

## The Nominative Constraint in Japanese Cleft Constructions: Agreement, Labeling and Timing of Feature-Valuation

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### 1. Introduction

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*Our Proposals:*

- (1) **The nominative constraint (NC) in Japanese cleft constructions** can be explained by extending Saito's (2018) notion of "strength" of the K(ase) head.
- (2) The strength of K is not inherent, but changes depending on whether it bears a Case feature at a particular phase.
- (3) The timing of Case-valuation can affect other kinds of agreement, such as focus agreement.

### 2. Japanese Cleft Construction and Takano's (2015) Nominative Constraint

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*The Japanese Cleft Construction*

The **Japanese cleft construction** has the form of "Y *no-wa* X *da*," in which X is a presuppositional clause and Y is a focus phrase, boldfaced in (5).

- (4) Ken-ga Mari-ni hon-o ageta. (the base form of the sentences in (5))  
Ken-NOM Mari-DAT book-ACC gave  
'Ken gave a book to Mari.'
  - (5) a. Ken-ga Mari-ni ageta no-wa **hon-o** da. [Accusative]  
Ken-NOM Mari-DAT gave C-TOP book-ACC COP  
'It is a book that Ken gave to Mari.'  
b. Ken-ga hon-o ageta no-wa **Mari-ni** da. [Dative]  
Ken-NOM book-ACC gave C-TOP Mari-DAT COP  
'It is to Mari that Ken gave a book.'
- (Takano, 2015)

The cleft sentence is derived from the base form (4)/(6)a by moving a focus element (X) to C<sub>Foc</sub> (→ (6)b) and then applying topicalization to the rest of the sentence (Y) (→(6)c) (cf. Hiraiwa and Ishihara, 2002, 2012).

- (6) a. [TP ... XP...]  
b. [<sub>α</sub> XP C<sub>Foc</sub> [TP... <XP> ...]] *XP undergoes IM: focus movement*  
c. [<sub>β</sub> TP C<sub>Top</sub> [<sub>α</sub> XP C<sub>Foc</sub> <[TP ...<XP>... ]>]] *TP undergoes IM: topicalization*

Multiple foci are allowed in the Japanese cleft construction (**multiple cleft**):

- (7) Ken-ga ageta no-wa **hon-o** **Mari-ni** da. [Dative & Accusative]  
Ken-NOM gave C-TOP book-ACC Mari-DAT COP  
'It is a book to Mari that Ken gave.'

Takano's (2015) *Nominative Constraint*

Japanese cleft obeys **the nominative constraint (NC)**, which prevents a nominative element from appearing in the focus position.<sup>1</sup>

- (8) \*Mari-ni hon-o ageta no-wa **Ken-ga** da.  
 Mari-DAT book-ACC gave C-TOP Ken-NOM COP  
 'It is Ken that gave a book to Mari.' (Takano, 2015)

Takano's (2015) *account*:

Takano (2015) explains both NC in Japanese and the categorical restriction on English clefts (→ (9)) by appealing to labeling under Chomsky's (2013) **labeling algorithm**.

- (9) **English clefts: Only [-V] categories can appear in the focus position of the English cleft.**  
 a. It's [NP the custard pie] that I disliked.  
 b. It's [PP to John] that she spoke.  
 c. \*It's [VP blow up some buildings] that you should.  
 d. \*It's [AP very unhappy] that Bill is. (Takano 2015)

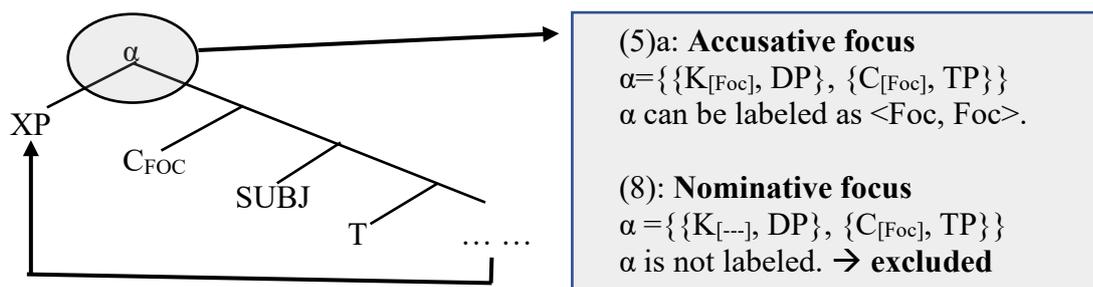
(10) *Takano's assumptions of feature distribution*:

