Gapping in Japanese = Coordinate + Dependent Ellipsis *

1. Introduction

The phenomenon of ellipsis has received a significant attention in the linguistic literature as its proper analysis leads to a better view of the way syntax relates to semantics and prosody. Various attempts have been made to elucidate various types of ellipsis (VP ellipsis, sluicing, stripping, gapping, etc.) so as to advance our understanding of the nature of ellipsis in natural language. The deletion and copying theories have been major competitors in the domain of ellipsis since they were first proposed by Ross (1967) and Williams (1977), and the debate between these two theories have not been settled up until now.

The purpose of this paper is to shed light on the question of what is the proper theory of ellipsis by providing a new analysis of the gapping construction in Japanese as in (1) that does not draw on either deletion or copying theories.

(1)	Takesi-ga	zassi-o,	$Ø_V$	sosite	Kaori-ga	hon-o	katta.
	Takesi-Nom	magazine-Acc		and	Kaori-Nom	book-Acc	bought

'Lit. Takesi (bought) a magazine, and Kaori bought a book.'

* I am very grateful to Caroline Heycock and two anonymous *JL* reviewers for extensive comments on both the content and structure of an earlier version of this paper. Needless to say, all remaining errors are my own.

I propose that the relevant construction is best analyzed as the product of the coordinate and dependent ellipsis within the anaphoric theory of deletion presented in Williams (1997). According to this theory, a coordinate structure arises from the projection of a bivalent lexical item of the form [X, X] P = XP and XP. Williams' theory analyzes gapping as an instance of projection of a bivalent item, one of whose heads is null and anaphoric to the corresponding element in the full-fledged conjunct (*Coordinate Ellipsis*). This analysis is illustrated in English gapping in (2a, b).

(2)a. [V, 0]P → VP and 0P

b. [give the book to Mary]$_{VP}$ and [0_V the record to Sue] $_{VP}$ (Williams 1998: 621)

Williams further argues that the null head, in turn, has the special property of licensing the (head of) the dependent to be null (*Dependent Ellipsis*). For example, the contrast between (3a) and (3b) in English shows that material in the gapped conjunct can be elided as long as the coordinate ellipsis has applied.

(3)a. John gave Mary a book today and 0_V 0_{NP} a record yesterday.

b. * John gave Mary a book today and gave 0_{NP} a record yesterday.

I demonstrate that the coordinate + dependent ellipsis theory briefly illustrated above provides a principled explanation of various properties known to hold for Japanese gapping that have remained mysterious under earlier analyses of this construction as in PF movement accounts, LF copy accounts, PF deletion accounts, and movement + PF deletion accounts. The relevant properties include island-insensitivity of remnants in a gapped clause, the possibility of P-stranding on the last remnant of a gapped conjunct, the impossibility of multiple P-stranding, and *v*P coordination.

The present paper is organized as follows. The following section proposes an analysis of the gapping construction in Japanese as the product of the coordinate + dependent ellipsis within William's (1997) anaphoric theory of deletion. Section 3 compares the present analysis with several existing theories of gapping in Japanese; they include PF movement analyses (Saito 1987; cf. Maling 1972; Kuno 1978), LF copy analyses (Abe and Hoshi 1997), PF deletion analyses (Mukai 2003), and movement + PF deletion analyses (Sohn 1994, Kim 1997, 1998), and argument ellipsis accounts (Oku 1998; Kim 1999; Saito 2003; Takahashi 2006, 2008, to appear). I show that these analyses each face various problems that can be successfully resolved in the present coordinate + dependent analysis of gapping. Section 4 is the conclusion.

2. Gapping in Japanese = Coordinate + Dependent Ellipsis

Before moving onto the analysis of gapping in Japanese, let us first address the question of what syntactic constituent is coordinated in this construction. One important property of gapping in

Japanese is that the left conjunct of a *sosite* 'and' coordination can never contain tense morphemes, as shown by the ungrammaticality of (4).

(4) Takesi-ga zassi-o ***kai/*katta*** sosite Kaori-ga hon-o katta.
Takesi-Nom magazine-Acc buy.cont/bought and Kaori-Nom book-Acc bought
'Lit. Takesi bought a magazine, and Kaori bought a book.'

Given that the conjuncts of a coordinate structure share categorial status with one another, the example in (4) suggests that the gapped counterpart of (4) in (1) involves *v*P/VP-coordination.

One might be tempted to argue based on examples as in (5) that gapping involves TP-coordination because temporally conflicting adjuncts (*kinoo* 'yesterday' and *kyoo* 'today') occur in two adjacency conjuncts.[1]

(5) [$_{vP}$ John-ga ***kinoo*** ringo-o] sosite [$_{vP}$ Tom-ga kyoo banana-o tabe]-***ru***.
John-Nom yesterday apple-Acc and Tom-Nom today banana-Acc eat-Present
'Lit. John (ate) an apple yesterday, and Tom eats a banana today.'

[1] (5) is modeled after Hirata's (2006: 87) example of *sosite*-coordination that does not involve gapping.

In this example, the temporal modifier *kinoo* 'yesterday' felicitously occurs, even though the sentence-final tense element is present. One might suggest, therefore, that this modifier should be licensed by the null T in the first conjunct that hosts the past tense. As Hirata (2006: 87) points out, however, this reasoning is based on the incorrect assumption that temporal modifiers must be licensed by T-like heads. Consider example in (6).

(6) kinoo-no-sinbun
yesterday-Gen-newspaper
'yesterday's newspaper' (Hirata 2006: 87)

In this example, the temporal modifier *kinoo* 'yesterday' can occur despite the fact that there is no T-like element in it. This example, therefore, suggests that the presence of T (whether it is null or overt) is not a prerequisite for licensing temporal modifiers.

Based on the above consideration, I assume in this paper that gapping in Japanese involves *v*P/VP-coordination.

2.1. *Williams' (1997) Anaphoric Theory of Gapping*

As briefly stated above, Williams' (1997) theory of gapping is based on his earlier proposal (Williams 1994) that a coordinate structure results from the projection of a bivalent head, as in (7).

This proposal generates a variety of bivalent heads as in (8a-c). Williams claims that gapping results in (9a-c) when one of the bivalent heads is the 0P that is anaphoric to the other head. Williams calls this process as *Coordinate Ellipsis*.

(7) [X, X] P = XP and XP

(8)a. [C, C] P = CP and CP

That the Earth revolves around the Sun and *that the Moon revolves around the Earth* are well-established facts

b. [I, I] P = IP and IP

I think that *John will eat meat* and *Mary will drink wine*.

c. [V, V] P = VP and VP

It is okay to *like fish* and *hate meat* (Ackema and Szendrői 2002:6)

(9)a. [C, 0] P = CP and 0P

That the Earth revolves around the Sun and *0 the Moon revolves around the Earth* are well-established facts

b. [I, I] P = IP and 0P

I think that *John will eat meat* and *Mary 0 drink wine*.

c. [V, V] P = VP and 0P

It is okay to *like fish* and *hate meat* (Ackema and Szendrői 2002:6)

Williams further claims, based on the examples in (3a, b), that the null head derived by the coordinate ellipsis serves as a licensor of further ellipsis of its complement, as in (3a), or just the head of that complement, as in (10). This type of ellipsis can be called *Dependent Ellipsis* since "this further ellipsis is dependent on coordinate ellipsis of the head, and also involves ellipsis of or into dependents of that head." (Ackema and Szendrői 2002: 7).

(10) John saw pictures of Mary on Tuesday and [0_V [0_N of Sue]$_{0P}$ on Wednesday].

