The Left Periphery of CP Phases in Japanese[1]

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Abstract. This paper discusses syntactic conditions under which complement clauses constitute CP phases in Japanese. Previous studies argue that in Japanese, long distance A-scrambling is permitted out of subjunctive and factive complements that are headed by complementizers and thus considered CP. This suggests that the category CP is not sufficient to characterize phases, and that close investigation is required of the decisive factor determining the phasehood of complement clauses. Although Uchibori (2000) attributes the non-phasehood of such complement clauses to defective tense or the nominal property of the complementizer *koto*, I propose an alternative approach that can uniformly account for the non-phasehood in terms of the left periphery. It is argued from considerations of embedded root phenomena that the thematic topic *wa* is not allowed and the exhaustive listing focus *ga* is not forced in non-phasal complements. Building on the left peripheral structure proposed by Haegeman (2003a;b; 2006a;b) (cf. Haegeman 2007; 2009; 2010a;b; Haegeman-Ürögdi 2010), I suggest that the lack of the thematic topic *wa* and the obligatory exhaustive listing focus *ga* reflects the absence of TopP and FocP in the left peripheral structure. The results obtained in this paper point toward a correlation between the phasehood of Japanese complement clauses and the totality of the left peripheral structure. It is also argued (contra Hiraiwa 2010) that Japanese factive complements do not necessarily support operator movement.

Keywords. CP phases, embedded topicalization/focalization, left periphery, complementizers

1. Introduction

An important issue in syntactic theory is the cycle on which syntactic objects built up by operations, i.e., Merge and Move, can be assigned meanings and sounds by

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interfacing components. Previous approaches in generative grammar assumed that semantics (LF) and phonology (PF) access the syntactic objects only once at the end of the derivation. Within the framework of the Minimalist Program (Chomsky 1993, et seq.), however, it is assumed that narrow syntax feeds semantics and phonology many times in the course of the derivation. This view is put forth by Uriagereka (1997), and developed by Chomsky (2000; 2001; 2008) in terms of phases. Once the syntactic computation reaches a domain called a phase, elements included within it (except a head and a specifier) are cyclically passed on to LF and PF for evaluation and interpretation. This way, it is possible to minimize the computational load incurred by keeping phrase markers in active memory. Since elements within a phase are taken from narrow syntax, further computation is not able to target anything within the complement of a phase head. This important concomitant of multiple Spell-Out by phases is known as the Phase Impenetrability Condition.

(1) *Phase Impenetrability Condition* (PIC)
In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.
(Chomsky 2000, 108)

Chomsky argues that phases are propositional domains. Although it is not entirely clear how the semantic notion 'proposition' is encoded in syntax, Chomsky's view is that at least transitive *v*Ps and CPs are phases. Transitive *v*Ps are considered propositional since they contain a complete argument structure including a thematic external argument. Note that in this regard verbal phrases such as passives and unaccusatives do not count as phases (they are *weak* phases in Chomsky's terms) because they are defective without a thematic external argument. As far as CP is concerned, it is construed as propositional in that it includes tense, event structure and force. If we take this definition of phases, it may be tempting to conclude that if the category of a domain is CP it constitutes a phase. As will be discussed later, however, this prediction does not always hold. Nemoto (1993) and Uchibori (2000) argue that long distance A-scrambling is admissible out of subjunctive (including control) and factive complements in Japanese, and that these complements are CPs headed by overt complementizers. This suggests that a set of complement clauses do not form a phase in

spite of their CP status, because if they do form a phase they should block A-movement out of them through PIC. The purpose of this paper is to elucidate the syntactic conditions under which complement clauses constitute a CP phase. Since not much research has focused on the defining factor for a domain to constitute a CP phase, it is hoped that this study will contribute to a better understanding of CP phases from a syntactic perspective.

In particular, by investigating the properties of subjunctive and factive complements in Japanese, I will show that the defining property for a domain to constitute a CP phase is the entirety of the left peripheral structure proposed by Haegeman (2003a;b; 2006a;b). It is argued that Japanese subjunctive and factive complements do not permit either the thematic topic *wa* or the obligatory exhaustive listing focus *ga* which are considered to occupy positions in the left periphery. If these subjunctive and factive complements do not constitute phases, this leads to the plausible generalization that a deficient left peripheral structure without TopP and FocP deprives complement clauses of their phasehood. Unlike Uchibori's (2000) analysis, my proposal in terms of the left periphery succeeds in uniformly accounting for the non-phasehood of subjunctive and factive complements. It is also argued that the left peripheral structure posited by Haegeman (2003a;b; 2006a;b) is more suitable for Japanese than her more recent approach (Haegeman 2007; 2009; 2010a;b ; Haegeman & Ürögdi 2010) which assumes event operator movement, because Japanese factive complements do not necessarily entail movement of an event operator (cf. Hiraiwa 2010).

This paper is structured as follows. In the next section, I will outline the properties of Japanese subjunctive and factive complements based on Uchibori (2000) as a starting point for the following discussion. Section 3 demonstrates the transparency of these complements using evidence from long distance A-scrambling. Section 4 argues how Uchibori (2000) accounts for their non-phasehood in terms of tense and complementizer. In section 5, I will show that the thematic topic *wa* and the exhaustive listing focus *ga* are not available in these complements, and that this can be captured in terms of Haegeman's (2003a;b; 2006a;b) left peripheral structure. Section 6 argues that contrary to the suggestion by Hiraiwa (2010), factive complements in Japanese does not necessarily support operator movement. Section 7 concludes the paper.

2. The properties of subjunctive and factive complements

In this section, the properties of Japanese subjunctive and factive complements are outlined following Uchibori (2000) in order to lay the foundation for the following discussion. In particular, attention will be directed to tense and complementizers in these complements.

The term 'subjunctive' in relation to Japanese may not be clear when compared with languages that have subjunctive inflection. According to Uchibori (2000), Japanese subjunctive complements do not differ morphologically from indicative complements in that they contain the non-past tense suffix *(r)u* or the past tense suffix *ta* (note that Japanese does not have agreement morphology). Instead of inflection, she argues that the irrealis nature of subjunctive complements is encoded by the complementizers *yoo(ni)* or *koto*. It is important to note that subjunctive complements are categorized into a control type in which the embedded subject is PRO, and a non-control type in which the embedded subject is an overt lexical item.[2]

Let us first look at control type subjunctive complements. As shown below, the complementizer can be either *yoo(ni)* or *koto*. The embedded predicate must be in the non-past (present) form irrespective of complementizer choice.

(2) *Subject control*

John$_i$-wa	[PRO$_i$	zyugyoo-o	sabor-u/*sabot-ta	yoo(ni)/koto-o]
John-top	[PRO	class-acc	skip-pres/skip-past	C/C-acc]

keikakusi-ta.
plan-past
'John planned to skip the class.'

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[2] In Japanese, the distribution of PRO subjects may not be complementary to that of overt reflexives and pronouns, as argued by Sakaguchi (1990) and Watanabe (1993) (see also Borer 1989 for a similar observation regarding Korean). As shown below, a PRO subject as well as an overt reflexive/pronoun are available as long as they refer to the controller.

(i) Mary-ga John$_i$-ni [PRO$_i$/?kare$_i$-ga/?karezisin$_i$-ga ik-u yoo(ni)/koto-o] motome-ta.
Mary-nom John-dat [PRO/he-nom/himself-nom go-pres C/C-acc] ask-past
'Mary asked John to go.'

Although it is debatable what licenses reflexives/pronouns in this position (see Uchibori 2000, ch. 4), I will not dwell on this matter any further as it would carry us too far away from the purpose of this paper. For now, it suffices to maintain that a PRO subject is available in control complements whereas it is not in non-control complements.

(3) *Object control*

John-wa Bob$_i$-ni [PRO$_i$ Mary-o suisensu-ru/*suisensi-ta
John-top Bob-dat [PRO Mary-acc recommend-pres/recommend-past
yoo(ni)/koto-o] motome-ta.
C/C-acc] ask-past
'John asked Bob to recommend Mary.'

Non-control type subjunctive complements are selected by verbs of wishing and praying, and can be headed either by the complementizer *yoo(ni)* or *koto*. Unlike control type subjunctive complements, the past tense is permitted. However, as shown in the contrast between (4a) and (4b), the past tense is allowed only with the complementizer *koto*.

(4) *Non-control type*

(a) John-wa [Mary-ga buzini kaerituk-u yoo(ni)/koto-o]
John-top [Mary-nom safely return.home-pres C/C-acc]
negat-ta/inot-ta.
wish-past/pray-past
'John wished/prayed that Mary would return home safely.'

(b) John-wa [Mary-ga buzini kaeritui-ta *yoo(ni)/koto-o]
John-top [Mary-nom safely return.home-past C/C-acc]
negat-ta/inot-ta.
wish-past/pray-past
'John wished/prayed that Mary had returned home safely.'

From what we have seen so far, it is clear that the complementizer *yoo(ni)* only permits non-past predicates. On the other hand, if the complementizer is *koto*, it is the governing verb that determines the tense of embedded predicates. When the embedded predicate is non-past, it has an irrealis interpretation in which the event denoted in the complement clause is unrealized or future with respect to the time at which the matrix event takes place.

