

LEXICAL VS. FUNCTIONAL PREDICATES IN JAPANESE AND THEIR AGREEMENT DOMAINS*

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1. Introduction

Restructuring is a cross-linguistic phenomenon where apparent bi-clausality disappears, and clauses act as a unit. There has been an issue in the literature that restructuring predicates show different domains for case agreement, and the fact appears to be attributed to the functional or lexical nature of restructuring predicates (Bobaljik & Wurmbrand 2005, Wurmbrand 2001).

However, I will show that there is also an independent factor that contributes to the domain discrepancy for case agreement, and I will argue that the factor is (un)availability of head movement. Paying attention to nominative case assignment on objects and two types of restructuring predicates, the syntactic causative *-sase* ‘make’ and the motion verb *ik* ‘go’ in Japanese, I will show that *-sase* shows one case agreement domain, whereas *ik* shows two separate agreement domains. Although the fact seems to be due to the functional/lexical distinction of these two restructuring predicates at first glance, I will demonstrate that there is a correlation between an expansion of agreement domain and syntactic head movement that gives rise to the functional/lexical distinction in their agreement domains.

2. Literature Review on Nominative Objects

2.1. Case-Marking and Stativity

Japanese is a nominative-accusative language. Thus, the default case morphology for objects is accusative. However, objects also appear with nominative case under certain predicates that are stative (Kuno 1973). Thus, while non-stative verbs such as *tabe* ‘to eat’ assign accusative case to their objects (1a), stative verbs such as *-deki* ‘be capable’ assign nominative case (2a):

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- (1) a. Emi-wa ringo-o tabe-ru
 Emi-TOP apple-ACC eat-PRES
 ‘Emi eats apples’
- b. * Emi-wa ringo-ga tabe-ru.
 Emi-TOP apple-NOM eat-PRES
 ‘Emi eats apples’
- (2) a. * Emi-wa nihongo-o deki-ru
 Emi-TOP Japanese-ACC be.capable-PRES
 ‘Emi speaks Japanese’
- b. Emi-wa nihongo-ga deki-ru
 Emi-TOP Japanese-NOM be.capable-PRES
 ‘Emi speaks Japanese’

Although objects only show up either as nominative or accusative when they are selected by simple predicates, they can optionally show up one way or the other, when they are objects of complex predicates. The potential morpheme *-rare/-e* is a member of stative predicates that assign nominative case. When it attaches to a verbal stem that is non-stative, the object case can be dependent either on the higher predicate (3a) or on the lower predicate (3b):

- (3) a. Emi-wa ringo-ga tabe-rare-ru
 Emi-TOP apple-NOM eat-CAN-PRES
 ‘Emi can eat apples’
- b. Emi-wa ringo-o tabe-rare-ru.
 Emi-TOP apple-ACC eat-CAN-PRES
 ‘Emi can eat apples.’

Long-distant case licensing is a characteristic of restructuring, and modals like *-rare* are thus known as restructuring predicates (Koizumi 1995, Wurmbrand 2001). (3a) is, therefore, a case of restructuring, where the object obtains case from the matrix T (Koizumi 1995, 2005; Takezawa 1987, among others), whereas (3b) is a case of non-restructuring, where the object case is assigned by *v* in the lower clause.

2.2 Nominative Objects and Scope

It was first observed by Sano (1985) that there is an interesting correlation between case marking and scope that an object takes. It has been generally observed that nominative objects unambiguously take wide scope over stative predicates, while accusative objects unambiguously take narrow scope below them:

- (4) 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’ can > only; ??only > can
- 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’ *can>only; only >can

Tada (1992) and succeeding works (Bobaljik & Wurmbrand 2005, Koizumi 1994, Saito 2000, Takano 2003, Ura 1996 among others) further elaborate the observation and captures the scope fact by a case-licensing mechanism.

