SURPRISING CONSTITUENTS AS UNLABELED SYNTACTIC OBJECTS [*]

Yuji Takano
Kinjo Gakuin University

1. Introduction: Japanese Clefts and the Nominative Constraint

This paper explores the nature of phrase structure through the examination of certain properties of cleft constructions in Japanese. The Japanese cleft construction we will look at is exemplified in (2a, b), which are formed on the basis of the noncleft sentence in (1).

(1) Ken-ga   Mari-ni   hon -o   ageta.
     Ken-NOM Mari-DAT book-ACC gave

   'Ken gave a book to Mari.'

(2) a. Ken-ga   hon-o   ageta no-wa **Mari-ni**   da.
        Ken-NOM book-ACC gave C-TOP Mari-DAT COP

     'It is to Mari that Ken gave a book.'

   b. Ken-ga   Mari-ni   ageta no-wa **hon-o**   da.
       Ken-NOM Mari-DAT gave C-TOP book-ACC COP

     'It is a book that Ken gave to Mari.'

The cleft construction in question has the general form *X no-wa Y da*, where X is a presuppositional clause and Y is a focus phrase with a case marker or a postposition. (2a) has *Mari-ni* 'Mari-DAT' in the focus position and (2b) *hon-o* 'book-ACC.' Throughout this paper, focus elements are bold faced. In (2) the focus position has one element, but it can also have more than one element, as shown in (3).

(3) a. Ken-ga   ageta no-wa **hon-o**   **Mari-ni**   da.
        Ken-NOM gave C-TOP book-ACC Mari-DAT COP

     'It is a book to Mari that Ken gave.'

   b. Ken-ga   ageta no-wa **Mari-ni   hon-o**   da.
      Ken-NOM gave C-TOP Mari-DAT book-ACC COP

      'It is to Mari a book that Ken gave.'

   c. Ageta   no-wa **Ken-ga   Mari-ni   hon-o**   da.
      gave   C-TOP Ken-NOM Mari-DAT book-ACC COP

      'It is Ken a book to Mari that gave.'

This freedom of having multiple elements in the focus position of the cleft is rather surprising from the perspective of languages like English where cleft sentences usually can have only one constituent. This is why I (Takano 2002) called multiple focus elements like those in (3) surprising constituents.

   In spite of the fact that various elements can appear in the focus position of the Japanese clefts, there is one mysterious restriction noted in the literature. Consider (4).

(4)   *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.'

The cleft sentence in (4) has a nominative phrase in the focus position. Cleft sentences like (4), in contrast to those like (2) and (3), are judged by many Japanese speakers to be degraded. In this paper, I refer to this phenomenon as the *nominative constraint*. [1]

   In what follows, I will explore the nature of the nominative constraint from the perspective of surprising constituents. By doing this, I will eventually make a new claim about surprising constituents in the context of a theory of phrase structure proposed by Chomsky (2013). In section 2, I will show that surprising constituents constitute a puzzling exception to the nominative constraint in that they have the effect of saving the cleft sentence from violating the nominative constraint. In section 3, I will propose an analysis that attributes the nominative constraint to a problem with labeling in the sense of Chomsky (2013). In section 4, I will extend this analysis to surprising constituents and claim that surprising constituents save the cleft sentence from violating the nominative constraint because they have no labels. I will argue that this result provides an argument for Chomsky's (2013) theory of phrase structure over earlier theories. In section 5, I will touch on the question how surprising constituents analyzed this way are formed. Section 5 concludes the

---

[1] As usual, there is variation among speakers regarding the status of the nominative constraint. Many Japanese speakers, including myself, find examples like (4) degraded, but the degree of degradedness varies among speakers, from completely unacceptable to only mildly degraded. There are also a few speakers who accept examples like (4); for them there is no nominative constraint. In this paper, I restrict discussion to the judgments of the former type of speakers and mark a violation of the nominative constraint uniformly with "*" ignoring the variation as to the strength of the effect.

discussion.

2. Exceptions to the Nominative Constraint

It is well known that there are exceptions to the nominative constraint. Let us consider (5).

(5) a. Hon-o   ageta no-wa **Ken-ga**   **Mari-ni**   da.
        book-ACC gave C-TOP Ken-NOM Mari-DAT COP

   'It is Ken to Mari that gave a book.'

   b. Mari-ni   ageta no-wa **Ken-ga**   **hon-o**   da.
       Mari-DAT gave C-TOP Ken-NOM   book-ACC COP

   'It is Ken a book that gave to Mari.'

The examples in (5) have a nominative phrase in the focus position, just like the example in (4), but they are perfectly acceptable. The difference is that in (5) there is another phrase, in addition to the nominative phrase, in the focus position. It thus seems that what is wrong with (4) is that the focus position has only a nominative phrase.

In fact, a similar situation can be found in coordination. The examples in (6) involve coordination.