Finally, Williams provides evidence that dependent ellipsis is not optional but is tied to a particular semantic interpretation. Specifically, he proposes the *Disanaphora Law*, which essentially states that a null element in an incomplete must be *anaphoric* to the parallel element in the full-fledged conjunct whereas the overt element must be *disanaphoric* in the same configuration. To illustrate this law, in (3a), the "gapped"/null indirect object must be anaphoric to the corresponding dependent of *gave* in the first conjunct. In the example in (12), which is minimally different from (3a) in that the dependent ellipsis has not applied, the overt indirect object pronoun *her* is disanaphoric to the corresponding dependent of *gave* in the first conjunct.

(12)* John gave Mary$_i$ a book today and 0_V her$_i$ a record yesterday.

Ackema and Szendrői (2002) provides extensive arguments that the subject and object determiner-sharing construction (see McCawley 1993, Johnson 2000; Lin 1999), as illustrated in (13a) and (13b), is an instance of the bivalent [T, 0] P and [V, 0] P heads.

(13)a. Too many Irish setters are named Kelly, ~~too many~~ German shepherds ~~are named~~ Fritz, and ~~too many~~ huskies ~~are named~~ Nanook.

b. Bob gave ~~too many~~ magazines to Jessica and ~~too many~~ newspapers to Joanne.

(Ackema and Szendrői 2002: 4, 18)

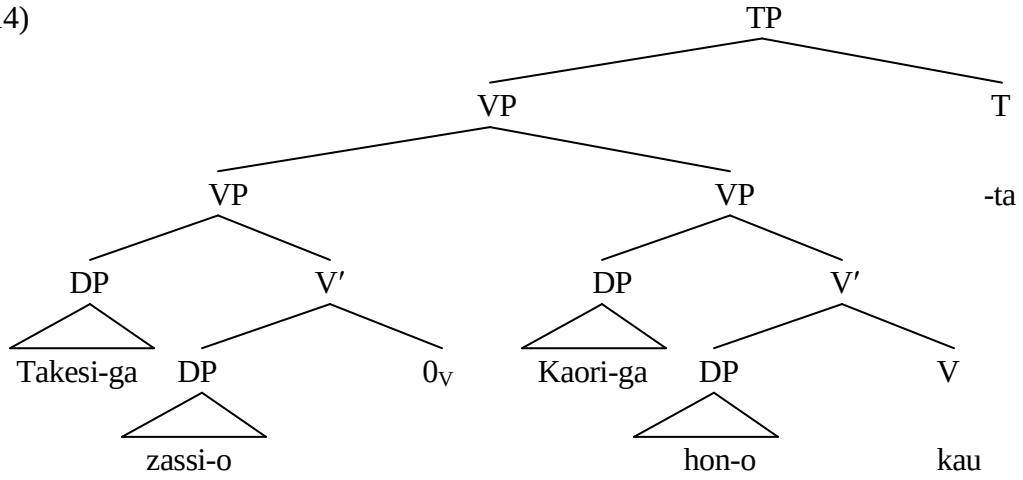
The subject determiner-sharing in (13a) arises when the coordinate T-ellipsis causes the ellipsis of the head of the dependent in its specifier. Similarly, the object determiner-sharing in (13b) arises when the coordinate T-ellipsis causes the ellipsis of the head of its DP complement. In this way, this dependent ellipsis analysis provides a natural explanation for the fact that subject and object determiner sharing typically depends on T gapping and V-gapping, respectively.

In the next subsection, I propose that Williams' anaphoric theory of ellipsis provides a unified explanation for various syntactic, semantic, and prosodic properties of gapping in Japanese.

2.2. *Gapping in Japanese = Coordinate + Dependent Ellipsis*

Within Williams' anaphoric theory of deletion, the example in (1) has the structure in (14) (omitting *v* heads). This structure results when the first head of the bivalent lexical item is 0V.

(14)



The proposed analysis provides a natural account of various syntactic, semantic, and prosodic properties associated with gapping in Japanese and other languages such as English. First, it has been widely known since the seminal work on English gapping by Sag (1976) that the material left in the gapped conjunct stand in a contrastive focus relation with the correspondents in the full-fledged conjunct. This contrastive focus relation can also be detected by examination of the intonation of gapping, which demands that remnants and their correspondents must receive contrastive stress. Thus, examples as in (15a, b) are bad because the subject remnant in (15a) (*Takesi*) and the object remnant in (15b) does not stand in the contrastive focus relation.

(15)a.* ***Takesi-ga*** zassi-o, sosite ***Takesi-ga*** hon-o katta.

Takesi-Nom magazine-Acc and Takesi-Nom book-Acc bought

'Lit. Takesi (bought) a magazine, and Takesi bought a book.'

b. * ***Takesi-ga*** zassi-o, sosite ***Kaori-ga*** zassi-o katta.

Takesi-Nom magazine-Acc and Kaori-Nom magazine-Acc bought

'Lit. Takesi (bought) a magazine, and Hanako bought a magazine.'

The contrastive focus effect observed here straightforwardly follows from the Disanaphora Law of Williams. When a lexical subject appears in the conjunct that undergoes coordinate ellipsis, the subject must be disanaphoric to the corresponding dependent of the full-fledged clause. (15a) is bad due to the violation of the Disanaphora Law. A similar account holds true for (15b).

Second, as reviewers point out, a certain parallelism condition is imposed on the remnants and their correspondents in the gapping construction: when conjuncts are not identical with respect to the number of remnants/correspondents or their linear order, the application of gapping yields ungrammatical results. This property is illustrated in (16a, b). Note that the non-gapped counterparts of (16a, b) are fine, as shown in (17a, b), suggesting that the relevant condition is imposed as the byproduct of the coordinate ellipsis process.[2]

[2] As a reviewer points out, Takahashi and Fox (2005) argue that the parallelism constraint is also relevant to another instance of ellipsis, VP-ellipsis in re-binding configurations where the variable within the elided clause is bound by an element outside of that clause. Chung et al. (1995: 248-250) also provide evidence that the sprouting operation for implicit arguments of their LF + Copy analysis of sluicing is sensitive to the particular use of the verb in a full-fledge antecedent in

(16)a.* Takesi-ga Hisako-ni zassi-o sosite Kaori-ga hon-o nageta. .

Takesi-Nom Hisako-Dat magazine-Acc and Karoi-Nom book-Acc threw

'Lit. Takesi (threw) a magazine to Hanako, and Kaori threw a book.'

b. * Takesi-ga Hisako-ni zassi-o sosite Kaori-ga hon-o Masa-ni ageta.

Takesi-Nom Hisako-Dat magazine-Acc and Kaori-Nom book-Acc Masa-Dat gave

'Lit. Takesi (gave) Hisako a magazine, and Kaori gave a book to Masa.'

(17)a.(?) Takesi-ga Hisako-ni zassi-o nage sosite Kaori-ga hon-o nageta.

Takesi-Nom Hisako-Dat magazine-Acc throw and Karoi-Nom book-Acc threw

'Lit. Takesi threw a magazine to Hanako, and Kaori threw a book.'

b. Takesi-ga Hisako-ni zassi-o sosite Kaori-ga hon-o Masa-ni ageta.

Takesi-Nom Hisako-Dat magazine-Acc and Kaori-Nom book-Acc Masa-Dat gave

'Lit. Takesi (gave) Hisako a magazine, and Kaori gave a book to Masa.'

The parallelism constraint can be given a natural explanation if we take the notion of a bivalent head. Recall that a coordinate structure results from the projection of a bivalent lexical item of the form [X, X] P = XP; the only difference with gapping is that the first head of the bivalent

terms of argument structure. Takahashi (2008) argues that the interpretation of quantificational null arguments in Japanese is sensitive to the scope parallelism in the sense of Fox (2000). One implication of these arguments is that parallelism is a defining characteristic of deletion in general. Exploring this implication goes beyond the scope of this article.

item is phonologically null. Thus, it is natural that the two heads in a gapping construction should impose identical requirements on their dependents in terms of argument structure, structural alignment and linear order. This consideration rules out (16a, b). The non-gapped variants of (16a, b) in (17a, b) are grammatical because the parallelism constraint does not apply.