Although details vary among these approaches, they can be roughly divided into two camps, which I call, following Koizumi’s (2005) terminologies, the movement approach and the base-generation approach. The movement approach assumes that a nominative object is first generated in its Θ -position in the embedded clause, and it subsequently moves to its case position in the matrix clause. The base-generation approach assumes that a nominative object is base-generated in the matrix clause, a non- Θ position, which is structurally higher than a stative predicate. The base-generated object also binds *pro* in a Θ -position. As for structures for licensing accusative objects, both approaches place an object in the complement position of a verb. The relevant configurations for both approaches are as follows (from Bobaljik & Wurmbrand 2005 and Takano 2003):

(5) *Movement Approach: VP-complementation* (B & W 2005)

- a. *Nominative Object*
 [TP SUBJ [_{VP} OBJ [_{VP} t_{SUBJ} [_{VP} [_{VP} t_{OBJ} V] V-rare/-tai] v]] T]



- b. *Accusative Object*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP} [_{VP} PRO [_{VP} OBJ V] v] V-rare/-tai] v] T]

(6) *Base-generation Approach:* (Takano 2003)

- a. *Nominative Object*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP} OBJ₁ [_{VP} PRO [_{VP} pro₁ V] v] V] v] T]

- b. *Accusative Object*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP} [_{VP} PRO [_{VP} OBJ V] v] V-rare/-tai] v] T]

Under the movement approach in (5a), Bobaljik & Wurmbrand (2005) assume that an object has to move outside of VP to obtain nominative case from *v* or T (Takezawa, 1987 Koizumi 2005). This movement is case-driven A-movement, and Bobaljik & Wurmbrand assume that the trace left of this movement does not count for scope-interaction, the exact mechanism of which is explained in the subsequent sections. Therefore, the moved nominative object necessarily takes scope over the higher predicate.

On the contrary, under the base-generation approach in (6a), Takano (2003) assumes that complex predicates are formed before merger of a nominative object, and thus the object is base-generated structurally higher than a stative predicate, obligatorily taking wide scope.

Although these two approaches have been competing against each other, I will claim shortly that both approaches are equally well-motivated. Before doing so, let me first start with Nomura's (2003) observation that brought people's attention to:

- (7) Taro-ga vodka-dake-ga nom-e-ru-no-wa
 Taro-NOM vodka-only-NOM drink-can-PRES-no-TOP
 yuumeida-ga, (kare-ga) gin-dake-ga nom-e-ru no-mo
 famous-but, (he-NOM) gin-only-NOM drink-can-PRES-no-also
 yoku shir-arete-iru.
 well know-PASS-PRES
 'It is famous that Taro can drink only vodka (shot with no soft drinks) but
 it is also well known that he can drink only gin (shot with no soft drinks).
can > only

Nomura argues that although it has been widely acknowledged that a narrow scope reading is absent with a nominative object, the above example clearly suggests that the reading is in fact possible, though, not salient, since the grammaticality of the sentence would contradict the obligatory wide scope reading of the object, contrary to fact.

In fact, wide scope readings of nominative objects have been quite accepted among many speakers with appropriate contexts. In (8a), the nominative object can ambiguously take wide/narrow scope relative to *-rare*, and it can either mean that (a) *rice is the only thing that Taro can eat (and nothing else)* under the wide scope reading, or (b) *Taro can eat rice on its own (but he can also eat miso-soup on its own)*, under the narrow scope reading. On the contrary, in (8b), the accusative object necessarily takes narrow scope, and thus the reading where *Taro can eat rice on its own* is the only possibility:

- (8) a. Taro-wa shirogohan-dake-ga tabe-rare-ru.
 Taro-TOP rice-only-NOM eat-can-PRES
 'Taro can only eat rice (and nothing else).' *can > only, only > can*
- b. Taro-wa shirogohan-dake-o tabe-rare-ru
 Taro-TOP rice-only-ACC eat-can-PRES
 'Taro can eat rice on its own' *can > only, *only > can*

Thus, the generalization so far is that nominative objects ambiguously take wide/narrow scope, while accusative objects unambiguously take narrow scope, contrary to what has been previously assumed in the literature.

However, in the following section, I will raise an example where this generalization does not hold, and a nominative object obligatorily takes wide scope.

3. The Obligatory Wide Scope for Nominative Objects: *-Sase VS. Ik*

3.1. Core Data

It is not always the case that nominative objects ambiguously take narrow/wide scope. So far, we have only looked at cases of complex predicates with only two verbal elements. However, once there is another restructuring predicate situated above the lower predicate but below the higher stative predicate, a different picture emerges.

