

RESEARCH

Case valuation after scrambling: Nominative objects in Japanese

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This paper provides new evidence for the claim that nominative objects in Japanese undergo overt movement without remaining at their base-generated positions, based on a variant of the construction which has not received as much attention as its complex predicate counterpart. It is then argued that the overt movement is scrambling. Departing from the general assumption, this paper investigates the hypothesis that an application of scrambling affects Case valuation, which was originally investigated by Fukui & Nishigauchi (1992) and Fukui (1995) (cf. Kuno 2002). Under the proposal, a nominative object is scrambled from its original position to the edge of vP, where nominative Case can be assigned. When scrambling does not take place, the object stays in-situ and receives accusative Case at its base-generated position. In other words, the Case alternation is contingent on the application of scrambling, which captures the optionality of the Case alternation in terms of that of scrambling. It is also proposed that the proposed mechanism of the Case alternation be restricted in such a way that the landing site and the base-generated position are included in the same transferred domain. Given this restriction, it is also possible to correctly capture cases where scrambling does not affect case valuation. The proposed analysis crucially adopts the hypothesis proposed by Chomsky (2001), where the transferred domain is the complement of a phase head. To the extent that the proposed analysis is successful, this paper lends support to this characterization of transferred domains.

Keywords: Case; EPP; nominative objects; phases; restructuring; scrambling

1 Introduction

One of the characteristic properties of Japanese is that it allows several cases of Case alternation. Accusative-Nominative alternation such as (1) is one such case. An object can be marked with nominative Case *ga* when a transitive verb is accompanied by the potential suffix *(rar)e* (Kuno 1973).

(1) Taroo-ga eigo-o/ga hanas-e-ru.
Taroo-NOM English-ACC/NOM speak-can-PRES
'Taroo can speak English.'

The construction has received much attention, mainly due to the scope asymmetry given in (2). Tada (1992) observes that the nominative object (henceforth NO) takes wide scope over the potential suffix in (2b), unlike the accusative object (henceforth AO) in (2a). In order to capture the wide scope reading of the NO, various approaches have been proposed in the literature (Tada 1992; Koizumi 1994; Saito & Hoshi 1998; Takano 2003; Nomura 2005; Saito 2010; Takahashi 2010 among many others).

- (2) Tada (1992: 94; with his judgement)
 - a. John-ga migime-dake-o tumur-e-ru. John-NOM right.eye-only-ACC close-can-PRES 'John can close only his right eye.'
 - (i) can > only (John can wink his right eye.)
 - (ii) ?*only > can (It is only his right eye that he can close.)
 - b. John-ga migime-dake-ga tumur-e-ru.
 John-NOM right.eye-only-NOM close-can-PRES
 'John can close only his right eye.' (i) *can > only (ii) only > can

This paper focuses on the following variant of the NO-construction, which exhibits a similar scope asymmetry.

- (3) Takano (2003: 825; with his judgement)
 - a. John-wa migime-dake-o tumur-u koto-ga deki-ru. John-TOP right.eye-only-ACC close-PRES NMLZ-NOM can-PRES 'John can close only his right eye.' (i) can > only (ii) ?*only > can
 - b. John-wa migime-dake-ga tumur-u koto-ga deki-ru. John-TOP right.eye-only-NOM close-PRES NMLZ-NOM can-PRES 'John can close only his right eye.' (i) *can > only (ii) only > can

Although this variant has been discussed by Kuno (2002), Takano (2003), and Hiraiwa (2005: 186), it has received less attention and its syntactic behavior remains to be relatively unexplored, compared to its complex predicate counterpart. In contrast to the complex predicate type such as (1) and (2), the matrix predicate is a morphologically independent verb *deki* 'can' and takes a verbal complement headed by the nominalizer *koto* in (3). The reason why this paper focuses on the variant given in (3) is that in the complex predicate type, the potential suffix and the verb constitute a complex predicate, which limits the application of some syntactic tests that otherwise could have been applied. Since the variant in (3) is free from such a morphological integrity problem, it will be possible to reveal any syntactic properties which we could not find based on the complex predicate type. In fact, taking a closer look at the variant in (3), this paper will provide novel pieces of evidence which show that the NO overtly undergoes movement from its base-generated position, as independently argued by Kuno (2002).

Investigating the nature of the overt movement of the NO is another goal of this study, which pursues the hypothesis that the relevant movement is scrambling, contrary to the general assumption that nominals have to retain their Case after scrambling. Departing from this general assumption, this paper proposes that the construction under investigation involves scrambling of an object to the position where nominative Case can be assigned. On the other hand, when scrambling does not take place, accusative Case is assigned to the object at the base-generated position. In other words, the relevant Case alternation is contingent on the application of scrambling. The precursor of the analysis is Fukui & Nishigauchi (1992) and Fukui (1995), where scrambling is involved in the so-called Nominative Genitive Conversion, wherein a genitive subject is scrambled to the point where genitive Case can be assigned. This paper revives this idea in analyzing NOs.

Before beginning a detailed discussion, an important issue will be mentioned here. Recall that Tada (1992) observes that the narrow scope reading of the NO is unavailable in (2b). Contrary to Tada, Nomura (2005) claims that the relevant narrow scope reading is

¹ I thank one of the reviewers for bringing my attention to Kuno (2002) and Hiraiwa (2005).

allowed under an appropriate context (see Nomura 2005 for details). Following Nomura, this paper takes the position that the relevant narrow scope reading is available in (2b). Similarly, I find the narrow scope reading of the NO available in (3b) as well, contrary to Takano (2003).

The rest of this paper is organized as follows. Carefully examining syntactic behaviors of the variant given in (3), Section 2 argues that the NO overtly moves out of the *koto*-phrase. Section 3 critically examines the overt movement approaches previously undertaken by Tada (1992), Koizumi (1994) and Nomura (2005). Section 4 puts forward the hypothesis that the movement of a NO is scrambling, and then illustrates how to derive the Case alternation under investigation, with the discussion about why Case alternation takes place in a limited way. Section 5 summarizes the paper.

2 A closer look at the variant

2.1 Structural asymmetries between NOs and AOs

This section investigates the syntactic behavior of NOs and AOs, taking a closer look at cases like (3), which have been discussed in Kuno (2002), Takano (2003), and Hiraiwa (2005). Two novel pieces of evidence will be provided in favor of the claim that NOs are outside of the *koto*-phrase, unlike AOs. The first one comes from coordination. Let us consider the contrast between (4a) and (4b).

- (4) a. Watasi-wa [eigo-o ryuutyooni hanasu koto] to [piano-o I-TOP English-ACC fluently speak NMLZ and piano-ACC ryoote-de hiku koto]-ga deki-ru.
 both.hands-with play NMLZ-NOM can-PRES
 'I can speak English fluently and play the piano with both hands.'
 - b. *Watasi-wa eigo-ga ryuutyooni hanasu koto to piano-ga I-TOP English-NOM fluently speak NMLZ and piano-NOM ryoote-de hiku koto-ga deki-ru. both.hands-with play NMLZ-NOM can-PRES 'I can speak English fluently and play the piano with both hands.'

In (4a), there is nothing wrong with coordinating two *koto*-phrases including the AOs. If the NOs could stay within the *koto*-phrase like the AOs, nothing would prevent the *koto*-phrases from being coordinated in (4b) as well. However, (4b) is ungrammatical, which suggests that the NOs are outside of the *koto*-phrases.

The other argument involves the adverb *mattaku* 'at all,' which should be licensed by the clause-mate negation. (5b) is ungrammatical because the adverb, which is in the matrix clause, cannot be licensed by negation in the *koto*-phrase. In (5a) and (5c), on the other hand, the clause-mate requirement is satisfied.

- (5) a. Taroo-wa [Hanako-ga gohan-o zenbu tabetesimatta koto]-ni
 Taroo-TOP Hanako-NOM rice-ACC all ate NMLZ-DAT
 mattaku hara-o tate-nakat-ta.
 at.all belly-ACC make.stand.up-not-past
 'Taroo did not get angry at all at Hanako's eating all the rice.'
 - b. *Taroo-wa [Hanako-ga gohan-o tabe-nai koto]-ni mattaku hara-o Taroo-TOP Hanako-NOM rice-ACC eat-not NMLZ-DAT at.all belly-ACC tate-ta. make.stand.up-past
 - Lit. 'Taroo got angry at all at Hanako's not eating rice.'

c. Taroo-wa [Hanako-ga mattaku gohan-o tabe-nai koto]-ni hara-o
Taroo-TOP Hanako-NOM at-all rice-ACC eat-not NMLZ-DAT belly-ACC
tate-ta.
make.stand.up-past

'Taroo got angry at Hanako's not eating rice at all.'

Keeping this in mind, let us consider (6a) and (6b).

- (6) a. Taroo-wa [mattaku migime-o tumur-anai koto]-ga deki-ru.

 Taroo-TOP at.all right.eye-ACC close-not NMLZ-NOM can-PRES

 'Taroo is able not to close his right eye at all.'
 - b. *Taroo-wa [mattaku migime-ga tumur-anai koto]-ga deki-ru.
 Taroo-TOP at.all right.eye-NOM close-not NMLZ-NOM can-PRES
 'Taroo is able not to close his right eye at all.'
 - c. Taroo-wa migime-ga [mattaku tumur-anai koto]-ga deki-ru. Taroo-TOP right.eye-NOM at.all close-not NMLZ-NOM can-PRES 'Taroo is able not to close his right eye at all.'

