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Optional A-Scrambling*

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1. Introduction

The non-uniform approach to Japanese scrambling as developed in a series of works by Shigeru Miyagawa (2001, 2003, 2005) has been quite influential. It admits two distinct kinds of scrambling operations. One is A-movement to TP Spec triggered by the EPP-feature on T and the other is A'-adjunction motivated by focusing. The obvious advantage of this approach is that scrambling is assimilated to other widely attested types of movements. There is no need to revise the theory to accommodate scrambling, and there is no need in particular to postulate 'optional movement'.

In this paper, I will develop Miyagawa's analysis of A-scrambling and explore its consequences. The discussion will lead to conclusions that contradict the non-uniform approach. More specifically, I will argue that A-

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scrambling is neither movement to TP Spec nor is triggered by the EPP-feature.

In the following section, I will introduce Miyagawa's core data and his analysis. I will also discuss the binding properties of A-scrambled phrases and present suggestive evidence that their landing site is not TP Spec. In Section 3, I will try to define 'subject' under Miyagawa's analysis and show that this leads to the conclusion that A-scrambling is not triggered by the EPP-feature. Then, in Section 4, I will suggest an alternative analysis for Miyagawa's core data. Section 5 concludes the paper.

2. Miyagawa's Analysis of A-scrambling

2.1. The Core Data

Miyagawa presents the following extremely interesting paradigm as evidence for his non-uniform approach to scrambling:

(1) a. Zen'in-ga sono tesuto-o uke -na -katta (yo /to omo -u)
all -NOM that test -ACC take-Neg-Past Part that think-Pres
'All did not take that exam'
(All > Not, *Not > All)

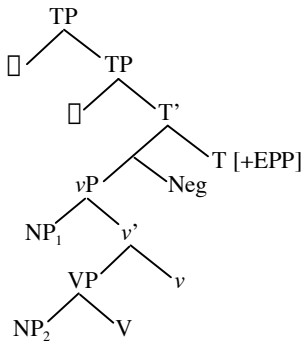
b. Sono tesuto-o_i zen'in-ga t_i uke -na -katta (yo /to omo -u)
that test -ACC all -NOM take-Neg-Past Part that think-Pres
'That exam, all did not take'
(All > Not, Not > All)

(2) Syukudai -o_i zen'in-ga [$_{CP}$ sensei -ga t_i das -u to]
homework-ACC all -NOM teacher-NOM assign-Pres that
omow-ana -katta (yo)
think -Neg-Past Part
'Homework, all did not think that the teacher would assign'
(All > Not, *Not > All)

In (1a), the quantified NP in the subject position, *zen'in* 'all', takes wide scope over negation, and the sentence expresses total negation. (1b) is derived from (1a) by scrambling the object to the sentence-initial position. In this case, the subject quantified NP is no longer sentence-initial, and it can take narrow scope with respect to negation. The example is ambiguous between total negation and partial negation. This effect is observed only with clause-internal scrambling. Thus, in (2) the subject quantified NP takes scope over negation despite the fact that the embedded object is preposed over it by long-distance scrambling.

Miyagawa argues that (1)-(2) can be readily accounted for under his non-uniform analysis of scrambling. Let us consider the structure in (3).

(3)



(1a), according to Miyagawa, is derived when the subject NP_1 moves to TP Spec ( ) in order to check the EPP-feature on T. In this case, the NP asymmetrically c-commands the negation and hence takes wide scope. (1b) can be derived from (1a) by adjoining the object NP_2 to TP ( ) by A'-scrambling. Then, the subject takes wide scope over negation just as in the case of (1a). However, given that A-scrambling can be to TP Spec, there is an alternative derivation for (1b). That is, NP_2 can move to TP Spec ( ) instead of NP_1 and satisfy the EPP requirement of T. With this derivation, NP_1 remains in *v*P Spec and hence takes narrow scope with respect to negation. The scope fact in (2) follows because movement to TP Spec cannot take place across a CP boundary, and long-distance scrambling must involve adjunction. The matrix subject must move to TP Spec in order to check the EPP-feature of the matrix T.

The generalization observed with (1)-(2) is not always clear-cut, and there are some loose ends in Miyagawa's analysis. First, the clarity of the contrasts depends on the specific quantified NP, the verb form, and the sentence-ending, as Miyagawa notes. For example, when a sentence of the form in (1a) is embedded in a conditional, a scope ambiguity emerges as (4) shows.

(4) Zen'in-ga sono tesuto-o uke -na -katta-ra, raigetu mata
all -NOM that test -ACC take-Neg-Past -if next month again
tesuto-o su -ru
test -ACC do-Pres
'If all do not take the exam, (we will) have another exam next month'
(All > Not, Not > All)

Miyagawa suggests that tense may be subjunctive in this case, and that this may be the cause of the availability of the narrow scope reading of the subject. On the other hand, potentially problematic examples are found in other contexts as well. Thus, (5) seems totally ambiguous when uttered in the

context where students have a choice of taking an exam or handing in a term paper to receive credit for a course.