The comparison between the restructuring causative morpheme *-sase* and another restructuring motion verb *ik* shows this contrast. What is surprising is that although *-sase* patterns the same way with other predicates with respect to the obligatory wide scope for a nominative object, *ik* behaves differently. Consider first the expected pattern with *-sase*.

- (9) a. Taroo-wa Hanako-ni shirogohan-dake-ga tabe-sase-rare-ru.
 Taroo-TOP Hanako-DAT rice-only-NOM eat-CAUSE-can
 ‘Taroo can make Hanako only eat rice (and nothing else)’
 ‘Taro can make Hanako eat rice on its own’ *can* > *only*; *only* > *can*
- b. Taroo-wa Hanako-ni shirogohan-dake-o tabe-sase-rare-ru.
 Taroo-TOP Hanako-DAT rice-only-ACC eat-CAUSE-can
 ‘Taroo can make Hanako only eat rice’ *can* > *only*; **only* > *can*

As expected, with the causative *-sase*, the nominative object ambiguously takes scope over or below the potential in (9a). Thus, the sentence can either mean that (a) *it is only rice that Taro can make Hanako eat*, or (b) *it is possible for Taro to make Hanako eat rice on its own*. As for the accusative object, it unambiguously takes narrow scope (9b), patterning the same way with other restructuring predicates.

Now, consider the unexpected scope pattern with *ik*:

- (10) a. Midori-wa sono cafe-ni aisu-dake-ga tabe-ni ik-ere-ru.
 Midori-TOP that café-to ice cream-only-NOM eat-ni go-can
 ‘Midori can only go to that café to eat an ice cream.’
 **can* > *only*; *only* > *can*
- b. Midori-wa sono cafe-ni aisu-dake-o tabe-ni ik-ere-ru.
 Midori-TOP that café-to ice cream-only-ACC eat go-can
 ‘Midori can only go to that café to eat an ice cream.’
can > *only*; **only* > *can*

In contrast to the *-sase* case above, the nominative object in (10a) obligatorily takes wide scope, which is surprising, given the generalization we made earlier and the scope pattern of the *-sase* in (9a). Regarding the accusative object, however, it shows the same scope pattern with other predicates. The obvious question to ask, then, is what the difference between *-sase* and *ik* is, and how these scope facts are explained.

Before analyzing the data, in the next subsection, I will introduce an analysis for restructuring predicates put forth by Bobaljik & Wurmbrand (2005), which divides restructuring predicates into lexical and functional predicates. Their analysis elaborates the lexical/functional distinction into the obligatory wide scope for nominative objects. I will first apply their analysis to my scope data above with *-sase* and *ik*, and then I will raise a question of if there is another factor that the relevant scope fact hinges on, other than the lexical/functional distinction of the restricting predicates.

3.2. Bobaljik & Wurmbrand (2005): Lexical/Functional Distinction of Restructuring Predicates and Their Distinct Agreement Domains

What Bobaljik & Wurmbrand proposed is that the verbal complement of a lexical restructuring verb constitutes its own agreement domain, whereas the verbal complement of a functional restructuring verb is not. This is called the induced domain generalization in (11).

- (11) *The induced domain generalization* (B & W 2005:20)
The (verbal) complement to a lexical verb delineates an agreement domain.

Their idea is roughly schematized as follows:

- (12) a. $[[[\text{OBJ V...}] \text{LR}] \text{T}]$

 b. $[[[\text{OBJ V...}] \text{FR}] \text{T}]$


As in (12a), the verbal complement of a lexical restructuring predicate (LR) is a boundary for agreement (i.e. agreement domain). In contrast, in (12b), the complement of a functional restructuring predicate (FR) does not constitute such a domain. What this means is that case-agreement between the case-assigning head T and the object across the agreement domain in (12a) is not permitted. Therefore, the object must move outside of the domain into the higher domain to obtain case. In contrast, case-agreement into the lower domain is possible in (12b), and thus the object can stay in-situ.

Now, Bobaljik & Wurmbrand's analysis can be interpreted in the following way in order to be applied to our case. If *-sase* is a functional restructuring predicate, then its complement should not be an independent

agreement domain. In contrast, if *ik* is a lexical restructuring predicate, its complement should be an agreement domain.