(6) a. gakusei-to   sensei-ga   (kita)
        student-and   teacher-NOM (came)

   'students and teachers (came)'

   b. *gakusei-ga-to   sensei-ga   (kita)
        student-NOM-and   teacher-NOM came

    'students and teachers (came)'

   c. gakusei-ga   sannin-to sensei-ga   hutari (kita)
       student-NOM   three-and teacher-NOM   two   came

   'three students and two teachers (came)' (Koizumi 1995: 204)

(6a) has a bare noun phrase in front of the coordination -*to* 'and' and the nominative case maker appears only on the second conjunct. This is a possible pattern of coordination. On the other hand, (6b) has a nominative case maker both on the first and the second conjunct, and this is ungrammatical. But if we change (6b) slightly so that there is a floating quantifier between the nominative phrase and the coordination, as in (6c), the expression becomes grammatical. Discussing these patterns, Koizumi (1995: 204) proposes that the

ungrammaticality of (6b) is due to the morpho-phonological constraint on coordination given in (7).

(7)   *X-*to*, unless X is a nominal-like category.

The assumption here is that noun phrases with nominative case-markers are not nominal, whereas quantifiers are nominal. Given this, the grammaticality of (6a, c) and the ungrammaticality of (6b) follows from (7).

Koizumi (1995: 204) further suggests that the copula *da* in the cleft construction is subject to a similar morpho-phonological constraint. His suggestion is intended to capture the nominative constraint, whose effects are seen in cases like (4), repeated in (8).

(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.'

Following his suggestion, we might posit a constraint of the following kind:

(9)   *X-Nom Cop, where X-Nom = focus of the cleft construction.

This approach takes the nominative constraint to be a surface constraint banning the particular linear sequence of a nominative phrase being immediately followed by the copula in the cleft. The same view is advocated by Cho, Whitman, and Yanagaida (2008), who consider the nominative constraint to be a surface phenomenon.

However, there is evidence suggesting the syntactic nature of the nominative constraint. Compare (8) with (10).

(10) a. Hon-o   ageta no-wa **Mari-ni**   **Ken-ga**   da.
           book-ACC gave C-TOP Mari-DAT Ken-NOM COP

           'It is to Mari Ken that gave a book.'

      b. Mari-ni   ageta no-wa **hon-o**   **Ken-ga**   da.
           Mari-DAT   gave C-TOP book-ACC Ken-NOM COP

           'It is a book Ken that gave to Mari.'

The examples in (10) have two elements in the focus position, one of them being a nominative phrase. In this respect, they are similar to the examples in (5). However, in (10) the nominative phrase comes right before the copula. Therefore, from the perspective of (9), the examples in (10) should be as bad as the example in (8). Contrary to the expectation, there is a striking contrast between (8) and (10): (10a, b) improve on (8). This is an

unexpected fact if the degradedness of (8) is just a morpho-phonological surface phenomenon due solely to (9). The fact strongly suggests that something syntactic is responsible for the degradedness of (8) and the improvement of (10).[2]

Moreover, the same effects can be seen even when the multiple foci consist only of nominative phrases. Let us consider the examples in (11).

(11) a. Ken-no   musume-ga   iedesita.
        Ken-GEN   daughter-NOM   ran.away.from.home

        'Ken's daughter ran away from home.'

    b. Ken-ga   musume-ga   iedesita.
        Ken-NOM   daughter-NOM   ran.away.from.home

        (Lit.) 'Ken his daughter ran away from home.'

    c. *Iedesita   no-wa **Ken-no**   **musume-ga**   da.
        ran.away.from.home   C-TOP Ken-GEN   daughter-NOM   COP

        'It is Ken's daughter that ran away from home.'

    d. Iedesita   no-wa   **Ken-ga**   **musume-ga**   da.
        ran.away.from.home   C-Top   Ken-NOM   daughter-NOM   COP

        (Lit.) 'It is Ken his daughter that ran away from home.'

(11a) is a single subject construction, whereas (11b) is a multiple subject construction. If the single nominative subject in (11a) appears in the focus position of the cleft, it induces a violation of the nominative constraint, as expected, as shown in (11c). However, if the single nominative subject is replaced by the multiple nominative subjects in (11b), the resulting cleft improves, as shown in (11d). Here too, the contrast between (11c) and (11d) suggests that there is something syntactic at work about the nominative constraint.

Nominative object constructions lead us to the same conclusion. Consider (12).

---

[2] I have checked with eleven speakers and out of the nine speakers who find (8) to be degraded (see note 1), eight share my judgments, detecting the improvement of (10) over (8) (one speaker finds (8) and (10) to be equally bad). I should also mention that there may be a slight contrast between (10) and (5): whereas (5) is perfect, (10) may not be as good (thanks to Masahiko Takahashi for pointing this out to me). The text discussion focuses on the fact that (10) is better than (8). The fact that (10) may still be slightly degraded may be taken to suggest that a constraint like (9) has a weak effect.