- a. Only nominal heads can have a focus feature that enters into agreement with the focus feature of C.  
 b. P can inherit this focus feature from its nominal complement.  
 c. Japanese nominative and accusative have the form [KP DP K].  
 d. Accusative K behaves like P and inherits a focus feature from its nominal complement, but nominative K does not. (Takano 2015)

(11) *Labeling of the {XP, YP} structure under Chomsky's (2013) labeling algorithm*:

- a. labeling by shared features between XP and YP → <f, f>  
 b. labeling by XP or YP moving out {YP...{XP, <YP>}} → XP

(12) *After focus movement in a cleft sentence: (= (6)b)*



<sup>1</sup> Japanese cleft focus allows its Case-marker to be dropped, in which case no NC is observed.

- (i) Mari-ni hon-o ageta no-wa Ken-[ ] da.  
 Mari-DAT book-ACC gave C-TOP Ken COP  
 'It is Ken that gave a book to Mari.'

Kuroda (1999) analyzes the Case-less cleft as a **pseudocleft**, instead of the regular cleft construction (see Hiraiwa and Ishihara (2002, 2012) for discussion). If (i) is not derived via focus movement of the nominative phrase (as will be discussed for regular clefts), the lack of NC may be straightforward.

According to Chomsky (2013), syntactic objects need to be labeled for interface interpretation. In (8),  $\alpha$  is not labeled since there is no shared feature, in contrast to (5). Thus, the representation of (8) is excluded at the interfaces.

### *The saving effect of ‘surprising constituents’*

A nominative element can appear as one of the multiple foci. (= No NC in **multiple cleft**)

- (13) a. Ageta no-wa **Ken-ga** **Mari-ni** **hon-o** da. [Nom, Dat & Acc]  
       gave C-TOP Ken-NOM Mari-DAT book-ACC COP  
       ‘It is Ken a book to Mari that gave.’  
       b. Mari-ni ageta no-wa **Ken-ga** **hon-o** da. [Nom&Acc]  
       Mari-DAT gave C-TOP Ken-NOM book-ACC COP  
       ‘It is Ken a book that Mari gave.’ (Takano, 2015)

**Takano’s explanation:** multiple foci form a label-less constituent.  
 (= a ‘surprising’ constituent, Takano 2002)

- (14) *Formation of the surprising constituent (SC) by Merge:*  
 a. [TP Subj IO DO V]  
 b.  $\{\alpha$  IO, DO} *IO and DO are externally merged forming SC.<sup>2</sup>*  
 c.  $[\beta$   $\{\alpha$  IO, DO} C<sub>FOC</sub> [TP ...]] *The SC is merged with C<sub>FOC</sub>.*

*How are  $\alpha$  and  $\beta$  labeled?*

- (15) a.  $\alpha$  = no label  
       {IO, DO} has no label: No agreement between IO and DO → No shared feature  
       b.  $\beta$  = C<sub>FOC</sub>  
       Since  $\alpha$  has no label, {IO, DO} is invisible to the Labeling Algorithm.  
        $\{\beta$  {IO, DO}, C<sub>FOC} is labeled as C<sub>FOC</sub> and **(13) is ruled in.**</sub>

*Why is the unlabeled syntactic object (=surprising constituent) not excluded at the interfaces?*  
 Although Chomsky (2013) suggests that labels are required for interface interpretation, Takano (2015) claims that labels are not needed for surprising constituents:

*...constituents in the cleft focus position generally do not have to be interpreted as syntactic objects of particular kinds, such as noun phrases, verb phrases, etc. Therefore, surprising constituents in the focus position, having no label, receive no interpretation as constituents of a particular category, but this does not cause a problem. (Takano 2015: 70)*

## **3. Reconsidering Takano’s (2015) Analysis**

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### *3.1 Availability of Focus-Feature Percolation*

Takano (2015) explains NC by appeal not only to the Labeling Algorithm but also to the availability of **Focus-feature percolation** from nominals ((16), repeated from (10)d).