Let us first consider the *-sase* case. Since the complement of *-sase*, which I assume for now is functional, is not an agreement domain according to (11), an object obtains case under AGREE (Chomsky 2000; 2001). In this case, the object takes low scope below the modal as in (13a). As for the wide scope reading of a nominative object, I assume that it can optionally undergo movement to satisfy an EPP feature on T, where it takes scope over the modal, along the lines of Nomura (2005)¹:

- (13) a. *Case-assignment under AGREE (low scope reading)*
 [[[[OBJ V]...-sase] -rare] T]



- b. *Optional object raising for EPP (high scope reading)*
 [OBJ [[t_{OBJ} V]...-sase] -rare] T]

With *-ik*, however, since the complement of *-ik* is an agreement domain, case agreement for an object across the agreement domain is not permitted (14a). Thus, the object must move outside of the lower domain to be assigned case, which forces it to have wide scope obligatorily (14b):

- (14) a. *Illegitimate case-assignment under AGREE*
 [[[[OBJ V]...ik] -rare] T]



- b. *Object movement for case (obligatory high scope reading)*
 [OBJ [[t_{OBJ} V]...-ik] -rare] T]

Now, we have just seen that Bobaljik & Wurmbrand's analysis can be applied to the scope facts with *ik* and *-sase*. Notice that under their system, a domain for agreement and that for movement do not coincide. This is so since otherwise, the object should not be able to move to obtain case. Note also that under their system, MOVE is not dependent on AGREE but rather it is an independent operation, contra Chomsky (2000, 2001), since MOVE occurs when AGREE is blocked.

However, an important question to ask on the conceptual grounds is that whether domains for agreement and movement have to be different from each other, and whether an independent domain for agreement is necessary. In other words, it is worth questioning if the functional/lexical distinction is the only factor that gives rise to the presence or absence of an agreement domain. If not,

¹ Whether the movement is case-driven or QR is not my concern here. Given that AGREE is sufficient for obtaining case, the natural assumption is that T has an EPP feature that requires more than one DP other than the subject (Nomura 2005).

we will be able to maintain the general concept that movement and agreement domains are the same (Chomsky 2000, 2001).

In fact, in the following section, I will show that there is another factor that brings about the transparency, namely, an operation of head movement. I will claim that an opaque domain (i.e., a phase) is intrinsic, and thus MOVE and AGREE are constrained under the same constraint. I will argue that head movement plays the role of expanding a domain (see also Baker 1988 and Den Dikken 2007).

4 Deriving Agreement Domains via Head Movement

4.1. Question-Answer Pairs

In this section, I argue that the relevant head movement is only possible with *-sase* cases, but not with *ik* constructions, which yields scope rigidity only with *ik*. My claim is that there is a correlation between head movement and expansion of an agreement domain, which then interacts with scope ambiguity. More precisely, I argue that what undergoes head movement is an embedded verb which directly takes a nominative object. The relevant head movement would expand the domain for an object to either move or agree.

The first supporting argument comes from question-answer pairs in Japanese. A question in Japanese is generally answered by repeating the verb:

- (15) a. Gohan-wa moo tabe-ta-no?
meal-TOP already eat-PAST-Q
'Did you already eat?'
- b. Tabe-ta.
eat-PAST
'Yes, I did.' *lit.* 'Ate.'

A bi-clausal question can be answered by repeating the matrix verb (Manning, Sag & Iida 1999):

- (16) a. John-ni [it-te kure-ru yoo-ni] tanon-da-no ?
John-DAT [go-PRES give-PRES (C)] ask-PAST-Q
'Have you asked John to go?'
- b. Tanon-da.
ask-PAST
'Yes, I have.' *lit.* 'Asked.'

When a question is formed out of a causative sentence, the verb may not stand alone to a question, and the entire verbal complex including the causative morpheme must be repeated (Manning, Sag & Iida 1999):

- (17) a. John-o hashir-ase-ta-no?
 John-ACC run-cause-PAST-Q
 ‘Did you make John run?’
- b. hashir-ase-ta. (V1 + V2)
 ‘Yes, I did’ *lit.* ‘Made run.’
- c. * Sase-ta. lit. ‘Made.’