Since the adverb *mattaku* should be licensed by negation in the embedded clause, the adverb is a hallmark of the left edge of the *koto*-phrase, which guarantees that the AO and the NO are in the *koto*-phrase in (6a) and (6b), respectively. The ungrammaticality of (6b) supports the claim that NOs are not included in the *koto*-phrase. As shown in (6c), when the NO precedes the adverb, the example becomes grammatical, which shows that the NO is outside of the *koto*-phrase.²

The novel pieces of evidence presented in this section indicate that the variant under investigation cannot be handled under one previous analysis, which was proposed by Takahashi (2010). He proposes that the wide scope interpretation of the NO *dake*-phrase in (2b) results from an application of the covert operation Quantifier Raising (see Saito 2010 for a similar approach). His analysis is crucially based on the assumption that the NO stays at its underlying position like the AO at overt syntax, but this assumption cannot be maintained with the variant, as shown in this section.

2.2 Base-generation or movement?

Kuno (2002) also investigates the relevant variant and claims that the NO undergoes overt movement out of the *koto*-phrase. The novel data presented in Section 2.1 is compatible with the overt movement approach but the relevant data can be also captured by basegenerating the NO as an element of the matrix clause, without appealing to movement. The

My informants suggest that (ib) is not significantly degraded, compared to (ia). One possible explanation for the speakers' judgement is speculated as follows: they allow the relevant manner adverb to be base-generated in the matrix clause so that it can modify the matrix verb *deki*. Thus, the NO can follow the adverb, even if it moves to the matrix clause. In contrast, this option is not available with the adverb *mattaku* because it should be in the same clause as negation in the embedded clause in (6b). The argument based on the adverb *mattaku* in the text demonstrates the point in a clearer way.

² Kuno (2002) presents a similar argument, based on the manner adverb *ryuutyooni* 'frequently' as a hallmark of the left edge of the *koto*-phrase, as shown below.

⁽i) Kuno (2002: 479; with his judgement)

a. Taroo-wa ryuutyooni Kankokugo-o hanas-u koto-ga deki-ru. Taroo-TOP fluently Korean-ACC speak-PRES NMLZ-NOM can-PRES 'Taroo can speak Korean fluently.'

b. ??/*Taroo-wa ryuutyooni Kankokugo-ga hanas-u koto-ga deki-ru. Taroo-TOP fluently Korean-NOM speak-PRES NMLZ-NOM can-PRES 'Taroo can speak Korean fluently.'

latter approach is pursued by Takano (2003). He proposes that (i) a NO is base-generated as a proleptic object in the matrix clause and (ii) that the object position of the embedded predicate is occupied by *pro*, as illustrated in (7).

- (7) a. John-wa migime-dake-ga₁ [PRO pro₁ tumur]-e-ru.

 John-TOP right.eye-only-NOM close-can-PRES

 'John can close only his right eye.'
 - b. John-wa migime-dake-ga₁ [PRO pro₁ tumur-u] koto-ga deki-ru. John-TOP right.eye-only-NOM close-PRES NMLZ-NOM can-PRES 'John can close only his right eye.'

Kuno (2002) does not discuss the base-generation approach but it is still important to examine which approach is more plausible. This is the topic of the rest of this section.

As mentioned in Section 1, this paper takes the position that the narrow scope reading of the NO is available in (7b), contrary to Takano (2003). This observation is readily captured under the movement approach because the lower copy of the NO can partake in the scope calculation. On the other hand, under the base-generation approach, it is difficult to expect the relevant narrow scope reading. In what follows, I will present another argument for the movement approach. Let us consider the example in (8), where the anaphor *zibun* in the NO can be bound by the causee *Hanako-ni*.^{3,4}

- (8) a. Taroo-ga Hanako-ni₁ zibun₁-no migite-dake-ga age-sase-ru
 Taroo-NOM Hanako-DAT self-GEN right.hand-only-NOM raise-cause-PRES koto-ga deki-ta.

 NMLZ-NOM can-past
 Lit. 'Taroo could make Hanako₁ raise only self₁'s right hand.'
 - b. Taroo-ga [zibun₁-no migite-dake-ga]₂ [Hanako₁-ni pro₂ age-sase-ru koto]-ga deki-ta.
 - c. Taroo-ga [Hanako₁-ni]₃ [zibun₁-no migite-dake-ga]₂ [t₃ pro₂ age-sase-ru koto]-ga deki-ta.

Taroo-ga Hanako-ni zibun-no migite-dake-ga age-sase-rare-ta. Taroo-NOM Hanako-DAT self-GEN right.hand-only-NOM raise-cause-can-past Lit. 'Taroo could make Hanako raise only self's right hand.'

According to the reviewer, the contrast above seems to suggest that the NO is indeed base-generated as a matrix element. First of all, my informants find no robust contrast in (i), but even if there is a contrast in (i), it is not clear that the degraded status of (ib) necessarily prefers the base-generation analysis to the overt movement analysis. Under the base-generation approach, it is likely that the degraded status of (ib) is due to the movement of *Hanako-ni* across the base-generated NO. Under the overt movement analysis, on the other hand, the same movement (the movement of *Hanako-ni*) is involved in (ib). Thus, the base-generation approach and the proposed analysis will end in a draw.

³ (8a) is adapted from the following complex predicate counterpart.

⁽i) Takahashi (2010: 330)

⁴ One of the reviewers observes that when a dative argument precedes a NO, the example becomes degraded in contrast to the accusative counterpart, as shown below. The judgement is due to the reviewer.

⁽i) a. Taroo-wa sono sigoto-ga Hanako-ni makase-ru koto-ga deki-ru. Taroo-TOP that job-NOM Hanako-DAT leave-PRES NMLZ-NOM can-PRES 'Taroo can leave the job to Hanako.'

b.??Taroo-wa Hanako-ni sono sigoto-ga makase-ru koto-ga deki-ru. Taroo-TOP Hanako-DAT that job-NOM leave-PRES NMLZ-NOM can-PRES 'Taroo can leave the job to Hanako.'

Under Takano's approach, the NO is base-generated as a proleptic object in the matrix clause, which is higher than the binder *Hanako-ni*, as illustrated in (8b). It is necessary to scramble *Hanako-ni* across the NO in order to obtain the surface order, as illustrated in (8c). As (8b) shows, *zibun* is not c-commanded by the antecedent at the base-generated position, which leads to the expectation that (8a) would involve binding failure. One might suggest that binding relation between *zibun* and its antecedent can be established after the binder moves to a higher position than *zibun* in (8c). However, this suggestion is not maintainable. Let us consider (9).

- (9) a. *Zibun $_1$ -no sensei-wa Hanako $_1$ -ni mondai-o tok-ase-ta. self $_1$ -GEN teacher-TOP Hanako $_1$ -DAT question-ACC answer-cause-past Lit. 'Self $_1$'s teacher made Hanako $_1$ answer the question.'
 - b. $*[Hanako_1-ni]_2$ zibun $_1$ -no sensei-wa t $_2$ mondai-o tok-ase-ta.
 - c. [Hanako-ni]₁ sensei-wa t₁ mondai-o tok-ase-ta. Hanako-DAT teacher-TOP question-ACC answer-cause-past 'The teacher made Hanako answer the question.'

In (9a), *zibun* is not c-commanded by its antecedent *Hanako-ni*. Even if *Hanako-ni* undergoes scrambling, the binding failure cannot be repaired, as shown in (9b). If scrambling could create a new binding relation between *zibun* and its antecedent, (9b) would be grammatical, contrary to fact. (9c) confirms that the scrambling of *Hanako-ni* poses no problem if binding relation is not involved. The availability of *zibun*-binding in (8a) suggests that *zibun* in the NO is bound by its antecedent at the base-generated position and that the NO moves out of the *koto*-phrase followed by the movement of *Hanako-ni*, as illustrated below.

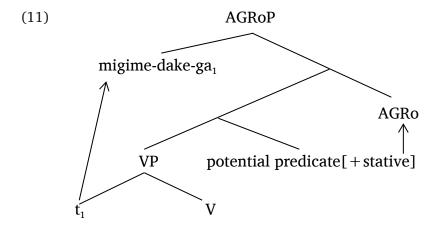
(10) Taroo-ga [Hanako-ni₁]₂ [zibun₁-no migite-dake-ga]₃ [t₂ t₃ age-sase-ru koto]-ga deki-ta.

This section has presented novel pieces of evidence in favor of the claim that the NO is outside of the *koto*-phrase at overt syntax, and then addressed the issue as to whether the relevant dislocation results from overt movement or base-generation, which has not been addressed by Kuno (2002). The section concludes that it is difficult to maintain the base-generation approach, based on the behavior of *zibun*-binding.

3 Overt movement approaches

In Section 2, it was shown that the relevant variant can be handled through neither Takahashi's (2010) nor Takano's (2003) approaches. The aim of this section is to critically examine another type of approach, where the NO undergoes overt movement for the purpose of Case checking, pursued by Tada (1992) and Koizumi (1994), among others. As reviewed later, Koizumi's analysis is more plausible than Tada's analysis, but it will be argued that the former analysis is also difficult to maintain. This is because Koizumi's analysis is crucially based on the assumption that T's EPP is obligatorily satisfied in Japanese like English, but this assumption needs to be reconsidered, along the lines of Fukui (1986) and Kuroda (1988).

