ON JAPANESE GAPPING IN MINIMALIST SYNTAX

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1. INTRODUCTION

Gapping is one of the elliptic constructions in which the identical part between two phrases is elided.

(1) English Gapping:
John bought a book, and Mary __ a CD.   (__: gapped = *bought*)

(2) Japanese Gapping:
John-ga hon-o __ , sosite Mary-ga CD-o   katta.   (__: gapped = *katta*)
  -NOM book-ACC and   -NOMCD-ACC bought
'(Lit.) John (bought) a book, and Mary bought a CD.'

Several analyses have been proposed to account for Gapping in the literature (Ross (1970), Sag (1976), Saito (1985), Jayaseelan (1990), Kim (1997), Abe and Hoshi (1997), Sohn (1999) and among others).   In this paper I focus on Japanese Gapping and its properties, and suggest an alternative analysis of the construction in the framework of the Minimalist Program developed in Chomsky (1993, 1995).

The structure of this paper is as follows.   Section 2 briefly introduces some properties of Japanese Gapping.   In section 3, I review two previous analyses and point out some issues associated with each.   Then, I propose a new approach in section 4.   Section 5 is the conclusion.

2. JAPANESE GAPPING: ITS PROPERTIES

In this section I describe some properties of Japanese Gapping that are relevant to discussion in the following sections.

First, the conjunction *sosite* 'and' may or may not be present in the gapped sentence:

(3)   John-ga hon-o   _____ _____,   Mary-ga   CD-o   katta.
   -NOM book-ACC (V)   (and)   -NOM CD-ACC   bought
   'John (bought) a book, (and) Mary bought a CD.'

Second, *sosite* is the only conjunction that allows Gapping as shown by the contrast between (2) and (4):

(4) a *   John-ga hon-o __,   **keredomo** Mary-ga   CD-o   katta.
   -NOM book-ACC   **but**   -NOM   -ACC   bought
   '(Lit.) John (bought) a book but Mary bought a CD.'

   b *   John-ga hon-o   __, aruiwa Mary-ga CD-o   katta
   -NOM book-ACC   **or**   -NOM   -ACC   bought
   '(Lit.) John (bought) a book or Mary bought a CD.'

   c * John-ga hon-o   __ atode,   Mary-ga CD-o   katta
   -NOM book-ACC   **after**   -NOM   -ACC bought
   '(Lit.) After John (bought) a book , Mary bought a CD.'

Third, what is gapped is obviously a verb form on the surface, but it is a verb plus more.   The first and

second conjuncts are interpreted as carrying the same tense.   Therefore, at least a verb and its tense are subject to Gapping.   Sentence (5) is ungrammatical because tense in the two conjuncts is mismatched: the first conjunct implies past tense with the temporal adverb *kinou* 'yesterday' whereas the second conjunct (= main conjunct) has *asita* 'tomorrow' and the non-past form of the verb *kaimasu* 'buy':[1]

(5)   *   John-ga   kinou   hon-o   __, sosite Mary-ga   asita   CD-o   kaimasu.
             -NOM yesterday book-ACC   and   -NOM tomorrow -ACC buy
      '(Lit.) John (will buy) a book yesterday, and Mary will buy a CD tomorrow.'

Elements that are left behind in a gapped conjunct are called *remnants*.   In the above sentence, *John-ga, hon-o* in the first conjunct are remnants. And *Mary-ga, CD-o* in the second conjunct are *correspondents*.   Remnants and correspondents are contrastive pairs that provide new information.   If the pairs are not contrastive, the sentence is not subject to Gapping as the ungrammaticality of the following example shows (in which *John* refers to the same person in both clauses):

(6)   *   John-ga$_i$ hon-o,   sosite   John-ga$_i$ CD-o   katta
             -NOM book-ACC and   -NOM   CD-ACC bought
      '(Lit.) John (bought) a book , and John bought a CD.'