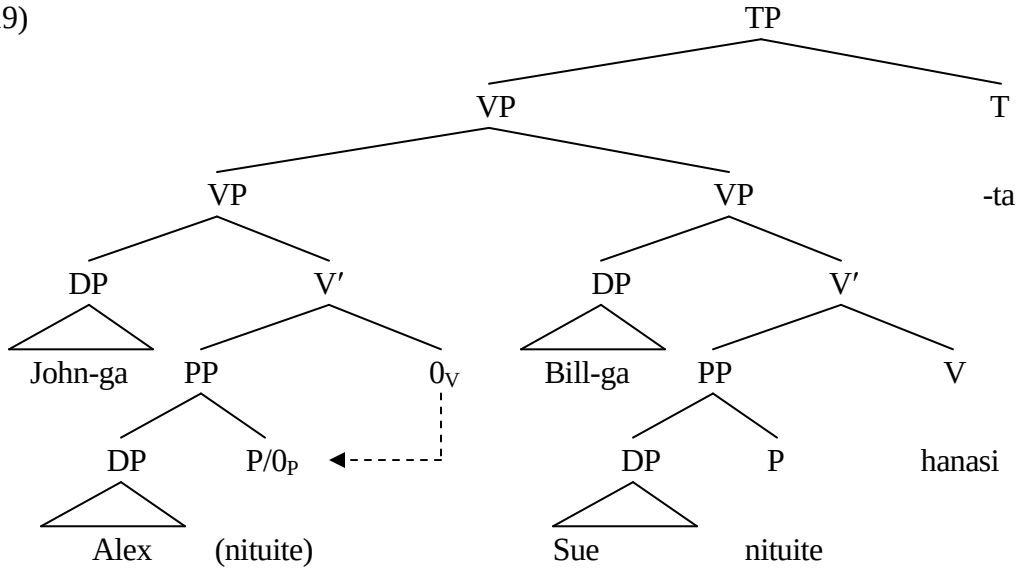
Third, Abe and Hoshi (1997), Sohn (1994) and Kim (1997, 1998) observe that Japanese/Korean gapping tolerates P-drop unlike English gapping. The contrast can be illustrated here in English and Japanese, as in (18a, b).

(18)a. Bill talked about Sue, and John (*about) Alex.

b. John-ga Alex-(nituite), sosite Bill-ga Sue-(*nituite) hanasita.
John-Nom Alex-about and Bill-Nom Sue-about talked
'Lit. John (talked about) Alex, and Bill talked about Sue.'

(18a) shows that the complement of a preposition. This prohibition is not observed in the Japanese example in (18b), in which the deletion of the preposition *nituite* 'about' does not result in ungrammaticality. Note, however, that the same preposition immediately preceding the non-gapped verb *hanasita* 'talked' in a full-fledged clause cannot be omitted. The P-drop pattern illustrated in (18b) is exactly what the present analysis predicts. The structure for (18b) is in (19).

(19)



This structure is created when the coordinate ellipsis applies so that the first head of the bivalent head is 0V. This null head, in turn, licenses the first conjunct (*nituite* 'about') to be realized as 0P via the application of dependent ellipsis. By contrast, the same preposition immediately preceding the verb in the second conjunct cannot be dropped because there is no 0P in this conjunct that licenses this dependent ellipsis.

Recall that the contrast between (3a) and (12) showed that the coordinate ellipsis has repercussions for semantic interpretation. The overt pronoun in (12) must be disanaphoric to its correspondent whereas the null pronoun in (3a) must be anaphoric in the same configuration. As a reviewer points out, one issue about the proposed analysis of P-drop in Japanese is whether the dependent ellipsis here is an "optional" operation with no semantic consequences. In all the examples discussed thus far, it is nominal dependents of a gapped head that determiner whether the

Disanaphora Law is obeyed or not; whether or not a nominal expression is anaphoric to its correspondent when deletion can be made because it has the inherent property of reference. However, prepositions, a member of functional categories, cannot be anaphoric even under deletion because they do not refer in the first place. Therefore, I maintain that the dependent ellipsis of prepositions has no consequences for semantic interpretation.

In sum, I have shown that the coordinate + dependent ellipsis theory of Williams (1997) provides a natural explanation for several core syntactic, semantic, and prosodic properties associated with gapping in Japanese. As a reviewer notes, the observation that gapping manifests this diverse set of cross-modular characteristics suggests that it is an interface phenomenon. The results so far indicate that the present theory is suited to correctly capture this behavior of gapping.

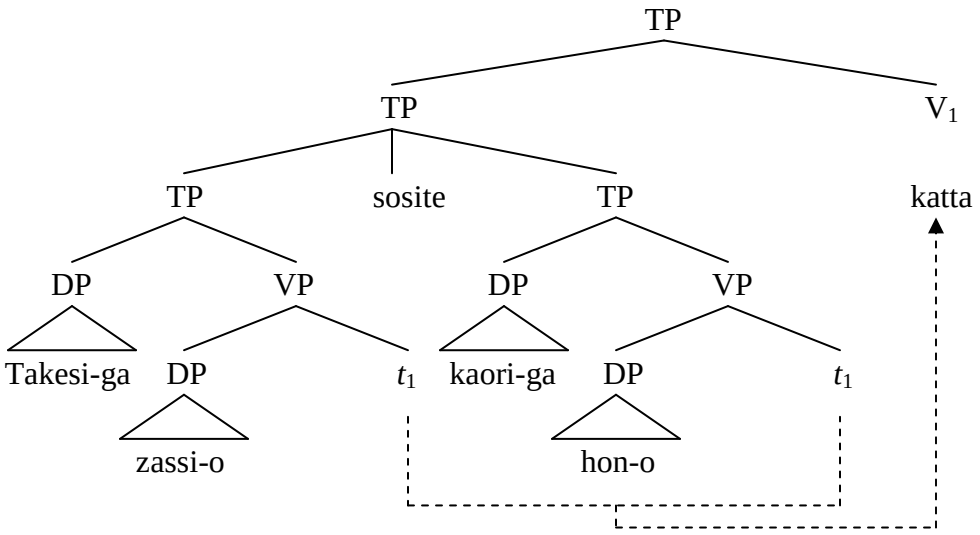
3. Other Alternative Analyses

As briefly mentioned in the introductory section, gapping in Japanese has received various treatments in the literature. They include PF movement accounts, LF copying accounts, PF deletion accounts, and movement + deletion accounts. In this section, I introduce a variety of properties of gapping other than those mentioned above that are problematic with the previous analyses and demonstrate that they are naturally resolved under the present analysis. To the extent that the relevant properties can only be accounted for by the present analysis, they count as additional empirical arguments for the analysis.

3.1. *Movement Accounts: Maling (1972), Kuno (1978), Saito (1987), Koizumi (2000)*

Following Kuno (1978) (see also Maling 1972), Saito (1987) argue that gapping constructions as in (1) are analyzed as involving Right-Node-Raising, in the manner seen in (20) (cf. Saito 1987: 320).

