then the passive clause has at least three positions for adverbs attaching below specifiers, which are underscored in (11). (The issue of how Theme NP can skip over Agent NP on its way to PassP arises. See Collins (2005).)

(11)



Under (9), the ambiguity of (8c) follows if the sentence is structurally ambiguous between a structure where *reluctantly* is attached to Pass′ and one where it is attached to v′. The former structure gives rise to the Surface-Subject-Oriented (SSO, henceforth) reading (Kubota 2015) and the latter the Deep-Subject-Oriented (DSO, henceforth) reading, respectively.

Now we are in a position to observe evidence that AOAs in Japanese can have a DSO reading: *orokani-mo* 'stupidly' can be construed with a *by*-phrase when the relevant factors are controlled for. In (12a), the active sentence supports an SSO reading. In its passive counterpart, (12b), stupidity can be attributed to the same institutional agent. The reason why (12b) is not ambiguous is because the surface subject in the passive, *eki* 'station', does not semantically qualify as an agent of adverbs of this class. (13) is the summary of the low behavior of Adv-*mo*.

(12) a. Seihu-wa orokani-mo atarasii eki-o inakamati-ni tateta.
government-TOP stupidly-*mo* new station-ACC rural.town-in constructed
'The government stupidly constructed a new station in the rural town.

b. Seihu-niyotte orokani-mo atarasii eki-ga inakamati-ni
government-by stupidly-*mo* new station-NOM rural.town-in
taterareta.
was.constructed
'A new station has been stupidly constructed in the rural town by the government.'

(13) [TP … [PassP … [vP Agent [v′ **Adv-*mo*** VP v] Pass] T]

The grammaticality of (12b) can be regarded as strong evidence that Adv-*mo* is construed with the deep subject *seihu* 'government', but one caveat is in order. Kubota (2015) claims that Adv-*mo* obligatorily exhibits SSO readings, observing that the deep subject of passive constructions such as (14) cannot be interpreted as the agent of *orokani-mo*. (14) only conveys an

interpretation like (14a) in which Mary was stupid to have allowed John to hug her. It does not mean that John was stupid to have hugged Mary as in the sense of (14b). We essentially agree with Kubota, who claims that it is hard to attribute stupidity to the agent of the hugging event in (14).

(14) Mary-wa orokani-mo John-ni dakishime-rareta.
Mary-TOP stupidly-*mo* John-DAT hug-PASS.PST
'Stupidly, Mary was hugged by John.'
a. It was stupid of Mary to have been hugged by John. (SSO reading)
b. *It was stupid of John to have hugged Mary. (DSO reading)

This judgement may make it look like Japanese SOAs are always construed with a surface subject as Kubota claims. The fact found in (12b), however, suggests that the lack of ambiguity in (14) not be regarded as a general property of Adv-*mo* in Japanese. See Section 3.4 for further discussion on (14).

In summary, the word order effect with multiple adverbs and the inability to modify causative complements suggest that Adv-*mo* must be attached high. The passive-sensitivity paradigm, however, seems to suggest that their attachment site does not always have to be so high. We have a puzzle.

3. A Solution

The state of affairs observed so far can be summarized as in (15).

(15) a. [$_{\text{Verb Phrase}}$ ... ***Adv-mo*** ...]
b. [$_{\text{TP}}$ … **Adv-mo** … [$_{\text{vP}}$ … ***Adv-mo** …] *sase* T]
c. [$_{\text{TP}}$ … [$_{\text{PassP}}$ … [$_{\text{vP}}$ Agent [$_{\text{v}'}$ **Adv-*mo*** VP v] Pass] T]

The guiding intuition here is that Adv-*mo* is licensed by being close enough to T. In (15a), Adv-*mo* is embedded inside a complement clause that lacks T. In (15c), there are some maximal projections intervening between Adv-*mo* and T (i.e., PassP) but they do not seem to constitute a clause boundary. A technical proposal is made in (16), which builds on Chomsky's (2000, 2001) Transfer. We call (16a) the T-domain-mate condition.