In addition to this, Uchibori (2000) claims that factive complements are also categorized into subjunctives, as they are headed by the seemingly subjunctive complementizer *koto*. In opposition to this perspective, I do not regard factive

complements as a type of subjunctives. This is because first of all factive complements are not construed as irrealis since the proposition in factive complements is presupposed to be true (Kiparsky-Kiparsky 1970). Moreover, contrary to her observation, *koto* is not the only complementizer that heads factive complements because *no* and *to* are also available. *No* is traditionally considered a clause nominalizer, and is interchangeable with *koto* in most cases. On the other hand, *to* is a complementizer that also heads indicative complements to verbs such as *omo-u* 'think' and *i-u* 'say', and most typically occurs in factive complements to so-called semi-factive verbs like *kizuk-u* 'notice' or emotive factive verbs such as *yorokob-u* 'be.glad'.[3] In addition to the variation in complementizers, it is noteworthy that factive complements can take the past tense as in (5) (here the matrix verb is emotive factive)

(5) *Factive*

Mary-wa [John-ga tuini nigeda-su/nigedasi-ta koto-o/no-o/to]
Mary-top [John-nom finally run.away-pres/run.away-past C-acc/C-acc/C]
yorokon-da.
be.glad-past
'Mary was glad that John is finally planning to run away/finally had ran away.

The combinations of the tense in complement clauses and complementizers are summarized in (6).

(6)

		complementizers	*tense*
(a)	Subject control	yoo(ni)/koto	non-past
(b)	Object control	yoo(ni)/koto	non-past
(c)	Non-control	yoo(ni)	non-past
(d)		koto	non-past/past
(e)	Factive	koto/no/to	non-past/past

[3] John-ga [Mary-wa kawai-i to] omot-ta/it-ta.
John-nom [Mary-top cute-pres C] think-past//say-past
'John thought/said that Mary was cute.'

3. The non-phasehood of subjunctive and factive complements

In this section, following previous analyses by Nemoto (1993) and Uchibori (2000), I shall argue for the non-phasehood of subjunctive and factive complements. The point to discuss is long-distance scrambling that offers a key to an understanding of the phasehood of complement clauses.

Saito (1992) and Tada (1993) argue that there are asymmetries between clause-internal and long-distance scrambling in Japanese (see also Mahajan 1990 for a similar observation regarding scrambling in Hindi). Let us first look at a case of clause-internal scrambling. As shown in (7), the pronoun *soko* 'it' contained in the subject cannot be bound by the quantifier phrase in the object position.

(7) * Soko$_i$-no sotugyoosei-ga mittu-izyoo-no daigaku$_i$-ni syutugansi-ta.
it-gen graduate-nom three-or.more-gen university-gen apply-past
'Their$_i$ graduates applied to three or more universities$_i$.'
(Takano 2010, 84)

That is, (7) does not have a bound variable interpretation such as 'there are three or more *x*, *x* a university, such that someone graduated from *x* applied to *x*'. When the quantifier phrase *mittu-izyoo-no daigaku* 'three or more universities' is scrambled to the sentence initial position, this reading becomes available. In this light, let us look at (8).

(8) Mittu-izyoo-no daigaku$_i$-ni soko$_i$-no sotugyoosei-ga syutugansi-ta.
Three-or.more-gen university-gen it-gen graduate-nom apply-past
'To three or more universities$_i$ their$_i$ graduates applied.'
(ibid.)

The fact that the quantifier phrase can bind the pronoun can be straightforwardly accounted for if we assume that clause-internal scrambling is A-movement. In contrast, this effect cannot be observed in long-distance scrambling out of indicative complements. In this connection, consider (9).

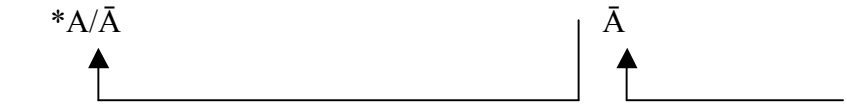
(9) (a)* Soko$_i$-no sotugyoosei-ga Aya-ni [Ken-ga mittu-izyoo-no
It-gen graduate-nom Aya-dat [Ken-nom three-or.more-gen
daigaku$_i$-ni syutugansi-ta to] it-ta.
university-dat apply-past C] say-past
'Their$_i$ students told Aya that Ken applied to three or more universities$_i$.'

(b)* Mittu-izyoo-no daigaku$_i$-ni soko$_i$-no sotugyoosei-ga Aya-ni
Three-or.more-gen university-dat it-gen graduate-nom Aya-dat
[Ken-ga syutugansi-ta to] it-ta.
[Ken-nom apply-past C] say-past
'To three or more universities$_i$ their$_i$ graduates told Aya that Ken applied.'

(ibid., 85)

The unavailability of a bound variable reading in (9b) suggests that the landing site of long-distance scrambling out of indicative complements is an A-bar position whereby the scrambled QP cannot bind the pronoun. But, why should long-distance scrambling out of indicative complements be A-bar movement? Remember that what the PIC in (1) states is that elements within the complement of a phase head are inaccessible to further operations outside the phase, except a head and a specifier. This amounts to requiring that if movement of a lexical item (XP) takes place out of a phase, it must first target the specifier position in order to be visible from an operation in the next higher phase. Since the specifier position of CP is an A-bar position, it follows that the resulting chain of long-distance movement out of a phase would be Ā-Ā-A. This should be so because mixed chains like an A-Ā-A chain are banned as cases of improper movement (May 1979; Chomsky 1981). Viewed in this light, the observation that long-distance scrambling out of indicative complements in Japanese is A-bar movement suggests that indicative complements like in (9) constitute phases. Since they are phases, long-distance scrambling must target embedded Spec CP first. Since Spec CP is an A-bar position, long-distance scrambling must end up in an A-bar position. The route of long-distance scrambling out of indicative complements is schematized in (10) (here, possible movement to the edge of *v*P phases is omitted for simplicity on the assumption that the edge of *v*Ps can be an A-position).

(10) QP_i $pronoun_{*i}$ NP $[_{PHASALCP}$ $[_{SPEC}$ <QP>] ...



In contrast to long-distance scrambling out of indicative complements, long-distance scrambling out of subjunctive and factive complements pattern with clause-internal scrambling.[4] Building on observations about Hindi (Mahajan 1990), Nemoto (1993) argues that long-distance scrambling out of control complements shows the same pattern of binding effects as clause-internal scrambling. In this connection, let us observe subject control (11) and object control (12).

(11) (a)* $Soko_i$-no sotugyoosei-ga [PRO mittu-izyoo-no $daigaku_i$-ni
It-gen graduate-nom [PRO three-or.more-gen university-gen
syutugansu-ru yoo(ni)/koto-o] keikakusi-ta.
apply-pres C/C-acc] plan-past
'$Their_i$ graduates planned to apply to three or more $universities_i$.'

(b) Mittu-izyoo-no $daigaku_i$-ni $soko_i$-no sotugyoosei-ga
Three-or.more-gen university-gen it-gen graduate-nom
[PRO syutugansu-ru yoo(ni)/koto-o] keikakusi-ta.
[PRO apply-pres C/C-acc] plan-past
'To three or more $universities_i$ $their_i$ graduates planned to apply.'

(12) (a)* Ken-ga $soko_i$-no sotugyoosei-ni [PRO mittu-izyoo-no
Ken-nom it-gen graduate-gen [PRO three-or.more-gen
$daigaku_i$-ni syutugansu-ru yoo(ni)/koto-o] susume-ta.
university-dat apply-pres C/C-acc] recommend-past
'Ken recommended $their_i$ graduates to apply to three or more $universities_i$.'

[4] The original observation was made with regard to binding of the reciprocal *otagai* 'each other'. However, since reciprocal binding is known to be controversial in Japanese as a judgment test (Hoji 2003), I stick to a bound variable to test for long-distance A-scrambling, following Takano (2010). Although I do not discuss this because of space limitations, the reader may refer to Uchibori (2000, chapter 5) for other evidence from (e.g.) scope interaction and weak crossover for the non-phasehood of subjunctive/factive complements.

(b)? Mittu-izyoo-no daigaku$_i$-ni Ken-ga soko$_i$-no sotugyoosei-ni
Three-or.more-gen university-dat Ken-nom it-gen graduate-gen
[PRO syutugansu-ru yoo(ni)/koto-o] susume-ta.
[PRO apply-pres C/C-acc] recommend-past
To three or more universities$_i$ Ken recommended their$_i$ graduates to apply.'
(Based on Takano 2010, 86-87)

Furthermore, in addition to control complements, Uchibori (2000) suggests that long-distance scrambling out of non-control type subjunctive complements and factive complements exhibits the same pattern as clause internal scrambling. In this light, let us observe that a QP scrambled out of a non-control type subjunctive complement (13) or a factive complement (14) can bind the pronoun.

(13) (a)* Soko$_i$-no sotugyoosei-ga [Ken-ga mittu-izyoo-no daigaku$_i$-ni
It-gen graduate-nom [Ken-nom three-or.more-gen univeresity-dat
syutugansu-ru yoo(ni)/koto-o] negat-ta.
apply-pres C/C-acc] wish-past
'Their$_i$ graduates wished that Ken would apply to three or more universities$_i$.
(b)? Mittu-izyoo-no daigaku$_i$-ni soko$_i$-no sotugyoosei-ga
Three-or.more-gen university-dat it-gen graduate-nom
[Ken-ga syutugansu-ru yoo(ni)/koto-o] negat-ta.
[Ken-nom apply-pres C/C-acc] wish-past
'To three or more universities$_i$ their$_i$ graduates wished that Ken would apply.'

(14) (a)* Soko$_i$-no sotugyoosei-ga [Ken-ga mittu-izyoo-no daigaku$_i$-ni
It-gen graduate-nom [Ken-nom three-or.more-gen university-gen
syutugansi-ta koto-o/no-o/to] yorokon-da.
apply-past C-acc/C-acc/C] be.glad-past
Their$_i$ graduates were glad that Ken had applied to three or more universities$_i$.'