However, with *ik*, only the higher predicate *ik* is repeated as an answer:

- (18) a. Keeki-o tabe-ni it-ta-no?
 cake-ACC eat-ni go-PAST-Q
 ‘Did you go eat a cake?’
- b. Itta. (V2)
 ‘Yes, I did.’ *lit.* ‘Went.’

Assuming that word-formation is part of the syntax (Halle & Marantz 1993), and that part of a complex word cannot be phonologically supplied (i.e. vocabulary insertion must be implemented cyclically at a given cycle), I argue that the illegitimate form (17c) is evidence for obligatory head movement of the embedded verb *hasir* ‘to run’. Thus, part of a complex head cannot be a target as an answer form:

- (19) *-sase with head movement of the lower verb*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP} OBJ t_V] V+v_{tabe-sase}] T]

Conversely, I take the legitimate form (18b) as evidence for lack of head movement of the embedded verb *tabe* ‘to eat’. Thus, only the higher verb is repeated contrary to the case with *-sase*:

- (20) *ik without head movement of the lower verb*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP}[_{VP} OBJ V_{tabe}] t_V] V+v_{ik}] T]

4.2 Reduplication

The second argument for availability/lack of head movement for *-sase* and *ik*, respectively, comes from reduplication. In Japanese, repetition of a certain action can be expressed by reduplicating a verb:

- (21) gohan-o tabe tabe...
 rice-ACC eat eat
 ‘repeatedly eating rice’

However, when we apply this test to *-sase* and *ik*, we see that *-sase* cannot be reduplicated by itself, and reduplication applies to an entire word including *-sase*

and its verbal complement (Manning, Sag & Iida 1999):

- (22) a. (?) Mainichi kare-ni keeki-o **tabe-sase tabe-sase** hagemasi-ta.
 everyday him-DAT cake-ACC eat-CAUSE eat-CAUSE cheer up-PAST
 ‘I cheered him up by repeatedly making him eat a cake everyday’
- b. * Mainichi kare-ni keeki-o **tabe-sase sase** hagemasi-ta.
 everyday him-DAT cake-ACC eat-CAUSE CAUSE cheer up-PAST
 ‘I cheered him up by repeatedly making him eat a cake everyday’

On the contrary, with *ik*, *ik* by itself can be a target of reduplication. In fact, it must be the target of reduplication, as repeating both verbs is bad:

- (23) a. (?) Mainichi **oyogi-ni iki iki** yaseru doryoku-o sita².
 everyday swim-ni go go lose weight effort-ACC did
 ‘I made an effort of losing weight by repeatedly going to swim everyday’
- b. * Mainichi **oyogi-ni iki oyogi-ni iki** yaseru doryoku-o sita.
 everyday swim-ni go swim-ni go lose weight effort-ACC did
 ‘I made an effort of losing weight by repeatedly going to swim everyday’

Again, we can account for these facts by seeing reduplication as an instance of head movement. If reduplication targets the highest *v* head, the fact that *V* + *sase* must be reduplicated suggests that the lower verb moves up to *-sase*, forming a single unit:

- (24) *Reduplication with -sase via head movement*
 $[_{TP} \text{SUBJ} [[_{VP} t_{\text{SUBJ}} [_{VP} \text{OBJ } t_V] V^{+v_{\text{tabe-sase}}}] \text{RED}] T]$



On the contrary, with *ik*, since there is no head movement of the lower verb, the highest head which is *ik* has to be the target of reduplication:

- (25) *Reduplication with -ik without head movement of the lower verb*
 $[_{TP} \text{SUBJ} [[_{VP} t_{\text{SUBJ}} [_{VP} [_{VP} \text{OBJ } \overline{V_{\text{tabe}}}] t_V] V^{+v_{\text{ik}}}] \text{RED}] T]$

The above data thus suggest that the embedded verb and *-sase* form a single unit via head movement, whereas the lower verb and *ik* do not.

² Although the sentence is slightly odd for presumably pragmatic reasons, there is a sharp contrast between (23a) and (23b), and *-sase* cannot be a target of reduplication.