(20)



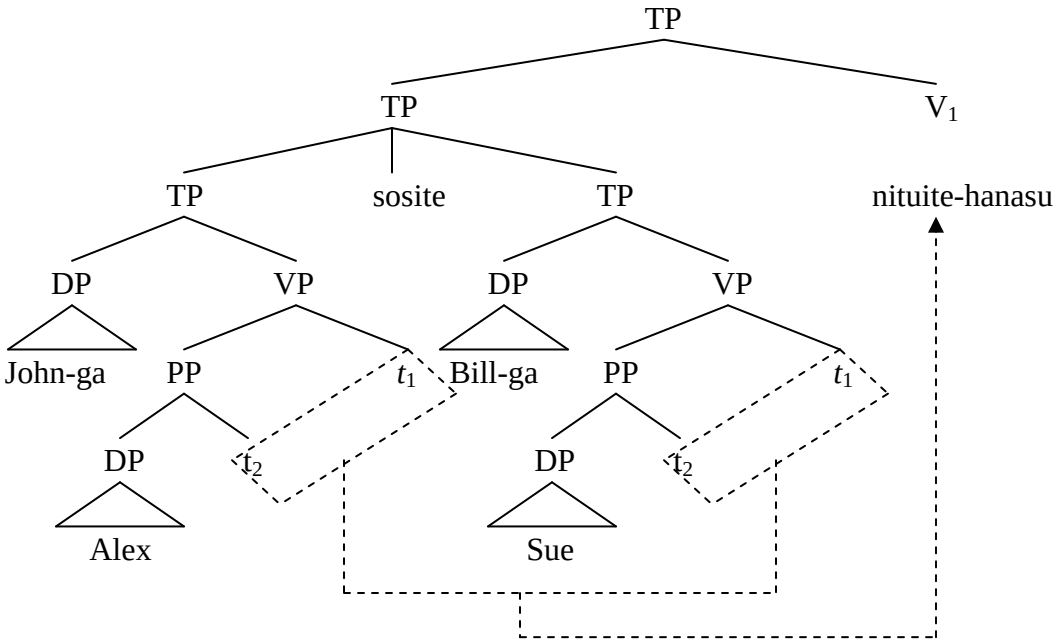
In this structure, the identical verb *kau* 'buy' is moved across the board and adjoined to TP.

As pointed out in the literature on Japanese/Korean gapping (see Abe and Hoshi 1997; Sohn 1994; Kim 1997, 1998; Mukai 2003), however, there are several empirical drawbacks within the Right-Node-Raising analysis. I mention only two of them here for reasons of space. First, the structure given in (20) is a very unusual configuration because the TP (or S in Saito's 1987: 320 original representation) is not headed by T. If gapping in Japanese involved standard TP-coordination with the T head, then we would wrongly predict (4) to be grammatical with the

tensed verb *katta* ‘bought’ in the first conjunct. This problem does not occur in the present analysis because it assumes that the construction under discussion involves *v*P-level coordination.

The second potential problem with the Right-Node-Raising analysis is that it cannot derive the P-drop pattern observed earlier in (18b) (see Sohn 1994:607 and Kim 1997: 182-184, 1998: 107 for the relevant examples in Korean), where the postposition *nituite* ‘about’ in the gapped conjunct is omitted under identity with its second occurrence in the full-fledged conjunct. The structure for the P-less gapping in (18b) would be as in (21) under Saito’s account.

(20)



In this representation, the shared elements, *nituite* ‘about’ and *hanasu* ‘talk’, are moved across the board to the TP-adjoined position. However, under the assumption (see Bresnan 1974;

Hankamer 1971; Postal 1974) that Right Node Raising may only target a syntactic constituent, as illustrated in (21), we cannot move the two shared elements in (20).[3]

(21) * He tried to persuade, but he couldn't convince, them that he was right.

(Bresnan 1974: 615)

As Abe and Hoshi (1997: 111-112) note, one might be tempted to save the Right-Node-Raising analysis in one of the two following ways. One way is to scramble the object of the preposition in both conjuncts to the VP-adjoined position and then apply Right-Node-Raising to the lower

[3] An anonymous reviewer points out that the constituency requirement on the Right-Node-Raising is challenged by Wilder (1997) and Hartmann (2000). For example, Wilder provides the following example.

(i) Alan looked a word with ten ___ and Adriana looked a word with twenty letters up in the dictionary.

(Wilder 1997: 86)

Two comments are in order. First, I have consulted five native speakers of English (all graduate students of linguistics) and they all reported (i) ungrammatical. Thus, the argument based on examples as in (i) are not convincing enough to draw any conclusion regarding the constituency requirement on the Right-Node-Raising. Second, it is technically possible to create a constituent that consists of the shared elements in (i) alone under Larson's (1988)/Kayne's (1994) framework, according to which the more leftward an element appears in linear order, the higher structural position it has. This analysis, of course, begs the question of why (21) is ungrammatical because the shared elements should form a constituent under the same framework. Importantly, the same native speakers as consulted above reported that, when the pronoun *them* is replaced by the full DP such as *the students*, as in (ii), the result exhibits improvement, though Bresnan judges both (21) and (ii) grammatical.

(ii) He tried to persuade, but he couldn't convince, the students that he was right.

Thus, one may maintain that it is the phonological heaviness that is responsible for the ungrammaticality of (21). I leave detailed examination of the nature of "heaviness" involved in Right Node Raising for future research.

VP. This possibility is independently blocked because (overt) Japanese scrambling does not allow P-stranding, as illustrated by the ungrammaticality of (22).

(22) * Susan$_1$, Mary-ga t_1-nituite hanasita.
Susan Mary-Nom -about talked
'Susan$_1$, Mary talked about t_1.' (Abe and Hoshi 1997: 111)

The other way is to reanalyze the verb and postposition as a single transitive verb so that the newly derived complex undergoes the across-the-board movement, as in (20). If this were involved in the derivation of the P-less gapping in Japanese, we predict that the P-drop pattern should not be available with prepositions that are not likely to undergo reanalysis with a verb. As Abe and Hoshi note, this prediction is falsified by the grammaticality of the P-less gapped conjunct in (23).[4]

(23) John-ga kono riyuu, sosite Mary-ga ano riyuu-de kubininatta.
John-Nom this reason and Mary-Nom that reason was-fired
'Lit. John (was fired) this reason, and Mary was fired for that reason.'
(slightly modified from Abe and Hoshi 1997: 112)

[4] Abe and Hoshi (1997: 111, 112) does not provide an explicit definition of reanalysis in this context. Provided that they take it that *nituite* 'about' and *hanasu* 'talk' can be reanalyzed while *de* 'for (reason)' and *kubininaru* 'fire' cannot, I assume here that only a pair of a verb and the prepositional head of its complement can undergo reanalysis. See Hornstein and Weinberg (1981) for detailed discussion.

As we saw in section 2.2, the coordinate + dependent ellipsis theory naturally accounts for the P-drop option. In (19) for (18b), the 0V of the bivalent head licenses ellipsis of the head of its dependent. The preposition of the complement of the verb in the second conjunct cannot be deleted because the dependent ellipsis is contingent on the prior application of coordinate ellipsis. Notice that this analysis predicts that the P-drop option is available only when the application of gapping/coordinate ellipsis has applied. This prediction is borne out by the ungrammaticality of (24), where the verb of the first conjunct is overt/does not undergo coordinate ellipsis.

(24)	John-ga	Alex-*(nituite)	hanasi,	sosite	Bill-ga	Sue-(*nituite)	hanasita.
	John-Nom	Alex-about	talk	and	Bill-Nom	Sue-about	talked

'Lit. John talked about Alex, and Bill talked about Sue.'

The core argument Saito makes for his right node raising analysis for gapping in Japanese concerns the distribution of null complementizers. Saito (p. 312) observes that "in some western dialects of Japan, some verbs allows their S′ [=CP] complements to appear without an overt complementizer, as illustrated in (25a). The complementizer deletion becomes impossible if we scramble the CP headed by the null complementizer, as shown in (25b). This behavior is reminiscent of the parallel distribution of null complementizers in English, as shown in (26a, b).

(25)a. John-ga [$_{CP}$ Koobe-ni iku (te)] yuuta.

John-Nom Kobe-to go C said

'John said that he was going to Kobe.'

b. [$_{CP}$ Koobe-ni iku *(te)] John-ga yuuta.

