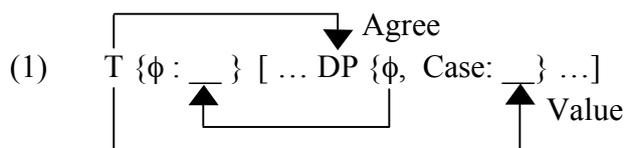


CASE CHECKING/VALUATION IN JAPANESE: MOVE, AGREE OR MERGE?*

Mamoru Saito
Nanzan University

1. Introduction

Case marking in Japanese has been investigated within the generative framework since the 1960's, and various proposals have been made, reflecting the development of syntactic theory. Over a decade, Chomsky (2000, 2008) has been pursuing an approach to associate Case with ϕ -feature agreement. According to this approach, nominative, for example, obtains as in (1).



T, with unvalued ϕ -features, probes and enters into Agree relation with a DP with an unvalued Case feature. As a result of this Agree relation, T obtains the values for its ϕ -features from the DP and values the Case of the DP as nominative. This approach, too, has been applied to Japanese with some fruitful results in works such as Ura (1999), Hiraiwa (2001a) and Takahashi (2010).

Particularly noteworthy in the light of this approach is the fact that PPs are Case marked extensively in Japanese. For example, (1) is an example of a “tough-sentence” with a nominative PP subject.

- (2) Koko-kara-ga huzi-san-ni nobori-yasu-i
here-from-NOM Mt. Fuji-DAT climb-easy-Pres

‘It is easy to climb Mt. Fuji from here.’

PPs are required to have genitive Case within a projection of N, as the examples in (3) show.

* This is a shortened version of the paper presented at the GLOW in Asia Workshop for Young Scholars, held on September 7–9, 2011 at Mie University. The material was presented also in seminars at Keio University, University of Connecticut and University of Maryland, and in a workshop at Nanzan University. I would like to thank the audiences at these places, especially, Hisatsugu Kitahara, Hideki Kishimoto, Norbert Hornstein and Željko Bošković, for helpful comments. The research reported here was supported in part by the Nanzan University Pache Research Grant I-A (2011).

- (3) a. Taroo-no oya-e-no izon
 Taroo-GEN parents-to-GEN dependence
 ‘Taroo’s dependence on his parents’
- b. ziyuu-kara-no toohi
 freedom-from-GEN escape
 ‘escape from freedom’

As PPs, as opposed to DPs, apparently lack ϕ -features, it is not obvious how Chomsky’s approach can be extended to them.

It should be noted that whether the Case markers on PPs are indeed Case in the usual sense has been controversial. As (4) shows, any DP or PP in a projection of N (and D) accompanies *no* whether it is an argument or an adjunct.

- (4) Hanako-no kinoo-no kaze-de-no kesseki
 Hanako-GEN yesterday-GEN cold-with-GEN absence
 ‘Hanako’s absence yesterday due to a cold’

Okutsu (1974) proposes that the *no* attached to PPs and adjunct DPs is the prenominal form of the copula *da* as opposed to the genitive *no*. Watanabe (2010) assumes a similar distinction, calling the former *no* a ‘linker’. On the other hand, An (2009) discusses the Korean counterpart of *no*, *uy*, and proposes that it is a kind of a prenominal inflection in all contexts, and consequently, that Korean does not have genitive Case in the usual sense. The basic idea is that the *uy/no* on PPs and adjunct DPs should be accounted for as a prenominal marker, and once this is done, the account should automatically extend to argument DPs as well.

In this paper, I basically follow An’s (2009) approach, although I continue to call *no* the genitive Case since I think the issue is merely terminological. This is after all the traditional analysis: Bedell (1972) presents an analysis where *no* is inserted after any prenominal DP and PP. As this approach does not differentiate *no* on argument DPs from that on PPs, it implies that genitive in Japanese is independent of ϕ -feature agreement. In this paper, I extend An’s proposal and suggest that Case in Japanese is in general part of the operation, Merge, instead. Just as Case in English is required for Agree and is valued through Agree, I suggest that Case in Japanese is required for Merge and is valued through Merge. For *no*, for example, I propose that Case is required on DPs and PPs for merger with a nominal projection, and is valued as genitive through merger with N-D.

In the following section, I briefly discuss the distribution and interpretation of nominative objects and show that it is desirable to seek an alternative to the Agree-based analysis for this case also. In Section 3, I introduce the Merge-based analysis and illustrate it with some concrete examples. In Section 4, I discuss some consequences of the analysis. I first show that the analysis allows a rather straightforward account of the distribution of

genitive arguments in prenominal sentential modifiers. Then, I argue that it opens up a way to apply Kayne's (1994) LCA to Japanese and derive the head-finality of its phrase structure. Section 5 concludes the paper.

2. A Little Historical Background on the Analysis of Nominative Objects

In Japanese, the object is normally in accusative as in (5a), but carries nominative Case when the predicate is stative. (5b) is a representative example.¹

- (5) a. Taroo-ga wani-o/*-ga tabe-ta (koto)
Taroo-NOM alligator-ACC/-NOM eat-Past fact
'(the fact that) Taroo ate alligator meat'
- b. Hanako-ni/-ga bakudai-na syakkin-ga/*-o ar-u (koto)
Hanako-DAT/-NOM immense debt-NOM/-ACC have-Pres fact
'(the fact that) Hanako has a huge debt'
- c. Taroo-ga wani-o/-ga tabe-rare-ru (koto)
Taroo-NOM alligator-ACC/-NOM eat-can-Pres fact
'(the fact that) Taroo can eat alligator meat'

As the predicate in (5c) consists of the non-stative *tabe* 'eat' and the stative verbal suffix (*rare*) 'can', the object can be in either accusative or nominative. The distribution and interpretation of nominative objects as in (5b–c) have been a central topic of research in Japanese syntax, especially in the past twenty years. In this section, I first discuss the movement analysis of Tada (1992) and Koizumi (1999), and then go over Ura's (1999) Agree-based analysis. Both approaches have provided much insight into the phenomenon, but I argue that neither of them is satisfactory.