(12) a. Ken-ga   Mari-yori   tenisu-ga   tokui   da.
       Ken-NOM   Mari-than   tennis-NOM good   COP

   'Ken is better at tennis than Mari.'

   b. *Mari-yori Tenisu-ga   tokui   na   no-wa   **Ken-ga**   da.
       Mari-than tennsi-NOM   good   COP C-TOP Ken-NOM COP
      'It is Ken that is better at tennis than Mari.'

   c. *Ken-ga   Mari-yori   tokui   na   no-wa   **tenisu-ga**   da.
       Ken-Nom Mari-than   good   COP   C-TOP tennis-NOM Cop

   'It is tennis that Ken is better at than Mari.'

   d. Mari-yori   tokui   na   no-wa   **Ken-ga**   **tenisu-ga**   da.
       Mari-than   good   COP C-TOP Ken-NOM   tennis-NOM COP

   'It is Ken tennis that is better at than Mari.'

In (12a) the adjectival noun *tokui* 'good' takes a nominative object, as a result of which both the subject and the object are marked with nominative. If one of these nominative phrases appears in the focus position, the cleft sentence is degraded, as in (12b, c). By contrast, if both of them appear there, the sentence becomes better, as in (12d).

The striking improvement in (10), (11d), and (12d) is caused by the presence of multiple elements in the focus position. Thus, this is another surprising property of surprising constituents. It leads us to the following generalization:

(13)   Surprising constituents save the cleft sentence from violating the nominative
        constraint (even when they consist only of nominative phrases).

This generalization shows that the nominative constraint is not simply a morpho-phonological surface phenomenon. It must be the case that some syntactic factors play a crucial role in inducing the nominative constraint effects and the saving effects with surprising constituents.

3. The Nominative Constraint and Labeling

Before we address the question why surprising constituents show the saving effect in (13), let us consider why we have the nominative constraint in the first place. First, I will assume an analysis of Japanese clefts proposed by Hasegawa (1997, 2011) and developed by Hiraiwa and Ishihara (2002, 2012). This analysis derives the cleft sentence in (14) from the base form given in (15) (which is also an acceptable sentence) in the way illustrated in (16).

(14) Ken-ga   hon-o   ageta no-wa **Mari-ni**   da.
      Ken-NOM book-ACC   gave C-TOP Mari-DAT COP

    'It is to Mari that Ken gave a book.'

(15) Ken-ga   Mari-ni   hon-o   ageta no da.
      Ken-NOM Mari-DAT book-ACC gave C COP

    'It is that Ken gave a book to Mari.'

(16) a. Ken-NOM Mari-DAT book-ACC gave C COP
        → focus movement of *Mari-DAT*

    b. **Mari-DAT** [$_X$ Ken-NOM <Mari-DAT> book-ACC gave C] COP
        → topicalization of X

    c. [$_X$ Ken-NOM <Mari-DAT> book-ACC gave C-TOP] **Mari-DAT** <X> COP

The derivation starts from (16a) (=(15)). The first step is movement of the focus phrase *Mari-DAT* to the focus position (the material surrounded by angled brackets is a copy of the moved element). This yields (16b). The next step is topicalization of X (whose exact identity is not relevant here). This results in (16c), which surfaces as (14).

    Regarding the nature of the nominative constraint, I would like to pursue the idea that it is not an isolated phenomenon but is the same in nature as the well-known categorial restriction on the focus phrase in English clefts. Emonds (1976) observes that while DPs and PPs can occur in the focus position of English clefts, other categories generally cannot, as shown in (17) and (18).

(17) a. It's [$_{DP}$ **the custard pie**] that I disliked.

    b. It was [$_{PP}$ **to John**] that she spoke.

(18) a. *It is [$_{vP}$ **blow up some buildings**] that you should.

    b. *It's [$_{AP}$ **very unhappy**] that Bill is.

    c. *It was [$_{AdvP}$ **too carefully**] that she spoke.

    d. *It was [$_{CP}$ **to buy a new hat**] that I wanted.

    e. *It's [$_{CP}$ **that John has come too late**] that Bill realizes.

We thus have the generalization in (19) for the English clefts.

(19) Only [-V] categories can appear in the focus position of the English clefts.

I claim that the nominative constraint on the Japanese clefts can be unified with (19). To achieve this goal, we need to address the following two questions:

(20) a. What is wrong with non-[-V] categories appearing in the focus position of the English clefts?

  b. How can we assimilate the nominative constraint to this restriction?

To answer these questions, I propose that when non-[-V] categories and nominative phrases appear in the focus position, a problem arises with labeling in the sense of Chomsky (2013).

Chomsky (2013) proposes a theory of phrase structure in which the notion of labeling plays an important role. The relevant parts of his theory are summarized in (21).

(21) a. Syntactic structure is formed by Merge.

  b. Under the simplest conception of Merge, merger of X and Y yields the syntactic object {X, Y} with no projection or order.

  c. A label is required for SO to be interpreted at the interfaces.

  d. The label of SO is a lexical item (head) contained in SO.

  e. The label of SO is determined by a minimal search algorithm called a labeling algorithm LA.