Because of the contrastive and new information the pairs provide, let us call them contrastive or focused phrases.[2]

Lastly, Japanese Gapping does not limit the number of possible remnants.   Let us refer to this as the *multiple remnant* phenomenon:

(7)   John-ga   Fred-ni   hon-o   getsuyoobi-ni __, sosite Mary-ga   Sue-ni   CD-o   kayoobi-ni   ageta.
          John-NOM Fred-DAT book-ACC Monday-on   and   Mary-NOM Sue-DAT CD-ACC Tuesday-on gave
      '(Lit.) John (gave) Fred a book on Monday, and Mary gave Sue a CD on Tuesday.'

In this example, the first conjunct contains four remnants (*John, Fred, book, on Monday*), and yet the sentence is perfectly grammatical.

In the next section, I will discuss previous accounts of Japanese Gapping that are based on mechanisms of LF copying and PF deletion.   In discussing these approaches, I will point out critical problems for which the alternative analysis will provide solutions.

3.   PREVIOUS ANALYSES: LF COPY APPROACH AND PF DELETION APPROACH

There are at least two major ways of accounting for Japanese Gapping found in the literature that I want to discuss: the LF copy approach and the PF deletion approach.   In this section, I will review Abe and Hoshi's (1997) LF copy approach and Kim's (1997) PF deletion approach, and discuss advantages and disadvantages of each approach.

3.1 LF Copy Approach

According to Abe and Hoshi's (1997) LF copy approach, Japanese Gapping involves covert movement of

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[1]Negation can also be gapped, but I will not deal with sentences with negation in this paper.

(i)   John-ga   hon-o   __, sosite Mary-ga CD-o   kawanakatta.
             -NOM book-ACC   and   -NOM CD-ACC buy-**neg**-past
      ' (Lit.) John (didn't buy) a book, and Mary didn't buy a CD.'

The literal translation of the correct reading of this sentence is that 'John did not buy a book, and Mary did not buy a CD', and it does not mean that 'John bought a book, and Mary did not buy a CD'.

[2] Here, the term 'focus' is used in a very limited sense when referring to these phrases in a gapped sentence.   It does not cover topicalized or scrambled phrases, for instance.

remnants followed by copying of the identical part (which is I' in their analysis) from the second conjunct to the first conjunct in LF. Let me illustrate the derivation using sentence (2), which is repeated here as (8):

(8)　　　John-ga　hon-o　___ , sosite Mary-ga　CD-o　　katta.
　　　　　-NOM book-ACC　and　　　-NOM CD-ACC　bought
　　　　　'(Lit.) John (bought) a book, and Mary bought a CD.'

The first conjunct starts with an empty I' and with the object NP in the Spec of I':

(9)　　　[IP John-ga　[I' hon-o　[I'　e　　　]]]　　　(first conjunct)
　　　　　　　　-NOM　　book-ACC

For the second conjunct, the object NP *CD-o*, is moved out of its original position to Spec of I' in order to obtain a structure identical to the first conjunct:

(10)　　　[IP Mary-ga　　[I' CD-o　　[I'　t　　katta　　]]] (second conjunct)
　　　　　　　　-NOM　　　CD-ACC　　　　　　　bought
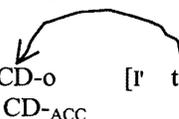
Lastly, the lowest I' [I'　t　katta] in the second conjunct in (10) is copied to the lowest I' [I'　e　　] in the first conjunct in (9) in LF for the sake of obtaining full interpretation of the first conjunct.

Abe and Hoshi's (1997) account, however, faces a theoretical problem. As we have seen above, a syntactic structure is built on an empty syntactic object in their analysis. In the case of example (8), the object NP *hon-o* is assumed to be merged with the empty I':

(11)
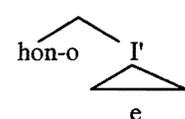
This is problematic in minimalist syntax in which *lexical items* must be selected from the numeration to begin with and then a pair of lexical items must be merged. Clearly, the empty I' is not a legitimate object to merge in this example.