<sup>2</sup> See also Kitahara (2019) for relevant discussion on the derivation of SC by External Merge.

(16) Accusative K behaves like P and inherits a focus feature from its nominal complement, but nominative K does not.

Obviously, a question we need to further pursue is why only Accusative K (and P) inherits a focus feature but nominative K does not.

### 3.2 Weak K in Japanese: Saito (2016, 2018)

Recall Takano's account of the NC example (8), which is repeated as (17) below:

(17) \*Mari-ni hon-o ageta no-wa **Ken-ga** da.  
 Mari-DAT book-ACC gave C-TOP Ken-NOM COP  
 'It is Ken that gave a book to Mari.' (Takano, 2015)

(18) *The representation resulting from focus movement of "Ken-ga":*

$[\alpha \text{ Ken-ga } C_{[FOC]} [TP <\text{Ken-ga}> \dots \dots ]]$

$\alpha = \{ \{K_{[---]}, DP\}, \{C_{[FOC]}, TP\} \} = \text{no label} \rightarrow \text{excluded}$

Under Takano's assumptions, the focus feature does not percolate to nominative KP, so that there is no shared feature between  $\{K_{[---]}, DP\}$  and  $\{C_{[FOC]}, TP\}$ , and no label is assigned, in contrast to accusative K.

#### *Incompatibility with Saito (2018):*

However, Takano's analysis is incompatible with Saito's (2018) view that **Japanese K (either nominative or accusative) is weak** and has no ability to label. Under this view,  $\alpha$  in (18) can be labeled as C(P), and the representation in (18) should not be excluded.

Below, we will review Saito's account of how English and Japanese labeling patterns differ:

#### **English sentences**

(19) *Case-valuation since Chomsky (2000):*

Case-valuation takes place as a reflex of phi-feature agreement.

(20) *Labeling of English (so-called) TP:*

$\{ \alpha DP_{[phi]}, \{T_{[phi]}, VP\} \} \quad \alpha = \langle \text{phi}, \text{phi} \rangle$

The representation in (20) is labeled as  $\langle \text{phi}, \text{phi} \rangle$  since T undergoes phi-feature agreement with the subject DP. The shared phi-features can be a label.

#### **Japanese sentences**

Since there is no phi-agreement between T and the subject DP in Japanese,  $\alpha$  is not labeled as  $\langle \text{phi}, \text{phi} \rangle$ . The fact that Japanese allows the **multiple nominative construction** ((21)) indicates that phi-feature agreement between T and the subject DP does not take place, since it is impossible for phi-features on T to be valued by multiple DPs:

(21) Bunmeikoku-ga dansei-ga heikin-zyumyoo-ga mizika-i.  
 civilized.country-NOM male-NOM average-life.span-NOM short-Pres.  
 'It is in civilized countries that male's average life span is short.' (Saito, 2018)

(22) *Case-agreement in Japanese, NOT phi-agreement:*

Based on this fact, Saito claims that **Case-agreement, not phi-agreement**, takes place in Japanese. Also, K in KP is an inherently weak head, which does not have the ability to label. Therefore,  $\{_{\alpha} DP, \{T, vP\}\}$  is labeled as **T(P)** in Japanese, not  $\langle \text{phi}, \text{phi} \rangle$ .

If this is correct, the ungrammaticality of NC in (8)/(17) cannot just be attributed to the labeling problem. Nominative K is weak and hence should not block the other phrase from becoming the label. → *Is there any way to make Saito's analysis compatible with Takano's account of NC?*

#### 4. Timing of Feature Valuation and the Nominative Constraint in Cleft Sentences

In this section, we present our analysis of NC by explaining two points we mentioned in Sections 3.1 and 3.2: **(i) focus feature percolation, (ii) K as a weak head.**

##### 4.1 K as a Strong Head after Case-Valuation

We propose the following to extend Saito's (2018) Case system in Japanese:

(23) *Focus feature percolation and the strength of heads:*

Focus features are percolated **only to strong heads, not to weak heads.**

(24) *The strength of K in KP:*

K is a weak head only when it bears a Case-feature.