In this theory, Merge forms syntactic objects without any projection or order, and projections are determined in the form of labels by an algorithm called LA that is defined in terms of minimal search (order is assigned outside the core computation). There are two relevant cases to consider:

(22) a. SO = {H, XP}

  b. SO = {XP, YP}

In the case of (22a), the syntactic object (SO) is formed by Merge by combining a lexical item (head, H) and a phrase (XP). Given (21d), the label of this SO can be easily identified by minimal search: just by looking at the two immediate constituents of SO, H and XP, LA selects H as its label (the other element is an XP, so it cannot be a label). By contrast, in the case of (22b), the label of SO cannot be determined by LA, because the two immediate constituents of SO are both XPs and there are no grounds to choose between the two. Therefore, if nothing happens, the SO in (22b) has no label. Claiming that a label is required for SO to be interpreted at the interfaces (21c), Chomsky considers this situation to be fatal: the SO in (22b) cannot receive proper interpretation at the interfaces.

However, Chomsky further proposes that Universal Grammar has available three ways to

avoid this situation. They are given in (23).

(23)   a.   SO = {<XP>, YP}

    b.   SO = {XP, YP}, where the label of XP and the label of YP share the most prominent feature F due to agreement.

    c.   SO = {XP, YP}, where the head of XP cannot serve as a label.

(23a) shows that one of the constituents of SO, say XP, has moved out of SO. As a result, SO consists of YP and a copy of XP. Chomsky claims that copies are invisible to LA. Therefore, LA sees only YP and, by minimal search, identifies the label of YP as the label of SO.

    (23b) is a case in which XP and YP are the same in a sense, due to agreement. Suppose there is agreement between X and Y. As a result, in SO = {XP, YP}, the label (head) of XP and the label of YP share the most prominent feature F. By minimal search LA sees this feature and considers XP and YP to be the same in this sense. As a result, LA identifies the feature F as the label of SO. Chomsky illustrates this case with the example in (24).

(24)   They wondered [$_\alpha$ [$_\gamma$ in which Texas city] [$_\beta$ C [JFK was assassinated]]]

In (24) α = {γ, β} = {XP, YP}, an instance of (22b). But, due to agreement between the head of γ and C, the most prominent feature of γ and β is shared, namely, the interrogative feature Q, a feature of C and the head of γ. LA finds the same most prominent feature Q in both γ and β, and takes Q to be the label of α. Chomsky contrasts (24) with (25).

(25)   *They thought [$_\alpha$ [$_\gamma$ in which Texas city] [$_\beta$ C [JFK was assassinated]]]?
    (cf. They thought JFK was assassinated in which Texas city?)

In (25), too, α = {γ, β} = {XP, YP}. Here, however, there is no agreement between the head of γ and C and therefore, LA cannot identify the label of α. As a result, α has no label and is uninterpretable at the interpretive interface.

    Finally, (23c) represents a case similar to (23a), where one of the constituents of SO cannot provide a label due to movement. But in (23c) the reason that XP cannot provide a label has to do with the nature of its head. According to Chomsky, some heads by their nature cannot serve as labels. If XP has such a head, LA sees only YP and determines the label of YP to be the label of SO.

    Given Chomsky's theory, I claim that both the categorical restriction on English clefts and the nominative constraint on Japanese clefts reduce to problems with labeling and moreover that surprising constituents show the saving effects because they are syntactic objects without labels. To implement them, I first propose (26).

(26) 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 (in a way parallel to the inheritance of a Q feature from the complement *wh*-phrase, as in (24)).

　　c. Japanese nominative and accusative phrases 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.

To see how this proposal works, let us look at what happens with the grammatical cases of English clefts in (17). The relevant part of the structure is shown in (27).

(27)　It is [$_\alpha$ **D$_{Foc}$P/P$_{Foc}$P** [$_{FP}$ C$_{Foc}$ that …

I assume that English clefts are derived by movement of a focus phrase to a specifier of the focus head in the C domain (C$_{Foc}$). I also assume that the phrase headed by C$_{Foc}$ is selected as such by a higher head. In (27) a DP/PP has moved to the focus position. Due to selection, α needs to be interpreted as having Focus as its label. Note that α results from merger of the DP/PP with the FP, having the structure {DP/PP, FP}, which is {XP, YP} in (22b). Thus, if nothing more happened, α would have no label, which would cause a problem for interpretation, given the assumption that α is selected by a higher head. However, D can have a focus feature that agrees with the focus feature of C (26a) and P can have this feature by inheritance (26b). As a result, C$_{Foc}$ and D/P agree and share the focus feature. By (23b) α is labeled Focus and satisfies selection.

　　Consider next the cases violating the categorical restriction in (18):

(28)　*It is [$_\alpha$ **vP/AP/CP** [$_{FP}$ C$_{Foc}$ that …

Here α has the structure {vP/AP/CP, FP}, which is also {XP, YP}. Unlike the case in (27), however, this case causes a problem. By (26a, b) C$_{Foc}$ and vP/AP/CP do not agree. This results in α having no label. Therefore, α does not satisfy selection and the examples are ungrammatical for this reason.

　　Let us turn to Japanese clefts. Grammatical cases like those in (2) receive the same account as (27). Given the analysis of Japanese clefts shown in (16), those cases involve the structure in (29), which results from merger of DP/PP/accusative KP (see (26c)) with FP.