2.1. Tada and Koizumi's Overt Movement Analysis

Tada's (1992) discussion of the contrast in (6), originally observed in Sano (1985), has renewed interest in Japanese nominative objects among syntacticians.

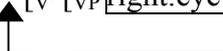
- (6) a. Kiyomi-wa migime-dake-o tumur-e-ru (can > only)
Kiyomi-TOP right. eye-only-ACC close-can-Pres
'Kiyomi can wink with her right eye.'

¹ Some predicates allow the subject to be in dative when the object is in nominative. *Ar* 'be, have' in (5b) is one of them.

- b. Kiyomi-wa migime-dake-ga tumur-e-ru (only > can)
 Kiyomi-TOP right.eye-only-NOM close-can-Pres

‘It is only her right eye that Kiyomi can close.’

It had been assumed that Case on the object has little effect, if any, on interpretation, but these examples indicate that nominative objects take wider scope than accusative objects. The accusative object in (6a) scopes under the higher predicate *e* ‘can’ but the nominative object in (6b) scopes over it.² Tada proposed that this is because accusative is checked within the projection of the verb *tumur* ‘close’ while the nominative is licensed within the projection of the stative verbal affix *e* ‘can’. According to his analysis, the nominative object in (6b) moves as in (7) and hence, takes wide scope over *e* ‘can’.³

- (7) [TP Kiyomi-wa [T' [VP  [V' [VP right.eye-only-NOM] close]-can]]-Pres.]]

Koizumi (1998), on the other hand, observes that nominative objects take yet higher scope than predicted by Tada’s analysis. He shows that nominative objects even scope over negation as in (8).

- (8) Kiyomi-ga migime-dake-ga tumur-e-na-i (koto) (only > not > can)
 Kiyomi-NOM right-eye-only-NOM close-can-Neg-Pres fact

‘(the fact that) it is only her right eye that Kiyomi cannot close’

He then proposes that nominative objects are licensed within the projection of T as in (9).

- (9) [TP Kiyomi-wa [T' [T' [NegP [VP [VP right.eye-only-NOM] close]-can]-Neg]-Pres.]]]

Koizumi’s analysis is attractive as it implies that nominative is licensed uniformly by T whether it is on the subject or on the object. However, it shares a problem with Tada’s analysis, to which I now turn.

The problem is that the movement operation illustrated in (7) and (9) does not observe the locality expected of NP-movement.⁴ Let us first consider the example of causative in (10) because the point can be best illustrated with this construction.

² Nomura (2005) presents some examples in which nominative objects seem to scope under *e* ‘can’ and questions the Sano-Tada generalization. However, as the pattern in (6) is observed quite generally, I believe it reflects a hierarchical relation in phrase structure as Tada proposed. See Takahashi (2010) for an analysis based on the assumption that nominative objects can take narrow scope.

³ Tada (1992) assumes the AGR-based Case theory and proposes that the nominative object moves to the Spec position of AGR projected over *e* ‘can’. I present a simplified version of his analysis here.

⁴ For a more detailed discussion on this point, see Saito (1982) and the references cited there.

- (10) Hanako_i-ga [_{VP} Taroo_j-ni [_{VP} zibun_{i,j}-no wani-o tabe]]-sase-ta (koto)
 Hanako-NOM Taroo-DAT self-GEN alligator-ACC eat-make-Past fact
 ‘(the fact that) Hanako made Taroo eat her/his (pet) alligator’

It has been known since Kuroda (1965) that the causative morpheme *sase* takes a clausal complement. (10) confirms this. The causee *Taroo* can be the antecedent of the subject-oriented reflexive *zibun*, and hence, it should be the subject of the embedded clause. I assume that the clausal complement is a *vP*, following Murasugi and Hashimoto (2004). The hypothesis is further confirmed by the fact that the object cannot be passivized out of a causative complement as shown in (11).

- (11) *wani-ga_i Hanako-niyotte [_{VP} Taroo_j-ni [_{VP} *t*_i tabe]]-sase-rare-ta (koto)
 alligator-NOM Hanako-by Taroo-DAT eat-make-Passive-Past fact
 ‘*Lit.* (the fact that) the alligator was made by Hanako to be eaten by Taroo’

This is expected as the movement crosses the embedded subject *Taroo* in violation of minimality.

Let us return to nominative objects with this background. As shown in (12), the object in the causative construction can be in nominative when the potential suffix (*rare*) ‘can’ is attached to the causative verb.

- (12) Hanako-ga [_{VP} Taroo-ni [_{VP} wani-o/-ga tabe]]-sase-rare-ru (koto)
 Hanako-NOM Taroo-DAT alligator-ACC/-NOM eat-make-can-Past fact
 ‘(the fact that) Hanako can make Taroo eat alligator meat’

This is totally unexpected under the movement analysis of nominative objects. According to Koizumi’s (1998) analysis, for example, the nominative object in (12) must move to the inner Spec of T to have its Case licensed. But then, the movement should violate minimality exactly as in the case of (11). The same problem arises with Tada’s analysis because the nominative object must move across the embedded subject in order to land within the projection of (*rare*) ‘can’.

Koizumi (1998), as noted above, demonstrated that nominative objects take scope over negation and argued that this is because their Case is licensed by T. The discussion above, however, indicates that they do not move to a Spec position of T. These considerations naturally lead to the hypothesis that T values nominative through the operation Agree. In the next subsection, I consider Ura’s (1999) Agree-based analysis.