Let us start the discussion with Tada's analysis (1992). He argues that the NO moves to [Spec, AGRoP] for Case checking. Under his analysis, the potential predicate moves to AGRo and its [+stative] is responsible for nominative Case checking of the NO at [Spec, AGRoP], as illustrated below.



In the structure above, [Spec, AGRoP] is higher than the potential predicate, which leads to the wide scope reading of the NO. The narrow scope reading of the AO is successfully captured because the AO stays within VP. The scope asymmetry between the NO and the AO in (2) is thus explained.

Although Tada's analysis successfully captures the wide scope nature of the NO, his analysis faces some problems, pointed out by Koizumi (1994). One of them is given below.

(12) Koizumi (1994: 220)

Under his (= Tada's) analysis, nominative Case is licensed by two different categories: nominative Case of subjects is licensed by Tense (+ AGRs), and nominative Case of (nominative) objects is licensed by [+ stative] predicates (+ AGRo). Tense is a functional category, while [+ stative] predicates are lexical categories (verbs, adjectives, and adjectival nouns). These two categories have nothing in common, except for the alleged nominative Case licensing ability. It is not clear at all why nominative Case should be licensed by two distinct sets of categories as different as Tense and stative predicates. This fact alone, of course, does not render the analysis untenable, but it surely makes it dubious.

Koizumi (1994) solves this problem by proposing that the Case of the NO is licensed by T in the same way as nominative subjects. This proposal is technically implemented by arguing that the NO overtly moves to [Spec, TP]. One of his arguments is based on scope interaction with negation. Let us consider the following example.

(13) Koizumi (1994: 222)

John-ga migime-dake-ga tumur-e-na-i.

John-NOM right.eye-only-NOM close-can-not-PRES

'John cannot close only his right eye.' (only > not > can)

In the example above, the NO takes wide scope over negation, which is correctly predicted under his analysis because [Spec, TP] is higher than negation. Koizumi points out that (13) is problematic for Tada's analysis, where the landing site of the NO under his analysis (i.e. [Spec, AGRoP]) is lower than negation. As just reviewed, it seems that Koizumi's (1994) analysis is more plausible than Tada's analysis conceptually and empirically but it will be argued below that it is also difficult to maintain Koizumi's analysis.

Koizumi's analysis crucially assumes that Japanese T plays a significant role in syntactic computation in a way similar to English T, which induces ϕ -feature agreement and triggers A-movement for the EPP requirement. However, this assumption should be carefully examined. It has been controversial whether Japanese has A-movement such as

passivization and raising in English and other languages which exhibit ϕ -feature agreement. Concerning passivization, one could analyze the so-called passive construction in Japanese such as (14a) in the same way as its English counterpart, which is widely analyzed in terms of A-movement, as illustrated in (14b).

- (14) a. Taroo-ga Hanko-ni hihans-are-ta.

 Taroo-NOM Hanako-DAT criticize-PASS-past

 'Taroo was criticized by Hanako.'
 - b. Taroo-ga, Hanko-ni t, hihans-are-ta.

However, this is not the only possible analysis of the Japanese passive. Some researches argue that examples such as (14a) involve a clausal complement and that the dislocated subject is the argument selected by the passive morpheme (Kuroda 1965/79, among many others). Additionally, given that scrambling is widely available in Japanese, it will be also plausible to analyze the dislocation of the nominative subject is scrambling. In fact, carefully examining reconstruction effects, Hoji (2008) argues that the relevant dislocation in Japanese passive is analyzed as scrambling. The optionality of the dislocation of *Taroo-ga* in (14) is straightforwardly explained under the scrambling analysis because scrambling is also optional.

From a conceptual perspective, there is no reason to claim that T's EPP is obligatorily satisfied in Japanese either. Recall that EPP was originally proposed as a structural requirement in order to capture the appearance of expletive elements in some languages like English (Chomsky 1981; see also Bever 2009; Chomsky 2009 for relevant discussion). As one of the reviewers points out, since EPP is just the name of a phenomenon in those languages, not a principle, nothing conceptually forces this structural requirement to hold universally. In fact, McCloskey (2001) and Bobaljik & Wurmbrand (2005), among others, argue that EPP does not hold universally. Recently, Chomsky (2015) also suggested that Italian lacks EPP. Turning to Japanese, given the absence of expletive elements, it is plausible to argue that T has no EPP requirement in the language. In fact, Fukui (1986) and Kuroda (1988) take a similar stand and pursue the hypothesis that Japanese subjects do not have to move to [Spec, TP] but can stay insitu, unlike English.

One of the arguments for subject raising in Japanese in the literature is presented by Kishimoto (2001). His argument is based on the syntactic distribution of indeterminate pronouns in cases like (15), where they concur with the particle *mo*, which is originally studied by Kuroda (1965/79).

(15) Hanako-wa [Taroo-ga nani-o kat-ta to mo] omowa-nakat-ta. Hanako-TOP Taroo-NOM what-ACC buy-past that PART think-not-past 'Hanako did not think that Taroo bought anything.'

Kishimoto (2001: 600) observes that there is a subject/object asymmetry when *mo* is attached to a verb, as illustrated below.

- (16) a. *Dare-ga warai-mo si-nakat-ta. who-NOM laugh-PART do-not-past 'Nobody laughed.'
 - b. Taroo-wa dare-ni ai-mo si-nakat-ta. Taroo-TOP who-DAT see-PART do-not-past 'Taroo did not meet anyone.'

Kishimoto claims (i) that mo is combined with a verb and they move to v together and (ii) that the scope of mo is the vP. He argues that the ungrammaticality of (16a) results from the existence of subject raising to [Spec, TP] out of the domain of mo.

However, it is necessary to reconsider the generalization that subject indeterminate pronouns cannot be licensed by *mo* attached to the verb. In fact, Kuroda (1965/79) provides the following example, where the indeterminate pronoun occupies the subject position.

(17) Kuroda (1979: 93)

Koremade dare-ga kangae-mo si-nakat-ta aidia this.till who-NOM think-PART do-not-past idea 'the idea which nobody has ever thought of'

The grammaticality of the following example also casts doubt on the structural condition proposed by Kishimoto.

(18) Takano (2003: 803)

?Watasi-wa dare-ni [koi to mo] itte-inai. I-TOP who-DAT come that PART said-have.not 'I haven't said to anyone to come.'

In (18), *dare-ni* is an object of the matrix verb while *mo* is attached to the complement. It is obvious that the former does not fall under the scope of *mo*. Nevertheless, the example is acceptable. To the extent that the nature of indeterminate pronouns is not clearly understood, it seems to be difficult to employ them as a diagnostic for exploring the syntactic position of a subject in Japanese (see also Yamashita 2009 for a prosodic analysis of the relevant construction).

Following Fukui (1986) and Kuroda (1988), this paper argues that subjects can stay insitu in Japanese (see also Kato 2006 for relevant discussion). Let us consider the following example. In (19), the verb in the first conjunct is bare and lacks a tense morpheme.

(19) Taroo-ga nattoo-o tabe, Jiroo-ga koohii-o nom-u yooni natta.

Taroo-NOM nattoo-ACC eat Jiroo-NOM coffee-ACC drink-PRES COMP happened 'It happened that Taroo ate nattoo and Jiroo drank coffee.'

The absence of subject raising in Japanese enables (19) to be analyzed in terms of the coordination of the embedded νPs , as illustrated in (20).

(20) [[,,, Taroo-ga nattoo-o tabe] & [,,, Jiroo-ga koohii-o nom]u] yooni natta.

On the other hand, under the hypothesis that T's EPP is obligatorily satisfied in Japanese as in English, (19) is supposed to be derived from coordination of the matrix TPs with the ellipsis taking place in the first conjunct, as illustrated in (21).

- (21) [Taroo-ga nattoo-o tabe-ru yooni natta] & [Jiroo-ga koohii-o nom-u yooni natta]. However, such ellipsis analysis is not plausible. Let us consider the ungrammaticality of (22a).
- (22) a. *Taroo-ga Hanako-ni nattoo-o tabe, John-ga Mary-ni koohii-o Taroo-NOM Hanako-DAT nattoo-ACC eat John-NOM Mary-DAT coffee-ACC nomu yooni itta.

 drink COMP told
 - 'Taroo told Hanako to eat nattoo and John told Mary to drink coffee.'
 - b. Taroo-ga Hanako-ni nattoo-o tabe-ru yooni itta, John-ga Mary-ni koohii-o nomu yooni itta.

If it were possible to derive (19) via ellipsis as illustrated in (21), (22a) would be analyzed as (22b) in a way similar to (21). It is not clear why the ellipsis strategy available for (21) is not available for (22b). On the other hand, under the non-ellipsis approach, the ungrammaticality of (22a) is easily captured in terms of coordination of non-constituents. It is obvious that *Taroo-ga*, *Hanako-ni*, *nattoo-o* and *tabe* do not make a constituent in (22a). Thus, it is more plausible to claim that (19) should be analyzed as (20) without recourse to ellipsis, which indicates that Japanese subjects do not have to move to [Spec, TP].