(29)　… [$_\alpha$ **D$_{Foc}$P/P$_{Foc}$P/K$_{Foc}$P**] [$_{FP}$ C$_{Foc}$ …, where K is accusative.

Given (26a, b, d), D/P/K agrees with C$_{Foc}$ in terms of the focus feature. Due to the sharing of the focus feature between D/P/K and C$_{Foc}$, α is labeled Focus, just as in (27), and satisfies selection.

In this analysis, the cases in (4) violating the nominative constraint are treated in the same way as (28). Look at (30), which results from merger of a nominative KP with FP.

(30)   *… [$_\alpha$ **KP** [$_{FP}$ C$_{FOC}$ …, where K is nominative.

Given (26d), nominative K, like v, A, and C, cannot have a focus feature entering into agreement with C$_{Foc}$. Thus, there is no agreement between K and C$_{Foc}$ in this case. As a result, for the same reason as (28), α has no label and is excluded as a violation of the selectional requirement.

In this way, the present analysis answers the questions in (20a, b) in terms of problems with labeling: cases violating the categorial restriction and the nominative constraint are all excluded because the syntactic object formed by merging an FP and a non-[-V] category (English)/nominative phrase (Japanese) has no label and hence cannot be interpreted as a phrase headed by Focus. This causes a problem for selection by a higher head.

4. Surprising Constituents Are Unlabeled Syntactic Objects

Assuming the analysis proposed in the previous section, let us consider why surprising constituents have the saving effect in (13), repeated here in (31)?

(31)   Surprising constituents save the cleft sentence from violating the nominative
        constraint (even when they consist only of nominative phrases).

The basic idea I would like to pursue is that surprising constituents form the constituent [$_\alpha$ X DP-Nom] (where X can also be DP-Nom) and α is different in nature from DP-Nom.

To implement this idea, let us first consider how we should analyze surprising constituents. There are two major approaches proposed in the literature that argue that surprising constituents indeed form constituents. One approach, proposed by Koizumi (1995, 2000) and Kuwabara (1996), claims that surprising constituents are remnant VPs. The other approach, proposed by Takano (2002) as an alternative to the first, analyzes surprising constituents as being formed by movement of one element to another.

According to the first approach, the multiple cleft sentence in (32) is derived as illustrated in (33).[3]

---

[3] Here, assuming the analysis of Japanese clefts in (16), I modify the original analysis by Koizumi and Kuwabara, which employs movement of a null operator in the presuppositional clause and the base generation of a focus phrase in the focus position. The same reservation holds for the exposition of the second approach in (34).

(32) Ken-ga   ageta no-wa **hon-o**   **Mari-ni**   da.
      Ken-NOM gave C-TOP book-ACC Mari-DAT COP

  'It is a book to Mari that Ken gave.'

(33) a. Ken-ga   hon-o   Mari-ni   ageta no da.
   Ken-NOM book-ACC Mari-DAT gave C COP

   'It is that Ken gave a book to Mari.'

  b. Ken-NOM [$_{VP}$ book-ACC Mari-DAT gave] C COP
   → verb raising out of VP

  c. Ken-NOM [$_{VP}$ book-ACC Mari-DAT <gave>] gave C COP
   → focus movement of VP

  d. [$_{VP}$ **book-ACC Mari-DAT** <gave>] [$_X$ Ken-NOM <VP> gave C] COP
   → topicalization of X

  e. [$_X$ Ken-NOM <VP> gave C]-TOP [$_{VP}$ **book-ACC Mari-DAT** <gave>] <X> COP

The derivation starts with (33a=b). The first important step is raising of the verb out of VP. This creates VP made up of a copy of the raised verb and the arguments of the verb, as shown in (33c). Then this VP moves to the focus position, yielding (33d). Finally, X undergoes topicalization, giving rise to (33e), which corresponds on the surface to (32).

  By contrast, the second alternative derives (32) in the way shown in (34).

(34) a. Ken-NOM Mari-DAT book-ACC gave C COP
   → movement (adjunction) of *book-ACC* to *Mari-DAT*

  b. Ken-NOM [$_X$ book-ACC Mari-DAT] <book-ACC> gave C COP
   → focus movement of X

  c. [$_X$ **book-ACC Mari-DAT**] [$_Y$ Ken-NOM <X> <book-ACC> gave C] COP
   → topicalization of Y

  d. [$_Y$ Ken-NOM <X> <book-ACC> gave C]-TOP [$_X$ **book-ACC Mari-DAT**] <Y>
   COP

The first step is movement of the accusative object to the dative object, adjoining the former to the latter (see Saito 1994 and Sohn 1994 for original proposals for this kind of movement). This creates a new constituent, as shown in (34b). Then this newly created constituent X undergoes focus movement to the focus position, yielding (34c). Finally, Y undergoes topicalization, as in (34d), which produces the surface form in (32).

Note that the first approach could account for the saving effect in (31) because what appears in the focus position of multiple clefts containing a nominative phrase is a different category (i.e., VP) from a nominative noun phrase. But various problems have been pointed out for this approach (see, for example, Takano 2002 and Cho, Whitman, and Yanagida 2008). Here I provide new evidence against it. Let us consider (35).