(5) Zen'in-ga siken-o erab -ana -i to omo -u
all -NOM exam-ACC choose-Neg-Pres that think-Pres
'I think that all will not choose an exam (over a term paper)'
(All > Not, Not > All)

As far as the analysis is concerned, comparison of (1a) with its English counterpart raises a question. As (6) indicates, a quantified NP in TP Spec can fall within the scope of negation in English.

(6) Everyone had not left the party. There were still some people talking and drinking.

The narrow scope reading of 'everyone' may arise due to its reconstruction to *v*P Spec or because negation can take TP as its scope. Whichever the reason is, it is puzzling why the same mechanism does not yield ambiguity in the case of Japanese (1a).[1]

Nevertheless, I believe that the contrasts in (1)-(2) obtain in a wide variety of contexts and are definitely worth exploring. In the following subsection, I will consider the effect of scrambling in (1b) and show that it is observed even when the scrambled object clearly does not occupy the TP Spec position.

2.2. The Binding Properties of A-Scrambled Phrases

It was proposed originally by Mahajan (1990) that scrambling is of two types, A and A', because of its effects on the binding relations.[2] Let us consider the following examples:

(7) a. *[Otagai -no sensei]-ga karera-o hihansi -ta (koto)
each other-GEN teacher-NOM they -ACC criticize-Past fact
'*Lit*. Each other's teachers criticized them'

b. Karera-o_i [otagai -no sensei]-ga t_i hihansi -ta (koto)
they -ACC each other-GEN teacher-NOM criticize-Past fact
'*Lit*. Them, each other's teachers criticized'

[1] See also Yamashita 2001 and Kawamura 2004 for much relevant discussion. They argue that A-scrambling does not observe the locality expected of movement to TP Spec.

[2] Mahajan's proposal is based on Hindi data. See Tada 1993 and Nemoto 1993 for detailed discussion on the Japanese data considered here.

(8) a. *[Otagai -no sensei] -ga [Hanako-ga karera-o
each other-GEN teacher-NOM -NOM they -ACC
hihansi -ta to] it -ta (koto)
criticize-Past that say-Past fact
'*Lit*. Each other's teachers said that Hanako criticized them'

b. *Karera-o_i [otagai -no sensei] -ga [Hanako-ga t_i
they -ACC each other-GEN teacher-NOM -NOM
hihansi -ta to] it -ta (koto)
criticize-Past that say-Past fact
'*Lit*. Them, each other's teachers said that Hanako criticized'

(7a) is out because the anaphor *otagai* 'each other' is not bound by its antecedent *karera* 'they'. As shown in (7b), if *karera* is scrambled to a position that c-commands *otagai*, the sentence becomes grammatical. This indicates that a scrambled phrase can serve as an A-binder for an anaphor. This effect, however, is limited to clause-internal scrambling. In (8b), *karera* is scrambled across a CP boundary to a position that c-commands *otagai*, and no improvement is observed. Mahajan concludes then that clause-internal scrambling can be A-movement while long-distance scrambling is necessarily A'-movement.

If there is scrambling with A'-properties, we would expect it to apply not only across a CP boundary but clause-internally as well. This prediction is borne out by examples such as (9).

(9) Zibun-zisin-o_i Taroo-ga t_i seme -ta (koto)
self -self -ACC -NOM blame-Past fact
'Himself, Taroo blamed'

If the landing site of *zibun-zisin-o* 'self-ACC' is an A-position in (9), the example should be in violation of Condition (C) of the binding theory. Thus, it suggests that clause-internal scrambling can be A'-movement.

Miyagawa follows Mahajan and assumes that there are two types of scrambling, A and A'. As noted at the outset of this paper, his proposal is that A-scrambling is movement to TP Spec while A'-scrambling involves adjunction. Now, if we combine his analysis of the paradigm in (1)-(2) and Mahajan's account of the binding facts in (7)-(9), a clear prediction follows. I will illustrate this with the concrete examples in (10)-(11).

(10) a. Zen'in-ga zibun-zisin-ni toohyoosi-na -katta (to omo -u)
all -NOM self -self -DAT vote -Neg-Past that think-Pres
'Everyone did not vote for herself/himself'
(All > Not, *Not > All)

b. Zibun-zisin-ni$_i$ zen'in-ga t_i toohyoosi-na -katta
self -self -DAT all -NOM vote -Neg-Past
(to omo -u)
that think-Pres
'For herself/himself, everyone did not vote'
(All > Not, Not > All)

(11) a. Zen'in-ga zibun-zisin-o seme -na -katta (to omo -u)
all -NOM self -self -ACC blame-Neg-Past that think-Pres
'Everyone did not blame herself/himself'
(All > Not, *Not > All)

b. Zibun-zisin-o$_i$ zen'in-ga t_i seme -na -katta (to omo -u)
self -self -ACC all -NOM blame-Neg-Past that think-Pres
'Herself/himself, everyone did not blame'
(All > Not, Not > All)