A similar argument holds with NOs. The following example shows that the NO does not undergo movement to [Spec, TP], contrary to Koizumi (1994).

(23) Hanako-wa gakuhu-ga surasurato yom-u koto-ga deki, piano-ga Hanako-TOP score-NOM easily read-PRES NMLZ-NOM can piano-NOM ryooote-de hik-u koto-ga deki-ru yooni natta. both.hands-with play-PRES NMLZ-NOM can-PRES COMP happened 'It happened that Hanako was able to read scores easily and play the piano by both hands.'

It is plausible to claim that (23) involves ν P-coordination as illustrated in (24a), in a way similar to (19). The analysis in (24a) is incompatible with Koizumi's analysis because each conjunct lacks [Spec, TP], which is a landing site of the NO under his analysis.

- (24) a. $[_{\nu P}$ Hanako-wa $_1$ gakuhu-ga surasurato yom-u koto-ga deki] & $[_{\nu P}$ pro $_1$ piano-ga ryooote-de hik-u koto-ga deki] ru yooni natta.
 - b. $[_{TP}$ Hanako $_1$ -wa gakuhu-ga surasurato yom-u koto-ga deki-ru yooni natta] & $[_{TP}$ pro $_1$ piano-ga ryooote-de hik-u koto-ga deki-ru yooni natta].

Alternatively, (23) could be analyzed as (24b), which involves TP coordination with ellipsis taking place on the right edge of the first conjunct. However, recall that such an ellipsis analysis is not plausible, as discussed in (22a).⁵

Nomura (2005) also pursues the analysis where the NO is licensed by T. Deviating from Koizumi, he proposes that the NO is allowed to stay at its base-generated position, in addition to the option of moving to [Spec, TP]. Under Nomura's analysis, the grammaticality of (23) can be accommodated but given the data presented in Section 2, where it was shown that the NO overtly moves out of the *koto*-phrase from its underlying position, it is not plausible to allow the NO to stay in its base-generated position.

4 Proposal

The aim of this section is to provide an alternative analysis of the construction under discussion. Before presenting details of the proposal, the gist of it is provided below. Given that Japanese does not exhibit ϕ -feature agreement, this paper adopts the approach where a nominal is assigned Case on the basis of its structural position without appealing to

Yatsushiro argues that under Koizumi's analysis the fronted VP would be expected to be unable to contain the NO *eigo-ga* because it would have to move to [Spec, TP]. However, it is not clear how successful her argument is. It seems that nothing prevents the example (i) from being analyzed as (ii), where the NO undergoes scrambling to the sentence-initial position from [Spec, TP], across the fronted VP.

(ii) Eigo-ga₁ [t₁ hanas-e]-sae₂ Kai-ga t₁ t₂ sita.

⁵ Yatsushiro (1999) also casts doubt on Koizumi's proposal that the landing site of NOs is [Spec, TP]. She argues that the NO is contained within the fronted VP in (i).

⁽i) Yatsushiro (1999: 96)
[Eigo-ga hanas-e]-sae, Kai-ga t, sita.
English-NOM speak-can-even Kai-NOM did
'Even to be able to speak English, Kai managed.'

agreement (see Kuroda 1978; Saito 1982; Fukui 1986; Zushi 2016 among others), instead of the Agree-based approach to Case (Chomsky 2000). Investigation of the internal structure of the *koto*-phrase is also an important step for a better understanding of the relevant construction. It will be argued that the *koto*-phrase taken by *deki* involves restructuring in the sense of Wurmbrand (2001). That is, the verb phrase within the relevant *koto*-phrase is just VP, not ν P. This point will be explored in terms of the Negative Concord Items. The most important point of the proposed analysis is to challenge the general assumption that scrambling does not affect Case valuation. It will be argued that scrambled nominals can receive Case at the landing site of scrambling in principle and that this is indeed involved in the relevant construction.

4.1 Case

Under the standard approach to Case in the minimalist program, Case valuation is obtained as a by-product of ϕ -feature agreement (Chomsky 2000). It is controversial whether this Agree-based approach is plausible to some languages which do not exhibit ϕ -feature agreement such as Japanese. The literature includes another view of Case, whereby a nominal is assigned Case based on its structural position without appealing to agreement (see Kuroda 1978; Saito 1982; Fukui 1986 among others). Zushi (2016) investigates the latter approach under the minimalist program and proposes that Case valuation is executed in non-agreement languages such as Japanese via the following mechanisms, which are adopted in this paper.

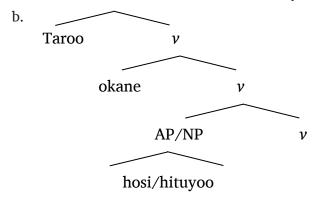
(25) Zushi (2016: 48)

- a. When a nominal is merged with a lexical head, its Case feature is valued as accusative.
- b. When a nominal is merged with a phase head (ν or n), its Case feature is valued as nominative or genitive.
- c. Otherwise, the Case feature of a nominal is valued as dative.

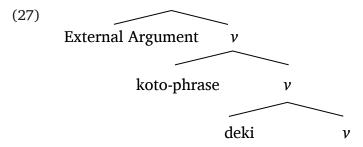
This paper also follows Zushi (2016) with respect to the structure of stative predicates, most of which are adjectives and nominal adjectives. Assuming that adjectives and nominal adjectives must combine with a phase head to take arguments, which is originally due to Baker (2003) and Kayne (2009), she proposes that a theme argument of a stative predicate occupies an edge position of v, not the complement position of the predicate. Thus, (26a) has the structure given in (26b). The internal argument is assigned nominative Case ga under the mechanism given in (25b).

(26) Zushi (2016: 54)

a. Taroo-ga okane-ga hosii/hituyoo-da/aru. Taroo-NOM money-NOM want/need-be/have 'Taroo {wants/needs/has} some money.'



This paper claims that the stative verb deki has a similar structure, where its internal argument (i.e. the koto-phrase) occupies an edge position of v, as illustrated below.



Before showing how the construction under investigation is derived, let us take a closer look at the internal structure of the *koto*-phrase in the next subsection.

4.2 On the internal structure of the koto-phrase

The nominalizer *koto* can be employed not only with the stative verb *deki* but also with non-stative verbs such as *kokoromi* 'try' as shown in (28a), where the *koto*-phrase is marked with accusative Case *o*, not nominative Case *ga*, in contrast to the construction under investigation, repeated as (28b).⁶

- (28) a. Taroo-wa issyookenmei benkyoos-uru koto-o kokoromi-ta.

 Taroo-TOP hard study-PRES NMLZ-ACC try-past

 'Taroo tried to work hard.'
 - b. Taroo-wa migime-dake-ga tumur-u koto-ga deki-ru. Taroo-TOP right.eye-only-NOM close-PRES NMLZ-NOM can-PRES 'Taroo can close only his right eye.'

In what follows, it will be shown that despite the absence of the apparent difference, the *koto*-phrase in (28a) has a different internal structure from that in (28b), based on the Japanese *wh-mo* expression appearing under a negative context such as *dare-mo* 'who-PART' and *nani-mo* 'what-PART.' Following Watanabe (2004), let us call these items negative concord items (NCIs) in this paper. The contrast between (29a) and (29b) shows that the NCI requires negation.

- (29) a. Taroo-wa dare-ni-mo awa-nakat-ta.
 Taroo-TOP who-DAT-PART see-not-past
 'Taroo did not see anyone.'
 - b. *Taroo-wa dare-ni-mo at-ta.
 Taroo-TOP who-DAT-PART see-past
 Lit. 'Taroo saw anyone.'
 - c. *Taroo-wa [Hanako-ga dare-ni-mo au to] iwa-nakat-ta.
 Taroo-TOP Hanako-NOM who-DAT-PART see that say-not-past
 'Taroo did not say that Hanako would see anyone.'

It has also been observed that the NCI and negation should be involved in the same clause, as shown in (29c).

This type of *koto*-phrase will be discussed in Section 4.4.

⁶ One of the reviewers points out that there is another type of *koto*-phrase, where tense is realized. The relevant example is given in (i).

⁽i) Taroo-wa Hanako-ga kaetta koto-o sitta. Taroo-TOP Hanako-NOM left NMLZ-ACC knew 'Taroo knew that Hanako left.'

As has been discussed, this paper takes the view that Japanese does not employ the Agree-based approach to Case valuation. However, this leaves the possibility that Agree still plays a role in other syntactic dependencies in Japanese where ϕ -feature is not involved. This paper adopts the hypothesis that the dependency between the relevant NCI and negation is captured via Agree. Along the lines of Yamashita (2003) and Maeda (2004), this paper also argues that the clause-mate requirement in question is derived from the Phase Impenetrability Condition (PIC), proposed by Chomsky (2000; 2001). Given that phases play an important role in the syntactic computation under the current minimalist program, it is desirable to reduce the clause-mate requirement to the PIC, originally proposed by Chomsky (2000), as given in (30).

(30) Chomsky (2000: 108)

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.

Later, Chomsky (2001) relaxes the PIC as shown in (31), where ZP is a next higher phase.