2.2. Ura’s Analysis with Covert Feature Movement/Agree

To my knowledge, Ura (1999) is one of the first works that propose an analysis of

nominative objects in terms of Agree.⁵ He first argues against Koizumi's (1998) movement analysis based on examples of the following kind:

- (13) Hanako_i-ni/-ga Taroo_j-ga zibun_{i,*j}-no ie-de sikar-e-ru (koto)
 Hanako-DAT/-NOM Taroo-NOM self-GEN house-at scold-can-Pres fact
 '(the fact that) Hanako can scold Taroo at her/*his house'

This example shows that a nominative object does not qualify as the antecedent for the subject-oriented *zibun* 'self'. However, Koizumi's analysis predicts that it should if subject is defined as a phrase in TP Spec. Ura concludes then that nominative objects do not move to a position within the projection of T.⁶

Ura, then, goes on to propose that T checks the Case feature of nominative objects through Agree. This predicts that nominative objects stay in situ, and hence, readily accounts for (12), where a nominative object appears in the complement of a causative verb. But a problem remains with the scope property of nominative objects. Koizumi's crucial example in (8) is repeated below as (14).

- (14) Kiyomi-ga migime-dake-ga tumur-e-na-i (koto) (only > not > can)
 Kiyomi-NOM right-eye-only-NOM close-can-Neg-Pres fact
 '(the fact that) it is only her right eye that Kiyomi cannot close'

For this, Ura suggests that the Agree relation yields the wide scope of the object. As T licenses the nominative Case on the object, the object takes scope at T.

However, it is shown in Lasnik and Saito (1991) that Agree relation does not affect scope. The examples in (15) demonstrate this.

- (15) a. Fewer than five knights_i [_{VP} appeared *t_i* at the gate] every day
 (fewer than five > every, every > fewer than five)
 b. There [_{VP} appeared fewer than five knights at the gate] every day
 (every > fewer than five)

In (15a), *fewer than five knights* moves from the object position to TP Spec. Thus, the example exhibits a scope ambiguity between this DP and *every day*. In (15b), on the other hand, T enters into Agree relation with the DP, but the DP stays in situ. In this case, it cannot scope over *every day*. This shows that Agree does not suffice to account for the wide scope

⁵ His analysis appeals to covert feature movement. But it is equivalent to Agree as covert feature movement was in effect reanalyzed as Agree in Chomsky (2000).

⁶ Note that examples like (10) indicate that the antecedent of *zibun* is not limited to phrases in TP Spec. Hence, it is necessary to reexamine what constitutes "subjects" in the relevant sense to see if this argument goes through. See Saito (2011) for relevant discussion.

property of Japanese nominative objects.

3. A Preliminary Merge-Based Analysis of Japanese Case

It was argued in the preceding section that neither movement nor Agree successfully captures the distribution and interpretation of nominative objects. In this section, I suggest an alternative Merge-based analysis. In Section 3.1, I motivate the general approach. Then, in Section 3.2, I present the details of the analysis with some concrete examples.

3.1. What is Japanese Case for?

Chomsky (2000) proposes that Case is a reflex of ϕ -feature agreement. Case is required on a DP to participate in agreement and is checked through the agreement. This is embedded in a system with feature-inheritance in Chomsky (2008). It is proposed there that phase heads are the locus of unvalued/uninterpretable features. Thus, C, for example, carries ϕ -features and the EPP, and transmits them to T as illustrated in (16).



T, then, probes a DP with unvalued Case feature and enters into Agree relation with the DP. The ϕ -features on T are valued by the DP and the Case feature on the DP is valued as nominative by T through this Agree relation. Finally, the EPP on T raises the DP to its Spec. Thus, Case is required for ϕ -feature agreement and is valued through ϕ -feature agreement.

However, as noted at the outset of this paper, Case is observed on PPs extensively in Japanese. The relevant examples in (2) and (3a) are repeated below as (17a–b).

- (17) a. Koko-kara-ga huzi-san-ni nobori-yasu-i
 here-from-NOM Mt. Fuji-DAT climb-easy-Pres
 ‘It is easy to climb Mt. Fuji from here.’
- b. Taroo-no oya-e-no izon
 Taroo-GEN parents-to-GEN dependence
 ‘Taroo’s dependence on his parents’

The nominative Case in (17a) and the genitive Case on PP in (17b) cannot be a reflex of ϕ -feature agreement as PPs do not carry ϕ -features. Then, what is Japanese Case for if it is not part of ϕ -feature agreement?

Since the only operations in Minimalist syntax are Agree and Merge, Merge is a plausible candidate. That is, if Case is not a precondition for a phrase to participate in Agree, it is likely to be required of a phrase to participate in Merge. For genitive Case, this is in fact a restatement of An’s (2009) idea noted above that genitive is a kind of prenominal inflection.

The initial hypothesis can be stated as in (18).

- (18) a. Case is required on DPs and PPs for merger with N and D.
 b. Case is required on argument DPs for merger with V and A.
 c. Case is required on argument DPs and PPs for merger with *v*.

(18b–c) stipulate that an argument PP must have a Case in a sentence only when it is a subject as in (17a).

If Case in Japanese is required for Merge, it seems equally plausible that it is valued by this operation. Let us then hypothesize that Case is valued through Merge as in (19).

- (19) a. Case is valued as nominative by merger with T-C.
 b. Case is valued as accusative by merger with (transitive) V-*v*.
 c. Case is valued as genitive by merger with N-D.

If the locus of nominative is C and it is inherited by T, this yields a more or less standard derivation for examples like (20a).

- (20) a. Taroo-ga hasir-u
 Taroo-NOM run-Pres
 ‘Taroo runs.’
 b. [_{CP} [_{TP} Taroo-Case_i [_T [_{vP} *t*_i [[_{VP} hasir] *v*]] T]] C]

As *Taroo* carries Case, it can be merged at *vP* Spec for thematic interpretation. The Case, however, is not valued at this position. The DP then must move and merge at TP Spec for the Case to be valued nominative.

If this mechanism is assumed as is, it leads to a notational variant of Koizumi’s (1998) analysis for nominative objects. They must carry Case to be merged at the object position for thematic interpretation. If the V-*v* in the relevant cases lacks the ability to value accusative, they must move to TP Spec to have their Case valued as nominative. But it was shown in the preceding section that they do not move to TP Spec. It seems then that we have a paradox. Nominative objects must be merged with T but they do not move to TP Spec. In the following section, I suggest a way out of this problem, developing Shimada (2007) and Tonoike’s (2009) hypothesis on phrase structure building.