In (10a), the quantified NP subject *zen'in* 'all' takes wide scope over negation. This is expected under Miyagawa's analysis since the subject is raised to TP Spec exactly as in the case of (1a). (10b) is ambiguous and parallels (1b). If this example is derived from (1b), the subject is in TP Spec and the scrambled phrase is adjoined to TP. In this case, the subject *zen'in* takes scope over negation. On the other hand, according to Miyagawa, the narrow scope reading of *zen'in* obtains when the scrambled phrase is in TP Spec and check the EPP-feature. Then, *zen'in* remains in *v*P Spec and is within the c-command domain of the negation. But note that the scrambled phrase is a reflexive just as in (9). That is, if it is in TP Spec, the example should be in violation of Condition (C) of the Binding theory. It follows that *zen'in* can take narrow scope even when the scrambled phrase is not in TP Spec but is in an A'-position. The examples in (11) raise the same problem.

The ambiguity of (10b) and (11b) suggests that the narrow scope reading of *zen'in* is not made possible because the scrambled phrase checks the EPP-feature on T in its place. It seems then necessary to come up with an alternative analysis for the paradigm in (1)-(2). Before I pursue this, I will raise another issue in the following section with the analysis of A-scrambling as movement to TP Spec. It has to do with the definition of 'subject'.

3. On the Definition of Subject

As is well known, the Japanese reflexives *zibun* 'self' and *zibun-zisin* 'self-self' are subject-oriented. Thus, only *Hanako* qualifies as the antecedent of *zibun* in (12) and (13).

(12) Hanako-ga Taroo-ni zibun-no hon -o okut-ta
-NOM -DAT self -GEN book-ACC send-Past
'Hanako sent her book to Taroo'

(13) Hanako-ga Taroo-o zibun-no ie -de sikat -ta
-NOM -ACC self -GEN house-at scold-Past
'Hanako scolded Taroo at her house'

However, as far as I know, the definition of 'subject' in this context is yet to be made precise. There are two obvious candidates, TP Spec and *v*P Spec. This is so since *Hanako* in (12), for example, is merged at *v*P Spec and is raised to TP Spec, as illustrated in (14).

(14) $[_{TP}$ Hanako$_i$-ga $[_{vP}$ t_i $[_{VP}$ Taroo-ni zibun$_i$-no hon-o okut-]] ta]

Interestingly, Miyagawa's analysis of A-scrambling as movement to TP Spec is compatible only with the definition of 'subject' as *v*P Spec. A scrambled object never qualifies as the antecedent of *zibun*, as shown in (15), and hence, the analysis makes incorrect predictions if TP Spec is the 'subject' in the relevant sense.

(15) Taroo-o$_i$ Hanako-ga t_i zibun-no ie -de sikat -ta
-ACC -NOM self -GEN house-at scold-Past
'Hanako scolded Taroo at her house'

In this section, I will first examine 'subjecthood' in examples with complex predicates and present evidence that phrases in *v*P Spec are indeed possible antecedents for *zibun*. This appears to provide support for Miyagawa's analysis. In Section 3.2, however, I will argue that further exploration of the definition of 'subject' leads us to the conclusion that A-scrambling is not triggered by the EPP-feature on T.

3.1. Subject as *v*P Spec

It has been known that what qualifies as a possible antecedent for *zibun* is the 'surface subject'. Thus, *zibun* can refer to the subjects of passive and unaccusative sentences, as shown in (16)-(17).

(16) Taroo-ga$_i$ karera-niyotte zibun-no ie -de t_i koros-are -ta
-NOM they -by self -GEN house-at kill -Passive-Past
(koto)
fact
'Taroo was killed by them at his house'

(17) Taroo-ga$_i$ zibun-no ie -de t_i sin-da (koto)
-NOM self -GEN house-at die-Past fact
'Taroo died at his house'

If *Taroo* in (16)-(17) moves directly to TP Spec from the internal argument position, these examples suggest that TP Spec is the 'subject position' in the relevant sense.

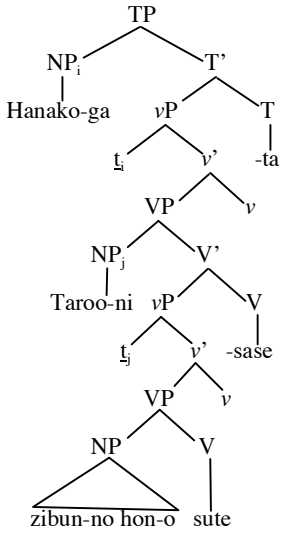
On the other hand, the examination of complex predicate constructions leads us to a different conclusion. Let us consider the following causative sentence:

(18) Hanako-ga Taroo-ni zibun-no hon -o sute -sase -ta
-NOM -DAT self -GEN book-ACC discard-make-Past
'Hanako made Taroo discard her/his book'

It has been widely assumed since Kuroda 1965 that the causative morpheme *-sase* takes a sentential complement. (18) confirms this since both the causer and the causee qualify as the antecedent for *zibun*. That is, causative sentences contain two 'subjects' and hence two sentences.