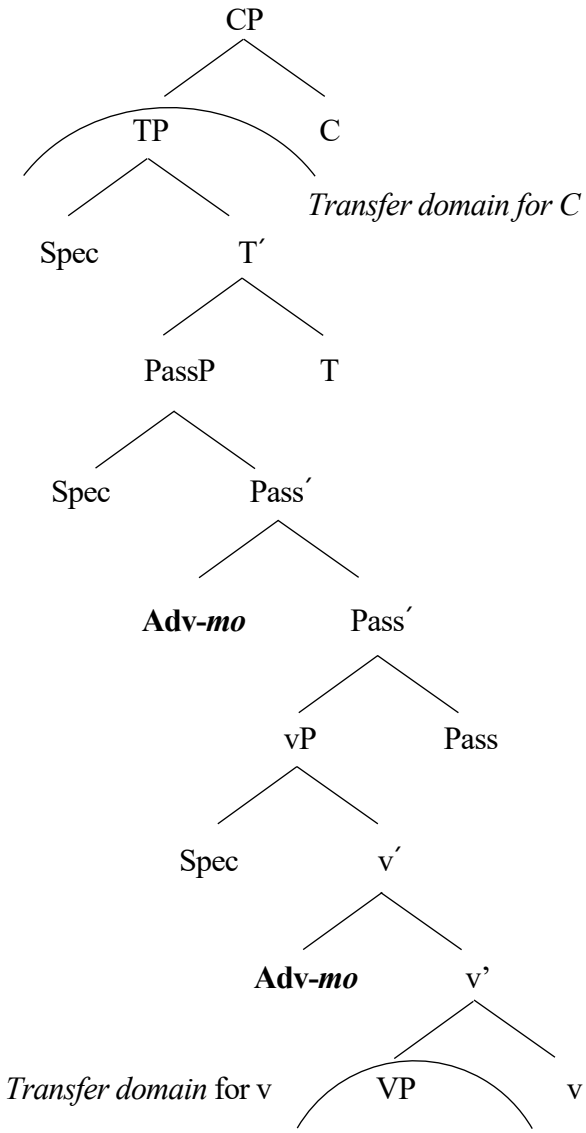
(16) a. Adv-*mo* must be in the same Transfer domain as T. (T-domain-mate condition)
b. A phase complement (e.g., VP complement for vP-phase) undergoes Transfer.

In what follows, we demonstrate that the requirement for Adv-*mo*'s syntactic distribution in (16a), together with the T-domain-mate condition in (16) explains the puzzling properties of this class of adverbs summarized in (15) straightforwardly. Although we basically agree with the guidance of SBT (Ernst 2002 and his successive work), we agree with Kubota (2015) that a syntactic assumption is needed to capture the data concerning Adv-*mo*'s orientation such as (15b) and (15c).

3.1 Availability of Deep-Subject-Oriented Reading

Let us begin with (15c) (i.e., that Adv-*mo* can be c-commanded by the underlying subject position, [Spec,vP], in passives and therefore it is possible to interpret the *by*-phrase as Adv-*mo*'s agent argument). The tree diagram in (17) illustrates the derivation of example (12b) in which Adv-*mo* is attached to v′ or Pass′. According to the definition of Transfer domain given in (16b), the VP is a T-domain for v and the TP is a T-domain for C. When Adv-*mo* is adjoined to Pass', it is c-commanded by [Spec,PassP] or [Spec,TP]. These specifiers are places that the surface subject is located at or passes through. Thus the SSO reading is ensured. The DSO reading, on the other hand, can be derived when Adv-*mo* is attached to v′. The adjunct is c-commanded by [Spec,vP], which is occupied by the *by*-phrase or a null NP associated with it.

(17)

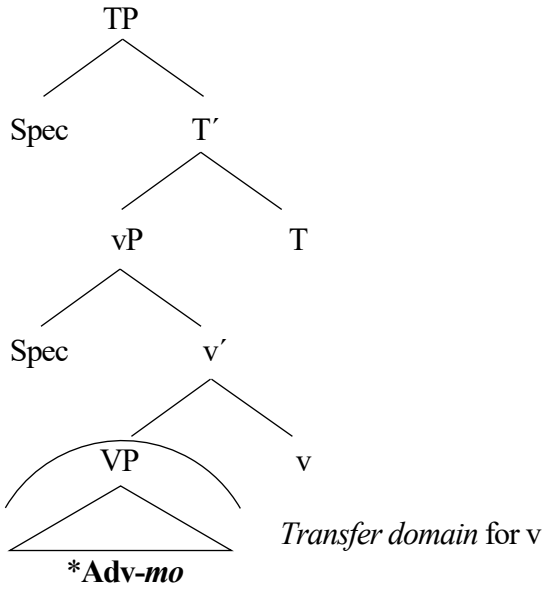


Note that this account would be unavailable if Adv-*mo* were always attached to T′ as proposed by Kubota (2015).