For movement, Abe and Hoshi (1997) does not assume feature-driven movement in Gapping. In other words, there is no motivation for *CD-o* 'CD-ACC' to raise to a specifier position of a higher I' in (10). It is another theoretical problem within minimalist syntax framework. Kim (1997), on the other hand, employs feature-driven movement in his PF deletion approach, which is more theoretically restricted than Abe and Hoshi (1997), in which movement lacks clear motivation such as feature-checking. Let us review Kim (1997) in the next section.

3.2 PF Deletion Approach

Kim (1997) argues that a gap is created by a combination of overt movement of remnants and deletion of a Tense Phrase (TP) in PF. Creating an identical structure between two conjuncts by raising remnants is basically the same idea entertained by Abe and Hoshi (1997), but Kim's approach is developed with the assumptions of the Minimalist Program. Kim assumes the following: (i) Focus Phrase (FocP) is located above TP in Japanese/Korean Gapping; (ii) remnants move overtly to Spec of Focus Phrase (FocP), driven by the strong feature called [+focus]; (iii) both the moved items (=remnants) and the head Foc carry strong [+focus] in Japanese/Korean Gapping; and (iv) one remnant can adjoin to another remnant repeatedly, and a higher focused phrase can check off the feature of a lower focused phrase (a process which he names *Checking-through-Adjunction*).

The gapped sentence in (8) is derived as follows under Kim's analysis.[3] First, the lower focused phrase

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[3] This is a simplified derivation. Please see Kim (1997:175-176) for a more detailed illustration of the derivation.

adjoins to the higher focused phrase in order to check its own strong feature against the same feature of the higher one:
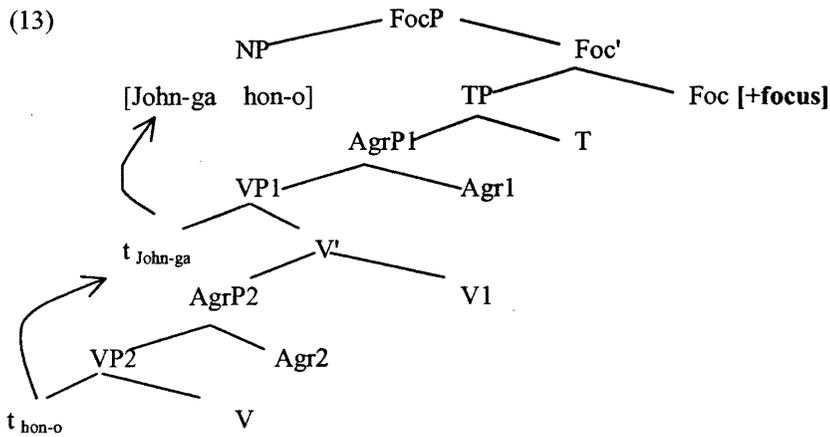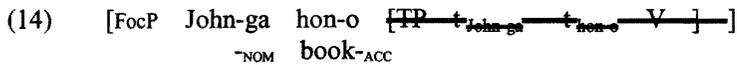
(12)
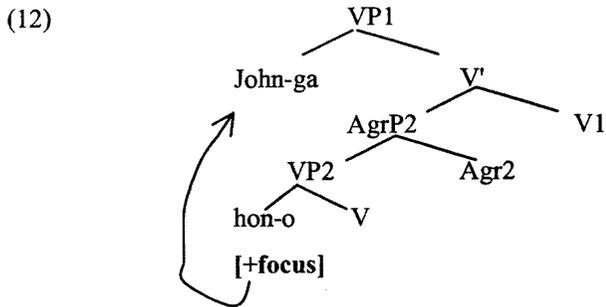
Then, the complex of two focused phrases [NP *John-ga hon-o*] moves to Spec of FocP as a single unit to check off the strong [+focus] of the head Foc:

(13)

Finally, TP, which no longer contains the focused phrases, is deleted in PF to obtain the gapped conjunct:

(14)   [FocP   John-ga   hon-o   [TP   t~John-ga~   t~hon-o~   V   ]]
                  -NOM   book-ACC

The idea of the operation *Checking-through-Adjunction* is extended from a proposal developed by Saito (1994) for independent reasons.[4]   Kim's motivation for assuming this device is to account for the fact that Japanese/Korean allows multiple remnants in Gapping.   If a focused phrase can adjoin to another successively, more than two remnants can be hosted, resulting in legitimate multiple remnants.