(31) Chomsky (2001: 14)

The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

Let us consider how (30) and (31) differ under the schematically illustrated structure given in (32), where there is a non-phase head X between Z and H.

$$(32) \qquad \left[_{ZP} Z \left[_{XP} X \left[_{HP} H Y P\right]\right]\right]$$

Under (30), the non-phase head X cannot probe into the domain of H (i.e. YP) because the domain of H becomes inaccessible to any elements outside of HP. Under (31), on the other hand, the non-phase head X is allowed to probe into the domain of H (i.e. YP), although YP is still inaccessible to the next higher phase head Z. In fact, the latter definition is supported by the so-called quirky NO in Icelandic such as in (33). "X" in (32) is T in the following example, where the NO agrees with T.

(33) Sigurðsson (2002: 692)

Henni leiddust strakarnir.

her.dat bored boys.the.nom

'She found the boys boring.'

Yamashita (2003) and Maeda (2004) argue that the PIC in (31) is also more plausible in terms of NCI licensing. Let us observe how this is by taking as an example (34a), which includes an object NCI.

(34) a. Taroo-ga nani-mo yoma-nakat-ta.

Taroo-NOM what-PART read-not-past
'Taroo did not read anything.'

b. [C [T [Neg [$_{vP}$ Taroo ν [$_{VP}$ V NCI]]]]] (order irrelevant)

⁷ Yamashita (2003) and Maeda (2004) focus on the so-called *sika*-phrase, which should be also licensed by sentential negation, as shown in (i). *Sika*-phrases also exhibit the clause-mate requirement like NCIs.

⁽i) a. Taroo-sika ko-nakat-ta. Taroo-only come-not-past 'Only Taroo came.'

b. *Taroo-sika ki-ta. Taroo-only come-past

Let us adopt the assumption widely adopted in the literature that negation (Neg) is merged with ν P. Under the definition of the PIC given in (30), Neg cannot probe into the domain of ν (i.e. VP) because Neg is outside of the phase ν P. On the other hand, under the definition given in (31), VP is not accessible to C, which is a next higher strong phase head, but nothing prevents Neg, which is below C, from probing into VP. Thus, Neg can successfully undergo Agree with the NCI (see Yamashita 2003 and Maeda 2004 for more empirical arguments).

Bearing the discussion so far in mind, let us consider the following contrast.

- (35) a. *Taroo-wa [dare-ni-mo purezento-o age-ru koto]-o kokoromi-nakat-ta.

 Taroo-TOP who-DAT-PART present-ACC give-PRES NMLZ-ACC try-not-past

 'Taroo didn't try to give a present to anyone.'
 - b. Taroo-wa [dare-ni-mo purezento-o age-ru koto]-ga deki-nai.

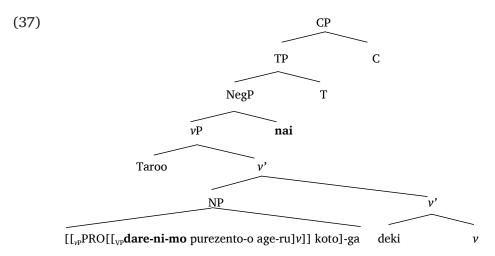
 Taroo-TOP who-DAT-PART present-ACC give-PRES NMLZ-NOM can-not

 'Taroo can't give a present to anyone.'

In (35a), the NCI within the *koto*-phrase cannot be licensed by negation in the matrix clause. This is because the matrix negation fails to probe into the lower VP within the embedded ν P, as illustrated in (36).

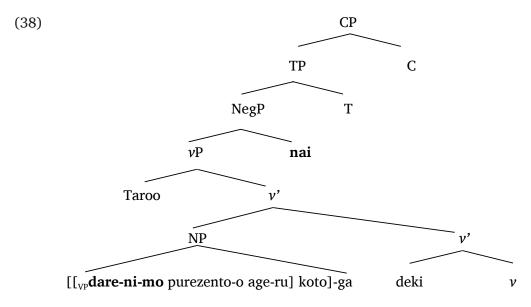
(36) $[_{vp}$ Taroo-wa $[[_{vp}$ PRO $[[_{vp}$ dare-ni-mo purezento-o age-ru]v]] koto-o]koko-romi]v]]-nakat-ta.

In contrast, interestingly, (35b) is grammatical. The NCI included in the *koto*-phrase can be licensed by the matrix negation. Based on the structure in (27), suppose that (35b) has the following structure.



Let us consider the timing of Transfer of the VP within the *koto*-phrase. Given the PIC formulated in (31), it is reasonable to assume that when a given phase becomes part of another phase, the complement of the lower phase head gets transferred and becomes inaccessible. In (37), when the *koto*-phrase is merged to an edge position of the matrix ν P, the VP complement gets transferred, which makes the VP inaccessible. The *koto*-phrase in (37) itself is still accessible to further syntactic computation because it occupies an edge position of the matrix ν P. However, the VP within the *koto*-phrase is no longer accessible at the matrix ν P-phase level. Thus, negation, which is outside of the matrix ν P, is expected to fail to probe into the VP containing the relevant NCI, as is the case in (36), which calls for an alternative structure in order to capture the restructuring effect above.

Wurmbrand (2001) proposes that some restructuring predicates which she calls "lexical restructuring predicates" combine with a bare VP, which lacks an embedded syntactic subject. It is claimed in this paper that what is selected by *koto* in (35b) is also a bare VP without a ν P-layer within the *koto*-phrase. Under this analysis, *nai* can probe into the VP within the *koto*-phrase due to the absence of a ν P-layer within the *koto*-phrase. Given the absence of the ν P-layer within the *koto*-phrase, since NegP involves only one phase, the NCI is accessible to negation, which leads to the welcome result, as illustrated in (38).



The grammaticality of (35b) also suggests that the relevant *koto* is not a complementizer as a phase head. If so, the NCI in (35b) would fail to be licensed by negation, contrary to fact.

One might say that *koto* takes a TP because it is sometimes assumed in the literature that the morpheme attached to the verbal stem (i.e. (r)u) is a realization of present tense. In fact, this paper has glossed and continues to gloss the morpheme as "present" for the sake of convenience. However, this is not the only way of analyzing the morpheme in question. Alternatively, it is also plausible to analyze the morpheme as part of a verbal conjugation. In other words, the morpheme is just required for morpho-phonological reasons, without any semantic meaning (see Kusumoto 1999 for relevant discussion). Under this view, the relevant morpheme is required to make the verb an adnominal form when it appears before the noun *koto*. This paper adopts the latter view, which is compatible with Wurmbrand's claim that the relevant restructuring predicates take a bare VP.8

Under the proposal, it is obvious that what is directly selected by the relevant verbs (kokoromi and deki) is a koto-phrase. One of the reviewers raises a question regarding how to ensure that the koto-phrase selected by kokoromi involves a vP while that selected by deki involves a VP, and not vice versa. As both of the verbs take a koto-phrase, it is reasonable that they are lexically specified in such a way that they syntactically take a nominal argument (i.e. an argument with [+N]). In addition to this syntactic selection, they are also lexically specified concerning semantic selection. For example, the verb kokoromi is lexically specified in such a way that it takes a proposition as a semantic type. VP corresponds to a predicative event while vP, which involves an embedded subject, corresponds to a proposition. Let us also assume that the nominalizer koto itself does not make any semantic contribution: if a given syntactic object X is merged with koto, the larger syntactic object $\{koto, X\}$ has the same semantic type as X. For example, the semantic type of

⁸ I thank one of the reviewers for bringing this issue to my attention.

νP (i.e. a proposition) is inherited to the *koto* phrase where *koto* takes a νP. Suppose that *kokoromi* is merged with such a *koto*-phrase. Since *kokoromi* needs to take a proposition, no type mismatch will arise between the verb and the *koto*-phrase. On the other hand, if *kokoromi* is merged with the *koto*-phrase where *koto* takes a VP, type mismatch will arise because the relevant *koto*-phrase is interpreted as a predicative event, which *kokoromi* does not want.

Note that the *koto*-phrase in (35a) involves o while that in (35b) involves ga, which indicates that the former stays at the complement of the verb and the latter occupies an edge position of vP. One might say that the asymmetry in (35) is somehow due to the positional differences of the *koto*-phrases in the structure. However, this is not the case. Interestingly, the passive counterpart of (35a), whose *koto*-phrase is marked with ga, is also ungrammatical, as shown in (39).

(39) *[Dare-ni-mo purezento-o age-ru koto]-ga kokoromi-rare-nakat-ta. who-DAT-PART present-ACC give-PRES NMLZ-NOM try-PASS-not-past Lit. 'It was not tried to give a present to anyone.'

The existence of nominative Case suggests that the subject of the passive construction in Japanese is supposed to occupy an edge position of νP in a way similar to the *koto*-phrase in (35b). The ungrammaticality of (39) confirms that the contrast given in (35) is due to the internal structure of the *koto*-phrases, not their positional differences.

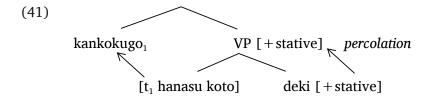
4.3 Case valuation after scrambling

It has been widely assumed that a noun phrase never changes its Case marker as a result of scrambling. That is, a scrambled phrase retains its Case marker assigned before scrambling. It is true that this is well-established empirically but theoretically speaking, nothing prevents nominals from receiving Case after scrambling in principle. In fact, Fukui & Nishigauchi (1992) and Fukui (1995) pursue the hypothesis that an application of scrambling can change its Case marker of a noun phrase, on the basis of Nominative/Genitive Conversion such as (40a) and (40b), which was originally discussed by Harada (1971).