3.2 Ban on Adjunction within Verb Phrases

The schema in (15a) indicates that Adv-*mo* cannot appear within verb phrases, with the caveat that their exact category label remains unclear. Our analysis shown in (18) below immediately predicts that Adv-*mo* is prevented from adjoining within VP at least. According to (16), the complement of v undergoes Transfer. This means that being inside VP, Adv-*mo* cannot be in the same T-domain as T.

(18)

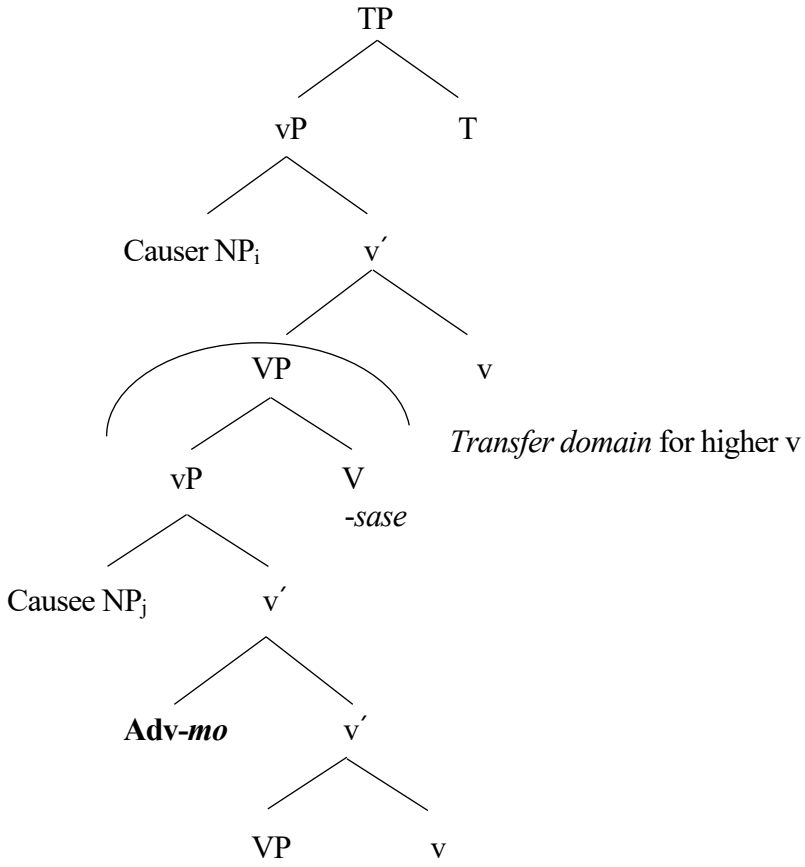


It should be noted that as mentioned in Section 2, a semantic account is also available here. That is, VP can only yield *Specified Events*, which clausal adverbs such as Adv-*mo* cannot be combined with under SBT. The analysis above shows that our proposal is compatible with this semantic account.

3.3 Ban on Adjunction within Causative Complements

Let us move onto another instance of high behavior of Adv-*mo*. As is widely assumed in the previous literature (Marantz 1984, Miyagawa 1999, Heycock 1988, Baker 1988, Miyagawa 1999, Harley 2008), there are two types of causative heads in Japanese: the so-called lexical causative involves a single vP while the syntactic causative that contains *-sase* a biclausal structure. As mentioned earlier, the syntactic causative morpheme *-sas*e is assumed to take a vP complement as its complement (Murasugi and Hashimoto 2004, Harley 2008). Given that, we have a structural analysis like (19) for the syntactic causative construction that contains Adv-*mo* in its embedded clause. This configuration clearly violates the locality condition: T is outside the T-domain for the matrix v, where Adv-*mo* is contained.

(19)