However, in order to raise multiple focused elements, he has to assume both Greed and Attract concepts of movement.   Let me illustrate this point, using the sentence in (8).   In tree (12), the lower focused phrase *hon-o* moves up to the higher focused phrase *John-ga*, where it has its own focus feature checked by the focus feature of the higher phrase (Greed movement).   In (13), the complex phrase of [*John-ga hon-o*] is attracted by the head Foc and moves up to the Spec of FocP in order to check off the focus feature of the head (Attract movement).

3.3 Summary

In section 3, we have looked at two different approaches: the LF copying approach in Abe and Hoshi (1997) and the PF deletion approach in Kim (1997).   I pointed out that there is a theoretical problem of merging with an empty syntactic object in Abe and Hoshi's LF copy approach.   For Kim's PF deletion approach, I showed

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[4]   See Saito's (1994) proposal for "additional-wh effects" for more details.

that his focus movement is a mixture of Greed and Attract, which is not theoretically restrictive. More importantly, neither analysis addresses the obvious correlation between Gapping and coordinate structures. In what follows, I will propose an alternative approach, in which this point is accounted for.

4. PROPOSAL OF AN ALTERNATIVE ANALYSIS

In the previous section, I have described two major approaches; the LF copy and the PF deletion analyses. However, neither approach addressed the correlation between Gapping and coordinate structures. It is crucial to account for this correlation and for how the shared part between the two conjuncts is identified. As we have seen in section 2, Gapping is peculiar to coordinate structures with the conjunction *sosite* 'and':

(15) * John-ga hon-o _____, aruiwa/keredomo/atode Mary-ga CD-o katta.
John-$_{NOM}$ book-$_{ACC}$ __ or/but/after   Mary-$_{NOM}$ CD-$_{ACC}$ bought
'(Lit.) John (bought) a book or/but/after Mary bought a CD.'

To provide a solution to these issues, I propose an alternative analysis. I claim that the conjunction *sosite* 'and' has a specific function that can make a copy of certain lexical items in the numeration. As a result, the gapped (i.e. shared) part is composed of the copied elements. Let us call the function *AND copy*. The proposed analysis of Gapping is two-fold: (i) *AND copy*, and (ii) focus movement. Suppose that a numeration contains lexical items such as {and, X, Y}. *AND copy* creates copies of X and Y (represented by <X> and <Y>), as a result of which, the numeration becomes {and, X, Y, <X>, <Y>}. Then, the lexical items are merged together, and some focus phrases undergo focus movement for feature checking.

In the following sections, I will briefly introduce the theoretical background for my proposal and then discuss details of *AND copy* and focus movement respectively.

4.1 Theoretical Framework of the Proposal

Before discussing the alternative analysis, let us briefly describe the background assumptions in minimalist syntax as the framework of my proposal. Chomsky (1995) defines a numeration as a set of pairs *LI* and *i*, where LI is a lexical item and *i* is the index that indicates how many times the lexical item is selected from the numeration. For example, the numeration for *the apple* is described as follows:

(16)   Numeration : { the$_1$, apple$_1$ }

Syntactic operations apply to items in the numeration and construct syntactic objects from them. Such operations include *Select, Merge, Move*, and *Delete*. In the case of the above numeration, *the* and *apple* merge to generate a syntactic object *the apple*:

(17)   the
        /\
      the   apple
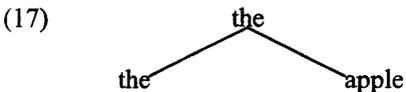
While *Select* and *Merge* are defined to be "costless" operations and hence not subject to economy conditions (Chomsky (1995:226)), *Move* is defined as a combination of *Copy* and *Merge*, and it is subject to economy conditions. One such condition is *Last Resort*: *Move* operations are driven by morphological necessity (i.e. they are feature-driven).