(35)   a.   *John thinks Mary saw those pictures of himself.

     b.   Which pictures of himself did John think Mary saw?

     c.   Those pictures of himself, John thinks Mary saw.

(35a) shows a locality effect of the anaphor of the familiar kind. The example is ungrammatical because the anaphor is not bound in its local domain. (35b, c) show that movement of an object containing the anaphor has the effect of extending the local domain in which the anaphor needs to be bound. Thus, the examples become grammatical. However, as Huang (1993) extensively discusses, this effect of domain extension cannot be seen if the phrase undergoing movement is a VP, as shown in (36).

(36)   a.   *John thinks Mary would not criticize himself.

     b.   *Criticize himself, John thinks Mary would not.

Thus, there is a clear asymmetry between movement of objects and movement of VPs with respect to the domain extension effects.

Keeping this in mind, let us consider Japanese. Japanese exhibits exactly the same pattern of domain extension with movement of objects. Thus, while (37a) allows only the local antecedent (the embedded-clause subject) for the anaphor *zibunzisin*., (38b, c) become acceptable on the reading on which the anaphor is bound by the matrix subject. Note that we can see the domain extension effect not only with scrambling (37b) but also with cleft movement (37c).

(37)   a. Ken_i-ga $Mari_j$-ga $zibunzisin_{*i/j}$-ni   purezento-o   katta   to   omotteiru.
           Ken-NOM   Mar-NOM   self-DAT   present-ACC   bought   C   think

           'Ken thinks that Mari bought a present for herself.'

     b. $zibunzisin_{i/j}$-ni Ken_i-ga $Mari_j$-ga   purezento-o   katta   to   omotteiru.
           self-DAT   Ken-NOM   Mar-NOM   present-ACC   bought   C   think

           'For herself/himself, Ken thinks that Mari bought a present.'

  c. Ken$_i$-ga   Mari$_j$-ga   purezento-o   katta   to omotteiru   no-wa
      Ken-NOM   Mari-NOM   present-ACC bought   C   think   C-TOP
      zibunzisin$_{i/j}$-ni   da.
      self-DAT   COP

      'It is for herself/himself that Ken thinks that Mari bought a present.'

Now what happens with multiple clefts, as in (38)?

(38) a. Ken$_i$-ga   Mari$_j$-ga   katta   to omotteiru   no-wa **purezento-o**
          Ken-NOM   Mari-NOM   bought   C   think   C-TOP present-ACC
          zibunzisin$_{i/j}$-ni   da.
          self-DAT   COP

          'It is a present for herself/himself that Ken thinks that Mari bought.'

  b. Ken$_i$-ga   Mari$_j$-ga   tokui da   to omotteiru   no-wa
      Ken-NOM   Mari-NOM   good COP   C   think   C-TOP
      zibunzisin$_i$-yori   tenisu-ga   da.
      self-than   tenisu-NOM   COP

      'It is tennis than himself that Ken thinks that Mari is better at.'

In (38a) we see the same domain extension effect as we do in (37c). Thus, (38) patterns with (37c) and not with (36b). This indicates that the surprising constituent there is not a VP. Moreover, (38b) shows that the domain extension effect arises in the context of the saving effect in (31) as well (see (12); note also that the only noncontradictory reading in (38b) is one on which the anaphor refers to the matrix subject). Given this, I conclude that the first approach to surprising constituents cannot be correct, and adopt the second approach.

How can we derive the saving effect in (31) under the second approach, according to which surprising constituents have the form [$_\alpha$ **X DP-NOM**]? One possibility is that surprising constituents are formed by adjunction, as in my (Takano 2002) original analysis shown in (34). Suppose α is formed by adjoining DP-Nom to X. On the usual assumptions about adjunction, α formed in this way is identical to X and is therefore saved from violating the nominative constraint. However, this analysis fails to account for the fact that the saving effect can be seen when X is also a nominative phrase.[4]

---

[4] The same holds for the proposal of Hornstein and Nunes (2008) that syntactic objects formed by adjunction have no labels. In their analysis, a syntactic object formed by adjunction of X to Y has no label and therefore is not an atomic object that can be input to further operations (such as movement). They claim that the adjoined element X is not integrated into the atomic object Y but dangles off Y, so to speak. What this means is that the resulting syntactic object has all the properties of Y and behaves as Y, with X invisible to syntactic operations. So, in all relevant respects, their analysis faces the same problem as the analysis in the text, in that it fails to capture the fact that the saving effect can be seen when both X and Y are nominative. Below I will propose an analysis that shares with Hornstein and

Suppose instead that surprising constituents are formed by regular Merge. Thus, they have the form {XP, YP}. Now the question is what the label of this syntactic object is. Recall that LA cannot determine the label of {XP, YP} if nothing happens. I propose that this is exactly the situation with surprising constituents. Thus, I claim that surprising constituents have the saving effect because they have no label.

This proposal works in the following way. In the focus position, surprising constituents made up of XP and YP have the form {XP, YP}. There is no agreement between X and Y. Therefore, they have no label. Suppose one of the two constituents is a nominative phrase, as in (39).