Kobe-to go C John-Nom said

'John said that he was going to Kobe.' (Saito 1987: 312)

(26)a. Ben knew [$_{CP}$ (that) the teaching was lying].

b. [$_{CP}$ *(that) the teaching was lying] Ben already knew. (Saito 1987: 313)

Saito adopts Stowell's (1981) ECP-based account of this paradigm, which states for the present purposes that empty categories including null Cs must be governed by an overt verb. (25a)/(26a) are grammatical because the null C is governed by the verb; (25b)/(26b) are bad because the null C fails to be governed by the verb due to the fronting of the CP that contains the head. Saito then argues, based on the different behavior of null complementizers in English and Japanese, that the (backward) gapping in Japanese is the product of Right-Node-Raising rather than V-gapping. Consider examples in (27a-d) and (28a-d).

(27)a. John said that we should go to London, and Bill [$_V$ *e*] that we should go to Paris.

b. John said we should go to London, and Bill [$_V$ *e*] that we should go to Paris.

c. * John said that we should go to London, and Bill [$_V$ *e*] we should go to Paris.

d. * John said we should go to London, and Bill [$_V$ *e*] we should go to Paris.

(Saito 1987: 317)

(28)a. John-ga Koobe-ni iku te, soide Mary-ga Tookyo-ni iku te, yuuta.
John-Nom Kobe-to go C and Mary-Nom Tokyo-to go C said
'John said that he was going to Kobe, and Mary said that she was going to Tokyo.'

b. * John-ga Koobe-ni iku te, soide Mary-ga Tookyo-ni iku [$_C$ *e*] , yuuta.
John-Nom Kobe-to go C and Mary-Nom Tokyo-to go said

c. * John-ga Koobe-ni iku [$_C$ *e*] , soide Mary-ga Tookyo-ni iku te, yuuta.
John-Nom Kobe-to go and Mary-Nom Tokyo-to go C said

d. * John-ga Koobe-ni iku [$_C$ *e*], soide Mary-ga Tookyo-ni iku [$_C$ *e*] ,yuuta.
John-Nom Kobe-to go and Mary-Nom Tokyo-to go said

(Saito 1987: 318)

The paradigm in (27) illustrates that gapping blocks the deletion of the complementizer only in the conjunct that it has applied to though the complementizer in the first conjunct may or may not be

deleted. This paradigm is naturally accounted for under the V-gapping analysis if empty verbs are not proper governors (Torrego 1984); the null complementizers do not have licensors that govern them, hence the ungrammaticality of (27c, d). If Japanese backward gapping were simply the V-gapping as in English, (28c, d) are correctly ruled out as the ECP violation. However, (28b) would remain mysterious because the null C in the second conjunct is properly governed by the verb *yuuta* 'said' on a par with (25a) and (26a). Saito argues that this example is naturally accounted for if the identical verb in both conjuncts undergoes Right-Node-Raising into the TP-adjoined position. Under this analysis, (28b) is correctly excluded since the empty C in the first conjunct fails to be licensed under the present assumption that empty verbs are not proper governors.

The paradigm in (27a-d), however, receives a principled explanation without evoking Right Node Raising. Drawing on Pesetsky's (1992) analysis of the null C as an affix, Bošković and Lasnik (2003) develops a comprehensive account of the distribution of null Cs in English, according to which null Cs, being an affix, must undergo *Morphological/PF Merger* (see Halle and Marantz 1993; Bobaljik 1995) to structurally higher [+V] elements to circumvent the Stranded Affix Filter (Lasnik 1981). (28c, d) are ruled out because there is no [+V] host for the null C in the gapped conjunct. How about (28b)? As first observed by Kuno (1973: 10), gapping sentences in Japanese are acceptable when there is an intonational boundary between the verb in the second conjunct and the dependent that immediately precedes it. Thus, (1) is acceptable when it is read as in (29a), but not as in (29b).

(29)a. **[**Takesi-ga zassio, sosite Karoi-ga hon-o**]** katta

b. * **[**Takesi-ga zassio**]**, sosite **[**Karoi-ga hon-o katta**]**

Bošković (2001) provides independent evidence that intonational boundaries block affixation. Thus, the example in (28b) is ruled out due to the Stranded Affix Filter because the pause intervenes between the null C and the verb that blocks the *Morphological/PF* Merger of the former to the latter. To the extent that the present analysis is correct, there is no independent evidence for the Right Node Raising analysis.

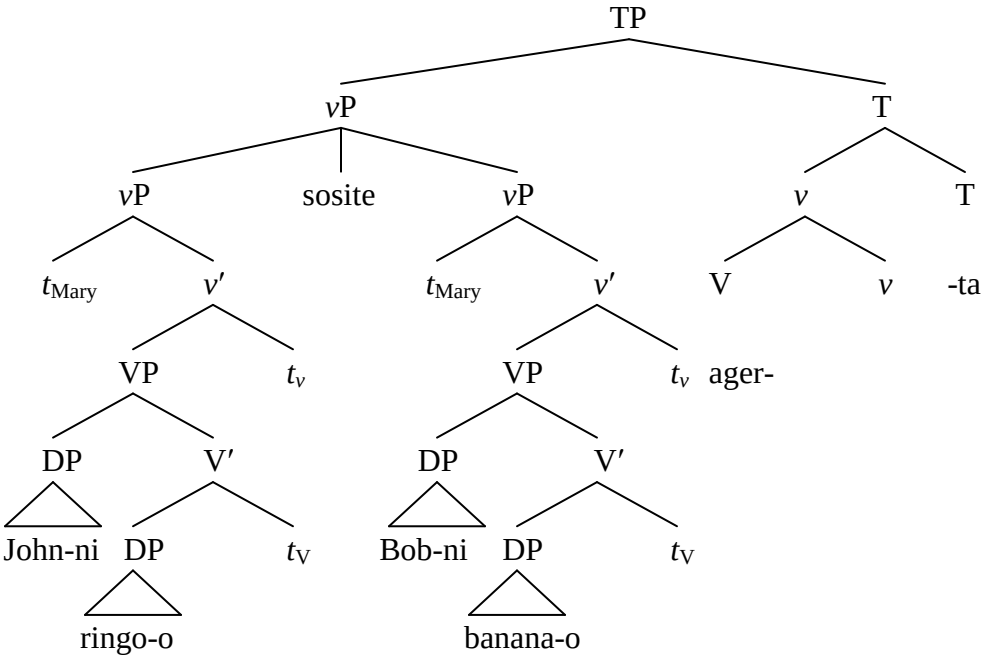
Koizumi (2000) proposes another variant of the movement-based analysis of gapping in Japanese that draws on the string-vacuous overt verb raising. He analyzes (30) as shown in (31) (slightly modified from Koizumi 2000: 229).

(30) Mary-ga [[John-ni ringo-o]] sosite [Bob-ni banana-o]] ageta.

Mary-Nom John-to apple-Acc and Bob-to banana-Acc gave

'Mary gave two apples to John, and three bananas to Bob.'

(31)

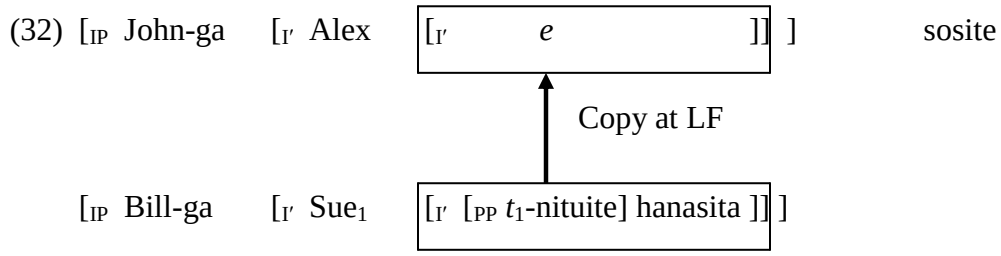


In this derivation, the identical subject *Mary* undergoes the across-the-board movement into [Spec, TP]. The identical verb moves overtly through *v* to T in the across-the-board manner.