3.2. Phrase Structure Building with Excorporation

Shimada (2007) and Tonoike (2009) propose an original way to derive phrase structure. For clauses, they assume that the derivation starts with a complex of heads, C-T-*v*-V. If the verb is transitive, the object merges with this complex as in the first step of (21).

- (21) $C-T-v-V \textcircled{1} \rightarrow \{C-T-v-V, DP_1\} \textcircled{2} \rightarrow \{C-T-v, \{V, DP_1\}\} \textcircled{3} \rightarrow \{DP_2, \{C-T-v, \{V, DP_1\}\}\} \textcircled{4} \rightarrow \{C-T, \{DP_2, \{v, \{V, DP_1\}\}\}\} \textcircled{5} \rightarrow \{DP_2, \{C-T, \{DP_2, \{v, \{V, DP_1\}\}\}\}\} \textcircled{6} \rightarrow \{C, \{DP_2, \{C-T, \{DP_2, \{v, \{V, DP_1\}\}\}\}\}\}$

Then, C-T-*v* excorporates as in step 2, creating a *v*P. This *v*P merges with the subject DP in step 3, and C-T excorporates in step 4 to create a TP. The subject is internally merged with this TP in step 5. The final product after the excorporation of C in step 6 is the CP structure.

Both Shimada and Tonoike propose this derivation to maintain the extension condition in the strict form. Shimada argues that it allows head movement to observe the condition. Tonoike, on the other hand, points out that the derivation of Chomsky (2008) illustrated in (16) forces a counter-cyclic movement of the subject to TP Spec. This problem does not arise in the derivation in (21).

The Shimada–Tonoike proposal is of particular interest in the present context because it allows a nominative object to merge with T without moving to TP Spec. Recall the problem noted in the preceding subsection: nominative is valued through merger with T but nominative objects do not raise to TP Spec. In step 1 of (21), the object is directly merged with a complex that includes T as well as V. In the remainder of this section, I adapt their main idea and suggest a way to account for the distributions of Cases in Japanese.

First, I suggest that a head complex is formed initially because a derivation starts with a phase head and proceeds to satisfy selectional requirements. Let us take (22) to illustrate how this works.

- (22) Hanako-ga Taroo-o sikat-ta
 Hanako-NOM Taroo-ACC scold-Past
 ‘Hanako scolded Taroo.’

As *v*P is the smallest phase in the example, the derivation starts with *v*. It first merges with V as in (23a) because it selects for a V.

- (23) a. $\{\underline{V}, v\}$ (accusative)
 b. $\{\underline{DP}_1\text{-ACC}, \{\underline{V}, v\}\}$
 c. $\{\{\underline{DP}_1\text{-ACC}, V\}, v\}$
 d. $\{\underline{DP}_2\text{-Case}, \{\{\underline{DP}_1\text{-ACC}, V\}, v\}\}$
 e. $\{\underline{T}, \underline{C}\}$ (nominative)
 f. $\{\{\underline{DP}_2\text{-Case}, \{\{\underline{DP}_1\text{-ACC}, V\}, v\}\}, \{\underline{T}, \underline{C}\}\}$
 g. $\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_2\text{-Case}, \{\{\underline{DP}_1\text{-ACC}, V\}, v\}\}, \{\underline{T}, \underline{C}\}\}\}$
 h. $\{\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_2\text{-Case}, \{\{\underline{DP}_1\text{-ACC}, V\}, v\}\}, T\}\}, C\}$

The object DP is merged in (23b) to satisfy the selectional requirement of V. As the merger is to V-*v*, the Case on the DP is valued as accusative. Then, *v* excorporates in (23c) to create a *v*P as it should have VP as its complement. The subject DP is merged with this *v*P and

satisfies the selectional requirement of v in (23d).

The derivation moves on to the next phase in (23e). The phase head C selects T , and hence the T - C complex is formed. vP is merged with this complex in (23f) because of the selectional property of T . At this stage, the Case on the subject is still unvalued. So the subject DP internally merges with $\{vP, \{T, C\}\}$ as in (23g) so that the Case is valued as nominative. The assumption here is that the Case on XP is valued if XP is merged with a syntactic object that contains the value assigner. In the case of (23g), this in effect means that T - C values nominative on XP in its Spec. Finally, C excorporates to complete the derivation in (23h).

The in-situ property of nominative objects follows with one additional assumption: I assume, following Takahashi (2010), that v is a phase head if and only if it values accusative. Let us consider (24) for illustration.

- (24) Hanako-ga rosiago-ga wakar-u (koto)
 Hanako-NOM Russian-NOM understand-Pres fact
 ‘(the fact that) Hanako understands Russian’

As v in this example does not value accusative, it is not a phase head by assumption. Then, the derivation starts with the only phase head C as in (25a).

- (25) a. $\{\underline{T}, \underline{C}\}$ (nominative)
 b. $\{v, \{\underline{T}, \underline{C}\}\}$
 c. $\{V, \{v, \{\underline{T}, \underline{C}\}\}\}$
 d. $\{\underline{DP}_1\text{-NOM}, \{V, \{v, \{\underline{T}, \underline{C}\}\}\}\}$
 e. $\{\{\underline{DP}_1\text{-NOM}, V\}, \{v, \{\underline{T}, \underline{C}\}\}\}$
 f. $\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_1\text{-NOM}, V\}, \{v, \{\underline{T}, \underline{C}\}\}\}\}$
 g. $\{\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_1\text{-NOM}, V\}, v\}\}, \{\underline{T}, \underline{C}\}\}$
 h. $\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_1\text{-NOM}, V\}, v\}\}, \{\underline{T}, \underline{C}\}\}\}$
 i. $\{\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_2\text{-NOM}, \{\{\underline{DP}_1\text{-NOM}, V\}, v\}\}, T\}\}, C\}$

The derivation proceeds as in (25b) and (25c) as T and v select v and V respectively. In (25d), the object is merged with this complex and the Case is valued as nominative simultaneously because the complex contains T - C . Then, v - T - C excorporates in (25e) to yield a vP . The external argument is merged with this vP in (25f), and its Case is valued as nominative. T - C excorporates in (25g), and I assume here that the subject is raised to TP Spec as in (25h) to satisfy the EPP requirement of T - C .⁷ Finally, C excorporates to complete the derivation in (25i). Note that the object is merged at the thematic position and its Case is valued as nominative at this position by T - C . Thus, this analysis allows nominative objects to have their Cases valued by T - C without moving to TP Spec, a desirable result.