On the other hand, the embedded "clause" clearly lacks tense and does not seem to be a full-fledged TP. It is thus assumed to be a *v*P in more recent works such as Murasugi and Hashimoto 2004. The structure of (18) would then be as in (19).[3]

(19)



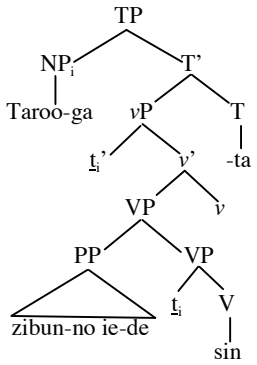
Here, *Taroo*, a possible antecedent for *zibun*, never occupies a TP Spec

[3] In (19), the embedded subject *Taroo* moves and merges with a projection of the causative verb *-sase* in order to receive the causee role. (See Saito 2001 for relevant discussion.) But this is not crucial for the discussion here. The argument is unaffected even if *Taroo* stays in the embedded *v*P Spec, or it is merged directly in the matrix VP and controls PRO in the embedded *v*P Spec.

position. Examples of this kind thus suggest that *v*P Spec, rather than TP Spec, is the 'subject position' in the relevant sense.

Although we apparently have conflicting data on the definition of 'subject', the evidence from the causative construction is more compelling. If 'subject' is defined as TP Spec, it seems impossible to accommodate examples like (18). On the other hand, (16)-(17) are consistent with the definition of 'subject' as *v*P Spec if *Taroo* moves through the *v*P Spec position on the way to TP Spec, as illustrated in (20).

(20)



And there is indeed evidence that the subjects of passive and unaccusative sentences move through *v*P Spec. Let us consider the following causative sentence:

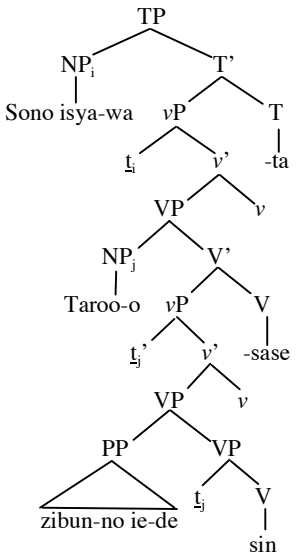
(21) Sono isya -wa Taroo-o zibun-no ie -de sin-ase-te
that doctor-TOP -ACC self -GEN house-in die-make
simat-ta
have -Past
'The doctor has let Taroo die in his own house'

This sentence can be appropriately uttered when the doctor failed to notice the seriousness of Taroo's illness and has mistakenly let him leave the hospital, indirectly causing him to die at his own house. In this case, *Taroo* is the antecedent for *zibun*.

What is interesting about (21), in comparison with (18), is that the embedded verb *sin* 'die' is unaccusative. This means that *Taroo* is initially merged at the object position of this verb, and then moves to the embedded *v*P Spec so that it qualifies as the antecedent for *zibun*. The derivation is shown in (22).[4]

[4] The final verb *simat-ta* in (21) adds perfective meaning to the sentence. It is omitted in the structure in (22).

(22)



(22) indicates that the object of an unaccusative verb can move through *v*P Spec on the way to a higher position. Then, we would expect this to be the case in (17) as well. That is, the sentence may be derived as in (20), and there is no compelling reason to include TP Spec among the 'subject positions' to accommodate unaccusative sentences. Precisely the same argument can be constructed for the passive (16) on the basis of (23), where the causative *-sase* takes a passive complement:

(23) Taroo-wa dai-sensei -o zibun-no gakusei-tati-niyotte
-TOP big-teacher-ACC self -GEN student-PL-by
suuhais-are -sase-te oi -ta
worship-Passive-make leave-Past
'Taroo kept letting the big professor be worshiped by his/her students'

The internal argument of the complement verb *suuhais* 'worship' can be the antecedent of *zibun* in this example.

It was shown in this subsection that *v*P Spec is a plausible candidate for the position of the possible antecedents for the subject-oriented reflexive *zibun*. As noted at the outset of this section, the definition of 'subject position' as TP Spec is incompatible with the EPP analysis of A-scrambling. In this sense, the discussion here provides indirect support for the analysis. However, I will show in the following subsection that a closer examination of the relevant data leads to different conclusions. I will argue in particular that 'subjects' should be defined as those phrases that check the EPP-feature and that A-scrambling is not feature-driven.