Elegant though it may be, Koizumi's overt verb raising analysis immediately faces the problem of P-stranding in gapping, as illustrated in (18b) (see also Fukui and Sakai 2003 for additional problems with Koizumi's analysis.) Under his analysis, the P-less gapped conjunct would involve overt scrambling of the complement of the preposition *nituite* 'about' (*Alex* and *Sue*), but this option is unavailable in Japanese because scrambling requires pied-piping as in (22). The reanalysis option would also not do since, as we saw above, the P-drop option is available even with prepositions that are unlikely to be reanalyzed with a verb, as shown in (23). See also Fukui and Sakai 2003 for other arguments against Koizumi's verb raising analysis.

3.2. *LF Copying Accounts: Abe and Hoshi (1997)*

Drawing on the data and analysis presented by Jayaseelan (1990), Abe and Hoshi (1997) propose an alternative LF Copy account of gapping in Japanese that builds on the LF leftward movement of the remnants in a gapped conjunct and their correspondents in a full-fledged conjunct. Under their analysis, the P-less gapping construction in (18b) is analyzed as in (32).



In (32), the direct object *Sue* undergoes leftward LF movement, leaving the postposition *nituite* 'about' behind, and adjoins to the I′. The lower I′ in the second conjunct is then copied at LF onto that of the first conjunct designated here by *e*. Their analysis adopts the crucial assumption (Aoun 1985 and Huang 1982) that P-stranding is allowed universally at LF for leftward movement, but not for rightward movement. The P-less gapping in English is grammatical, as shown in (18a), because rightward movement (specifically, Heavy NP Shift) cannot tolerate P-stranding, as shown in (33).

(33) * John talked [PP about t_i] yesterday [DP the man who he had run across in San Francisco].

Abe and Hoshi's analysis, thus, correctly predicts the availability of P-stranding in Japanese gapping and the lack thereof in English gapping. Two arguments suggest, however, that their analysis cannot cover the full range of properties associated with Japanese gapping.

The first argument against the LF Copy Analysis concerns island effects. It has been proposed in the literature (Nishigauchi 1986, 1990, Choe 1987, Pesetsky 1987, Reinhart 1991) that not only overt movement but also covert/LF movement obeys subjacency conditions. Abe and Hoshi (p.115) observes that gapping in Japanese exhibits island effects, as shown in (34a, b).

(34) a. ?? Harry-ga *imiron*, sosite Alfonse-ga *toogoron-o* (relative clause island)
Harry-Nom semantics and Alfonse-Nom syntax-Acc
kenkyuusiteiru gengogakusha-ni atta.
is studying linguist-to met
'Harry met a linguist who studies *semantics* and Alfonse *syntax*.'

b. ?? *John-ga suugaku*, sosite *Mary-ga eego-o* (adjunct clause island)
John-Nom math and Mary-Nom English-Acc
benkyoosuru mae-ni syokuzisita.
study before ate
'*John* had a meal before he studied *math*, and *Mary English*.' (Abe and Hoshi 1997:115)

This is exactly what is predicted under their LF Copy Analysis. The contrasted elements in the full conjunct undergo LF movement to create an I′-structure to be copied onto the gapped conjunct. The LF representations for the sentences in (34a, b) are shown in (35a, b), respectively.

(35) a. ?? [$_{IP}$ *Harry-ga* [$_{I'}$ *imiron* [$_{I'}$ e]]], sosite
[$_{IP}$ *Alfonse-ga* [$_{I'}$ *toogoron*$_1$ [$_{I'}$ [$_{NP}$ [$_{IP}$ t_2 t_1-o
kenkyuusiteiru] gengogakusya$_2$]-ni atta]]]

b. ?? [$_{IP}$ *John-ga* [$_{I'}$ *suugaku* [$_{I'}$ e]]], sosite
[$_{IP}$ *Mary-ga* [$_{I'}$ *eego*$_1$ [$_{I'}$ [$_{AdvP}$ pro t_1-o benkyoosuru
mae-ni] syokuzisita]]]

The LF movement of the NP *toogoron* ‘syntax’ in (35a) and that of the NP *eego* ‘English’ in (35b) violates the subjacency condition (i.e. relative clause island and the adjunct clause island).

However, the argument above for Abe and Hoshi’s analysis does not go through on two grounds. First, there have been as many works, if not more, as in Huang (1982), Lasnik and Saito (1984, 1992), Chomsky (1986), and Watanabe (1992), which claim that island-sensitivity diagnoses only overt syntactic movement. Under this view of islands, then, the island violations observed in (34a, b) would mean that the contrasted elements undergo overt movement. This result, in turn, would make Abe and Hoshi’s analysis of the P-less gapping untenable since their analysis crucially assumes that P-

stranding is tolerated for leftward movement only at LF; recall (22). Second, the judgments reported by Abe and Hoshi are controversial. Thus, Mukai (2003) discusses data as in (36), structurally akin to (34a), and reports that 37 out of her 43 native consultants judged this sentence acceptable.

(36) *Mike-ga raion-ni, Tom-ga kuma-ni* osowareta otoko-o tasuketa.
Mike-Nom lion-Dat Tom-Nom bear-Dat was attached man-Acc saved
'*Mike* saved the man who was being attached by *a lion*, and *Tom a bear*.'

(Mukai 2003: 210)

Furthermore, Kato (2006) points out that the reduced acceptability of (34a, b) is not due to the movement-induced locality effect but rather to the omission of case particles. She (p.50) points out that "the grammaticality of the sentences improves when the accusative Case-marker of the object NP is not omitted." The relevant examples are given in (37a, b).

(37) a. ? Harry-ga imiron-***o***, sosite Alfronse-ga toogoron-o
Harry-Nom semantics-Acc and Alfronse-Nom syntax-Acc
kenkyuusiteiru gengogakusya-ni atta.
is studying linguist-to met
'Harry met a linguist who studies *semantics* and Alfonse *syntax*.'

b. ? John-ga suugaku-***o*** sosite Mary-ga eego-o
John-Nom math-Acc and Mary-Nom English-Acc
benkyoosuru mae-ni syokuzisita.
study before ate
'*John* had a meal before he studied *math,* and *Mary English*.'

(adopted from Kato 2006: 51, 52)

Thus, Mukai and Kato's finings indicate that the LF movement analysis entertained by Abe and Hoshi is difficult to sustain. On the other hand, the coordinate ellipsis analysis proposed in this paper provides a natural explanation for the lack of subjacency violations in the examples in (36) and (37a, b) (as well as in (34a, b)) because the contrasted elements do not need to move at all either in syntax or at LF to be licensed as remnants of a gapping construction. I take this result to provide strong evidence for the movement-less approach to gapping, as argued for in this paper.

The second argument against the LF Copy Analysis concerns the impossibility of multiple P-stranding in Japanese gapping. As Abe and Hoshi (p.133) note, the P-omission from a non-final remnant of a full-fledged conjunct results in ungrammaticality. This point is illustrated in (38a).The LF representation of this example is in (38b).

(38) a.* *Mary-ga* *nokogiri* *gareezi-o,* sosite *John-ga* *hammaa-de*

Mary-Nom saw garage-Acc and Jon-Nom hammer-with

ie-o tukutta.

house-Acc built

'Mary built the garage with a saw and John the house a hammer.'

b. * [$_{IP}$ Mary-ga [$_{I'}$ nokogiri [$_{I'}$ gareezi-o [$_{I'}$ e]]]]

sosite

[$_{IP}$ John-ga [$_{I'}$ hammaa$_1$ [$_{I'}$ ie-o$_2$ [$_{I'}$ [$_{PP}$ t$_1$-de] t$_2$ tukutta]]]]

(Abe and Hoshi 1997:133)

Abe and Hoshi (p. 13) that their analysis would incorrectly rule (38a) in because "nothing prevents P-stranding of *de* because it is created by left movement" and leave this problem for future research. This problem in fact has remained a residual issue in all subsequence research on gapping in Japanese and Korean without any good solution. Noting that a similar P-stranding prohibition charaterizes Korean gapping, Sohn (1994) and Kim (1997, 1998) propose the generalization as in (39), merely stating that P-stranding in Korean/Japanese gapping does not follow from a deeper principle other than (39).