⁷ Whether this EPP-triggered raising applies is not important for the proposal made here. See Saito (2011) and the references cited there for discussion on EPP in Japanese.

The analysis readily extends to genitives. I use (26) to demonstrate this.

- (26) Taroo-no yooroppa-e-no ryokoo
 Taroo-GEN Europe-to-GEN trip
 ‘Taroo’s trip to Europe’

The only phase head, I assume, is D. The derivation in (27) starts out with the merger of N and D as in (27a).

- (27) a. {N, D} (genitive)
 b. {PP-GEN, {N, D}}
 c. {DP-GEN, {PP-GEN, {N, D}}}
 d. {{DP-GEN, {PP-GEN, N}}, D}

Then, the PP and the subject DP are merged as in (27b) and (27c) respectively. Recall that both must have Case to be merged in this context as specified in (18a). And their Cases are both valued as genitive because of the presence of N-D in the syntactic objects they merge with. The derivation is completed with the excorporation of D in (27d).

The illustrations so far, I believe, made it clear how the proposed Merge-based analysis works. Instead of going over more examples to demonstrate its empirical coverage, I discuss a couple of consequences of the analysis in the next section.

4. Some Consequences of the Merge-Based Analysis

I first consider the nominative/genitive alternation in prenominal sentential modifiers in Section 4.1 and demonstrate that the Merge-based analysis allows a straightforward analysis. Then, in Section 4.2, I return to the wide scope property of nominative objects and show that its Merge-based analysis opens up a new way to apply Kayne’s (1994) LCA to Japanese.

4.1. The Nominative/Genitive Alternation

An alternation between nominative and genitive is observed in Japanese prenominal sentential modifiers as in (28).

- (28) Taroo-ga/-no ongaku-ga/-no kik-e-ru basyo
 Taroo-NOM/-GEN music-NOM/-GEN listen-can-Pres place
 ‘a place where Taroo can listen to music’

As the predicate *kik-e-ru* ‘listen-can-Pres’ in the relative clause is stative, it is not surprising that the subject *Taroo* and the object *ongaku* ‘music’ can both appear in nominative. What is peculiar is that both can appear in genitive as well.

I assume here, following Maki and Uchibori (2008), that genitive is possible in this

context because of the presence of the relative head, or more precisely, N-D.⁸ This implies that a relative clause does not constitute a phase as it does not block the relevant relation between the relative head and the genitive phrase(s) within the relative clause. This is assumed, for example, in Ochi (2001), which proposes that D licenses the genitive(s) through Agree.⁹ It is also plausible in the light of Murasugi's (1991) proposal that Japanese relative clauses are TPs and not CPs. For example, they never contain relative pronouns or complementizers. Given the hypothesis entertained here that nominative is valued by T-C, Japanese relative clauses must be headed by C. I assume then that the C is "defective," probably the lowest C, the Subject head, in Rizzi's (1997) CP hierarchy. It is not a phase head but participates in the valuation of nominative.

Given these assumptions, the nominative/genitive alternation in (28) follows from the Merge-based analysis outlined in the preceding section. (29) is a slightly simplified derivation of the example that takes *kik-e* 'listen-can' as a simple stative verb.

- (29)
- a. $\{\underline{N}, \underline{D}\}$ (genitive)
 - b. $\{\underline{C}, \{\underline{N}, \underline{D}\}\}$
 - c. $\{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}$ (nominative)¹⁰
 - d. $\{v, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}$
 - e. $\{\underline{V}, \{v, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}\}$
 - f. $\{\underline{DP}_1\text{-NOM/GEN}, \{\underline{V}, \{v, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}\}\}$
 - g. $\{\{\underline{DP}_1\text{-NOM/GEN}, \underline{V}\}, \{v, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}\}$
 - h. $\{\underline{DP}_2\text{-NOM/GEN}, \{\{\underline{DP}_1\text{-NOM/GEN}, \underline{V}\}, \{v, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}\}\}$
 - i. $\{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\alpha, \underline{V}\}, v\}\}, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}, \alpha = \underline{DP}_1\text{-NOM/GEN}$
 - j. $\{\underline{DP}_2\text{-NOM/GEN}, \{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\alpha, \underline{V}\}, v\}\}, \{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}\}\}$
 - k. $\{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\alpha, \underline{V}\}, v\}\}, \underline{T}\}\}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}$
 - l. $\{\{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\alpha, \underline{V}\}, v\}\}, \underline{T}\}\}, \underline{C}\}, \{\underline{N}, \underline{D}\}\}$
 - m. $\{\{\{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\underline{DP}_2\text{-NOM/GEN}, \{\{\alpha, \underline{V}\}, v\}\}, \underline{T}\}\}, \underline{C}\}, \underline{N}\}, \underline{D}\}$

The head complex V-v-T-C-N-D is formed in (29a–e). The object is merged in (29f), and its Case can be valued as nominative or genitive as the head complex contains T-C as well as N-D. v-T-C-N-D excorporates in (29g) and the subject DP is merged in (29h). Here too, the Case of the subject can be valued as nominative or genitive for the same reason. (29i) shows the

⁸ See Hiraiwa (2001b) for an alternative and Maki and Uchibori (2008) for discussion of the issues related to this assumption.

⁹ Ochi (2001) actually proposes an analysis in terms of covert feature movement. But his analysis can be readily restated in terms of Agree.