3.2. A-Scrambling and the EPP-feature on *v*

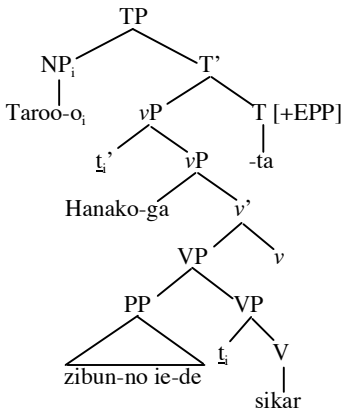
Recall that a scrambled object does not qualify as the antecedent for *zibun*. The relevant example (15) is repeated below as (24).

(24) Taroo-o_i Hanako-ga t_i zibun-no ie -de sikat -ta
-ACC -NOM self -GEN house-at scold-Past
'Hanako scolded Taroo at her house'

If 'subject' is defined as *v*P Spec, this seems to be expected under the hypothesis that the landing site of A-scrambling is TP Spec. But the situation turns out to be more complex when the precise derivation of (24) is considered.

Note that (24) is a transitive sentence, and hence, its *v*P should constitute a derivational phase.[5] This implies that the scrambling of *Taroo* should proceed through the edge of *v*P. If the final landing site is TP Spec, the derivation should be as in (25).

(25)



Then, after all, the EPP analysis of A-scrambling makes a false prediction with respect to (24) whether 'subject' is defined as TP Spec or *v*P Spec.

The problem is clearer when we consider, again, the causative construction. As shown below, a causative sentence counts as simplex for the locality of A-scrambling.

(26) Karera-o_i [otagai -no sensei -ga Taroo-ni t_i
they -ACC each other-GEN teacher-NOM -DAT
home -sase -ta] (koto)
praise-make-Past fact
'*Lit*. Each other's teachers made Taroo praise them'

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[5] I assume, following Chomsky 2000, for example, that C and transitive/unergative *v* (*v** in Chomsky's terms) project phases.

This is not surprising because scrambling in this case does not cross a CP boundary. And a scrambled phrase cannot be the antecedent for *zibun* in a causative sentence, as shown in (27).

(27) Hanako-o$_i$ [Ziroo-ga Taroo-ni zibun-no ie -de t_i
-ACC -NOM -DAT self -GEN house-at
nagur-ase -ta] (koto)
praise-make-Past fact
'Ziroo made Taroo hit Hanako at his house'

I have been assuming that the causative morpheme *-sase* takes a *v*P complement. If this is correct, the scrambling in (27) must proceed via the edges of two *v*P's; the complement *v*P and the matrix *v*P. Hence, this example is clearly incompatible with the definition of 'subject' as *v*P Spec.

Although (24) and (27) were discussed as problematic examples for the EPP analysis of A-scrambling, the issue they raise is a general one. As discussed in the preceding subsection, when an internal argument of a passive verb or an unaccusative verb moves through *v*P Spec, it qualifies as the antecedent of *zibun*. On the other hand, when an argument is scrambled through *v*P Spec, it does not count as the 'subject'. Then, how can these two cases be distinguished?

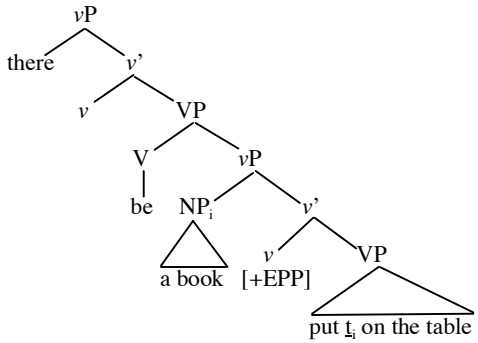
It seems to me that Lasnik's (1995) discussion on existential passive sentences provides a hint toward the solution to this problem. Considering the English counterparts of the Italian (28), discussed in Belletti 1988, he presents the contrast in (29).

(28) È stato messo un libro sul tavolo
has been put a book on the table

(29) a. *There has been put a book on the table
b. There has been a book put on the table

(29a), which corresponds to (28), is ungrammatical; the object must be preposed in front of the passive verb as in (29b). In order to account for this short movement, Lasnik suggests that there is a functional head with an EPP-like feature right above the passive verb. If the relevant functional head is *v* and the feature is EPP, the structure of the relevant part of (29b) will be as in (30).

(30)

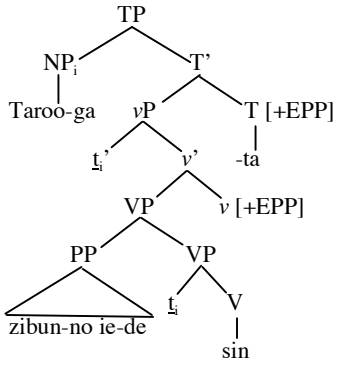


If this analysis is correct, and in particular, if passive and unaccusative *v* has an EPP-feature, a more precise analysis becomes possible for (21) and (23). It was left unaccounted for why *Taroo-o* 'Taroo-ACC' moves though *v*P Spec in (22). The EPP-feature on the embedded *v* provides a reason for this step of the movement. Further, this forces the internal argument to move through *v*P Spec on the way to TP Spec in the simple unaccusative sentence in (17), which is repeated below as (31).