(b)? Mittu-izyoo-no daigaku$_i$-ni soko$_i$-no sotugyoosei-ga
Three-or.more-gen university-dat it-gen graduate-nom
[Ken-ga syutugansi-ta koto-o/no-o/to] yorokon-da.
[Ken-nom apply-past C-acc/no-acc/C] glad-past
'To three or more universities$_i$ their$_i$ graduates were glad that Ken had applied.'

The observation that the scrambled QP can bind the pronoun in (11)-(14) shows that long-distance scrambling out of subjunctive/factive complements ends up in an A-position. Now recall, as noted earlier about long-distance scrambling out of indicative complements, movement out of a phasal complement must end up in an A-bar position. Given this, long-distance A-scrambling observed in (11)-(14) is naturally accounted for if we assume that subjunctive (including control) and factive complements do not constitute phases. That is, because they do not constitute phases, long-distance movement out of them need not transit through the edge of a phase which is an A-bar position. And because movement need not transit through an A-bar position, movement can end up in an A-position. Rather than cyclic movement via embedded Spec CP, therefore, the QP here is directly moved to the sentence initial position as schematized in (15) (movements to Spec *v*P positions are omitted here as well).

(15) QP$_i$ pronoun$_i$ (NP) [$_{\text{NON-PHASALCP}}$[$_{\text{SPEC}}$] ...

Recall that a natural assumption that would stem from Chomsky's claim is that if the category of a domain is CP, it would constitute a phase. However, what we have seen above suggests that subjunctive and factive complements which are reasonably considered CP headed by overt complementizers do not constitute phases. Accordingly, we are led to consider that the category CP is not sufficient to define the phasehood of complement clauses in Japanese, and a detailed account is required as to what distinguishes phasal CP complements from non-phasal CP complements. In the next section, I will review one such analysis by Uchibori (2000).

4. The role of tense and complementizers

In the previous section, we saw that not all complement clauses that are considered CPs constitute phases. Given this observation, in this section, I will review the approach by Uchibori (2000) that accounts for why this is so.

Uchibori (2000) directs her attention to the tense in complement clauses. As we discussed in section 2, subject control (6a), object control (6b) and non-control subjunctive complements headed by *yoo(ni)* (6c) only permit the non-past tense form. This contrasts with indicative complements such as that in (9) which are considered to constitute a phase. As shown in (16), these indicative complements permit either the non-past or past tense forms.

(16) Sensei-wa [John-ga sono daigaku-ni syutugansu-ru/syutugansi-ta
Teacher-top [John-nom that university-dat apply-pres/past
to] it-ta/omot-ta.
C] say-past/think-past
'The teacher said/thought that John would apply/had applied to that university.'

Therefore, one possible way of accounting for this is to assume that defective tense deprives the phasehood of those complements. This is formalized by Uchibori as in (17).

(17) If a given C embeds defective/deficient T, the C is not qualified as a strong phase head.

(Uchibori 2000, 232)

If (17) is on the right track, we are able to account for why long-distance scrambling out of control and non-control subjunctive complements headed by *yoo(ni)* is A-movement. If they do not constitute phases, long-distance scrambling out of them need not transit through the embedded Spec CP position. As a consequence, long-distance scrambling can directly move to the sentence initial position which is considered an A-position as schematized in (15).

However, a natural question that immediately arises from this approach is how we

can account for the non-phasehood of non-control subjunctive complements headed by *koto* (6d) and factive complements (6e). As we saw in section 2, these complements permit both the non-past and past tense forms. Hence, we are not able to resort to defective tense in order to account for the non-phasehood of these complements. Instead of defective tense, Uchibori contends that the nominal nature of the complementizer *koto* offers a solution. Recall that both non-control subjunctive complements and factive complements can be headed by *koto* (see 6d, e). Traditionally, the complementizer *koto* is considered special in being nominal in nature. The nominal nature of the complementizer *koto* is supported by three pieces of evidence; that is, (i) optional nominative-genitive Case conversion on embedded subjects, (ii) obligatory adnominal ending of embedded predicates, and (iii) obligatory Case-marking on the complementizer. Although Uchibori limits the discussion to *koto*, I here include complementizer *no* as it can also head factive complements and have nominal features in the same way as *koto*.

Let us first examine nominative-genitive Case conversion on subjects. In Japanese, nominative-genitive Case conversion is permitted only in relative clauses and nominal complements but not in main clauses (see Miyagawa 1993, Ochi 2001 among many others) as shown in (18).[5]

(18) (a) Kinoo John-ga/no kat-ta hon
Yesterday John-nom/gen buy-past book
'The book which John bought yesterday.'
(b) Kinoo John-ga/*no hon-o kat-ta.
Yesterday John-nom/gen book-acc buy-past
'John bought the book yesterday.'

With this in mind, let us turn to non-control subjunctive complements headed by *koto* and factive complements headed by *koto/no*. As shown in (19), both allow nominative-genitive Case conversion on their subjects, which points toward the nominal nature of the complementizer *koto/no*.

[5] (18b) is acceptable if *no* is interpreted as genitive as in '(I) bought John's book yesterday'.

(19) (a) John-wa [siken-ga/no umaku ik-u koto]-o negat-ta.
John-top [exam-nom/gen well go-pres C]-acc wish-past
'John wished that he would pass exams successfully.'
(Uchibori 2000, 50)

(b) John-wa [siken-ga/no umaku it-ta koto-o/no-o] yorokon-da.
John-top [exam-nom/gen well go-past C-acc/C-acc] be.glad-past
'John was glad that he had passed exams successfully.'

Second, the adnominal ending of predicates confirms the nominal status of *koto/no*. In Japanese, predicates can have this special inflection known as an adnominal form.[6] As far as verbs and adjectives are concerned, this is not observable since verbal endings and adnominal endings are not distinct in Modern Japanese. However, copulas and nominal adjectives still differentiate these by the ending *da* being realized as *na*. Observe that the adnominal ending is only permitted in relative clauses and nominal complements, not in main clauses.

(20) (a) John-ga suki-na/*da hito
John-nom like-pres/pres person
'The person who John likes.'

(b) John-wa Mary-ga suki-*na/da
John-top Mary-nom like-pres/pres
'John likes Mary.'

Given this, the observation that the nominal adjective has an adnominal ending in non-control subjunctive complements headed by *koto* and factive complements headed by *koto/no* in (21) suggests that *koto/no* are nominal in nature.

(21) (a) John$_i$-wa [Mary-ga zibun$_i$-o suki-na/*da koto]-o negat-ta.
John-top [Mary-nom self-acc like-pres/pres C]-acc wish-past
'John$_i$ wished that Mary would like him$_i$.'

(b) John$_i$-wa [Mary-ga zibun$_i$-o suki-na/*da koto-o/no-o] yorokon-da.
John-top [Mary-nom self-acc like-pres/pres C-acc/C-acc] be.glad-pres

6 This is known as *rentai kei* in traditional Japanese grammar.

'John$_i$ is glad that Mary likes him$_i$.'

The last piece of evidence for the nominal nature of *koto/no* is related to Case particles. As the reader may have already noticed from examples so far, *koto/no* is assigned Case particles *o* (acc) or *ni* (dat) depending on the matrix verb. And this Case particle is obligatory. Since it is usually nominal elements that are Case-marked, this supports the claim that *koto/no* are nominal in nature.

Building on these considerations, Uchibori assumes that the speficier of *koto* becomes an A-position because it is nominal and hence L-related. Considering that non-control subjunctive complements headed by *koto* and factive complements headed by *koto/no* are tensed, they should constitute phases, according to the definition in (17). However, if the specifier of *koto* (and *no*, as *no* is also nominal) counts as an A-position, cyclic movement via embedded Spec CP is allowed to form a uniform A-A-A chain. Therefore, even though these complements are phases, long-distance scrambling of a QP out of them succeeds in binding a pronoun as in (13b) and (14b). The route of this long-distance scrambling is schematized in (22).

(22) QP$_i$ pronoun$_i$ [$_{\text{PHASALCP}}$ [$_{\text{SPEC}}$] ... *koto/no*

However, there are two reasons for being skeptical of the approach by Uchibori (2000). First, contrary to what she claims, *koto* is not the only complementizer that heads factive complements. As discussed in section 2, *no* and *to* can also head factive complements. And as discussed in section 3, long-distance A-scrambling out of factive complements is possible irrespective of complementizer choice. The relevant example is repeated here as (23).

(23) (a)* Soko$_i$-no sotugyoosei-ga [Ken-ga mittu-izyoo-no daigaku$_i$-ni
It-gen graduate-nom [Ken-nom three-or.more-gen university-gen
syutugansi-ta koto-o/no-o/to] yorokon-da.
apply-past C-acc/C-acc/C] be.glad-past

Their$_i$ graduates were glad that Ken had applied to three or more universities$_i$.'

(b)? Mittu-izyoo-no daigaku$_i$-ni soko$_i$-no sotugyoosei-ga
Three-or.more-gen university-dat it-gen graduate-nom
[Ken-ga syutugansi-ta koto-o/no-o/to] yorokon-da.
[Ken-nom apply-past C-acc/no-acc/C] glad-past
'To three or more universities$_i$ their$_i$ graduates were glad that Ken had applied.'

Now, the complementizer *no* can be treated in the same way as *koto* because as we have just seen *no* also bears nominal features. However, the complementizer *to* does not have three nominal features. That is, factive complements headed by *to* do not permit nominative-genitive Case conversion on its subject (24a), adnominal ending (24b) and Case-marking on the complementizer (24c).

(24) (a) John-wa [siken-ga/*no umaku it-ta to] yorokon-da.
John-top [exam-nom/gen well go-past C] be.glad-past
'John was glad that he had passed exams successfully.'