- (40) a. Taroo-ga katta hon
 Taroo-NOM bought book
 'the book Taroo bought'
 - b. Taroo-no katta hon Taroo-GEN bought book 'the book Taroo bought'
 - c. $[Taroo-no_1 [[_{relative clause} t_1 \text{ katta}] \text{ hon}]]$

It has been argued that nominative Case marker *ga* can alternate with genitive Case marker *no* under several syntactic contexts such as relative clauses and noun complements (see Maki & Uchibori 2008 for an overview). Particularly, under Fukui's (1995) analysis, the converted form in (40b) is derived in such a way that the subject of the relative clause undergoes scrambling out of that embedded clause and is merged to the nominal projection, where it receives genitive Case *no*, as illustrated in (40c). Under the mechanism of Case valuation adopted in this paper given in (25b), the relevant landing site is the edge of *n*P.

A similar analysis has been suggested to the construction explored in this paper by Kuno (2002). As briefly mentioned earlier, Kuno claims that the NO overtly undergoes movement ("focus raising" in his words) out of the *koto*-phrase, as shown in (41), where the moved object is merged with the VP with [+stative].



The moved object receives nominative Case at the landing site under the assumption that the stativity of *deki* percolates onto the VP node. The percolated stativity is responsible for assigning nominative Case, even though the moved object is not a sister of *deki*.

Given that the theoretical status of percolation is not clear enough under the current syntactic theory, it would be desirable to eliminate the mechanism of percolation. In addition, Kuno does not address the issue on how to regulate Case alternation due to an application of scrambling. For example, even if an accusative object undergoes scrambling, it retains accusative Case at the landing site, as shown below.

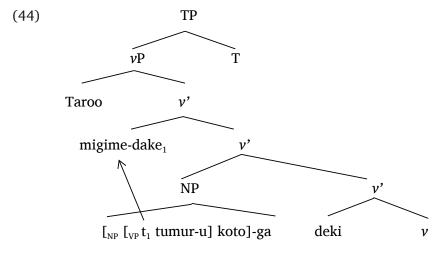
(42) Kono-hon-o/*ga Taroo-ga yon-da. this-book-ACC/NOM Taroo-NOM read-past 'Taroo read this book.'

In what follows, I also would like to pursue the hypothesis that scrambled phrases can receive Case at the landing site in a more sophisticated way. In doing so, I address the issue as to why scrambling can affect Case alternation in such a restricted way under the conceptions of minimalist program, without appealing to the mechanism of percolation.

Let us now take a close look at the derivation of the construction under investigation, which is repeated as (43).

(43) Taroo-wa migime-dake-ga tumur-u koto-ga deki-ru. Taroo-TOP right.eye-only-NOM close-PRES NMLZ-NOM can-PRES 'Taroo can close only his right eye.'

The derivation of (43) is shown in (44), where the object *migime-dake* is first base-generated at the complement of the verb.



This paper takes the view that the operation of valuation can freely apply. Although the application itself is optional, if unvalued features remain at the end of a derivation, the derivation will be illegitimate. Even if a nominal occurs in the appropriate configuration of Case valuation, Case valuation does not have to apply. If Case feature of the nominal is valued later in the course of a derivation, the Case feature will not make the derivation illegitimate. Thus, the object does not have to receive accusative Case at the base-generated position, although it is possible. The object can undergo scrambling with its Case feature unvalued, as illustrated in (44). Then, the scrambled phrase receives nominative Case ga at the landing site of scrambling (i.e. an edge position of vP) because the structural requirement for Case valuation is appropriately satisfied.

One of the advantages of the proposed analysis is that nominative subjects and nominative objects are both licensed in a structurally unified way: both of them are licensed at an edge position of νP . Recall Koizumi's criticism of Tada's analysis given in (12). Under the latter, there are two sources for nominative Case assignment: stative predicates and T. The proposed approach overcomes this problem by unifying the two modes of nominative Case assignment.

Since the landing site of scrambling is higher than the predicate *deki* 'can,' it is correctly expected that the NO can take wide scope over *deki*. Since scrambling is optional, the object can remain at the base-generated position in (44). Since the base-generated position is the only position for Case valuation with the object, it should receive accusative Case there, which leads to the accusative counterpart given in (45).¹⁰

(45) Taroo-ga migime-dake-o tumur-u koto-ga deki-ru. Taroo-NOM right.eye-only-ACC close-PRES NMLZ-NOM can-PRES 'Taroo can close only his right eye.'

(i) [t₁ tumuru koto-ga]₂ Taroo-wa migime-dake-ga₁ t₂ deki-ru. close NMLZ-NOM Taroo-TOP right.eye-only-NOM can-PRES 'Taroo can close only his right eye.'

One might say that (i) is supposed to be excluded in a way similar to (ii), by the Proper Binding Condition (PBC) because the unbound trace within the *koto*-phrase is a trace of scrambling under the proposed analysis.

(ii) Saito (1985: 167)

*[Mary-ga t₁ yonda to]₂ sono hon-o₁ John-ga t₂ itta (koto). Mary-NOM read that that book-ACC John-NOM said fact '(the fact that) John said that Mary read that book.'

It is true that the unbound trace in (i) is created by scrambling under the proposed analysis; however, there is a difference between the unbound trace in (i) and that in (ii): the Case feature is unvalued in the former whereas the Case feature is valued in the latter. At this point it is speculated that the trace whose Case feature is not valued is exempt from the PBC. This is independently supported by the following examples.

- (iii) Goodall (1997: 133)
 - a. John said he would return the books, and [returned t_1], they, were t_2 last Thursday.
 - b. [How likely t₂ to win], is John₂ t₁?

Since the nature of the PBC effect is controversial under the minimalist program, further investigation of this issue is left for future research. See also Takita (2009) and Takahashi (To appear) for more recent approaches to the PBC effect.

Under the structure given in (44), deki does not c-command the base-generated position of the dake-phrase. Let us assume that in order for a scope bearing element to take scope over another scope bearing element, the former has to c-command the latter. It is expected that deki cannot take scope over the dake-phrase because the former fails to c-command the latter. One speculative solution is as follows. Given that deki takes the koto-phrase with the aid of v, it would not be implausible to say that what functions as a predicate in the relevant construction is a unit of v and deki (i.e. $\{v, deki\}$) not deki itself and that the relevant unit plays an important role in other computation such as scope calculation. Since the relevant unit c-commands the lower copy of the dake-phrase, the narrow scope reading of it can be correctly expected. This speculation would be the case with other stative predicates given in (26a). Further investigation of this issue is left for future research.

⁹ The koto-phrase can undergo scrambling, leaving behind the NO, as shown below.

The analysis given in (44) is extended to the complex predicate counterpart such as (2b), repeated as (46a), whose derivation is given in (46b), where the potential suffix e occupies the complement position of v, in a way similar to deki in (44). 11,12

- (46) a. John-ga migime-dake-ga tumur-e-ru.

 John-NOM right.eye-only-NOM close-can-PRES

 'John can close only his right eye.'
 - b. $[_{TP} [_{vP}]$ John $[_{v}]$ migime-dake $_{1} [_{v}]$ $[_{vP} [_{VP}]$ tumur $[_{v}]$ e v]]]] T]

Under the proposed approach, the Case alternation is contingent on application of scrambling. Thus, the optionality of Case alternation is due to that of scrambling. The optionality of scrambling itself is not a problem. It is true that the optionality of scrambling used to be a problem under the early minimalist program, where the application of movement is restricted in such a way that it is subject to Last Resort: movement is obligatory. However, under the recent "Free Merge" theory of movement (Chomsky 2013; 2015), where movement/Internal Merge freely applies, the optionality of scrambling ceases to be a problem. Rather Japanese scrambling is a reflection of the notion of Free Merge in a straightforward way, as suggested by one of the reviewers.

As has been discussed so far, scrambling plays a crucial role in triggering Case alternation in Japanese. In what follows, it will be argued that employing the structure-based approach to Case valuation is also important to the availability of Case alternation. As one of the reviewers points out, even though some languages such as Italian and German also have many restructuring phenomena, Case alternation is not allowed in those languages. Let us take German as an example. Recall that Wurmbrand (2001) argues that restructuring involves a configuration where the embedded predicate involves bare VP-structure, not full *v*P-structure. The so-called *easy-to-please* construction is one of them, given below.

Recall that since the existence of ν P-phase within the *koto*-phrase prevents negation from probing into the VP within the ν P, the NCI would not be licensed by negation, contrary to fact.

One reviewer observes that (43) is slightly degraded than the complex predicate counterpart unless some emphasis is put on the NO. Another reviewer also observes that a pause is required after the NO in (43). These effects seem to be compatible with the proposed approach because scrambling has the effect of focalization more or less, which requires a pause after the fronted phrase. However, if scrambling is involved in the complex predicate counterpart as well, a question arises as to why it does not exhibit such effects obligatorily.

Another reviewer points out a similar asymmetry between the variant and the complex predicate counterpart. She/he observes that the NO must receive exhaust-listing interpretation in the following example, contrary to the complex predicate counterpart (see also note 4).