(39) The postposition or Case-marker in Korean gapping may drop only if the host remnant is immediately followed by the conjunction *kuliko* 'and'. (Kim 1998: 131)

Kato (2006: 124, 135) speculates that P-stranding in Japanese might have to do with a different intonational contour on the element that precedes the gap (such as lengthening of the syllable preceding the gap), but leaves the issue open.

As stated in section 2.2, the analysis proposed in this paper provides a straightforward solution to the P-stranding pattern available in Japanese/Korean. I have argued there that the P-drop of the last conjunct of a gapped clause is the byproduct of the Dependent Ellipsis; the ellipsis of the preposition *nituite* 'about' in the example in (18b) is licensed by the prior application of the Coordinate Ellipsis. The question now becomes why only the postposition/case-marker of a remnant immediately followed by conjunction can be dropped. This question is naturally answered if we assume that the 0_V only licenses the ellipsis of the head of its immediate dependents: XP is an immediate dependent of the head Y if XP is the sister of Y. Note that in (10), the 0_V licenses the head (*pictures*) of its NP complement (*pictures of Sue*) to go unpronounced. To illustrate this point, consider the schematic derivation in (41) for a gapping sentence in (40), in which the postposition is dropped from one of the non-final contrasted elements of the gapped conjunct.

(40) John-*(ga) Alex-*(to) seizi-(nituite), sosite Bill-*(ga) Sue-*(to)

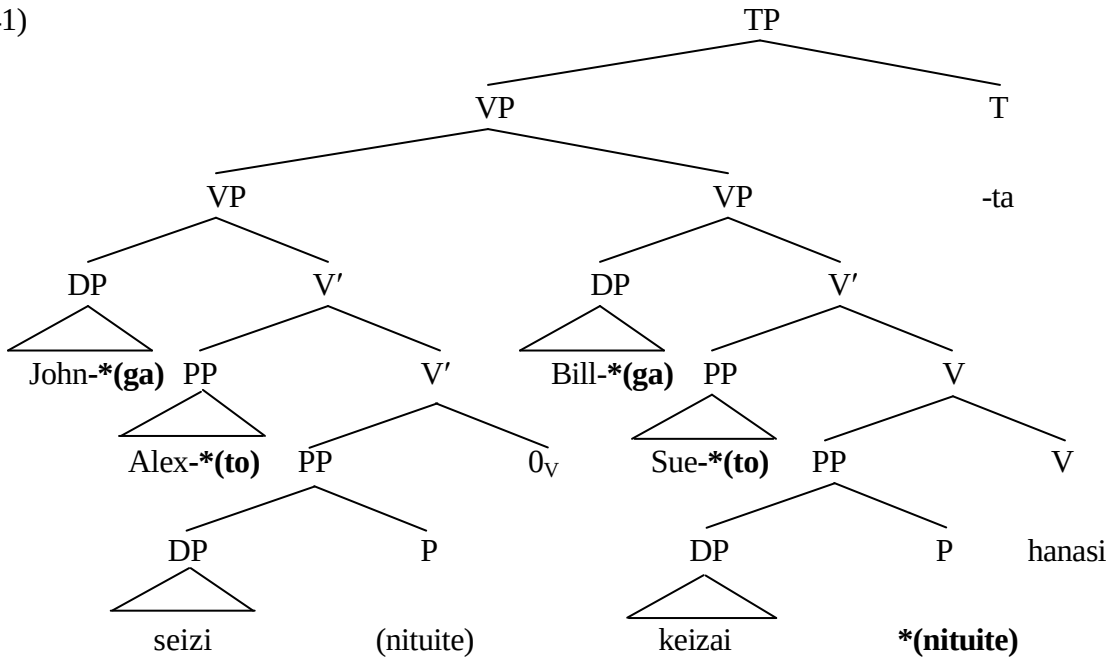
John-Nom Alex-with politics-about and Bill-Nom Sue-with

keizai-*(nituite) hanasita.

economy-about talked

'Lit. John (talked) with Alex about politics, and Bill talked with Sue about economy.'

(41)



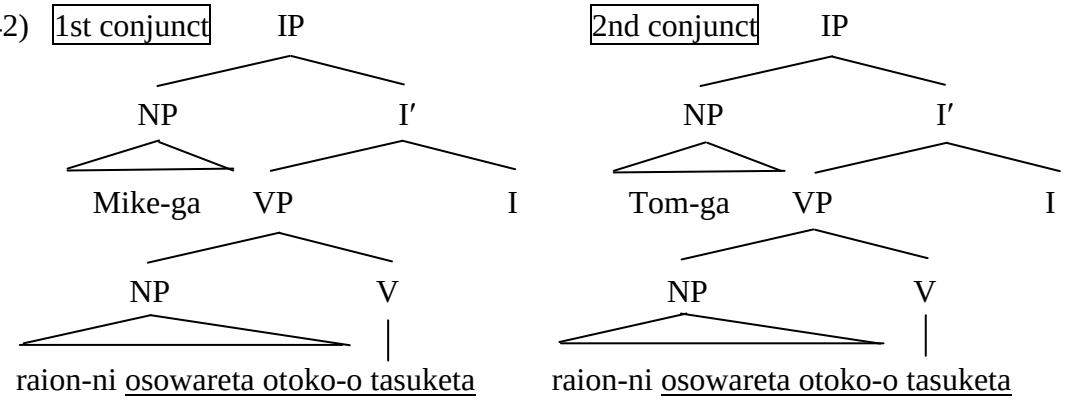
In (40), none of the postpositions can be dropped in a full-fledged conjunct. This is because no Coordinate Ellipsis has applied to this conjunct. The P-drop from the direct object *seizi* 'politics' is permissible since the P position is the head of the immediate dependent of 0_V. Deletion of postpositions from all other nominal elements in the gapped conjunct are impossible because these

prepositions are not a head of the immediate dependent of 0_V. Based on the lack of island effects and the impossibility of multiple P-stranding, I conclude that the present analysis makes better predictions than Abe and Hoshi's (1997) LF Copy Analysis concerning Japanese gapping.

3.3. *PF Deletion Accounts: Mukai (2003)*

Mukai (2003) proposes that the gapping construction in (36) is derived by the operation she dubs *String Deletion* that applies to a phonetic string, regardless of its syntactic constituency; see also Fukui and Sakai (2003) for a PF-based approach to gapping similar to Mukai's. Mukai assumes (p. 211) that "the only structural condition on String Deletion is that the target is continuous and contains a verb." Under this analysis, the example in (36) is derived as in (42).

(42)



(adopted from Mukai 2003: 211)

In this structure, the underlined portion of the first conjunct, which is continuous and contains a verb , is identical to the underlined portion of the second conjunct. Thus, String Deletion applies to the underlined portion of the first conjunct. Mukai argues that the absence of island effects in gapping, as illustrated in the previous subsection, naturally follows since the movement of the correlate is not necessary in this string-based deletion approach. Mukai also provides independent evidence from honorification that gapping is sensitive to the string identity at PF. In Japanese, *mesiagaru* is the honorific suppletive form for the plain verb *taberu* 'eat' that a speaker uses to show respect to the person denoted by the subject, as shown in (43a). For example, (43b) is unacceptable because it is awkward to show respect to oneself (cf. Mukai 2003: 212).