¹⁰ Here, T and C are not directly merged. The tacit assumption here, informally speaking, is that C is the head (or label) of $\alpha = \{\underline{C}, \{\underline{N}, \underline{D}\}\}$ and hence, $\{\underline{T}, \alpha\}$ values nominative. Note that DP and V are thematically related, for example, in $\{\underline{DP}, \{\underline{V}, v\}\}$. Then, V must be "visible" to DP in this configuration just as C is visible to T in $\{\underline{T}, \{\underline{C}, \{\underline{N}, \underline{D}\}\}\}$. I leave the precise formulation of "visibility" to future research.

excorporation of T-C-N-D. The subject is internally merged to TP as in (29j) if this is required by the EPP. Three successive excorporations in (29k–m) complete the derivation.

This derivation demonstrates that once the defectiveness of C is assumed, which seems necessary under any account, the nominative/genitive alternation follows from the Merge-based analysis of Japanese Case. A desirable consequence of this approach is that it automatically explains the absence of genitive on PPs and adjunct DPs in prenominal sentential modifiers. As noted above, genitive is required on adjunct DPs within simple DPs. Another relevant example is shown in (30a).

- (30) a. Hanako-no kinoo-*(no) ikisaki
 Hanako-GEN yesterday-GEN destination
 ‘Hanako’s destination yesterday’
- b. Hanako-no kinoo-(*no) it-ta tokoro
 Hanako-GEN yesterday-GEN go-Past place
 ‘the place that Hanako went yesterday’

However, those DPs cannot be in genitive in relative clauses as (30b) shows. This follows from the hypothesis that Case is required for Merge as in (18), repeated below in (31).

- (31) a. Case is required on DPs and PPs for merger with N/D.
 b. Case is required on argument DPs for merger with V and A.
 c. Case is required on argument DPs and PPs for merger with *v*.

The adjunct DP, *kinoo* ‘yesterday’, is merged with N in (30a) and hence, must carry Case. The Case is valued as genitive by N-D. That in (30b), on the other hand, is merged with V. As only argument DPs are required to have Case in this context, no Case shows up on *kinoo* ‘yesterday’ in (30b).

If one adopts the Agree-based analysis, it would probably be necessary to assume that the *no* on *Hanako* is Case that is valued by Agree while that on *kinoo* ‘yesterday’ is something else, a linker or prenominal inflection, that appears only prenominally. There is no need to make this distinction with the Merge-based analysis proposed here.

4.2. Head-Finality as a Consequence of Covert Excorporation

In this section, I return to the wide scope property of nominative objects and discuss its consequence for linearization. I argue that the proposals on phrase structure building and Case valuation outlined above open up a new way to derive the head-finality of Japanese from Kayne’s (1994) LCA.

Let us consider again the contrast discussed by Tada (1992) in (6), repeated below in (32).

- (32) a. Kiyomi-wa migime-dake-o tumur-e-ru (can > only)
 Kiyomi-TOP right.eye-only-ACC close-can-Pres
 ‘Kiyomi can wink with her right eye.’
- b. Kiyomi-wa migime-dake-ga tumur-e-ru (only > can)
 Kiyomi-TOP right.eye-only-NOM close-can-Pres
 ‘It is only her right eye that Kiyomi can close.’

The narrow scope of the accusative object in (32a) should be attributed the fact that the accusative is valued by the V-*v* associated with the non-stative *tumur* ‘close’. Then, *e* ‘can’ takes a *vP* complement, and the example should be derived as in (33)–(34).

- (33) a. {close, *v*} (accusative)
 b. {DP only-ACC, {close, *v*}}, DP = right eye
 c. {{DP only-ACC, close}, *v*}
 d. {K-Case, {{DP only-ACC, close}, *v*}}, K = Kiyomi

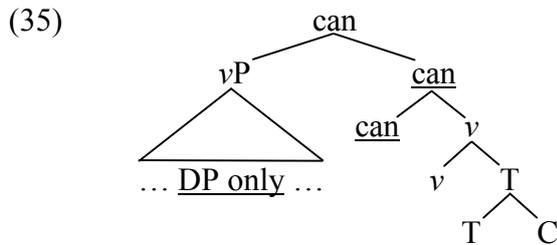
(33) shows the derivation of the embedded *vP*. The accusative is valued when the object is merged with V-*v* in (33c).

(34) is the derivation of the matrix CP phase.

- (34) e. {T, C} (nominative)
 f. {*v*, {T, C}}
 g. {can, {*v*, {T, C}}}
 h. {{K-Case, {{DP only-ACC, V}, *v*}}, {can, {*v*, {T, C}}}}, V = close
 i. {{{K-Case, {{DP only-ACC, V}, *v*}}, can}, {*v*, {T, C}}}
 j. {K-Case, {{{K-Case, {{DP only-ACC, V}, *v*}}, can}, {*v*, {T, C}}}}¹¹
 k. {{K-Case, {{{K-Case, {{DP only-ACC, V}, *v*}}, can}, *v*}}, {T, C}}
 l. {K-NOM, {{K-Case, {{{K-Case, {{DP only-ACC, V}, *v*}}, can}, *v*}}, {T, C}}}
 m. {{K-NOM, {{K-Case, {{{K-Case, {{DP only-ACC, V}, *v*}}, can}, *v*}}, T}}, C}

(34e–g) form the matrix *can-v-T-C* complex. Then, in (34h), the embedded *vP* is merged with this complex. The accusative object is contained within the *vP* while *can* is plausibly the head (or label) of the head complex. (See Fn.10 for relevant discussion.) Then, the scope relation, *can* > *only*, can be read off from this structure as illustrated in (35).