(39)   … [$_\alpha$ {**XP, KP**} [$_{FP}$ C$_{FOC}$ …, where K is nominative .

Recall that if the label of α is not determined in this structure, α does not satisfy selection. This is what happens in (30), repeated below.

(30)   *… [$_\alpha$ **KP** [$_{FP}$ C$_{FOC}$ …, where K is nominative.

However, in (39) {XP, KP} has no label. This makes the situation different from (30). Recall (23a, c), according to which {XP, YP} can be labeled if one of XP and YP cannot provide a label. Note that for the labeling of α in (39), {XP, KP} is invisible to LA since {XP, KP} has no label. As a result, LA takes the label of FP, namely, F, to be the label of α.[5] Since α is labeled Focus in this way, it satisfies selection. In general, surprising constituents must form unlabeled syntactic objects to ensure the proper interpretation of the Focus Phrase (i.e., the SO headed by C$_{Foc}$).

In this analysis, surprising constituents have no label and this makes them invisible to LA. As a result, they overcome the labeling problem in (30). Thus, the presence of unlabeled syntactic objects plays a crucial role. Note that the concept of unlabeled syntactic objects is in principle available in Chomsky's (2013) theory, according to which simple Merge forms syntactic objects without order or projection. However, Chomsky (2013) claims that labels are necessary for syntactic objects because they need to be interpreted. But what kind of interpretation do labels contribute to? The label of a given syntactic object provides information on what kind of phrase it is, that is, it is a phrase of a nominal nature (noun phrase), a verbal nature (verb phrase), and so on. That kind of information is necessary for the purposes of selection or θ-role assignment, for instance. But Chomsky's theory predicts that a

---

Nunes the idea that syntactic objects can be label-less, but implement it without invoking adjunction and in a way that accounts for the saving effect under consideration. I thank Miki Obata for bringing Hornstein and Nunes' work to my attention.

[5] Saito (2013) proposes that similar situations arise quite widely in Japanese, claiming that Case in Japanese has the function of making a phrase invisible to LA. Given his proposal, SO = {XP, YP} is always labeled Y if X has a Case feature. Whether Saito's proposal is compatible with the proposal here is a matter that remains to be investigated.

syntactic object can be without a label if that kind of information is not necessary. I am claiming here that surprising constituents in the cleft focus position represent this situation. That is, 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. In fact, as we have seen, this is necessary to avoid a violation of the nominative constraint.

So far, I have been arguing that surprising constituents be constituents without labels to account for the fact that they have the effect of saving the sentence from violating the nominative constraint. But I have not shown whether they are *always* such constituents. Let us discuss this. Let us consider what will happen if the two elements in the focus position in (40) do not form constituents.

(40)   Ken-ga   ageta   no-wa   **hon-o**   **Mari-ni**   da.
        Ken-NOM   gave   C-TOP   book-ACC   Mari-DAT   COP

       'It is a book to Mari that Ken gave.'

If the accusative phrase and the dative phrase did not form a constituent, (40) would be derived as shown in (41).

(41)   a.   … [$_\alpha$ **Mari-DAT** [$_{FP}$ C$_{Foc}$ [$_{TP}$ …

       b.   … [$_\alpha$ **book-ACC** [$_{FP}$ **Mari-DAT** [$_{FP}$ C$_{Foc}$ [$_{TP}$ …

Since the two elements move to the focus position independently, the first step is merger of *Mari-DAT* with FP, yielding (41a). Here *Mari-DAT* and C$_{Foc}$ agree and share the Focus feature. Thus, α is labeled Focus. The next step is merger of *book-ACC* and (the newly formed) FP. This gives rise to (41b). On the assumption that agreement is one to one, there is no more agreement between *book-ACC* and C$_{Foc}$. Then α has no label in (41b) though it must be interpreted as having Focus as its label (due to selection). Therefore, (41b) is excluded at the interpretive interface.

This result shows that surprising constituents are indeed always constituents. It thus argues against Hiraiwa and Ishihara (2002, 2012) and Cho, Whitman, and Yanagida (2008), who propose to analyze surprising constituents in terms of non-constituents.

5. On the Formation of Surprising Constituents

The analysis of the saving effect in (31) proposed in the previous section rests heavily on the proposal that surprising constituents are syntactic objects without labels. The question arises how exactly those syntactic objects are formed. Note that the surprising constituent

{XP, YP} cannot be formed by adjunction of XP to YP, as in Takano's (2002) original analysis (see (34)). There are two problems with this analysis: (i) adjunction structure does not account for the saving effect, and (ii) merger of XP with YP violates the Extension Condition/No-Tampering Condition.