(b) John$_i$-wa [Mary-ga zibun$_i$-o suki-*na/da to] yorokon-da.
John-top [Mary-nom self-acc like-pres/pres C] be.glad-past
'John$_i$ was glad that Mary liked him$_i$.'

(c) John-wa [siken-ga umaku it-ta to]-*(o) yorokon-da.
John-top [exam-nom well go-past C]-acc be.glad-past
'John was glad that he had passed exams successfully.'

Accordingly, we cannot appeal to the nominal nature of a complementizer to account for the fact that long-distance A-scrambling is possible out of factive complements headed by *to*. Given this and the fact that factive complements are tensed, Uchibori's analysis offers no account of why long-distance A-scrambling out of factive complements headed by *to* is possible. Perhaps factive complements headed by *to* are non-phasal for other reasons than the nature of complementizers and defective tense.

The second reason stems from the fact that the complementizer *koto* is not exclusive to non-control subjunctive complements and factive complements. Her

account is plausible if the distributions of defective tense and the complementizer *koto* are mutually exclusive. However, it is apparent that this is not the case. In section 2, we saw that subject control and object control complements can be headed by *koto* as well as *yoo(ni)*, and that they are untensed. Hence, insofar as control complements are concerned, the distributions of defective tense and the complementizer *koto* overlap. The outcome of this overlapping would lead to a self-contradicting problem.

As we have seen, Uchibori assumes that long-distance A-scrambling out of non-control subjunctive and factive complements is possible because it can utilize the specifier of *koto* as an escape hatch thanks to its nominal nature. If this is true, it also implies that long-distance A-scrambling does not necessarily show the non-phasehood of a complement if it is headed by *koto*, because it can utilize the specifier of *koto* anyway. In other words, this is tantamount to saying that long-distance A-scrambling out of control complements headed by *koto* does not entail their non-phasehood. It must be recalled here that the non-phasehood of control complements is one motivation for her positing a correlation between the non-phasehood and defective tense as in (17). The logic behind (17) is that control complements are untensed and permit long-distance A-scrambling out of them, therefore untensed complements are non-phasal. However, insofar as there is a possibility that long-distance A-scrambling out of a complement does not entail the non-phasehood of the complement, (17) does not hold anymore. And control complements headed by *koto* are one such possibility. If (17) does not stand, we lose the possibility of accounting for the non-phasehood of other complements in terms of defective tense. More specifically, if defective tense does not entail the non-phasehood, we are not able to account for why control complements headed by *yoo(ni)* and non-control subjunctive complements headed by *yoo(ni)* do not constitute phases.[7]

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[7] It is important to mention here that Uchibori (2000, 51-54) argues that *yoo*(ni) has nominal properties to some extent but it is less nominal than *koto*. As shown below, a purpose clause headed by *yoo(ni)* permits optional genitive-nominal Case conversion on a subject and the adnominal ending on a predicate. But unlike *koto*, *yoo(ni)* does not allow a Case-particle attached to it. Therefore, if we follow the reasoning of Uchibori (2000), it could be argued that *yoo(ni)* is not nominal enough to make its specifier to an A-position.

(i) John-wa [siken-ga/no umaku ik-u yoo(ni)]-(*o)
John-top [exam-nom/gen well go-pres C]-acc
moobenkyoosi-ta.
study.hard-past
'John studied hard in order to pass the exam successfully.'

(ii) NEC-wa [sono konpyuutaa-ga eigo-o umaku honyaku kanoo-na/*da yoo(ni)]
NEC-top [that computer-nom English-acc well translate able.to-pres/pres C]
doryokusi-ta.
make.affort-past
'NEC made every effort so that the computer is able to translate English successfully.'

Perhaps, these problems may arise from a discrepancy in her analysis between control and non-control subjunctive complements headed by *yoo(ni)* on the one hand, and non-control subjunctive complements headed by *koto* and factive complements on the other, although these do not constitute natural classes independently of each other. If there is a uniform way of accounting for the non-phasehood of those complements, these problems will be circumvented. I will propose such an analysis in the next section.

5. The left periphery of Japanese complement clauses

In this section, I shall propose an alternative analysis to Uchibori (2000) in hoping to capture the non-phasehood uniformly. Specifically, by appealing to the structure of the CP-layer proposed by Haegeman (2003a;b; 2006a;b), I will show that non-phasal complements in Japanese constitute a deficient CP structure that does not project TopP or FocP. This ultimately leads to the conclusion that only complement clauses which have a fully-fledged left peripheral structure can constitute phases.

Simplifying somewhat, the basic claim of Haegeman is that subordinate clauses come in different sizes in terms of the left periphery (see Rizzi 1997), depending on whether the proposition is directly related to the speaker. For instance, Haegeman (2006a;b) suggests that adverbial clauses can be divided into two types – central adverbial and peripheral adverbial clauses - depending on the degree of the 'speaker anchoring'. Whilst central adverbial clauses merely serve to modify the main clause by giving extra information such as temporal specification, peripheral adverbial clauses have an independent proposition, functioning as the discourse background to the main clause. This point can be made clear by looking at the conjunction *while* that can have either function. The central adverbial clause in (25a) merely gives temporal specification of the event, whereas the peripheral adverbial clause in (25b) has an independent proposition from the main clause, which reflects the speaker's thought.

(25) (a) These men worked for Clinton *while* he was governor.
(b) *While* Dr Williams' support for women priests and gay partnerships might label him as liberal, this would be a misleading way of depicting his uncompromisingly orthodox espousal of Christian belief.

(Haegeman 2006a, 29)

The availability of root (main clause) phenomena further highlights the difference between central and peripheral adverbial clauses. Haegeman notes that root phenomena such as topicalization/focalization are only permitted in peripheral adverbial clauses as shown in (26).

(26) (a)* *While* this book Mary was writing this time last year, her children were staying with her mother.
(b) His face not many admired, *while* his character still fewer felt they could praise.

(ibid., 33)

Root phenomena such as topicalization/focalization involve argument fronting to the positions within CP. The impossibility of these phenomena in central adverbial clauses thus points to a deficiency in their CP-internal structure. Given these considerations, Haegeman proposes that the structures for central and peripheral adverbial clauses are as follows.

(27) (a) *Central adverbial clause*
Sub Fin
(b) *Peripheral adverbial clause*
Sub Top Focus Force Fin
(c) *Root clause*
Top Focus Force Fin

(Haegeman 2006b, 1663)

Notwithstanding potential disagreement as to the ordering of Top/Focus on the one hand and Force on the other, the gist of her approach is that the functional projection labeled as Force syntactically encodes the state of affairs that the proposition is directly related/anchored to the speaker. Since, as we have seen, this 'speaker anchoring' is responsible for the availability of embedded topicalization/focalization, it follows that

the Force projection licenses TopP and FocP. It could be argued that this is a syntactic realization of the intuition by Hooper-Thompson (1973) that non-assertive clauses do not tolerate root phenomena because they have reduced structures. This is so if what Hooper-Thompson (1973) calls assertion accords with speaker-anchoring encoded by Force here.

Of particular importance is the separation between Force and Sub in (27), a shorthand for subordinators.[8] According to Haegeman, subordinating conjunctions situated in Sub in (27) serves to subordinate the clause, and makes it available for categorial selection independently of Force. Force limits its function to syntactically encoding speaker anchoring, and licensing of, among other things, illocutionary force and epistemic modality. Therefore, by this separation, we are now able to countenance the possibility that subordinating conjunctions may not necessarily encode illocutionary force like assertion. Having observed that Japanese subordinating conjunctions (complementizers) do not always identify illocutionary force (*to* can head both indicative and factive complements, *koto* can head both subjunctive and factive complements), this separation between Sub and Force is advantageous.

Since non-phasal complements (subjunctive and factive complements) in Japanese are considered non-assertive and non-assertive clauses are assumed to resist root phenomena in the sense of Hooper-Thompson (1973), it is worth examining the extent to which the reductionist approach to the left periphery can be applied to Japanese. In the remainder of this section, I will argue from evidence of topicalization and focalization that phasal indicative complements have the fully-fledged left peripheral structure in (27b), while non-phasal complements have the defective left peripheral structure in (27a).[9]

5.1 Embedded topicalization in Japanese

This subsection aims to show that Japanese thematic topics marked by the particle *wa* are impossible in non-phasal complements, which shows the absence of TopP. Before

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8 Rizzi (1997, fn. 6) mentions a possibility that subordinating conjuncts are situated in a Sub head above Force.

9 Since Japanese is a head-final language, it should be borne in mind that elements in the CP-layer can appear at the left-hand edge of a clause (left periphery) or the right-hand edge of a clause (right periphery), depending on whether an element occupies a specifier or a head. Here, I concentrate on topicalized/focalized elements that occupy specifiers, and for this reason I will continue to use the term 'left periphery'.

plunging into the distribution of topics in complement clauses, let us first consider the nature of topicalization in Japanese.

It is well known that in Japanese topicalized phrases are followed by the particle *wa*, and this *wa* can be attached to various categories such as NPs (both subjects and objects) and PPs. According to Kuno (1973), topicalized nominal expressions in the sentence initial position can have two interpretations: thematic (or aboutness) topic or contrastive topic.[10] The thematic topic *wa* serves to introduce a theme of a sentence, and is best translated as 'speaking of...' 'as for...'. On the other hand, the contrastive topic *wa* functions to single out a *wa*-marked entity from other possible entities in the discourse, and generally has stress placed on it. This is illustrated in (28) (the contrastive topic *wa* is boldfaced hereafter in example sentences).