The completely formed structure is then *Spelled-Out* to the phonological component (PF) and to the covert component (LF). A schematic picture of the whole system is illustrated as below:

(18)   Lexicon → Numeration → Syntactic Object → Spell-Out ⟨ PF
                                                                  LF
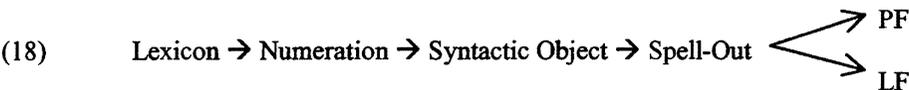
I adopt the basic assumptions of this system.[5]

4.2 AND Copy

We have seen that Gapping is peculiar to the coordinate structures with *sosite* 'and'. In order to capture this fact, I propose a new mechanism that I will call *AND copy*, based on the computational system and a numeration described in the previous section.

AND copy is a function that operates in a numeration for *and* coordinate structures and that makes a duplicate of certain lexical items. Let us take the example in (2), which is repeated here:

(19)   John-ga   hon-o   ___, sosite Mary-ga   CD-o   katta.
        -NOM book-ACC   and   -NOM CD-ACC   bought
        '(Lit.) John (bought) a book, and Mary bought a CD.'

First, lexical items are selected from a lexicon, and then a numeration {$sosite_1$, $John\text{-}ga_1$, $hon\text{-}o_1$, $Mary\text{-}ga_1$, $CD\text{-}o_1$, $katta_1$} is created. Second, *AND copy* operates in the numeration, creating a copy of the verb *katta* 'bought'. The resultant numeration is illustrated below. Notice that *AND copy* is not a simple increment of the index of a lexical item from 1 to 2:

(20)   Numeration: {$sosite_1$, $John\text{-}ga_1$, $hon\text{-}o_1$, $Mary\text{-}ga_1$, $CD\text{-}o_1$, $katta_1$}[6]
                          and   John-NOM   book-ACC   Mary-NOM CD-ACC bought
        AND copy →   {$sosite_1$, $John\text{-}ga_1$, $hon\text{-}o_1$, $Mary\text{-}ga_1$, $CD\text{-}o_1$, $katta_1$, $<katta_1>$}

The next question is: which lexical items are subject to the *AND copy* operation? The fact that remnants in the gapped conjunct and correspondents in the full conjunct are contrastive elements leads me to assume that they carry a feature [+focus], following Kim (1997). Given that elements that lack the focus feature are not contrastive, from which it follows that they do not need to be repeated, I propose that *AND copy* targets lexical items that lack the [+focus] feature.[7] In the above example, *John-ga, hon-o, Mary-ga* and *CD-o* in the numeration have a [+focus] feature whereas the verb *katta* does not. Therefore *katta* needs to be AND copied.

Now, how is a lexical item generated by *AND copy* (AND copied item) different from a *trace*? If a *trace* is redefined as a *copy* left as a result of the syntactic operation *Copy* as part of *Move*, as discussed in Chomsky (1993, 1995), Collins (1997) and Nunes (2001), the AND copied item is similar to the copy (=trace) in that phonological information is taken away by *Spell-Out* and does not remain in PF, hence both are "unpronounceable" (Chomsky (1995:301)). The AND copied item is, however, different from the copy (=trace) in that the former carries unchecked features, it is capable of taking arguments, and it is subject to syntactic operations, while the latter does not have these characteristics.