(31) Taroo-ga$_i$ zibun-no ie -de t_i sin-da (koto)
-NOM self -GEN house-at die-Past fact
'Taroo died at his house'

The precise derivation of this example will be as in (32).

(32)



Let us now return to the scrambling example in (24) with this conclusion. The example is repeated below as (33).

(33) Taroo-o$_i$ Hanako-ga t_i zibun-no ie -de sikat -ta
-ACC -NOM self -GEN house-at scold-Past
'Hanako scolded Taroo at her house'

As noted above, *Taroo-o* moves through the edge of *v*P in this example. If this movement to *v*P Spec is driven by the EPP-feature on *v*, then (33) and (31) will be indistinguishable again. The only way to differentiate these two cases, as far as I can tell, is to say that movement to *v*P Spec is triggered by the EPP-feature in (31) but not in (33) and that only those phrases that satisfy an EPP requirement counts as the 'subject'. This correctly accounts for the fact that the subject of an unaccusative/passive verb qualifies as the antecedent of *zibun* while a scrambled object does not. But then, we are led to the conclusion that there is local A-scrambling to the edge of *v*P that has nothing to do with the EPP. This amounts to saying that there is optional A-scrambling. And if scrambling can take place to the edge of *v*P without the aid of an EPP-feature, there does not seem to be reason to suppose that it cannot move a phrase to the edge of TP in the same way. Thus, the examination of the distribution and the interpretation of *zibun*, after all, raises serious doubts for the EPP analysis of A-scrambling.

Given the evidence against the EPP analysis of A-scrambling presented so far, I will suggest an alternative approach to Miyagawa's paradigm (1)-(2) in the following section. In the remainder of this section, I will point out a few consequences of the proposed account for the possible anteced-ents of *zibun*.

I just argued that possible antecedents for *zibun* are not those phrases in a specific position such as TP Spec or *v*P spec, but those that check the EPP-feature. Thus, phrases in TP Spec and *v*P Spec qualify as 'subjects' as long as they satisfy an EPP requirement of a head. This has a couple of obvious implications. First, let us reconsider the simple causative example in (18), repeated below as (34).

(34) Hanako-ga Taroo-ni zibun-no hon -o sute -sase -ta
-NOM -DAT self -GEN book-ACC discard-make-Past
'Hanako made Taroo discard her/his book'

Here the embedded verb *sute* 'discard' is transitive and its external argument *Taroo* is a possible antecedent for *zibun*. Then, a transitive/unergative *v* must also carry an EPP-feature and it must be checked by the external argument.

Second, the EPP-feature of *v* cannot play any part in successive-cyclic operator movement. It is proposed in Chomsky 2000 and 2001, for example, that an EPP-feature can be assigned freely to a transitive/unergative *v* and this makes the initial step of the *Wh*-movement in (35) possible.

(35) $[_{CP}$ What$_i$ did $[_{TP}$ John$_j$ $[_{vP}$ t_i' $[_{vP}$ t_j $[_{VP}$ buy t_i]]]]]

But if an EPP-feature can be assigned freely to a transitive/unergative *v*, in addition to the one checked by the external argument, then we lose the

account for the fact that a scrambled object does not qualify as the antecedent of *zibun*. This is so because *Hanako* in (27), for example, should be able to check the additional EPP-feature of *v* on its way to the sentence-initial position and be the antecedent for *zibun*. I tentatively suggest that the feature that is assigned freely to *v* is not the EPP-feature but the P-feature, which Chomsky (2000) postulates for the operator movement to an intermediate CP Spec. The P-feature, then, can be assigned to any phase head and attract an operator to its Spec position, while the EPP-feature is inherent in T and *v*.

One example that is still left unaccounted for is the Italian (28), repeated below in (36).

(36) È stato messo un libro sul tavolo
has been put a book on the table

If the passive *v* universally has an EPP-feature, it is not clear why *un libro* 'a book' need not be preposed to the position in front of *messo* 'put' as in its English counterpart (29b). Although I do not have a solution to this problem, I would tentatively assume that the null expletive is initially merged at *v*P Spec and checks the EPP-feature of *v* in (36). English and Italian are then parameterized in the ability of expletives to check the EPP-feature on *v*. Since the expletive *there* is unable to check the EPP-feature of *v*, it is necessary to raise *a book* to *v*P Spec in (29b).[6]

4. Miyagawa's Paradigm and the First-Constituent Effects

Let us finally return to Miyagawa's examples in (1)-(2), repeated below in (37)-(38).