(28) (a) John-wa gakusei desu
John-top student is
'Speaking of John, he is a student.'
(b) John-ga pai-**wa** tabe-ta ga (keeki-**wa** tabe-nakat-ta)
John-nom pie-top eat-past but (cake-top eat-neg-past)
'John ate (the) pie, but he didn't eat (the) cake.'

(Heycock 2008, 55)

Building on the observation by Saito (1985), Hoji (1985) extensively argues that differences in the interpretation of *wa* reflect their syntactic positions. The syntactic structures he suggests for *wa*-objects are schematized as follows.

(29) (a) Sono hon-wa John-ga kat-ta. (thematic topic)
That book-top John-nom buy-past
'As for that book, John bought it.'
$[_{S''}$ NP_i-wa $[_{S'}$ $[_S$ NP-ga $[_{VP}$ ec_i V]]]]
(b) Sono hon-**wa** John-ga kat-ta. (contrastive topic)
That book-top John-nom buy-past
'That book (but not others), John bought.'
$[_S$ NP_i-wa $[_S$ NP-ga $[_{VP}$ t_i V]]]

[10] A *wa*-marked NP in non-sentence-initial position is known to have only the contrastive topic interpretation (Kuno 1973).

The structure in (29a) suggests that the thematic topic is base-generated in some position within S'' from where it binds the null pronoun (here notated as *ec*) within VP. Hoji (1985) notes that S'' is not different from Banfield's (1973) E(xpression) projection, which I take it to mean a projection within the left periphery here. On the other hand, as shown in the structure in (29b), the contrastive topic originates within VP and is moved/scrambled to adjoin to S (=TP). The reason for his assuming different syntactic structures for thematic and contrastive topics is that only the contrastive topic shows hallmarks of movement such as reconstruction.[11]

Reconstruction phenomena can be illustrated by examining structures like the following.

(30) [ec_i /zibun$_i$]-**wa** QP$_i$/NP$_i$-ga V

What (30) shows is that if a topicalized object has been moved over a subject, it should show reconstruction effects. More specifically, it should have interpretations in which the *wa*-object is a variable/anaphor bound by the subject. As Hoji (1985) illustrates, this reconstruction effect is only observable in contrastive topics. In this light, let us consider the examples below in which (31) examines the possibility of a bound variable reading and (32) a reading of binding the anaphor *zibun* 'self'.

(31) (a) [$_{NP}$ [$_S$ ec_i ec_j hitome mi-ta] hito$_j$]-*wa/**wa** daremo$_i$-ga
[[one.glance see-past] person]-top/top everyone-nom
sukininat-ta.
fell.in.love.with-past
'*As for the person$_j$ that he$_i$ saw, everyone$_i$ fell in love with him$_j$. (thematic topic)'
'The person$_j$ that he$_i$ saw, everyone$_i$ fell in love with. (contrastive topic)'

11 One may wonder if the contrastive topic observes subjacency. Hoji (1985) argues that the contrastive topic that is scrambled out of complex NPs does not have the intended contrastive topic interpretation any more (it has a so-called categorical subject interpretation), which blurs the judgment as to the effect of subjacency. However, as indirect support for the subjacency effect, he suggests that when the contrastive topic is scrambled out of complex NPs, it does not have a variable/anaphor bound interpretation in its reconstructed position.

(b) [$_{NP}$ [$_{S}$ ec_j ec_i but-ta] hito$_j$]-*wa/**wa** dare$_i$-ga
[[hit-past] person]-top/top who-nom
uttae-ta no.
sue-past Q
'*As for the person$_j$ who hit him$_i$, who$_i$ sued him$_j$? (thematic topic)'
'Lit. The person$_j$ who hit him$_i$, who$_i$ sued? (contrastive topic)'

(32) (a) [$_{NP}$ Sono zibun$_i$ nituite-no hon]$_j$-*wa/**wa** John$_i$-ga sute-ta.
[that self about book]-top/top John-nom throw.away-past
'*As for [the book about himself$_i$]$_j$, John$_i$ threw it$_j$ away. (thematic topic)'
'[That book about himself$_i$]$_j$, John$_i$ threw away. (contrastive topic)'

b. [$_{NP}$ [$_{S}$ Mary-ga ec_j zibun$_i$-ni kure-ta] hon$_j$]-*wa/**wa** John$_i$-ga
[[Mary-nom self-dat give-past] book]-top/top John-nom
sute-ta.
throw.away-past
'*As for [the book that Mary gave to himself$_i$]$_j$, John$_i$ threw it$_j$ away. (thematic topic)'
'[The book that Mary gave to himself$_i$]$_j$, John$_i$ threw away. (contrastive topic)'

(Hoji 1985)

Furthermore, Hoji (1985) argues that the structural difference between thematic and contrastive topics can naturally account for distributional differences between them. It is well known that the thematic topic cannot appear in relative clauses as shown in (33).

(33) John-ga [$_{NP}$ [$_{S}$ Mary-*wa/**wa** ec_i non-da] kusuri$_i$]-o non-da.
John-nom [[Mary-top/top drink-past] pill]-acc drink-past
'*John took the pill that as for Mary, she took. (thematic topic)'
'John took the pill that Mary (but not others) took. (contrastive topic).'

(Hoji 1985)

According to Hoji (1985), this distributional difference immediately follows if S'' only occurs in matrix clauses. Since the thematic topic is assumed to be generated within S'',

it is natural that it cannot occur within relative clauses that do not contain the S'' projection. In contrast, the contrastive topic is allowed in relative clauses if it is generated within VP. If what Hoji calls S'' corresponds to TopP in the left peripheral structure, it follows that the distribution of the thematic topic can show the presence/absence of TopP in a given complement clause.

In fact, such an investigation has been conducted by Maki et al. (1999). Their analysis includes the observation that embedded thematic topics are permitted in complements to bridge verbs, but they are not allowed in factive complements headed by *no*. Applying their observation, I intend to examine here whether or not non-phasal complement clauses generally disallow the thematic topic.

Let us begin by considering complements to bridge verbs as an object of comparison. As shown below, the thematic topic as well as the contrastive topic is allowed in complements to verbs such as *i-u* 'say' and *omo-u* 'think'.
This is so whether the subject is topicalized as in (34a) or the object is topicalized as in (34b).

(34) (a) John-wa [Mary-wa/**wa** kono hon-o yon-da to]
John-top [Mary-top/top this book-acc read-past C]
it-ta/omot-ta.
say-past/think-past
'John said/thought that as for Mary, she had read this book. (thematic topic)'
'John said/thought that May had read this book (though others may not have read it) (contrastive topic).'

(b) John-wa [kono hon-wa/**wa** Mary-ga yon-da to]
John-top [this book-top/top Mary-nom read-past C]
it-ta/omot-ta.
say-past/think-past
'John said/thought that as for this book, Mary read it. (thematic topic)'.
'John said/thought that Mary read this book (but not others). (contrastive topic).'

(Based on Maki et al. 1999, 8)

This is straightforwardly accounted for if complements to bridge verbs project up to TopP that licenses thematic topics.

Let us now turn to subjunctive complements. It appears that the thematic topic in either subject control and object control complements is rather worse than that in (34). As the embedded subject is PRO, the relevant example is limited to *wa*-objects here.

(35) John-wa [kono hon-??wa/**wa** PRO yom-u yoo(ni)/koto-o] keikakushi-ta.
John-top [this book-top/top PRO read-pres C/C-acc] plan-past
'John planned that as for this book, he would read it. (thematic topic)'
'John planned to read this book (but not others). (contrastive topic)'

(36) John-wa Mary-ni [kono hon-??wa/**wa** PRO yom-u yoo(ni)/koto-o]
John-top Mary-dat [this book-??top/top PRO read-pres C/C-acc]
motome-ta.
ask-past
'John asked Mary that as for this book Mary read it. (thematic topic)'
'John asked Mary to read this book (but not others) (contrastive topic)'

A similar asymmetry of acceptance between thematic and contrastive topics can be found in non-control subjunctive complements. (37a) illustrates a case in which the subject is topicalized and (37b) the object is topicalized.

(37) (a) John-wa [Mary-??wa/**wa** kono hon-o yom-u yoo(ni)/koto-o]
John-top [Mary-top/top this book-acc read-pres C/C-acc]
negat-ta.
wish-past
'John wished that as for Mary she would read this book. (thematic topic)'
'John wished that Mary (but not others) would read this book. (contrastive topic)'

(b) John-wa [kono hon-??wa/**wa** Mary-ga yom-u yoo(ni)/koto-o]
John-top [this book-top/top Mary-nom read-pres C/C-acc]
negat-ta.
wish-past
'John wished that as for this book Mary would read it. (thematic topic)'
'John wished that Mary would read this book (but not others). (contrastive topic).'

As far as factive complements are concerned, Maki et al. (1999, 9) states that a thematic topic is not allowed in factive complements headed by *no*. I suggest that the same degree of unacceptability is observed if we replace *no* with *koto* (see also Kuroda 2005; Hiraiwa 2010). (38a) illustrates a case in which the subject is topicalized and (38b) the object.

(38) (a) John-wa [Mary-*wa/**wa** kono hon-o yon-da no-o/koto-o]
John-top [Mary-top/top this book-acc read-past C-acc/C-acc]
kookaisi-ta.
regret-past
'John regretted that as for Mary she had read this book. (thematic topic).'
'John regretted that Mary (but not others) had read this book. (contrastive topic)'

(b) John-wa [kono hon-*wa/**wa** Mary-ga yon-da no-o/koto-o]
John-top [this book-top/top Mary-nom read-past C-acc/C-acc]
kookaisi-ta.
regret-past
'John regretted that as for this book, Mary had read it. (thematic topic)'
'John regretted that Mary had read this book (but not others). (contrastive topic)'

When factive complements are headed by *to*, the acceptability of the embedded thematic topic improves compared to that of clauses headed by *no* or *koto*. However, of particular importance is that it is still worse than the thematic topic in complements to bridge verbs as in (34). In this light, consider (39).