⁽i) Taroo-wa sono sigoto-ga Hanako-ni makaser-u koto-ga deki-ru. Taroo-TOP that job-NOM Hanako-DAT leave-PRES NMLZ-NOM can-PRES 'Taroo can leave the job to Hanako.'

The obligatory exhaust-listing interpretation with the variant could also be challenging for the unification approach pursued in this paper. It is speculated that the complex predicate counterpart can have an alternative derivation where scrambling of the NO is not involved. Consequently, the latter derivation is free from the focus effects mentioned above. One possibility is that such an alternative derivation involves "head-head merger," proposed by Saito & Hoshi (1998). This approach directly merges the verb tumur with the potential predicate e in (46a), without appealing to scrambling. More detailed investigation of this issue will be needed, and it is left for future research.

¹² Nomura (2005) also proposes that the NO construction with a complex predicate involves restructuring: the complement of the matrix predicate is a bare VP, in a way similar to the proposed analysis. However, Nomura proposes that the AO counterpart does not involve restructuring: the complement of the matrix verb is a νP. Nomura's analysis of the AO counterpart cannot be extended to the variant under investigation because there is difficulty to capture the grammaticality of (35b), repeated below.

⁽i) Taroo-wa [dare-ni-mo purezento-o age-ru koto]-ga deki-nai Taroo-TOP who-DAT-PART present-ACC give-PRES NMLZ-NOM can-not 'Taroo can't give a present to anyone.'

(47) Wurmbrand (2001: 27)
Dieser Text ist schwer zu lessen.
this text.NOM is hard to read
'This text is hard to read.'

There is no case assigner within the embedded VP. *Dieser Text* has to undergo Agree with T, followed by movement to [Spec, TP], and nominative Case is assigned to *Dieser Text*. It is crucial that the object cannot appear with accusative Case, as shown below.

(48) Wurmbrand (2001: 37)

*weil den Traktor leicht zu riparieren ist since the tractor.ACC easy to repair is 'since the tractor is easy to repair'

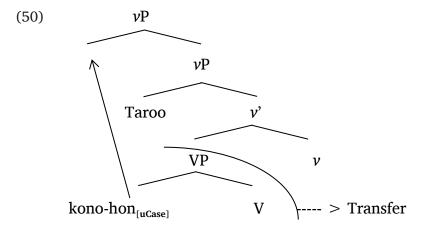
The ungrammaticality of (48) shows that Case alternation is not allowed even under the restructuring context in German, unlike Japanese. As the reviewer above points out, the difference with respect to the (un)availability of Case alternation boils down to the difference concerning the way of case valuation: the structure-based approach vs the Agree-based approach. If German adopted the former approach, the object could receive accusative Case in-situ in (48) and the example would be grammatical, contrary to fact.

4.4 A constraint on Case alternation

Let us consider the important issue which Kuno (2002) does not address: why scrambling does not affect Case marking in standard cases like (49), where the scrambled phrase has to retain accusative Case, although it moves to the edge of ν P.

(49) $\begin{bmatrix} I_{TP} & I_{VP} & I_{$

Under the proposed analysis so far, nothing would prevent *kono-hon* from receiving nominative Case, contrary to fact. Let us assume that once an unvalued feature is assigned a value, it cannot undergo another process of valuation. On this assumption, in order for the scrambled object to receive nominative Case at the edge of ν P, the Case feature of the object should remain unvalued when the object stays at the base-generated position. When Transfer applies to the complement of ν , the unvalued Case feature (uCase) of the object will be transferred to the interfaces, as illustrated below.



I would like to propose that the interfaces check whether a Case feature is valued or not in each transferred domain. Under this proposal, once a nominal is sent to the interfaces

with its Case feature unvalued, the Case feature is not legible at the interfaces, even though the Case feature of the nominal is valued at the next transferred domain. Thus, the unvalued Case feature within the VP makes the derivation illegitimate. To circumvent this problem, the object has to be given a value of its Case feature at the base-generated position. In this case, the object cannot receive nominative Case after it undergoes scrambling because it has already received Case. It is thus guaranteed that the scrambled nominal does not receive Case after scrambling in (49).

Let us turn to the issue as to how Transfer applies to (44). As discussed in Section 4.2, Transfer does not take place within the *koto*-phrase because of the absence of a *v*P-layer. At the matrix CP-phase level the scrambled *dake*-phrase and the *kokto*-phrase are transferred together. Since the interfaces check whether a Case feature is valued or not in each transferred domain, as proposed earlier, it is confirmed at the interfaces that the Case-feature of *migime-dake* has been valued.¹³

The proposed analysis also captures the unavailability of Accusative-Nominative alternation in the *koto*-phrase under *kokoromi*, as shown below.

(51) Taroo-wa migime-dake-o/*ga tumur-u koto-o kokoromi-ta. Taroo-TOP right.eye-only-ACC/NOM close-PRES NMLZ-ACC try-past 'Taroo tried to close only his right eye.'

In order for the argument of the lower verb to receive nominative Case, it has to move to the edge of vP. One possibility is moving to the edge of vP within the *koto*-phrase. Recall that under the proposed approach, the *koto*-phrase selected by *kokoromi* has a vP, in contrast to *deki*. In this case, the unvalued Case feature makes the derivation illegitimate in the same way as (50). Even if the relevant argument moves to the edge of vP in the matrix clause, the problem cannot be circumvented because the base-generated position and the landing site are transferred separately.

The discussion about the locality constraint on the NCI leads to the conclusion that *koto* is not a C as a phase head, as argued in Section 4.2. If *koto* were a phase head, the underlying position of a nominal and its landing site would be transferred separately. One reviewer points out that the *koto*-phrase under discussion behaves differently from the *koto*-phrase where tense is realized in (52b).

- (52) a. Taroo-wa [eigo-ga/*no hanas-u koto]-ga deki-ru.

 Taroo-TOP English-NOM/GEN speak-PRES NMLZ-NOM can-PRES

 'Taroo can speak English.'
 - b. Taroo-wa [Hanako-ga/no kaetta koto]-o sitta.
 Taroo-TOP Hanako-NOM/GEN left NMLZ-ACC knew
 'Taroo knew that Hanako left.'

As shown in (52a), the *koto*-phrase selected by *deki* does not allow Nominative-Genitive Conversion, in contrast to (52b). Since n is responsible for assigning Genitive case, the *koto* in (52a) is not n as a phase head either.

¹³ As discussed in Section 4.2, the *koto*-phrase selected by *kokoromi* 'try' involves a νP-phase, which is supported by failure to license a NCI (see (35a) and (39)). It is predicted that the object which is base-generated within the *koto*-phrase selected by *kokoromi* could not receive nominative Case at the landing site of scrambling due to the existence of the νP-phase, even though the *koto*-phrase occupies the edge of νP. Recall from the discussion in (39) that the subject of the passive construction appears at the edge of νP. This expectation is borne out by (i), where the example with nominative Case is degraded.

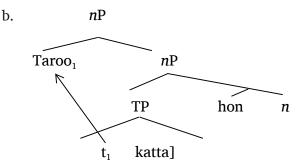
⁽i) Hanako-ni purezento-o/*ga age-ru koto-ga kokoromi-rare-ta. Hanako-DAT present-ACC/NOM give-PRES NMLZ-NOM try-PASS-past Lit. 'It was tried to give a present to Hanako.'

Another crucial point of the analysis is that the *koto*-phrase occupies an edge position of ν P, which enables the *koto*-phrase to escape from the transferred domain at the matrix ν P-phase. If the *koto*-phrase were at the complement of ν , it would undergo Transfer separately from the edges of ν P and the same problem discussed in (50) would arise. Since this paper adopts the idea that base-generating a theme argument at an edge position of ν P is available for stative predicates, not for non-stative predicates, the proposed analysis correctly captures the generalization that the investigated Case alternation is available only for the former.

One of the theoretically important points of this paper is to adopt the assumption that the transferred domain is the complement of a phase head, following Chomsky (2001) among others. This assumption plays a crucial role in the above discussion in that the base-generated position and the landing site of scrambling are transferred separately and the unwanted Case alternation in (49) is correctly excluded. Alternatively, Chomsky (2000) and Bošković (2016) among others have argued that the phase itself, not the complement of a phase head, is transferred. Under the latter approach, the base-generated position and the landing site of scrambling are included in the same transferred domain, which undermines an explanation for the unwanted Case alternation in (49). To the extent that the proposed analysis is on the right track, this paper lends support to the former approach.

As has been argued, Case alternation is available only when the underlying position of a nominal and its landing site of scrambling are included in the same transferred domain. In what follows, the derivation of other cases of Case alternation will be examined in terms of this constraint. Let us consider the derivation of Nominative-Genitive Conversion. Recall that under the analysis put forward in this paper along the lines of Fukui & Nishigauchi (1992) and Fukui (1995), the subject of a relative clause moves out of that clause via scrambling and is merged with nP. The transfer-domain-mate restriction has two implications for the analysis of relative clauses. One is that relative clauses cannot be merged with the complement of n. If the relative clause were merged with the complement of n, the former would be included in the transferred domain at nP. Thus, the landing site and the original position would be in different transferred domains, which blocks the relevant Case alternation.

(53) a. Taroo-no katta hon Taroo-GEN bought book 'the book Taroo bought'



On the other hand, if the relative clause is exempt from the transferred domain at the nP-level, as illustrated in (53b), the base-position and the landing site are included in the same transferred domain.