4.3 Focus Movement

I assume, following Kim (1997), that remnants and correspondents in a gapped sentence carry a strong feature [+focus] because these elements are contrastive and each provides new information and it is plausible to interpret the facts as meaning that remnants and correspondents carry the feature. The feature is an interpretable feature in LF and PF. If we further assume, following Kim (1997), that there is a functional phrase called *Focus Phrase* (hereafter *FocP*) above TP, and that the head of FocP carries a focus feature [+focus], which needs to be checked by the same feature that remnants and correspondents have, then remnants and correspondents (hereafter *focused phrases*) are attracted by the head of FocP, resulting in raising. This is focus movement.

Remember that there are two focused phrases in the first conjunct of the example sentence: *John-ga*

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[5] For expository purposes I use phrasal levels such as *VP* or *NP* in tree diagrams.

[6] I have omitted functional heads in the numeration to simplify the explanation. We will see a complete numeration with a full set of lexical items in a later section.

[7] I assume that the head Comp (C) lacks [+focus] but two Cs exist in the numeration, hence it does not need to be AND copied.

(subject NP) and *hon-o* (object NP). Kim (1997) proposes amalgamation of focused phrases and *Checking-through-Adjunction* in order to account for multiple remnants in Japanese/Korean Gapping. However, I will not adopt Kim's proposed way of dealing with multiple remnants because the introduction of his adjunction device results in using both Attract and Greed movements for the same feature as I pointed out in an earlier section. Instead, I will adopt the idea of multiple specifier analysis entertained in Chomsky (1995: 356). The multiple specifier analysis has been used to account for Scrambling and double nominative constructions in Japanese in the literature.

I further assume that having multiple specifiers renders a head able to attract multiple phrases with the same feature. In other words, the feature of the head Foc needs to be checked by the same feature of all focused phrases. Let me illustrate the process in a tree diagram. In the following example, the head Foc attracts NP1 to the lower specifier. At this point, the feature of Foc is not checked yet because there is another focused phrase NP2. The head Foc attracts NP2 to the higher specifier, and finally the feature of Foc is checked off by that of the moved NPs:

(21)