(39) (a) John-wa [Mary-??wa/**wa** kono hon-o yon-da to]
John-top [Mary-top/top this book-acc read-past C]
yorokon-da/kizui-ta.
be.glad-past/notice-past
'John was glad/noticed that as for Mary she had read this book. (thematic topic)'
'John was glad/noticed that Mary (but not others) had read this book. (contrastive topic)'

(b) John-wa [kono hon-??wa/**wa** Mary-ga yon-da to]
John-top [this book-top/top Mary-nom read-past C]
yorokon-da/kizui-ta.
be.glad-past/notice-past
'John was glad/noticed that as for this book, Mary had read it. (thematic topic)'
'John was glad/noticed that Mary had read this book (but not others). (contrastive topic)'

From what we have seen in this subsection, it is clear that phasehood and topichood are correlated. That is, those complements to bridge verbs that constitute phases permit an embedded thematic topic. On the other hand, subjunctive and factive complements that do not constitute phases do not allow an embedded thematic topic. If the thematic topic is licensed in the specifier of TopP, one plausible account would be that complement clauses constitute phases if they project a left peripheral structure including TopP in line with (27b).

5.2 Embedded focalization in Japanese

In the previous subsection, it was shown that non-phasal complements do not permit embedded thematic topics, which points to the absence of TopP in the structure within CP. A natural question that arises at this point is whether the absence of FocP is established in support of the structure in (27a). In this light, I shall investigate the nature

of embedded subjects marked by the particle *ga*.

As argued by Kuroda (1965) (see also Kuno 1973; Heycock 1993), *ga*-marked subjects can yield a so-called exhaustive listing focus interpretation in matrix clauses, depending on the type of predicate. More specifically, if a stage-level predicate is predicated of a *ga*-marked subject, the subject can give rise to either an exhaustive listing focus reading or a mere neutral description. On the other hand, if a predicate is individual-level, a *ga*-marked subject is forced to have the exhaustive listing focus reading (here the exhaustive listing *ga* is boldfaced in example sentences).

(40) (a) John-**ga**/ga asoko-ni tat-tei-ru.
John-nom/nom there-at stand-prog-pres
'It is John who is standing there. (exhaustive listing)'
'John is standing there. (neutral description)'

(b) John-**ga**/*ga gakusei desu.
John-nom/nom student is
'It is John who is a student. (exhaustive listing)'
'*John is a student. (neutral description)'

(Kuno 1973)

Sentences with an exhaustive listing interpretation of *ga* sound awkward if uttered out of the blue, but they sound natural as an answer to *wh*-questions such as 'who is standing there?' or 'who is a student?' Given the difference in interpretations, it is natural to inquire if the interpretations of *ga*-phrases give rise to different structures. However, it is very hard to examine the structural differences of *ga*-phrases because the *ga*-phrases in question are limited to subjects, and subjects do not scramble. So, unlike the case of *wa*-phrases that can also be objects, there is virtually no way of detecting movement of *ga*-phrases.[12]

Notwithstanding the difficulty in identifying the positions for *ga*-phrases, the fact that the interpretation of subjects differs depending on predicate type is a reminiscent of the argument on indefinite subjects by Kratzer (1989) and Diesing (1992). Bare plural indefinite subjects in English can only have a generic interpretation when a predicate is

[12] *Ga* also marks the object of stative transitive verbs such as in *John-wa kuruma-ga suki desu* 'John is fond of cars.' But *ga*-marked objects are irrelevant to the present discussion as they do not have an exhaustive listing focus interpretation.

individual level as in (41), whereas they can have either a generic or existential interpretation when a predicate is stage-level as in (42).

(41) Ferrets are intelligent.
G_x [ferrets′ (x)] (intelligent′ (x))

(42) Ferrets are wet.
a. $\exists_x$ (ferrets′ (x) ∧ wet′ (x))
b. G_x [ferrets′ (x)] (wet′ (x))

Simplifying somewhat, the gist of their analyses is that existential closure applies to VP, and the interpretational difference of bare plural subjects results from their syntactic positions, i.e., above or within VP, when mapping to LF. This is summarized in (43).

(43) *Mapping Hypothesis*
Material from VP is mapped into the nuclear scope
Material from IP is mapped into the restrictive clause
(Diesing 1992)

(43) suggests that if a bare plural subject is in IP (=TP) it is interpreted as generic, whereas if it is within VP (which equates to *v*P in the current framework) it is interpreted as existential. Diesing (1992) argues that bare plural subjects of individual-level predicates are base-generated in the Spec TP position. Hence, the only option for them is to be mapped into the restrictive clause and have a generic interpretation as in (41). On the other hand, bare plural subjects of stage-level predicates originate in Spec *v*P and move to Spec TP in order to be assigned Case. The generic interpretation of a subject would result if it is mapped from Spec TP as in (42b). Alternatively, Diesing assumes that the subject in Spec TP optionally lowers to Spec *v*P at LF, whereby it can have an existential interpretation as in (42a).

Applying this, I assume that the interpretation of *ga*-marked subjects in Japanese is affected by positions which they occupy when transferred to LF in line with (43). The neutral description reading of *ga* can be construed as an existential interpretation as in (44a). The exhaustive listing reading of *ga*, on the other hand, can be formalized as in (44b) and (45).

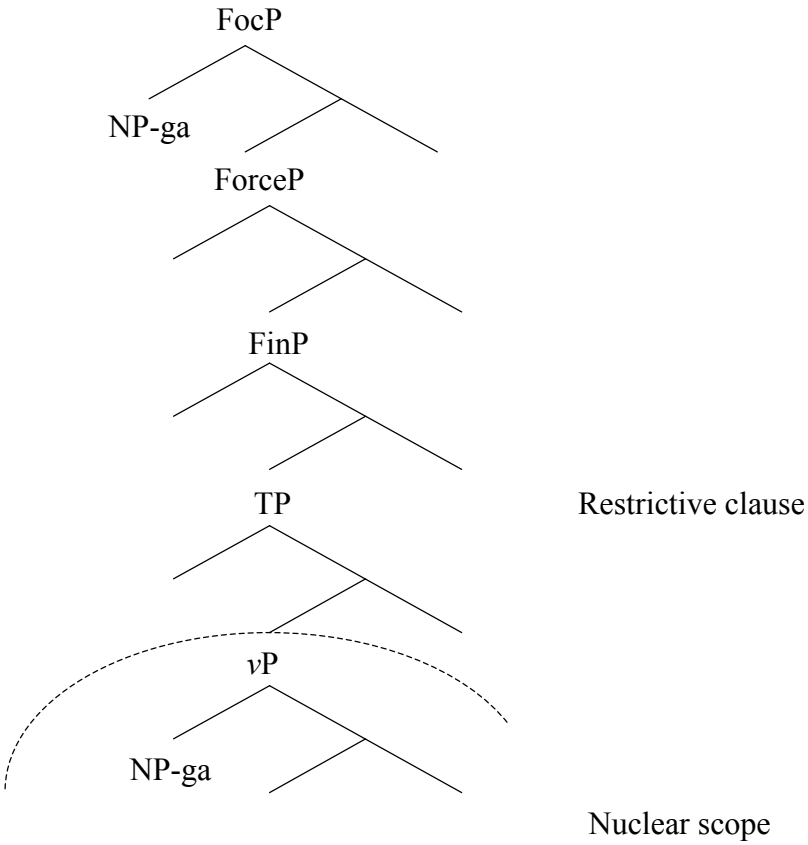
(44) John-**ga**/ga asoko-ni tat-tei-ru.
John-nom/nom there-at stand-prog-pres
(a) 'John is standing there. (neutral description)
$\exists_x$ (John′ (x) ∧ standing′ (x))
(b) 'It is John who is standing there. (exhaustive listing)
$\exists_x$ [(John′ (x) & $\forall_y$ (John′ (y) → $x = y$)) & standing′ (x)]

(45) John-**ga**/*ga gakusei desu.
John-nom/nom student is
'It is John who is a student. (exhaustive listing)'
$\exists_x$ [(John′ (x) & $\forall_y$ (John′ (y) → $x = y$)) & student′ (x)]

I suggest that Japanese *ga*-marked subjects are understood as existential within nuclear scope *v*P, and as exhaustive listing in the restrictive clause, which I assume to be above *v*P. I also assume that *ga*-marked subjects occurring with individual-level predicates are base-generated in Spec FocP, whilst those with stage-level predicates are base-generated in Spec *v*P, and optionally move out of it.[13] On this assumption, the interpretations of *ga*-phrases are properly captured. Let us see the structure in (46) to illustrate this point (the structure above FocP and below *v*P is omitted).

[13] There is room for further investigation as to the motivation for *ga*-marked subjects moving out of *v*P, because it is often argued that in Japanese subjects may remain in Spec *v*P (see Kuroda 1988).

(46)



Given this assumption, the next thing we have to examine is how this is related to the presence of FocP in the left peripheral structure. In fact, Heycock (2008, 58) argues that the obligatory exhaustive listing *ga* is a root phenomenon. To be more specific, she maintains that in unambiguously nonsubordinate clauses, the exhaustive listing reading of *ga* is forced on the subject of individual-level predicates, whereas this reading is not forced but merely available in clearly subordinate clauses that tolerate embedded root phenomena. If, as I suggest here, the obligatory exhaustive listing reading of *ga* is induced by a subject being base-generated in Spec FocP, this would lend plausibility to the presence/absence of the FocP projection in complement clauses. In what follows, I shall investigate if the exhaustive listing reading is forced on subjects of individual-level predicates in different types of complement clauses.