Here I suggest that surprising constituents are formed by a kind of "sidewards movement" in the following way:

(42) a. $[_\alpha \ldots XP \ldots YP \ldots]$
        $\rightarrow$ external merger of XP and YP

    b. $[_\alpha \ldots <XP> \ldots <YP> \ldots]$
        {XP, YP}
        $\rightarrow$ construction of CP structure (=FP)

    c. $[_{FP} C_{FOC} \ldots [_\alpha \ldots <XP> \ldots <YP> \ldots]]$
        {XP, YP}
        $\rightarrow$ external merger of {XP, YP} with FP

    d. $[\{XP, YP\} [_{FP} C_{FOC} \ldots [_\alpha \ldots <XP> \ldots <YP> \ldots]]]$

In (42a) there are two independent constituents, XP and YP, in α. Suppose that instead of taking two elements from a lexical array (Chomsky 2000), we take these two constituents in α and apply Merge to them. Given that neither of XP and YP is a part of the other, this is an instance of external Merge. As a result, we have {XP, YP}, independent of α, as shown in (42b). After constructing the FP above α, as in (42c), we apply Merge to FP and {XP, YP}, producing (42d). This derivation has the effect of merging XP and YP and moving the newly created syntactic object {XP, YP} to the focus position. As we discussed above, {XP, YP} here has no label and has the properties exhibited by surprising constituents.

6. Concluding Remarks

We have discussed the nominative constraint on the focus position of Japanese clefts and another surprising property of surprising constituents, namely, that they save the sentence from violating the nominative constraint. Through the discussion, we have reached the following conclusions:

(43) a. The nominative constraint is attributed to labeling.

    b. Surprising constituents are unlabeled syntactic objects.

    c. Surprising constituents as unlabeled syntactic objects serve to ensure a proper interpretation for Focus Phrase (the SO headed by C_{Foc}).

    d.   Surprising constituents indeed form constituents.

This proposal appeals crucially to the concept of unlabeled syntactic objects, which was simply unavailable in earlier theories of phrase structure but has now become available in Chomsky's (2013) theory of phrase structure and labeling. In this sense, it provides an argument in favor of the new theory.

While achieving these results, this proposal leaves many questions open, too. To name just a few, how is linear order determined for surprising constituents, which are label-less syntactic objects?; why is there variation among languages as to the availability of surprising constituents (they are restricted in English and surprisingly so in Korean, too, which shares many syntactic properties with Japanese)?; and how is the clausemate condition on surprising constituents (Koizumi 1995, 2000, Takano 2002) accounted for? I will address these and other important issues (including the one mentioned in note 5) elsewhere.

References

Cho, S., J. Whitman, and Y. Yanagida (2008)" Clefts in Japanese and Korean." *CLS* 44-1, 61-77.

Chomsky, N. (2000) "Minimalist Inquiries: The Framewirk." In R. Martin, D. Michaels, and Juan Uriagereka, eds., *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, MIT Press, Cambridge, Massachusetts.

Chomsky, N. (2013) "Problems of Projection," *Lingua* 130, 33-49.

Emonds, J. (1976) *A Transformational Approach to English Syntax: Root, Structure-Preserving, and Local Transformations*. Academic Press, New York.

Hasegawa, N. (1997) "A Copula-Based Analysis of Japanese Clefts: *Wa*-cleft and *ga*-cleft," *Researching and Verifying an Advanced Theory of Human Language*, Grant-in-aid for COE Research, Report (1), Kanda University of International Studies, 15-38.

Hasegawa, N. (2011) "On the Cleft Construction: Is It Simplex or Complex?," *Scientific Approaches to Language*, Kanda University of International Studies, 13-32.

Hiraiwa, K. and S. Ishihara (2002) "Missing Links: Cleft, Sluicing and "no da" Construction in Japanese," *The Proceedings of Humit 2001*, *MIT Working Papers in Linguistics* 43, 35-54.

Hiraiwa, K. and S. Ishihara (2012) "Syntactic Metamorphosis: Clefts, Sluicing, and In-situ Focus in Japanese," *Syntax* 15, 142-180.

Hornstein, N. and J. Nunes (2008) "Adjunction, Labeling, and Bare Phrase Structure," *Biolinguistics* 2, 57-86.

Huang, C.-T. J. (1993) "Reconstruction and the Structure of VP: Some Theoretical Consequences," *Linguistic Inquiry* 24, 103-138.

Koizumi, M. (1995) *Phrase Structure in Minimalist Syntax*, Ph.D. dissertation, MIT.

Koizumi, M. (2000) "String Vacuous Overt Verb Raising," *Journal of East Asian Linguistics* 9, 227-285.

Kuwabara, K. (1996) "Multiple Wh-Phrases in Elliptical Clauses and Some Aspects of Clefts with Multiple Foci," *Formal Approaches to Japanese Linguistics 2*, *MIT Working Papers in Linguistics* 29, 97-116.

Saito, M. (1994) "Additional-*Wh* Effects and the Adjunction Site Theory," *Journal of East Asian Linguistics* 3:195-240.

Saito, M. (2013) "Case and Labeling in a Language without φ-feature Agreement," ms., Nanzan University.

Sohn, K. (1994) "Adjunction to Argument, Free Ride and a Minimalist Program," *Formal Approaches to Japanese Linguistics 1*, *MIT Working Papers in Linguistics* 24, 315-334.

Takano, Y. (2002) "Surprising Constituents," *Journal of East Asian Linguistics* 11, 243-301.