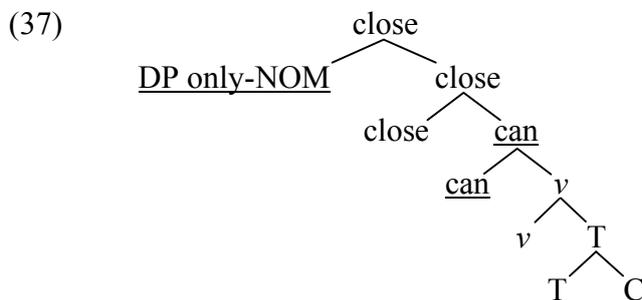
¹¹ The subject *Kiyomi* is the external argument of *tumur* ‘close’ as well as of *e* ‘can’. In (34j), I assume that it moves from the embedded *vP* Spec to the matrix *vP* Spec in order to account for this. But an alternative with PRO in the embedded *vP* Spec also serves the purpose.



Thus, the narrow scope property of accusative objects seems straightforward. On the other hand, the wide scope property of nominative objects has an interesting implication. Let us consider the derivation of (32b) in (36).

- (36)
- a. $\{\underline{T}, \underline{C}\}$ (nominative)
 - b. $\{v, \{\underline{T}, \underline{C}\}\}$
 - c. $\{\underline{can}, \{v, \{\underline{T}, \underline{C}\}\}\}$
 - d. $\{\text{close}, \{\underline{can}, \{v, \{\underline{T}, \underline{C}\}\}\}\}$ ¹²
 - e. $\{\underline{\text{DP only-NOM}}, \{\text{close}, \{\underline{can}, \{v, \{\underline{T}, \underline{C}\}\}\}\}\}$
 - f. $\{\{\underline{\text{DP only-NOM}}, \text{close}\}, \{\underline{can}, \{v, \{\underline{T}, \underline{C}\}\}\}\}$
 - k. $\{\{\{\underline{\text{DP only-NOM}}, \text{close}\}, \underline{can}\}\}, \{v, \{\underline{T}, \underline{C}\}\}\}$
 - l. $\{\text{K-Case}, \{\{\{\underline{\text{DP only-NOM}}, \text{close}\}, \underline{can}\}\}, \{v, \{\underline{T}, \underline{C}\}\}\}\}$
 - m. $\{\{\text{K-Case}, \{\{\{\underline{\text{DP only-NOM}}, \text{close}\}, \underline{can}\}\}, v\}\}, \{\underline{T}, \underline{C}\}\}$
 - n. $\{\text{K-NOM}, \{\{\text{K-Case}, \{\{\{\underline{\text{DP only-NOM}}, \text{close}\}, \underline{can}\}\}, v\}\}, \{\underline{T}, \underline{C}\}\}\}$
 - o. $\{\{\text{K-NOM}, \{\{\text{K-Case}, \{\{\{\underline{\text{DP only-NOM}}, \text{close}\}, \underline{can}\}\}, v\}\}, \underline{T}\}\}, \underline{C}\}$

As no Case is valued accusative in this example, the only phase head is C. The derivation, then, starts with C, and the *close-can-v-T-C* complex is formed in (36a–d). The object is merged with this complex in (36e), and the Case is valued nominative because of the T-C in the complex. At this point, the object c-commands *can* as in (37).



This accounts for the wide scope of the nominative object, but there is one further thing that must be said. Note that *can-v-T-C* excorporates in the next step of the derivation, (36f). The excorporation creates a configuration similar to (35). Then, if the scope relation is calculated based on this structure, it is predicted incorrectly that nominative objects at least

¹² I assume, following Bobaljik and Wurmbrand (2007), that *e* ‘can’ selects for a V and takes a VP complement when the object of the V is in nominative. This is not crucial for the analysis proposed here.

can have narrow scope. This indicates that excorporation is “invisible” and ignored in the calculation of the scope relation.

Here, there must be a reason for the “invisibility” of excorporation for scope. And the desired result is obtained if the excorporation is covert. As is well known, Japanese is a language with scope rigidity. Thus, (38) is unambiguous and its interpretation reflects the hierarchical relation of the two quantified phrases.¹³

- (38) dareka-ga daremo-o aisitei-ru (koto) ($\exists > \forall$)
 someone-NOM everyone-ACC love-Pres fact
 ‘(the fact that) someone loves everyone’

The scope relations in (32) can be understood as instances of this general phenomenon. As Kuroda (1971) points out, overt movement affects scope relations. (39a–b) are both ambiguous.

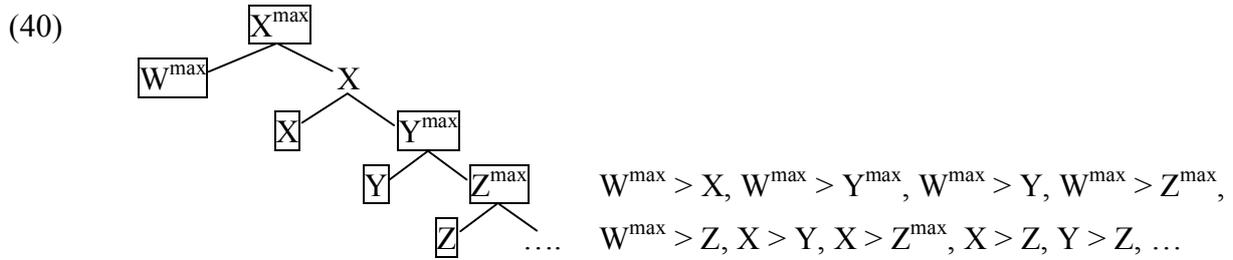
- (39) a. daremo-o_i dareka-ga t_i aisitei-ru (koto) ($\forall > \exists, \exists > \forall$)
 everyone-ACC someone-NOM love-Pres fact
 ‘(the fact that) someone loves everyone’
 b. dareka-o_i daremo-ga t_i aisitei-ru (koto) ($\exists > \forall, \forall > \exists$)
 someone-ACC everyone-NOM love-Pres fact
 ‘(the fact that) everyone loves someone’

But covert movement should have no effects on scope. If QR, for example, can broaden the scope possibilities, (38) should not be unambiguous to begin with. Hence, the account of (32b) based on (37) can be maintained if excorporation is covert in Japanese.¹⁴

Although this may sound like a stipulation to accommodate the wide scope property of nominative objects, it predicts the head-finality of Japanese in an interesting way. Kayne (1994) proposes that linear order is derived from asymmetric c-command relations (Linear Correspondence Axiom, LCA). Let us consider the configuration in (40), assuming Chomsky’s (1994) refinement that only maximal projections and heads count in the calculation of linear order.