Let us first look at complements to bridge verbs. As shown in (47), an exhaustive listing reading is forced on the embedded subject.

(47) John-wa [Mary-**ga**/??ga kasiko-i to] it-ta/omot-ta.
John-top [Mary-nom/nom smart-pres C] say-past/think-past
'John said/thought that it was Mary who was smart. (exhaustive listing)'
'John said/thought that Mary was smart. (neutral description)'

This can be accounted for if the embedded subject in (47) is base-generated in Spec FocP, whereby it can only have an exhaustive listing interpretation.

Although this diagnostic does not work for control complements as the embedded subject is covert PRO in normal settings, it seems that non-control subjunctive complements permit both exhaustive listing and neutral description readings of *ga*.

(48) John$_i$-wa [Mary-**ga**/ga zibun$_i$-ga suki-dea-ru yoo(ni)/koto-o]
John-top [Mary-nom/nom self-nom fond.of-be-pres C/C-acc]
negat-ta.
wish-past
'John$_i$ wished that it would be Mary who liked him$_i$. (exhaustive listing)'
'John$_i$ wished that Mary would like him$_i$. (neutral description).'

Similarly, an exhaustive listing reading is not forced on a subject in factive complements, whether the complementizer is *koto/no* (49a) or *to* (49b).

(49) (a) John-wa [Mary-**ga**/ga Bob-ga suki-dat-ta no-o/koto-o]
John-top [Mary-nom/nom Bob-nom fond.of-be-past C-acc/C-acc]
kookaisi-tei-ru.
regret-prog-pres
'John regrets that it was Mary who liked Bob. (exhaustive listing)'
'John regrets that Mary liked Bob. (neutral description)'

(b) John$_i$-wa [Mary-**ga**/ga zibun$_i$-ga suki-da to]
John-top [Mary-nom/nom he-nom fond.of-pres C]
yorokon-da/kizui-ta.
be.glad-past/notice-past
'John was glad/noticed that it was Mary who liked him. (exhaustive listing)'
'John was glad/noticed that Mary liked him. (neutral descrition)'

What (48) and (49) suggest is that the *ga*-marked subjects originate in Spec *v*P. According to my assumption, the neutral description reading is expected as it is the position where a *ga*-marked subject is mapped into the nuclear scope. The exhaustive listing reading is also available if a *ga*-marked subject is moved out of *v*P to the restrictive clause when mapped to LF. Note that this does not necessitate the presence of FocP as the exhaustive listing reading is supposed to be available in my analysis as long as it is above *v*P, say in Spec TP. Rather, what is at issue is the fact that the exhaustive listing reading on a subject is not forced here in spite of individual-level predicates that force it in matrix clauses. Given the assumption that the obligatory exhaustive listing reading of a *ga*-subject entails the base-generation of the *ga*-subject in Spec FocP, this is best captured by assuming that there is no FocP in non-control subjunctive and factive complements that allows the base-generation of the *ga*-subject in its specifier.

To recapitulate the argument in this section, by the investigation of the availability of embedded root phenomena such as the thematic topic *wa* and the obligatory exhaustive listing focus *ga*, the presence of TopP and FocP in the left peripheral structure of complement clauses has been clarified.[14] Since complement clauses that are considered non-phasal in section 4 do not permit relevant embedded root phenomena, it is plausible to consider that non-phasal complements lack TopP and FocP in their left periphery. It should be concluded, therefore, that there is a strong correlation between the phasehood of Japanese complement clauses and the totality of their left peripheral structure. On the assumption that the left peripheral structure of Japanese complement clauses is like (50) following Haegeman (2003a;b; 2006a;b), this result is stated as in (51).

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14 Yamato (1997) argues for the deficiency of some subordinate clauses in Japanese in terms of the left peripheral structure by Haegeman (2006a). It is important to note that my approach to focalization is different from his in that it is concerned with the *obligatory* exhaustive listing focus with individual predicates. Yamato cites examples such as follows to show that the exhaustive listing focus reading is absent in impoverished subordinate clauses.

(i) Taroo-***ga**/ga Hanako-ni at-tara, Jiroo-ga yorokob-u
Taro-nom/nom Hanako-dat meet-if Jiro-nom be.glad-pres
'If Taroo (*and only Taroo) meets Hanako, Jiroo will be delighted.'

Differing from his judgment, my judgment is that the exhaustive listing reading is available in (i) if a focal stress is placed on *ga*. This is natural given that the predicate in (i) is stage-level. According to my analysis here, *ga*-subjects with stage-level predicates are always ambiguous because they are supposed to originate within *v*P. Rather, as argued by Heycock (2008), it is the obligatory exhaustive listing reading with individual-level predicates that is a root phenomenon.

(50) (a) *Phasal complement clause*

Sub Top Focus Force Fin

(b) *Non-phasal complement clause*

Sub Fin

(51) Complement clauses constitute CP phases if and only if they have a complete left peripheral structure.

My approach would not suffer from the problems facing Uchibori (2000). Whereas Uchibori's problem stems from resorting to complementizer choice, my analysis suggests a separation of complementizer choice from the issue of the (non-)phasehood. This is made possible because the structure in (50) identifies an independent projection for complementizers, which creates room to separate the issue of complementizer choice and embedded root phenomena. This way, the present analysis succeeds in accounting for the non-phasehood of subjunctive and factive complements in a uniform fashion.

6. Speculations on referential CPs and operator movement

This section aims to give a counterargument to the movement derivation of factive complements proposed by Haegeman-Ürögdi (2010) (henceforce HÜ) and supported by Hiraiwa (2010). The present analysis is based on so-called reductionist approaches by Haegeman (2003a;b; 2006a;b) supposing that not every subordinate clause constitutes a fully-fledged left peripheral structure and that reduced/impoverished subordinate clauses resist root phenomena. Alternatively, more recent research by Haegeman (2007; 2009; 2010a;b) and HÜ (2010) proposes an operator movement account. In the operator movement account, it is assumed that every subordinate clause constitutes a complete left peripheral structure, and what has been captured in terms of the impoverishment of the left peripheral structure is now superseded by movement of an event operator. Since the operator movement account would pose a problem for the proposed analysis, it is necessary to secure my position here.

To be more specific, HÜ argue that an event operator moves to CP in factive

complements as in (52) in line with the derivation of event relatives. This operator in CP constitutes an intervention to embedded root phenomena and an extraction of *wh*-adjuncts as in (53).

(52) $[_{CP}\ Op_i \ \ldots [_{FP}\ t_i\ [_{TP}\ V \ldots]]]$

(HÜ 2010, 128)

(53) (a)* John regretted that <u>that film</u> he went to see.
(b)* Why did you notice that Mary had fixed the car *t*?

(ibid., 119-120)

They further argue that factive complements and DPs have in common that they are both referential (de Cuba and Ürögdi 2009a;b), and this referentiality can be captured in terms of operator movement. To the extent that the operator movement is viable, this approach succeeds in accounting for why both factive complements and DPs constitute weak islands.

In support of the operator movement account of factive complements, Hiraiwa (2010) provides data from Japanese. Whilst it is hard to detect the referentiality of clauses in Japanese, it is true that Japanese factive complements behave in the same way as English factive complements. As we have seen in the previous section, Japanese factive complements resist root phenomena such as thematic topics. In addition, Hiraiwa (2010) demonstrates that Japanese factive complements constitute weak islands as in (54).

(54) (a) Ken-ga [Naomi-ga dare-kara-mo okane-o moraw-anakat-ta
Ken-nom [Naomi-nom who-from-even money-acc receive-neg-past
koto-o/no-o] shira-nakat-ta sooda.
C-acc/no-acc] know-neg-past hear.say
'I heard that Ken didn't know that Naomi didn't receive money from anyone.'
(b)??Dare-kara-mo Ken-ga [Naomi-ga okane-o moraw-anaka-ta
Who-from-even Ken-nom [Naomi-nom money-acc receive-neg-past
koto-o/no-o] shira-nakat-ta sooda.
C-acc/C-acc] know-neg-past hear.say

'I heard that Ken didn't know that Naomi didn't receive money from anyone.'

(Hiraiwa 2010, 195)

Thus, if there is evidence for operator movement in factive complements, it would lend support to the claim by HÜ that the operator constitutes a weak island and an intervention to root phenomena. Based on Watanabe (1996), Hiraiwa (2010) assumes that an adnominal ending on predicates is evidence for operator movement. It is assumed that an adnominal ending on predicates obtains as a result of *wh*-agreement of a moved operator. Now, as we have seen in section 4, predicates in factive complements end in an adnominal form induced by the nominal property of *koto/no*.

(55) John$_i$-wa [Mary-ga zibun$_i$-o suki-na/*da koto-o/no-o]
John-top [Mary-nom self-acc fond.of-pres/pres C-acc/C-acc]
yorokon-da.
be.glad-past
'John$_i$ was glad that Mary likes him$_i$.'

In opposition to this, I should like to show that the correlation between an adnominal ending on predicates and intervention is not obligatory. Of particular importance is the fact that an adnominal ending induced by the nominal property of *koto* and *no* is not exclusive to factive complements. It must be recalled that *koto* can head control complements and non-control subjunctive complements as well. Although it is difficult to test for an adnominal ending in control complements, non-control subjunctive complements at least suggest that an adnominal ending is possible.[15]

(56) John$_i$-wa [Mary-ga zibun$_i$-o suki-na/*da koto]-o negat-ta.
John-top [Mary-nom self-acc fond-pres/pres C]-acc wish-past
'John$_i$ wished that Mary would like him$_i$.'