5. The Correlation between Scope Ambiguity and Structural Optionality

Now, recall that in section 2.2, we saw that there were two types of approaches with respect to the positioning of nominative objects. We saw that under one approach, which we called the movement approach, the nominative object is originated in its theta-position and moves later to the matrix domain to obtain case. We also saw that under the other approach, which we called the base-generation approach, the nominative object is base-generated in a matrix non- Θ position.

Recall also that both of these approaches are proposed under the assumption that nominative objects obligatorily take wide scope. However, we have seen that Nomura's (2003) example has brought a new observation that questions the old generalization, and that nominative objects in a mono-clausal context in fact show scope ambiguity. Subsequently, I have shown that nominative objects obligatorily take wide scope with *ik*, but not with *-sase*. I further examined these two constructions, and discovered that *-sase* employs head movement of the lower verb, whereas *ik* does not.

With this finding, I propose that when head movement is available, a nominative object can appear either in the complement of an embedded verb or in the domain of a matrix verb since the relevant opaque domain is expanded. In contrast, when head movement is not available, a nominative object must be base-generated in the domain of a matrix verb. This means that *-sase* has two options for its structural realization, whereas *ik* has only one option:

- (26) a. *-sase: nominative object under movement approach*
 [TP SUBJ [_{VP} OBJ [_{VP} t_{SUBJ} [_{VP}[_{VP} [_{VP} t_{OBJ} V] -sase]-rare] v]]T]
- b. *-sase: nominative object under base-generation approach*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP} OBJ₁ [_{VP} [_{VP} PRO [_{VP} pro₁ V] v] -sase] -rare] v] T]
- (27) *ik: nominative object under base-generation approach*
 [TP SUBJ [_{VP} t_{SUBJ} [_{VP} OBJ₁ [_{VP} [_{VP} PRO [_{VP} pro₁ V] v] -ik] -rare] v] T]

The optional-/obligatory nature of structural realization thus correctly yields scope ambiguity or rigidity, respectively. When *-sase* is realized as (26a), a nominative object takes scope below the modal, whereas it takes scope above the modal when the construction is realized as (26b). On the contrary, *ik* does not have such options, and it must be realized as a base-generation structure, and thus a nominative object necessarily takes wide scope.

What, then, prevents *ik* from generating the structure where a nominative object is base-generated in its Θ -position and subsequently moves to its scope position, like *-sase* does? I argue that the structural optionality is tied to availability of head movement of the lower verb of a complex predicate. More specifically, I argue that head movement extends a domain where an object undergoes agreement with case-assigning head, i.e., T. Thus, when an

nominative object is generated in its Θ -position, it must be guaranteed a domain to obtain case. I claim that the domain is a phase, and following Nissenbaum (2000) and Chomsky (2001), I assume that v spells out its complement domain (i.e. phase).

Now, let us consider the structure under the movement approach again, where a nominative object is in the complement of an embedded verb. I argue that an object cannot be case-licensed by T in this configuration since there is always at least one spell-out domain, whether there is a v P layer or a bare VP a la Bobaljik & Wurmbrand (2005). Thus, as soon as the derivation reaches the highest v below T, it triggers the spell-out of its complement domain (i.e. VP that contains *-rare*), which dominates the v P (or VP) that contains the object. At this point of the derivation, the object is in an impenetrable domain that T cannot access, and thus AGREE fails to happen due to Chomsky's (2001) Phase Impenetrability Condition (PIC)³. As a result, the object cannot obtain case, and the derivation crashes. This is why *ik* cannot generate the movement-based structure.

On the contrary, under the base-generation structure, when the derivation reaches at the highest v P level, v can pull up the nominative object situated in the edge of the highest VP to its specifier, where T can assign case. Thus, the fact that *ik* can only have the base-generation structure nicely follows from the case-licensing mechanism within the current Minimalist framework.

However, I argue that a given phase becomes *transparent* for agreement by moving the head of the lowest domain to be expanded to the agreeing head outside of the offending phase.

Now, recall that head movement of an embedded verb is only available with *-sase*, but not with *ik*. Thus, *ik* cannot generate a structure under the movement approach, since a nominative object cannot be licensed in its base-generated position due to lack of phase-expanding head movement. Thus, the only way that a nominative object is case-licensed when it appears with *ik* is to be situated in a penetrable position from the case-assigning head. The object therefore must be base-generated in the matrix domain, entering into an AGREE-relationship with T.