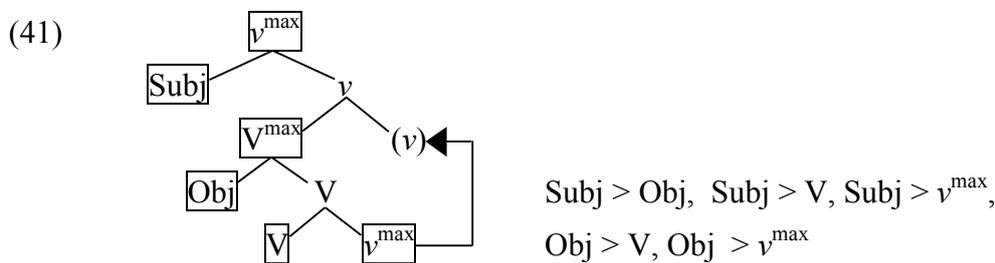
¹³ There are variations among speakers with this. But as far as I know, the strongly preferred reading of (38) is the one with *someone* taking scope over *everyone* for all speakers.

¹⁴ Note that this does not alter the derivations illustrated above if all operations, overt and covert, take place in a single cycle. I assume with Bobaljik (1995) that overt and covert movements apply in the same way, the only difference being that the phonetic features are interpreted at the landing site in the former while they receive interpretation at the initial site in the case of the latter.



Stated on the right are the asymmetrical c-command relations observed with this structure. The linear order, $W^{\max} > X > Y > Z$, is derived from these relations.

Kayne's LCA predicts the head-initial, spec-head-complement order. Hence, he entertains the possibility that the head-final, spec-complement-head order is derived by movement of the complement to a position that asymmetrically c-commands the head. However, the head-finality of Japanese automatically follows without further complication if excorporation is covert in the language. The only additional assumption required is virtually the definition of overt/covert movement: what enters into the calculation of linear order is the landing site in the case of overt movement and the initial site in the case of covert movement. Let us consider the vP structure in (41) for illustration.



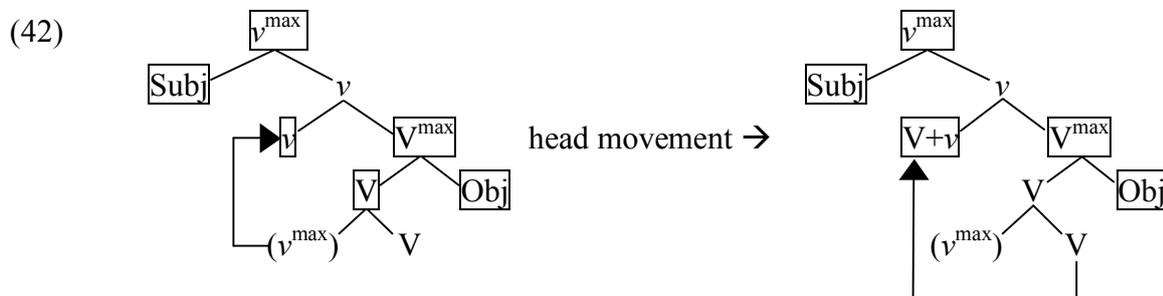
V and v merge first, and then the object DP merges with $V-v$. Then, v covertly excorporates and internally merges with VP . Then, the subject DP is externally merged. Here, since the excorporation is covert, the initial site of v counts in the calculation of linear order. Then, the asymmetric c-command relations on the right side obtain, yielding the subject-object-verb order. The linear order of V and v is undetermined, but it can be reasonably assumed that v cliticizes onto V . Thus, the head-finality of Japanese follows. As far as I can see, a derivation always yields a head-final order when it starts with a phase head and the excorporation is covert.

5. Conclusion and Further Issues

The main purpose of this paper was to suggest a Merge-based analysis of Case in Japanese. I first noted that an Agree-based analysis is untenable if a unified analysis is sought for Cases on argument DPs and PPs/adjunct DPs. Then, I argued that the wide scope property of nominative objects requires an alternative analysis on independent grounds. Given these conclusions, I explored the possibility that Case in Japanese is part of Merge: it is required for Merge and valued through Merge. I presented a concrete analysis, extending Shimada (2007)

and Tonoike's (2009) hypothesis on phrase structure building, which involves excorporation of heads out of head complexes. Finally, I pointed out that the wide scope property of nominative objects leads to the hypothesis that excorporation is covert in Japanese, and showed that this hypothesis predicts the head-finality of Japanese from Kayne's (1994) LCA.

In the discussion, I assumed that the proposed mode of phrase structure building applies universally. If this is correct, the head-initial order should be a consequence of overt excorporation. A vP in English, for example, would be derived as in (42) under this approach.



There are many possible ways to derive the head-initial order here. First, the structure is derived as illustrated on the left side with overt excorporation of v . This may suffice if the initial site of v is totally invisible in the calculation of linear order. It is also possible that V undergoes head movement to v as illustrated on the right side. In this case, the asymmetric c-command relation of $V+v$ and the object DP is clear if the initial site of V , which lacks phonetic features, enters the calculation unlike the case of excorporation because it is where the V is interpreted.

If this approach is tenable, then the head-parameter is reduced to whether excorporation is overt or covert. On the other hand, it may turn out, as Hisa Kitahara suggests, that English phrase structure is derived with V and the object merging first, as is usually assumed. In this case, Japanese employs the specific way of phrase structure building illustrated above because Merge is Case-dependent in the language. This predicts that head-initial languages have Agree-based Case systems while head-final languages have Merge-based ones. Although the exploration of the two approaches undoubtedly raises a number of interesting issues, I must leave it for another occasion.

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