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                    FocP
        _____/    _____
   NP2 [+focus]              Foc'
            NP1 [+focus]____/    \____
                                    Foc'
                        TP___/    \____
                                  Foc [+focus]  ←Attracter
```

In the next section, I will illustrate how Japanese Gapping is derived by *AND copy* and focus movement with more details.

4.4 Deriving Remnants in Japanese Gapping

Given the aforementioned *AND copy* function, focus feature and focus movement, Japanese Gapping is derived in the following way. First let us look at sentence (8), which is repeated here for convenience:

(8)   John-ga   hon-o   _____,   sosite Mary-ga CD-o   katta.
         -NOM   book-ACC   and   -NOM   -ACC bought
         '(Lit.) John (bought) a book, and Mary bought a CD.'

This time, let us include functional heads to show a complete set of the numeration, in which items in bold indicate that they carry the [+focus] feature:

(22)   Numeration:
          { sosite₁, **John-ga₁, hon-o₁, Mary-ga₁, CD-o₁,** katta₁, v_1, T₁, **Foc₂,** C₂, }
          and,   John-NOM, book-ACC, Mary-NOM, CD-ACC, bought, v, T, Foc, C

We have *sosite* 'and', four focused NPs, Focus heads (*Foc*), and a non-focused verb, a light verb (v), Tense (*T*) and Comp heads (*C*). There exist two *Foc*s and *C*s as the index of the items indicates, for two conjuncts. *AND copy* applies for the lexical items that lack the feature [+focus] in the numeration, which are the verb *katta* 'bought', the light verb v, and Tense *T*. The resultant numeration that contains AND-copied items <katta₁>, <v_1>, and <T₁> is illustrated as follows:

(23)   AND-copy application→
          { sosite₁, **John-ga₁, hon-o₁, Mary-ga₁, CD-o₁,** katta₁, v_1, T₁, **Foc₂,** C₂, <katta₁>, <v_1>, <T₁>}

Now we have all the necessary lexical items. Next, syntactic operations such as *Select, Merge, Move, Delete* apply to build a syntactic object in the following order:

(24)   First conjunct (gapping):

1. Select *hon-o* and *<katta>* from the numeration, and Merge them.[8]
2. Select *<v>*, and Merge it with [*hon-o <katta>*]
3. Select *John-ga*, and Merge it with [*<v>* [*hon-o <katta>*]]
4. Select *<T>*, and Merge it with [*John-ga* [*<v>* [*hon-o <katta>*]]]
5. The subject NP *John-ga* is attracted by [+EPP] of *<T>* and moves to Spec of TP to check off [+EPP].

At this stage, we have the following syntactic structure (the use of parentheses such as *(John-ga)* indicates that it is a *trace*):

(25)
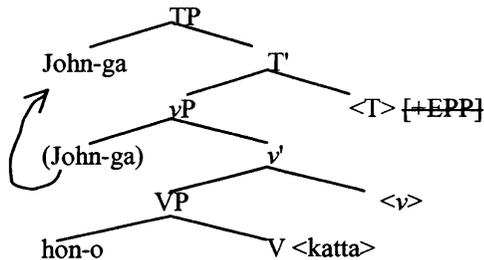
The second conjunct [$_{TP}$ Mary-ga CD-o katta] 'Mary bought a CD' is constructed in the same way as in (24) with different lexical items.

Next, the head Foc is selected from the numeration and merged with TP. Then, the feature [+focus] in Foc multiply attracts focused phrases *John-ga* and *hon-o* to the higher and lower specifiers respectively in order to have the feature checked off by the same feature carried by the focused phrases:
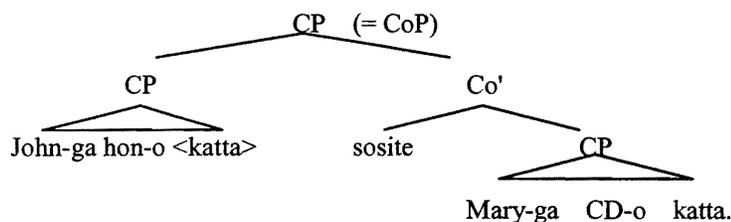
(26)
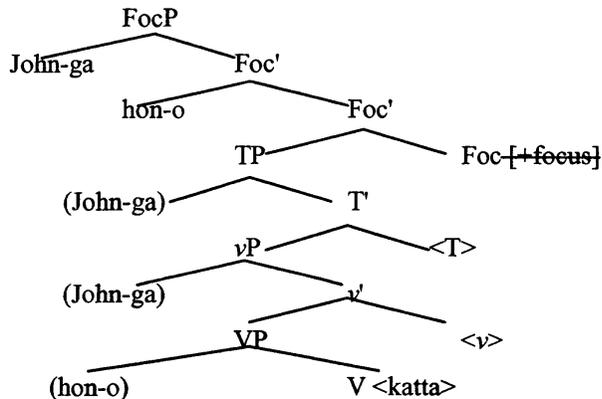
The same focus movement applies to *Mary-ga* and *CD-o* in the second conjunct to yield two Focus phrases. C is selected to build CP, and then finally, *sosite* is selected to merge two phrases as follows:[9]

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[8] It may be the language's head direction that determines which conjunct takes AND-copied items. It is the first conjunct that is gapped in Japanese whereas it is the second conjunct in English, for example. I will not discuss this further in this paper.

[9] Here, I adopt a coordinate structure created by *Coordinate-alpha* as developed in Johannessen (1998:175-177) without argument. The *Coordinate-alpha* operation takes two full CP conjuncts and coordinates them. The top CoP (Coordinate Phrase) is equal to CP, according to Johannesen.

(27)