As argued in the previous section, non-control subjunctive complements resist root phenomena. But as illustrated in (57) they do not constitute weak islands.

[15] It appears that copulas and nominal adjectives which show adnominal endings cannot readily occur in control complements.

(57) (a) Ken-ga [Naomi-ga dare-kare-mo okane-o moraw-ana-i
Ken-top [Naomi-nom who-from-even money-acc receive-neg-pres
koto]-o negat-ta sooda.
C]-acc wish-past hearsay
'I heard that Ken wished that Naomi would not receive money from anyone.'

(b) Dare-kara-mo Ken-ga [Mary-ga okane-o moraw-ana-i
Who-from-even Ken-nom [Mary-nom money-acc receive-neg-pres
koto]-o negat-ta sooda.
C]-acc wish-past hearsay
'I heard that Ken wished that Naomi would not receive money from anyone.'

Accordingly, it follows that the adnominal form and intervention are not necessarily correlated. Since the adnominal form is assumed to derive from operator movement, this in turn casts doubt on the correlation between operator movement and intervention in Japanese.

7. Concluding remarks

In this paper, I have proposed a syntactic condition under which Japanese complement clauses constitute CP phases. First, we saw that a set of complement clauses permit long-distance A-movement out of them in spite of the presence of complementizers, which suggests that the category CP is not sufficient to characterize CP phases. From the considerations of embedded root phenomena such as the thematic topic *wa* and the obligatory exhaustive listing *ga*, it has become apparent that non-phasal complements have in common that they do not have TopP or FocP. It should be concluded therefore that the phasehood is conditioned by the completion of the left peripheral structure within CP. The results reported in this paper have the important implication that information structure may affect the syntactic computation and (more specifically) phasehood. More research is needed to assess the extent to which the same approach can be extended to other subordinate clauses and to other languages.

References

Banfield, Ann 1973. Narrative style and the grammar of direct and indirect speech. Foundations of Language 10:1-39.

Borer, Hagit 1989. Anaphoric AGR. In: Osvaldo Jaeggli - Kenneth J. Safir (eds.): The null subject parameter, 69-109. Kluwer, Dordrecht.

Chomsky, Noam 1981. Lectures on government and binding. Foris, Dordrecht.

Chomsky, Noam 1993. A minimalist program for linguistic theory. In: Kenneth Hale – Samuel Jay Keyser (eds.): The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger, 1 – 52. MIT Press, Cambridge, MA.

Chomsky, Noam 2000. Minimalist inquiries. In: Roger Martin – David Michaels – Juan Uriagereka (eds.): Step by step: Essays on minimalist syntax in honor of Howard Lasnik, 89-155. MIT Press, Cambridge, MA.

Chomsky, Noam 2001. Derivation by phase. In: Michael Kenstowicz (ed.): Ken Hale: A life in language, 1-52. MIT Press, Cambridge, MA.

Chomsky, Noam 2008. On phases. In: Robert Freidin - Carlos P. Otero - Maria Luisa Zubizarreta (eds.): Foundational issues in linguistic theory, 133-166. MIT Press, Cambridge, MA.

de Cuba, Carlos – Barbara Ürögdi 2009a. Eliminating factivity from syntax: Sentential complementation in Hungarian. In: Marcel den Dikken – Robert M. Vago (eds.): Approaches to Hungarian, 29-64. John Benjamins, Amsterdam and New York.

de Cuba, Carlos – Barbara Ürögdi 2009b. Roots and radicals: The referentiality of clauses. Paper presented at the Workshop on Root Phenomena. ZAS Berlin, Germany.

Diesing, Molly 1992. Indefinites. MIT Press, Cambridge, MA.

Haegeman, Liliane 2003a. Conditional clauses: External and internal syntax. In: Mind and Language 18: 317-339.

Haegeman, Liliane 2003b. Notes on long adverbial fronting in English and the left periphery. In: Linguistic Inquiry 34: 640-649.

Haegeman, Liliane 2006a. Argument fronting in English, Romance CLLD and the left periphery. In: Raffaella Zanuttini – Héctor Campos – Elena Herburger – Paul Portner (eds.): Negation, tense and clausal architecture: Cross-linguistic

investigation, 27-52. Georgetown University Press, Washington DC.

Haegeman, Liliane 2006b. Conditionals, factives and the left periphery. In: Lingua 116: 1651-1669.

Haegeman, Liliane 2007. Operator movement and topicalization in adverbial clauses. In: Folia Linguistica 18: 485-502.

Haegeman, Liliane 2009. The movement analysis of temporal adverbial clauses. In: English Language and Linguistics 13: 385-408.

Haegeman, Liliane 2010a. Internal syntax of adverbial clauses. In: Lingua 120: 628-648.

Haegeman, Liliane 2010b. The movement derivation of conditional clauses. In: Linguistic Inquiry 41: 595-621.

Haegeman, Liliane – Barbara Ürögdi 2010. Referential CPs and DPs: An operator movement account. In: Theoretical Linguistics 36: 111-152.

Heycock, Caroline 1993. Focus projection in Japanese. In: Mercé Gonzàlez (eds.): Proceedings of NELS 24, 159-187. GLSA Publications, Amherst, MA.

Heycock, Caroline 2008. Japanese -*wa*, -*ga*, and information structure. In: Shigeru Miyagawa - Mamoru Saito (eds.): Handbook of Japanese linguistics, 54-83. Oxford University Press, Oxford.

Hiraiwa, Ken 2010. Complement types and the CP/DP parallelism: A case of Japanese. In: Theoretical Linguistics 36: 189-198.

Hoji, Hajime 1985. Logical Form constraints and configurational structures in Japanese. Doctoral dissertation, University of Washington, Seattle.

Hoji, Hajime 2003. Falsifiability and repeatability in generative grammar: A case study of anaphora and scope dependency in Japanese. In: Lingua 113:377-446.

Hooper, Joan - Sandra Thompson 1973. On the applicability of root transformations. In: Linguistic Inquiry 4:465-497.

Huddleston, Rodney 1994. The contrast between interrogatives and questions. In: Journal of Linguistics 30: 411-439.

Kiparsky, Paul - Carol Kiparsky 1970. Fact. In: Manfred Bierwisch - Karl E. Heidolph (eds.): Progress in linguistics, 143-173. Mouton de Gruyter, the Hague.

Kratzer, Angelika 1989. Stage-level and individual-level predicates. In: Emmon Bach – Angelika Kratzer - Barbara Partee (eds.): Papers on quantification, University of Massachusetts, Amherst.

Kuno, Susumu 1973. The structure of the Japanese language. MIT Press, Cambridge, MA.

Kuroda, S.-Y. 1965. Generative grammatical studies in the Japanese language. Doctoral dissertation, MIT, Cambridge, MA.

Kuroda, S.-Y. 1988. Whether we agree or not: A comparative syntax of English and Japanese. In: Linguisticae Investigationes 12: 1-47.

Kuroda, S.-Y. 2005. Focusing on the matter of topic: A study of *wa* and *ga* in Japanese. In: Journal of East Asian linguistics 14: 1–58.

Mahajan, Anoop 1990. The A /A-bar distinction and movement theory. Doctoral dissertation, MIT, Cambridge, MA.

Maki, Hideki – Lizanne Kaiser – Masao Ochi 1999. Embedded topicalization in English and Japanese. In: Lingua 109: 1-14.

May, Robert 1979. Must comp-to-comp movement be stipulated? In: Linguistic Inquiry 10:719-725.

Miyagawa, Shigeru 1993. LF Case-checking and minimal link condition. In: MIT Working Papers in Linguistics 19: 213-254.

Nemoto, Naoko 1993. Chains and case positions: A study from scrambling in Japanese. Doctoral dissertation, University of Connecticut, Storrs.

Ochi, Masao 2001. Move F and ga/no conversion in Japanese. In: Journal of East Asian Linguistics 10: 247-286.

Rizzi, Luigi 1997. The fine structure of the left periphery. In: Liliane Haegeman (ed.): Elements of grammar, 281-337. Kluwer, Dordrecht.

Sakaguchi, Mari 1990. Control structures in Japanese. In: Hajime Hoji (ed.): Japanese/Korean Linguistics, 303-317. CSLI/Stanford University, Stanford, CA.

Saito, Mamoru 1985. Some asymmetries in Japanese and their theoretical implications. Doctoral dissertation, MIT, Cambridge, MA.

Saito, Mamoru 1992. Long-distance scrambling in Japanese. In: Journal of East Asian Linguistics 1:69-118.

Tada, Hiroaki 1993. A /A-bar partition in derivation. Doctoral dissertation, MIT, Cambridge, MA.

Takano, Yuji. 2010. Scrambling and control. In: Linguistic Inquiry 41: 83-110.

Uchibori, Asako 2000. The syntax of subjunctive complements: Evidence from Japanese. Doctoral dissertation, University of Connecticut, Storrs.

Uriagereka, Juan 1999. Multiple spell-out. In: Samuel David Epstein - Norbert Hornstein (eds.): Working minimalism, 251 – 282. MIT Press, Cambridge, MA.

Watanabe, Akira 1993. The notion of finite clauses in Agr-based case theory. In: MIT Working Papers in Linguistics 18: 281-296.

Watanabe, Akira 1996. Nominative-genitive conversion and agreement in Japanese: A cross-linguistic perspective. In: Journal of East Asian Linguistics 5: 373-410.

Yamato, Naoyuki 1997. On topic and focus: An account of *–wa*/*–ga*-markers in Japanese. MPhill thesis, University of Tromsø.