3.4 When Deep-Subject Construal is Barred

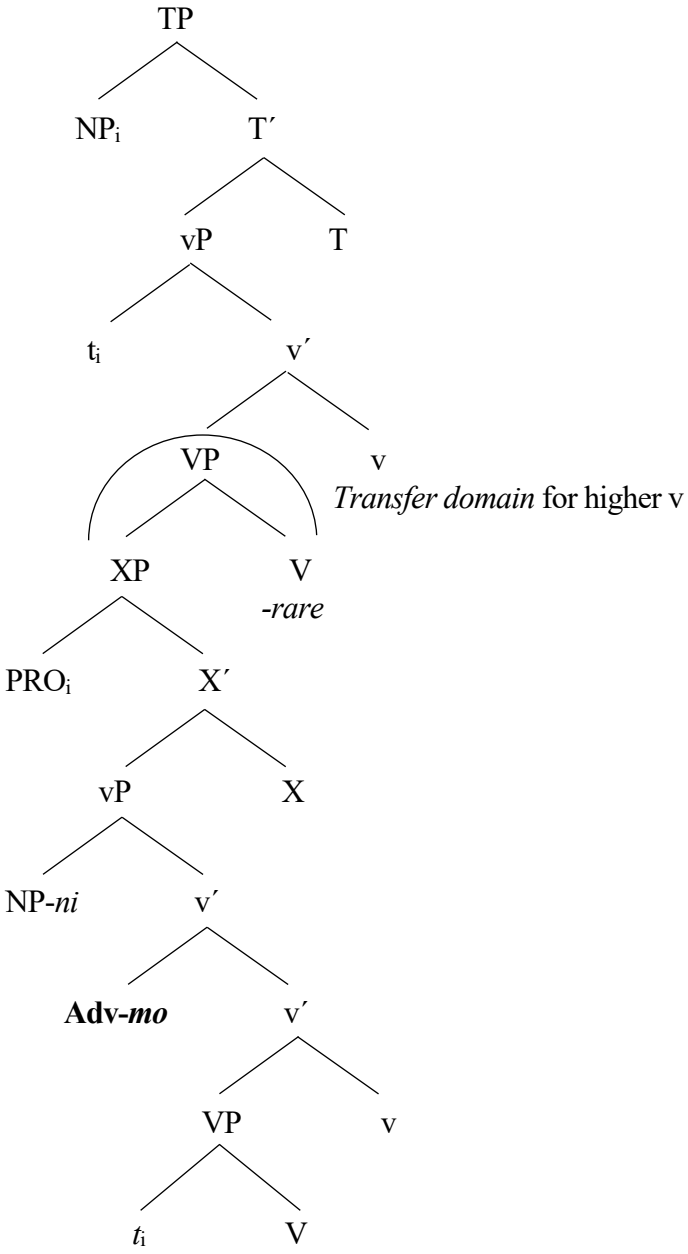
Our final concern in this section is about Kubota's (2015) observation on passive sensitivity. Kubota (2015: 1021) claims that AOAs in Japanese (e.g., *tdasiku-mo* 'correctly') are derived from their manner counterparts (e.g., *tadasiku* 'correct') by attaching the morpheme *mo* to them. Kubota's semantics of *mo* captures the fact that Adv-*mo* has only the clausal reading. Because the semantics does not severely constrain where Adv-*mo* can occur in the clausal spine, the fact that no DSO reading is possible in examples like (14) (repeated as (20) here) leads her to assume that Adv-*mo* is always attached to T′. If it could be adjoined within vP, the fact would not be captured.

(20) Mary-wa orokani-mo John-ni dakisime-rareta. (=14)
Mary-TOP stupidly-*mo* John-DAT hug-PASS.PST
'Stupidly, Mary was hugged by John.'
a. It was stupid of Mary to have been hugged by John. (SSO reading)
b. *It was stupid of John to have hugged Mary. (DSO reading)

At first glance, this fact seems to be inconsistent with what the present analysis predicts. In Section 3.1, we saw that Adv-*mo* can be attached to v′, where it is c-commanded by the underlying subject in [Spec,vP]. Note, however, that as is well known, Japanese passives come in at least two types: *niyotte* passives and *ni* passives (Kuroda 1965, 1979; Inoue 1976, Kitagawa and Kuroda 1990, Hoshi 1994, 1999). Kuroda (1979) proposes that the passive verb *-rare* of *ni* passives

imposes a selectional restriction on the surface subject. Following Kuroda, Hoshi (1994: 150) proposes that the passive morpheme "assigns an external theta-role and requires that the subject be an affectee". This means that (20) can be analyzed as involving sentence complementation by *-rar*e as a full-fledged verb. In other words, (20) should receive a biclausal analysis, on a par with the causative structure discussed in (19) unlike the *niyotte* passive discussed in (13). (21) is the structure of (20) under the DSO reading. (Following Hoshi, we assume that the *ni*-passive construction involves obligatory control and that PRO moves inside the embedded clause. This aspect of the analysis is not crucial for the current purposes. Also, as noted in (11) as well, we set aside the issue of minimality for A-movement.)

(21)



Here the Transfer domain containing Adv-*mo* excludes T, and therefore Adv-*mo* and T cannot be T-domain-mates.

4. Other Issues

Before closing the paper, let us address a couple of unsettled issues.