To summarize, when head movement is available, a nominative object can appear either in the complement of an embedded verb or in the domain of a matrix verb, taking ambiguous scope. This is the case with *-sase*. On the contrary, when head movement is not available, a nominative object must be base-generated in the domain of a matrix verb, taking obligatorily wide scope. This is the case with *ik*. Head movement thus plays the role of expanding a domain for case agreement, which allows an object to stay in-situ to obtain case from the higher clause.

³ (i) *Phase Impenetrability Condition (PIC)*
 In the following configuration [ZP...Z [HP H...]]
 The domain of H is not accessible to operations, but only the edge of HP.

6. Blocking Head Movement and Different Types of Head

What is it that blocks head movement of an embedded verb under *ik*? I argue that it is the intervening morpheme *-ni* between the embedded verb and *ik*:

(28) [VP [_{niP} [VP OBJ V] -ni] ik]

I also argue that it is not just any intervening morpheme that blocks head movement. Another restructuring predicate *mi* ‘try’ that has a similar structure to *-ik* does not behave the same way with *ik*, but patterns with *-sase*:

(29) keeki-o tabe-**te**-mi-ru.
 cake-ACC eat-te-try-PRES
 ‘(I) try to eat cake’

As you can see in the example above, there is an intervening morpheme *-te* between the embedded verb *tabe* and *mi*, yielding the meaning of ‘try to do V’. However, unlike the intervening morpheme *-ni*, *-te* does not block head movement, as exemplified by the question-answer pair form and reduplication with *mi* below:

- (30) a. Sono keeki-o tabete-mi-ta-no?
 That cake-ACC eat-try-PAST-Q
 ‘Did you try to eat that cake?’
- b. tabe-te-mi-ta. (V1 + V2)
 ‘Yes, I did.’ *lit.* ‘Tried to eat.’
- c. * mi-ta.
 ‘Tried.’
- (31) a. doresu-o kite-te-mi kite-te-mi (V2 + V1, V2 + V1)
 dress-ACC wear-te-try wear-te-try
 ‘repeatedly wearing a dress’
- b. * dress-o kite-te-mi mi (*V2 + V1 + V1)
 dress-ACC wear-te-try try
 ‘repeatedly wearing a dress’

As for a question-answer pair, the whole complex predicate must be provided as an answer form (30b); thus answering only with the higher predicate *mi* is not allowed (30c). Reduplication process also tells us that the whole complex head including the embedded verb must be reduplicated. These processes thus indicate that head movement of an embedded verb applies to the *mi* construction despite the presence of an intervening morpheme, suggesting that it is not just

any intervening morpheme that blocks head movement, and that some head such as *-te* can pass on movement further up.

The availability of head movement with *mi* in turn brings about an interesting prediction about scope. Recall that my claim is that head movement expands a domain for case-agreement, and therefore an object can stay in-situ to obtain case, taking low scope. Now, if *mi* indeed behaves with *-sase* with respect to employing head movement, then we would predict that the nominative object in this construction should be able to ambiguously take both high and low scope. The prediction is in fact born out:

- (32) Midori-wa sono café-de keeki-dake-ga tabe-te-mi-tai
 Midori-TOP that café-at cake-only-NOM eat-te-try-want
 ‘Midori wants to try to eat only a cake at that café’
only>*want*, *want*>*only*

This shows that the interaction between availability of head movement and expansion of an agreement domain, which results in the free scope effect, is on the right track.

7. Concluding Remarks

I have argued that head movement derives transparency for case-agreement. The claim brings about an important consequence for verb movement in Japanese. Although it has been a longstanding issue whether Japanese employs verb raising or not (Koizumi 2000, Otani & Whitman 1991, Fukui and Takano 1998, Kishimoto 2005 among others), I have shown that at least in a complex predicate formation, whether an embedded verb moves or not depends on the types of the higher predicate.

Accordingly, the claim brings a new view on how a certain domain is opaque in one case and transparent in another case. My view is that an opaque domain is intrinsically opaque, but it can become transparent via head movement expanding the domain, along the lines of Baker (1988) and Den Dikken (2007).

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