Under (24), the strength of K varies depending on at which phase Case is valued: **Accusative Case is valued in the vP phase** (by V) while **Nominative Case is valued in the CP phase** (by T). Given that valued features become phonological features in the next higher phase (Epstein et al. (2012)), **Accusative K** has no Case-feature in the CP phase so that it is **no longer a weak head**, as follows:

(25)

	vP phase		CP phase	
Accusative K	$K_{[Case: \ ]} \rightarrow K_{[Case: Acc]}$	weak	$K_{[Phon]}$	strong
Nominative K			$K_{[Case: \ ]} \rightarrow K_{[Case: Nom]}$	weak

In the above system, feature percolation to KP is only possible for the Accusative K in the CP phrase, but not for the Nominative K.

(26) *The availability of focus feature percolation in (25)*

- a. Nominative K in the CP phase: ×
- b. Accusative K in the vP phase: ×
- c. Accusative K in the CP phase: ✓

#### 4.2 Answering Two Questions

Let us see how we can answer the two questions raised in Section 3:

- (i) In Takano (2015), why does only Nominative K resist focus feature percolation, while Accusative K does not?

[Our Answer]

Focus feature percolation is associated with **the strength of K**. Nominative K resists focus feature percolation not because K is nominative but **because K is a weak head**. On the other hand, Accusative K receives focus feature percolation because it is **a strong head** in the (next higher) CP phase after Case-valuation.

- (ii) How can we make Saito's analysis compatible with Takano's account of NC?

[Our Answer]

In the proposed analysis, the strength of K plays a central role in focus feature percolation. We further extend Saito's analysis by assuming that K is a weak head as long as it bears a Case-feature. NC violation can be explained by saying that **Nominative K**, which is weak in (25), **and C<sub>[Foc]</sub> bear no shared feature** so that  $\{\{K_{[---]}, DP\}, \{C_{[Foc]}, TP\}\}$  is not labeled, hence is excluded. On the other hand, **Accusative K**, which is strong because of the lack of a Case-feature in (25), **and C<sub>[Foc]</sub> share focus features** so that  $\{\{K_{[FOC]}, DP\}, \{C_{[Foc]}, TP\}\}$  can be labeled as **<Foc, Foc>**.

Our analysis, which appeals to the timing of Case-valuation, can thus deal with the two issues arising from Takano (2015).

#### 4.3 Other Data Explained

Interestingly, the subject marked with Nominative Case can be a cleft focus when focus movement takes place across clause boundaries (i.e. **long distance focus movement**), as in (27), where it seems like the NC is nullified.<sup>3</sup>

- (27) Taro-ga Mari-ni hon-o ageta to omott-teitru no-wa **Ken-ga** da.  
Taro-ga Mari-DAT book-ACC gave C think-PROG C-TOP Ken-NOM COP  
'It is Ken that Taro thinks gave a book to Mari'

Under our analysis, the focus element *Ken-ga* has **no Case-feature once it is moved to the higher phase** (i.e. matrix vP phase), so that K is a strong head and [Foc] can percolate to K. As a result, the syntactic object resulting from focus movement is successfully labeled as **<Foc,Foc>**.

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<sup>3</sup> One may wonder if the lack of NC effect in (27) is due to the (relatively large) linear distance between the Nominative focus and its original position. (We thank Isso Nakamura (p.c.) for pointing out the possibility.) However, we judge (i) as unacceptable, and thus conclude that embedding is the crucial property of the amelioration of NC in (27).

- (i) \*Ringo-o [onaka-ga ippaini naru made] [nagai aida] tabe-tuzuke tei-ta no-wa  
Apple-ACC stomach-NOM full become until long time eat-continue Prog-Past C-Top  
**John-ga** da.  
**John-Nom** be  
'It is John that continued eating apples for a long time until he became full.'

The fact that the NC disappears in higher phases supports the view that the availability of feature percolation is not due to the inherent properties of the Nominative phrase.