Note first that there exist slightly different variants of the proposed locality requirement on Adv-*mo*. We have proposed that Adv-*mo* must be in the same T-domain as T, but the data presented so far are compatible with the hypothesis that the licenser is T but cannot be non-finite T and the one that it is C. Compare the examples given in (22a-c). The adverb is construed with the embedded subject of complement clause taken by *nozom-* 'wish' or *hosi-* 'want'. In (22a), the embedded subject *Hanako* can be interpreted as the agentive argument of *orokani-mo*. The data in (22b) shows that the same adverb can be construed with the embedded subject *Hanako* of a non-finite *te*-clause. The embedded-subject-oriented reading in (22b) might sound slightly degraded, compared to that in (22a). We, however, find that (22b) sounds clearly better than its causative counterpart in (22c).

(22) a. Taroo-wa [Hanako-ga orokani-mo yakubutu-ni te-o someru]-no-o
Taro-TOP Hanako-NOM stupidly-*mo* drug-DAT hand-ACC dye-COMP-ACC
nozom-anakatta.
wish-NEG.PST
'Taro didn't hope that Hanako would stupidly get involved in drug.'

b. ? Taroo-wa Hanako-ni orokani-mo yakubutu-ni te-o some-te
hosiku-nakatta.
Taro-TOP Hanako-DAT stupidly-*mo* drug-DAT hand-ACC dye-*te*
want-NEG.PST
'Taro didn't want Hanako to stupidly get involved in drug.'

c. * Taroo-wa Hanako-ni orokani-mo yakubutu-ni te-o
Taro-TOP Hanako-DAT stupidly-*mo* drug-DAT hand-ACC
some-sase-nakatta.
dye-CAUS-NEG.PST
'Taro didn't let Hanako stupidly get involved in drug.'

If *te*-clauses are bare TPs (Nakatani 2013, Hayashi and Fujii 2015), the contrast between the (22a) and (22b) on the one hand and (22c) on the other is naturally derived from the T-domain-mate condition in (16). We may argue that Adv-*mo* must be in the same T-domain as non-finite T, as stated in (16). However, if (22b) were unacceptable, this would suggest that Adv-*mo* must be licensed by finite T or C. The unclear status of (22b) requires further research.

Second, there are different characterizations of Transfer domain in the literature. We have not tested with our data other definitions of Spell-Out or Transfer domain such as the one adopted in the Cyclic Linearization (CL) model (Fox and Pesetsky 2005, Ko 2014). As Ko (2014) argues, the standard model (Chomsky 2000, 2001) and the CL model are crucially different concerning the treatment of Transfer domain. As we have given, the Transfer domain for the standard model is the complement of each strong phase (v, C), while the one for the CL model is the whole phase including the head and its specifier. If we adopted the CL model, *niyotte* passives would be predicted not to support the DSO reading, presenting a puzzle. This is so because if the whole vP is transferred together, Adv-*mo* adjoined to v′ cannot be transferred at the same time as T.

These considerations may suggest a possibility of disconnecting Adv-*mo* licensing with Transfer. Suppose that semantics is responsible for the ban on adjunction of Adv-*mo* within

VP. Then what the syntactic condition has to cover is the distribution of Adv-*mo* in causatives, *niyotte*-passives and *ni*-passives. All these follow from a rather simpler clause-mate condition, i.e., that Adv-*mo* must be in the same clause as T. Furthermore, no matter how we define the syntactic domain where Adv-*mo* requires the presence of T, further investigations are needed to understand why the distribution of Adv-*mo* is constrained in this way.

As Sawada (1978: 17) notes, the use of the morpheme in Adv-*mo* is what is called an *exclamatory* use in conventional grammar of Japanese. Note that the sentential force of (1a), repeated as (23), is clearly declarative: the sentence can serve as an answer to questions (Zanuttini and Portner 2003).

(23) Taroo-wa tadasiku-mo oturi-o kazoeta.
Taro-TOP correctly-*mo* change-ACC counted
'Correctly, Taro counted the change.'

There is, however, some truth to the idea that it can be paraphrased as something like "How correct Taro's decision to count the change was!" The semantic and pragmatic nature of the relevant use of *mo* needs to be explored.

5. Conclusion

In this paper we have discussed the data pertaining to the syntactic distribution of *mo*-attached SOAs in Japanese. We argue that these SOAs carrying the morpheme *mo* respect the locality requirement that they must be in the same Transfer domain as T. Put differently, the syntactic distribution of Adv-*mo* is governed by the need of a T-head with which Adv-*mo* can be sent to the relevant interface. Although this condition is not incompatible with an Ernst-style Semantically Based Theory of adverbs (Ernst 2002), it is argued that the properties discussed here include ones that cannot be reduced to it.

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