(37) a. Zen'in-ga sono tesuto-o uke -na -katta (yo /to omo -u)
all -NOM that test -ACC take-Neg-Past Part that think-Pres
'All did not take that exam'
(All > Not, *Not > All)

b. Sono tesuto-o_i zen'in-ga t_i uke -na -katta (yo /to omo -u)
that test -ACC all -NOM take-Neg-Past Part that think-Pres
'That exam, all did not take'
(All > Not, Not > All)

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[6] *There* should be able to check the EPP-feature of unaccusative *v* in English as the following example is grammatical:

(i) There arrived someone

It remains to be seen what property distinguishes English passives on the one hand and Italian passives and English unaccusatives on the other.

(38) Syukudai -o$_i$ zen'in-ga [$_{CP}$ sensei -ga t_i das -u to]
homework-ACC all -NOM teacher-NOM assign-Pres that
omow-ana -katta (yo)
think -Neg-Past Part
'Homework, all did not think that the teacher would assign'
(All > Not, *Not > All)

I argued in Section 2 that the narrow scope reading of *zen'in-ga* 'all-NOM' observed in (37b) is possible even when the scrambling exhibits A' properties. In Section 3, I pointed out that the analysis of A-scrambling as an EPP-driven movement to TP Spec faces a problem with the characterization of possible antecedents for *zibun*. I will then suggest an alternative approach to (37)-(38) in this section.

Note first that the effect of scrambling in (37b) is of a familiar kind observed with many other phenomena. That is, scrambling can but need not affect the interpretation of a sentence. Let me illustrate this point with the interpretation of phrases marked by the topic marker *-wa*. As discussed in detail in Kuno 1973, a *wa*-marked phrase can be interpreted as a 'theme' or as a contrastive topic. Thus, (39) is ambiguous.

(39) Taroo-wa sono hon -o yon -da
-TOP that book-ACC read-Past
a. 'Speaking of Taroo, he read that book' (thematic)
b. 'Taroo read that book, but the others did not' (contrastive)

It is also known that although any phrase can be marked by *-wa*, the thematic interpretation is possible only when the phrase is in the sentence-initial position. The object in (40), for example, receives only contrastive interpretation.

(40) Taroo-ga sono hon -wa yon -da
-NOM that book-TOP read-Past
'Taroo read that book, but he did not read the others' (contrastive)

Scrambling interacts with these interpretive properties of *wa*-marked phrases in an interesting way. Let us first consider the scrambled version of (39) shown in (41).

(41) Sono hon -o$_i$ Taroo-wa t_i yon -da
that book-ACC -TOP read-Past
'Taroo' - thematic or contrastive as in (40)

Here, the interpretation of *Taroo-wa* remains ambiguous; in particular it can be interpreted thematically despite the fact that the scrambled object precedes it. This shows that a scrambled phrase need not count in the calcula-

tion of the first constituent. At the same time, the following examples indicate that a scrambled phrase can participate in this calculation:

(42) a. Taroo-ga soko-e it -ta
-NOM there-to go-Past
'Taroo sent there'

b. Taroo-wa soko-e -wa it -ta
-TOP there-to-TOP go-Past
'Taroo' - thematic or contrastive, 'soko-e' - contrastive

c. Soko-e -wa$_i$ Taroo-wa t_i it -ta
there-to-TOP -TOP go-Past
'soko-e' - thematic or contrastive, 'Taroo' - contrastive or thematic

(42b) exhibits the expected pattern; only the sentence-initial *wa*-phrase can be interpreted thematically. (42c) is derived from (42b) by scrambling *soko-e-wa* 'there-to-TOP' to the sentence-initial position, and the phrase can be interpreted as a theme, which indicates that a scrambled phrase need not but still can count as the first constituent.

The examples in (37) can be understood in basically the same way. (37a) indicates that a quantified NP in the sentence-initial position takes wide scope over negation. In (37b), the scrambled object can count as sentence-initial. In this case, the subject quantified NP can assume narrow scope with respect to negation. On the other hand, a scrambled phrase need not count in the calculation of the first constituent. If it does not, the subject quantified NP remains the first constituent and takes scope over negation. Thus, (37a-b) and (42b-c) seem to be two instances of the same general phenomenon.

Then what is the position of the first constituent? The English example in (6), repeated below as (43), suggests that negation can take scope over the subject in TP Spec.

(43) Everyone had not left the party. There were still some people talking and drinking.

If this is true in Japanese as well, then the first constituent position must be outside TP as a quantified NP is this position necessarily takes scope over negation. This is in accord with the conclusion drawn from examples like (44) (= (10b)) that the position is an A'-position.