```
              CP   (= CoP)
        ┌───────────┴───────────┐
       CP                       Co'
   ┌────┴────┐            ┌──────┴──────┐
John-ga hon-o <katta>  sosite          CP
                                  ┌──────┴──────┐
                              Mary-ga  CD-o  katta.
```

The syntactic object CP is Spelled-Out to PF and LF. In PF, we have successfully derived a gapped sentence *John-ga hon-o sosite Mary-ga CD-o katta.*

4.5 Deriving Multiple Remnants in Japanese Gapping

As I discussed in section 2, Japanese Gapping allows more than two remnants. Let us repeat the relevant example in (7) as (28):
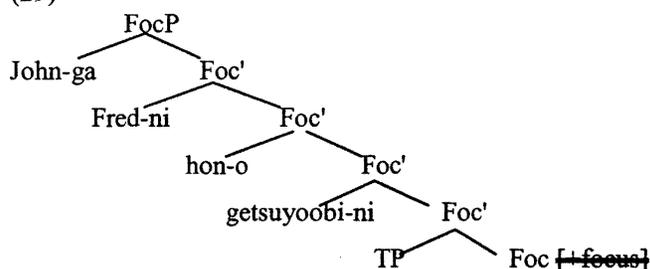
(28)   John-ga Fred-ni hon-o   getsuyoobi-ni __, sosite
        ⁻NOM   ⁻DAT   book-ACC Monday-on   (V) and

        Mary-ga Sue-ni CD-o   kayoobi-ni ageta.
        ⁻NOM   ⁻DAT   CD-ACC   Tuesday-on gave
        '(Lit.) John (gave) Fred a book on Monday, and Mary gave Sue a CD on Tuesday.'

I argue that the availability of multiple specifiers in the language makes it possible to have multiple remnants in Gapping. In other words, only languages that allow multiple specifiers allow multiple remnants. In the above example, there are four remnants: *John-ga, Fred-ni, hon-o* and *getsuyoobi-ni* in the first conjunct. The head Foc is a multiple attracter of elements that carry a [+focus] feature as I have discussed above. The four remnants are attracted by the head Foc and raised to a different Spec of FocP respectively, checking off [+focus] of the head. This process is illustrated as follows:

(29)

```
         FocP
      ┌───┴───┐
  John-ga    Foc'
          ┌───┴───┐
       Fred-ni   Foc'
              ┌───┴───┐
           hon-o     Foc'
                  ┌────┴────┐
            getsuyoobi-ni  Foc'
                        ┌───┴───┐
                       TP      Foc [+focus]
```

Remember that Japanese Gapping is possible even without having *sosite* 'and'. The example in (3) is repeated here as (30) :

(30)   John-ga hon-o   ____ ____, Mary-ga CD-o   katta.
        ⁻NOM   book-ACC (V) (and) ⁻NOM   CD-ACC bought
        '(Lit.) John (bought) a book, (and) Mary bought a CD.'

The grammaticality of the sentence suggests that the function of the conjunction exists without *sosite*. It leads me to further assume that *sosite* in such cases is phonologically null while maintaining the *AND copy* function.[10]

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[10] There are languages that have "empty conjunctions" such as Turkish, Sissala (a Niger-Congo Voltaic language), Cayuga (a Northern Iroquoian language of Ontario), Dyirbal, etc. Therefore, it is plausible to claim that the phonologically null *sosite* 'and' functions as a conjunction and maintains the *AND copy* function. See Johannessen (1998: 84-90) for details of "empty conjunctions".

In summary, the proposed analysis makes it possible to create the identical structures between two conjuncts in a more convincing way by introducing the *AND copy* function, and it does not require us to assume both Attract and Greed in focus movement unlike Kim (1997). In addition, it is able to account for multiple remnants in the language.

5. CONCLUSION

In this paper, I have discussed two previous analyses of Japanese Gapping and addressed the question of how the identical part can be identified, which was not captured in either analysis. I have proposed an alternative approach, which provides the answer to the question as well as solving other issues that the previous analyses have. The proposed analysis is composed of two operations: *AND copy* function in a numeration for coordinate structures, and focus movement. The former operation copies lexical items that lack the feature [+focus] in the numeration. The latter operation is a feature-driven movement. I have claimed that the head Foc in Focus Phrases attracts focused phrases. In order to account for multiple remnants, I have adopted the idea of multiple specifiers, which was then extended to allow the head Foc to function as multiple attracter.

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