Another implication is that Japanese relative clauses involve no CP-layer, which is independently argued by Murasugi (1990). Otherwise, Transfer would apply to the complement of C within the relative clause, including the base-position of the subject. Since the landing site of the scrambled subject would be transferred in the different domain, the relevant Case alternation would be blocked, contrary to fact.¹⁴

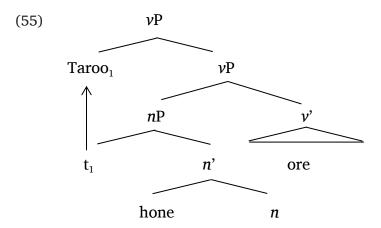
¹⁴ Whether or not a genitive phrase moves from within an embedded clause has been controversial in the literature of Nominative/Genitive Conversion. Let us consider the following example.

The proposed approach can be extended to the following Case alternation, where genitive Case can be converted into nominative Case.

(54) Taroo-no/ga hone-ga ore-ta.

Taroo-GEN/NOM bone-NOM break-past
'Taroo's bone broke.'

This alternation results from scrambling of *Taroo* from the edge of nP to that of vP, as illustrated below.



The transferred domain at the nP-phase is hone, not including the edge of nP. The edge position of nP is not included in the transferred domain at the vP-phase either. The edge of nP is transferred, together with the landing site of scrambling, when Transfer applies at the CP-phase level, finally. The transfer-domain-mate restriction is thus satisfied.

4.5 A comparison with alternative analyses

Recall that Koizumi (1994) argues that the example given in (13), which is repeated as (56), is problematic for Tada's (1992) analysis. He points out that Tada's analysis cannot capture the wide scope of the *dake*-phrase because under his analysis, the landing site of NOs (i.e. [Spec, AGRoP]) is below negation.

(56) Koizumi (1994: 222)

John-ga migime-dake-ga tumur-e-na-i.

John- NOM right.eye-only-NOM close-can-not-PRES

'John cannot close only his right eye.' (only > not > can)

The same criticism holds for the proposed analysis as well because the landing of NOs is an edge position of νP , which is below negation. In order to capture the interpretation in

More detailed investigation of Nominative/Genitive Conversion is beyond the scope of this paper.

⁽i) Maki & Uchibori (2008: 195; originally due to Nakai 1980) [kotosi sinju-no yasuku-naru] kanoosee this.year pearl-GEN cheap-become possibility 'the possibility that pearl will become cheap this year'

In (i), the sentential modifier of the embedded clause precedes the genitive phrase, which supports the hypothesis that genitive subjects can be licensed within the embedded clause, pursued by Watanabe (1996) and Hiraiwa (2001), among others. However, one of the reviewers suggests that it is suspicious that (i) represents the whole pattern of data, providing the following ungrammatical examples, where Nominative/Genitive Conversion is not allowed despite the same configuration.

⁽ii) a. kinoo Taroo-ga/*no waga-ya-ni kita koto yesterday Taroo-NOM/GEN my-house-to came fact 'the fact that Taroo came to my house yesterday'

b. natu-yasumi-no aidani Taroo-ga/*no daizina zikken-ni sippaisita kanoosei summer-break-GEN during Taroo-NOM/GEN important experiment-at failed possibility 'the possibility that Taroo failed an important experiment during the summer break'

question, the NO has to undergo further movement from the edge position to a position higher than negation. Given that scrambling is an instance of IM and freely available, it is reasonable to suggest that the relevant movement is scrambling. The scrambling from an edge position across negation is independently motivated from the wide scope in (56). It is also responsible for the wide scope of the subject QP over negation in the following example.

(57) Subete-no gakusei-ga sono-hon-o yoma-nakat-ta. all-GEN student-NOM the-book-ACC read-not-past 'All the students did not read the book.'

Recall that under the proposed analysis, Japanese subjects do not obligatorily move to [Spec, TP] but can stay within ν P, which is in the scope of negation. I suggest that the subject QP also undergoes scrambling from the base-generated position to a higher position than negation like (56), when it takes wide scope.

A question arises as to why a similar application of scrambling is not available with the AO in the following example. If available, the wide scope of the AO would be expected in (58), contrary to fact.

(58) Koizumi (1994: 221)

John-ga migime-dake-o tumur-e-na-i.

John-NOM rightv.eye-only-ACC close-can-not-PRES

'John cannot close only his right eye.' (not > can > only)

Importantly, other quantified objects such as *subete-no hon* 'all the books' can take easily wide scope over negation under the relevant syntactic context, as shown in (59) (cf. Kato 1985; Kataoka 2006 among others).

(59) John-ga subete-no hon-o yom-e-na-i.

John-NOM all-GEN book-ACC read-can-not-PRES

'John cannot read all the books.'

Given this, I speculate that the absence of the wide scope of the *dake*-phrase in (58) is sort of exceptional and it will be reasonable to reduce the absence of the relevant wide scope to the intrinsic property of the particle *dake*. At this point such property is not well understood and further investigation of it is left for future research.

Let us consider another apparent problem for the proposed analysis, under which (60b) involves two instances of movement: the NO moves to the edge of ν P across dareka-ni, which is followed by the movement of dareka-ni, as illustrated in (60c). One of the reviewers points out that the proposed analysis would expect that (60b) would allow the NO to take wide scope over the dative argument because the NO c-commands the lower copy of the dative argument in the course of the derivation. In contrast, the relevant wide scope reading is not available in (60a), which has no such movement.¹⁵

(60) a. Taroo-wa dareka-ni 40izyoo-no sigoto-o makase-ru
Taroo-TOP someone-DAT more.than.40-GEN job-ACC leave-PRES
koto-ga deki-ru.
NMLZ-NOM can-PRES
'Taroo can leave someone more than 40 jobs.'

¹⁵ The examples in (60) are provided by the reviewer without his/her judgment.

- Taroo-wa dareka-ni 40izyoo-no sigoto-ga makase-ru
 Taroo-TOP someone-DAT more.than.40-GEN job-NOM leave-PRES
 koto-ga deki-ru.
 NMLZ-NOM can-PRES
 'Taroo can leave someone more than 40 jobs.'
- c. Taroo-wa dareka-ni₁ 40 izyoo-no sigoto-ga₂ [t₁t₂ makase-ru] koto-ga deki-ru.

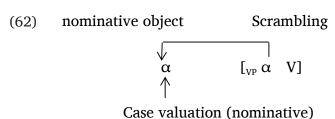
However, contrary to this expectation, there is no significant contrast between (60a) and (60b): it is difficult to obtain the wide scope reading of *40izyoo-no sigoto* in (60b) in a way similar to (60a). It is true that the proposed analysis offers no clear answer for the difficulty to obtain the relevant wide scope reading in (60b); however, other alternative approaches also fail to do so. Under Koizumi (1994) and Nomura (2005), (60b) could have the derivation where the NO moves to [Spec, TP], which is followed by the movement of the dative argument, in the way illustrated in (60c). A-movement can yield a new scope relation that is otherwise unavailable, as shown in (61), where *someone* can take wide scope over *likely*. It is expected that the A-movement of the NO could yield the wide scope of it.

(61) Someone, is likely to t_1 win the race.

Tada's (1992) analysis also has a similar prediction because the landing site of the NO ([Spec, AGRoP] under his analysis) is higher than the underlying position of the dative argument, in a way similar to the proposed analysis.

5 Conclusion

Taking a closer look at the variant given in (3), this paper has argued that the NO does not stay at its base-generated position but overtly undergoes movement. Extending Fukui & Nishigauchi's (1992) and Fukui's (1995) analysis of Nominative/Genitive Conversion to the Case alternation under investigation, it has been proposed that the overt movement is scrambling. Specifically, the derivation of a NO involves scrambling of an object from its base-generated position to an edge position of ν P, where it receives nominative Case, as illustrated in (62). Although scrambling itself is optional, in order for the object to be assigned nominative Case, scrambling takes place obligatorily, because what can be assigned at the base-generated position is accusative Case, not nominative Case. This is an explanation for the obligatory nature of the movement.



accusative object

On the other hand, when scrambling does not take place, accusative Case is assigned at the base-generated position. Since the Case alternation is contingent on application of scrambling under the proposed analysis, the optionality of the Case alternation is captured in terms of that of scrambling. It has also been argued that the Case alternation is restricted to the case where the landing site and the base-generated position should be included in the same transferred domain.

The proposed analysis is crucially based on the assumption that the transferred domain is the complement of a phase head (Chomsky 2001). If the analysis is on the right track, this paper lends support to this characterization of transferred domains, contrary to an alternative characterization recently argued by Bošković (2016), where the transferred domain is the phase itself. Also, this paper has argued that the proposed analysis based on the structure-based Case valuation approach is more suitable than the analyses based on the Agree-based approach such as Tada (1992), Koizumi (1994), and Nomura (2005). To the extent that the proposed analysis is successful, the former approach is more plausible to Japanese Case phenomena.

Abbreviations

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ACC = accusative, COMP = complementizer, DAT = dative, GEN = genitive, NMLZ = nominalizer, NOM = nominative, PASS = passive, PART = particle, PRES = present, TOP = topic
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Competing Interests

The author has no competing interests to declare.

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