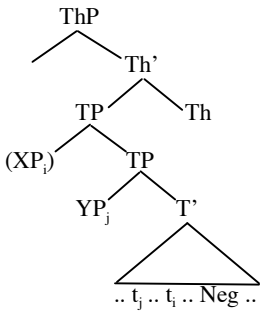
(44) Zibun-zisin-ni$_i$ zen'in-ga t_i toohyoosi-na -katta (to omo -u)
self -self -DAT all -NOM vote -Neg-Past that think-Pres
'For herself/himself, everyone did not vote'
(All > Not, Not > All)

Recall that if *zibun-zisin-ni* 'self-self-DAT' in this example is in an A-

position, the example should be in violation of Condition (C) of the Binding theory.

Based on these considerations, I would like to propose that there is a functional head Th above TP and that the first constituent is attracted to its Spec position. The structure of a Japanese sentence will then be as in (45).

(45)



YP is the subject (in TP Spec) and XP is a scrambled phrase. Both can be within the scope of negation, say, because negation takes TP as its scope. However, the functional head Th (for 'theme') attracts the closest phrase to its Spec. If there is no scrambling, the subject is raised to this position and takes scope over negation.

The situation is slightly more complex when scrambling takes place. We have seen that scrambling may or may not affect interpretation. I assume here along the lines of Tada 1993 that this is because scrambling can be undone in LF.[7] If a scrambled phrase stays at the landing site in LF, it can serve as the antecedent of an anaphor as in (46) (= (7b)).

(46) Karera-o$_i$ [otagai -no sensei]-ga t_i hihansi -ta (koto)
they -ACC each other-GEN teacher-NOM criticize-Past fact
'*Lit*. Them, each other's teachers criticized'

On the other hand, if scrambling is undone, there is no violation of Condition (C) in (47) (= (9)).

(47) Zibun-zisin-o$_i$ Taroo-ga t_i seme -ta (koto)
self -self -ACC -NOM blame-Past fact
'Himself, Taroo blamed'

Finally, the ungrammaticality of (48) (= (8b)) indicates that long-distance scrambling is necessarily undone in LF.

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[7] This is for ease of exposition. For a more principled interpretive mechanism that has the effect of 'LF undoing', see Saito 2005.

(48) *Karera-o$_i$ [otagai -no sensei]-ga [Hanako-ga t_i
they -ACC each other-GEN teacher-NOM -NOM
hihansi -ta to] it -ta (koto)
criticize-Past that say-Past fact
'*Lit*. Them, each other's teachers said that Hanako criticized'

Given this property of scrambling, the scope facts in (37b) and (38) can be correctly captured. (37b) involves clause-internal scrambling. If scrambling is not undone, the scrambled phase is attracted to ThP Spec and the subject *zen'in* 'all' remains in TP Spec. Hence, the narrow scope reading of the subject is possible. On the other hand, if the scrambled phrase moves back to its initial position, the subject *zen'in* moves to ThP Spec and takes scope over negation. (38) is straightforward because long scrambling is always undone. The matrix subject must move to ThP Spec and take wide scope. Note that this account implies that the movement to ThP Spec is covert as it is fed by the LF undoing of scrambling.[8]

The thematic interpretation of *wa*-phrases can be accounted for in the same way. As only the sentence-initial *wa*-phrase can be interpreted as the theme, the following interpretive mechanism can be assumed:

(49) A *wh*-phrase is interpreted as the theme only if it is in ThP Spec.

A clause-internally scrambled phrase may stay at the landing site or move back to its initial position. Hence, in (42c), repeated below as (50), either the scrambled phrase or the subject can be interpreted as the theme.

(50) Soko-e -wa$_i$ Taroo-wa t_i it -ta
there-to-TOP -TOP go-Past
'soko-e' - thematic or contrastive, 'Taroo' - contrastive or thematic

Following Heycock 2006, I assume that the thematic interpretation of *wa*-phrases is achieved as a matrix sentence is assigned an information structure. (49), then, should be operative in the mapping from the syntactic structure to the information structure.

5. Conclusion

In this paper, I examined Miyagawa's paradigm in (1)-(2) and proposed an alternative analysis. I argued in the course of the discussion that contrary to his proposals, A-scrambling is neither EPP-driven nor is to TP Spec. On the other hand, the proposed analysis adapts his insights; I have postulated a functional projection above TP and made it play the role Miyagawa at-

[8] The analysis, as formulated here, requires that the undoing of scrambling precede movement to ThP Spec in LF. This stipulation in unnecessary under the more principled mechanism for LF undoing alluded to in Fn.7.

tributed to TP. A phrase in the Spec position of this functional projection takes wide scope over negation, and when it is a *wa*-phrase, it can be interpreted thematically. Thus, the projection plays an important role in semantic/discourse interpretation. Although scrambling seems to lack semantic or discourse properties of its own, a phrase scrambled to the sentence-initial position, at least in some cases, qualifies to move to the Spec position of this functional projection. Hence, it can be said that the projection provides a "motivation" for scrambling, allowing it to have semantic and discourse effects.

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