Our analysis can also capture Takano’s ‘surprising constituent’ effect ((13)).

- (28) *Formation of Multiple Cleft in our analysis (Nom+Acc foci; cf. Takano’s (14))*
- a. [TP Subj IO DO V]
  - b. [ $\alpha$  Subj, DO] *Subj and DO are externally merged in the workspace forming the surprising constituent.*
  - c. [ $\beta$  [ $\alpha$  Subj, DO] C<sub>FOC</sub> [TP ...]] *Subj+DO is merged with C<sub>FOC</sub>.*

If we assume that the Merged foci ‘Subj + DO’ can have a percolated focus feature because of the existence of a strong K in DO, the possibility of focus movement in (28)c is predicted. In other words, a (matrix) Nominative phrase cannot move by itself (because it only has a weak K and does not allow feature percolation), but can move parasitically with a strong KP with a percolated focus feature.

*Are surprising constituents labeled or not?*

Takano (2015) claims that surprising constituents can stay unlabeled since they are not interpreted as syntactic objects at the interfaces, as mentioned in Section 2.

In our system, on the other hand, surprising constituents are labeled, as in (28):  
 $\{\alpha \text{ KP}_{\text{Subj}}, \text{KP}_{\text{Obj}}\}$ ,  $\alpha = \text{K(P)}$ : Strong K in  $\text{KP}_{\text{Obj}}$  becomes the label.

Under Chomsky’s (2013) analysis, unlabeled syntactic objects are not interpreted properly at the interfaces, so that surprising constituents are regarded as exceptional cases in Takano (2015). In our analysis, on the other hand, surprising constituents are also labeled and no extra assumption is needed.<sup>4</sup>

## 5. Theoretical Consequences

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Recall that in Section 3.2 we clarified that Takano’s (2015) system along with Saito (2018) predicts that the syntactic object ( $\alpha$ ) resulting from focus movement in the NC context is labeled as C(P), since a weak K has no ability to label, but the sentence is ungrammatical.

- (29)  $\alpha = \{\{\text{K}_{[\dots]}, \text{DP}\}, \{\text{C}_{[\text{Foc}]}, \text{TP}\}\}$  (= (18))  
 $\alpha = \text{C(P)}$

*What does this imply?*

This implies that NC violation is attributed **not to labeling failure but to focus agreement failure** due to a lack of focus feature percolation. This clarifies some aspects of how labels contribute to interface interpretation.

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<sup>4</sup> Ishii and Agbayani (2020) show that a surprising constituent forms a single prosodic constituent. If this is the case, a surprising constituent must be phonologically computed/interpreted at the SM interface, which implies that a surprising constituent must be labeled, as our system predicts (although our analysis is completely different from Ishii and Agbayani’s analysis, in that they suggest that Japanese multiple clefts are phonologically generated).

- (30) *Declarative (no agreement)*  
 a. John bought the book.  
 b.  $\{_{\alpha} C, TP\}$ ,  $\alpha = C(P)$
- (31) *Question*  
 a. What did John buy?  
 b.  $\{_{\alpha} WH_{[Q]}, C_{[Q]}\}$   $\alpha = \langle Q, Q \rangle$

In (30),  $\{C, TP\}$  is labeled as  $C(P)$  by Minimal Search, and no agreement takes place with  $C$ . If the syntactic objects involve functional features (such as Question, Focus, Topic, etc.), on the other hand, agreement is mandatory and labels are determined by shared features (e.g.  $\langle Q, Q \rangle$ ,  $\langle Foc, Foc \rangle$ , etc.). This may indicate how labels contribute to interface interpretation: CI can see semantic differences between sentence types based on their labels, and SM can choose an appropriate phonological interpretation based on those sentence types.

→ **Each sentence type needs to be labeled differently.**

## 6. Conclusion and Some Remaining Issues

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In summary, we extended Takano's feature percolation account of the NC and made it compatible with both Saito's (2016, 2018) system and our new example in (27). If our analysis is on the right track, it follows that the **existence of unvalued features can interfere with certain types of agreement (e.g. focus agreement)**. Also, the proposed system clarifies how labels contribute to interface interpretation at the interfaces.

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