(43) a. Kootyoosensei-ga tempura-o mesiagatta/*tabeta.
principal-Nom tempura-Acc ate-Hon/ate
'The principle ate tempura.'

b. Boku-ga tempura-o *mesiagatta/tabeta.
I-Nom tempura-Acc ate-Hon/ate
'I ate tempura.'

Mukai shows that String Deletion is sensitive to the surface verb form. Specifically, *mesiagaru* and *taberu* are distinct for the application of this operation. This point is illustrated by (44).

(44) * Boku-ga tempura-o, kootyoosensei-ga osusi-o mesiagatta.
I-Nom tempura-Acc principal-Nom sushi-Nom ate-Hon
'I ate tempura, and the principal ate sushi.' (Mukai 2003: 212)

This example naturally falls out if String Deletion is sensitive to the PF identity condition. Since this example has the derivation in (45), the first conjunct involves an unacceptable honorific form, just as the first conjunct in (43a) does.

(45) PF: I-Nom tempura-Acc ~~ate (HON)~~ Principal-Nom susi-Acc ate(HON)

There are two problems with the String Deletion analysis. First, if the PF identity is a sufficient identity condition for gapping, then this analysis would make a wrong prediction concerning gapping examples involving homonyms.[5] Specifically, examples as in (46) involving the word *kumo* 'spider, cloud' would allow the four possible interpretations explained below the Japanese example in (46). ((46) is from Mukai 2003: 213.)

[5] This issue was raised by Hajime Hoji, according to Mukai (2003: 213).

(46) John-ga Mary-ni, Bill-ga Susan-ni kumo-o miseta.

John-Nom Mary-Dat Bill-Nom Susan-Dat cloud/spider-Acc showed

'John showed Mary a cloud/a spider, and Bill showed Susan a cloud/spider.'

→ John showed Mary a cloud, and Bill showed Susan a cloud.

→ John showed Mary a spider, and Bill showed Susan a spider.

→ * John showed Mary a cloud, and Bill showed Susan a spider.

→ * John showed Mary a spider, and Bill showed Susan a cloud.

However, (46) is grammatically only when the homonym *kumo* is interpreted either as spider or cloud in both conjuncts. This interpretational constraint remains unexplained if the only structural condition on String Deletion is that the target is continuous and contains a verb." (p. 211). Mukai (p. 213) does conclude that "LF identity, as well as PF identity, is relevant in the case of verbless conjunction." but she does not clarify the nature of the LF identity requirement on String Deletion. This problem will not arise under the coordinate ellipsis theory, however, if we take the Disanaphora Law to require that the elided element in the first conjunct (i.e. *kumo*) must be anaphoric to the overt element in the second conjunct in its sense. Thus, if *kumo* is interpreted as 'cloud', then its first occurrence in the gapped conjunct must be interpreted as 'cloud'; see also note 2 for discussion on a similar LF identity requirement imposed on sluicing constructions.

Another problem with Mukai's analysis is that String Deletion overgenerates. Specifically, since the only condition is that the target is continuous and contains a verb, it would incorrectly predict that this operation should apply not only in coordinate structures but also subordinate structures. However, the results are clearly ungrammatical, as shown in (47a, b).

(47) a. * John-ga zassi-o atode, Mary-ga hon-o katta.
John-Nom magazine-Acc after Mary-Nom book-Acc bought
'Intended Interpretation: After John bought a magazine, and Mary bought a book.'

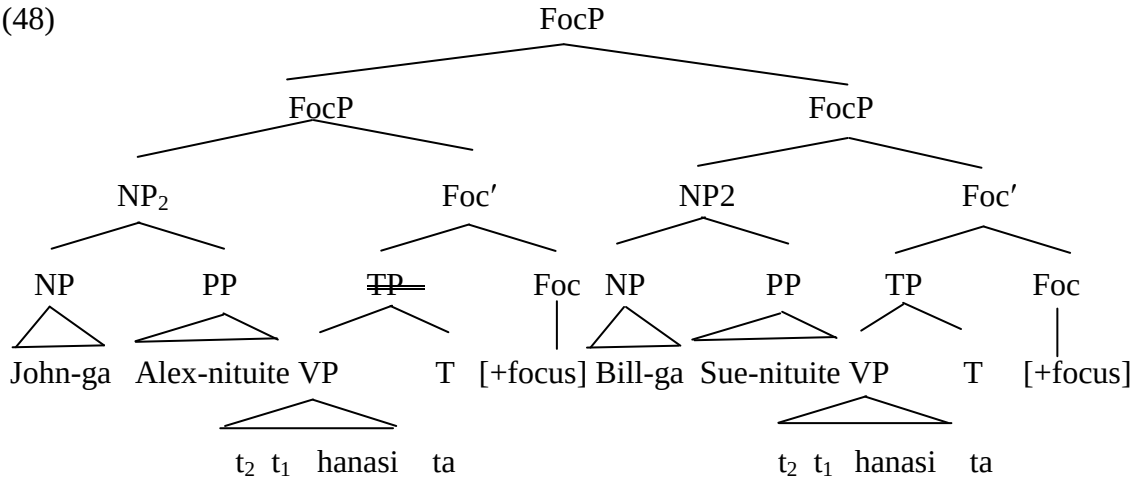
b. * John-ga zassi-o kara, Mary-ga hon-o katta.
John-Nom magazine-Acc because Mary-Nom book-Acc bought
'Intended Interpretation: Because John bought a magazine, Mary bought a book.'

This overgeneration, however, is sufficiently constrained under the present theory because gapping results only when one of the bivalent heads is V_0 and this head occurs only in coordinate structures. Based on the two empirical grounds, I conclude that the coordinate ellipsis theory is superior to the PF string deletion analysis.

3.4. *Movement + Deletion Accounts: Sohn (1994), Kim (1997, 1998)*

Kim (1997, 1998) and Sohn (1994) propose that gapping results from the syntactic movement of a focused remnant followed by PF deletion. Since the analyses proposed by Kim and Sohn essentially make the same point, I restrict my discussion here on Kim's (1998) analysis. Kim proposes that gapping is the result of the overt focus movement of remnants and correspondents followed by TP deletion at PF. To illustrate, consider the derivation of the example in (18b) in (48).[6]

(48)



(cf. Kim 1998: 122)

Adopting the idea of *Checking-through-Adjunction* (Saito 1994; Sohn 1994), Kim assumes that a contrastive phrase can adjoin to another contrastive repeatedly and the highest one, containing all contrastive phrases, can move to the specifier of FocP. In (48), then, the lower focused phrase

[6] Kim assumes that the [+EPP] feature is weak in Korean and Japanese. Thus, subjects do not undergo overt syntactic movement out of VP in (48).

(*Alex-nituite* in the first conjunct and *Sue-nituite* in the last conjunct) adjoins to the higher focused phrase (*John-ga* in the first conjunct and *Bill-ga* in the last conjunct) to check its strong [+focus] feature against the strong [+focus] feature of the latter. The example in (18b) results when deletion applies to the TP in the first conjunct, after the remnants have all undergone focus-driven movement out of the TP, as shown in (48).

A major problem with the movement plus deletion analysis of gapping in Japanese lies in the assumption that gapping involves TP deletion. Recall from the beginning of section 2 that the example in (4) suggests that gapping involves *v*P/VP-coordination. If the underlying derivation of gapping were TP-level coordination, then we would wrongly predict that the tense morpheme could occur in the gapped conjunct. Kim argues (p.124) that gapping is TP deletion precisely for this reason but this reasoning begs the question of why non-gapped examples as in (4) would still prohibit the past tense morpheme from appearing in the first conjunct. Rather, the impossibility of the tense marker suggests that gapping involves *v*P/VP-level coordination. Kim's analysis could be saved by assuming that the focus-driven movement of contrastive phrases into the specifier of FocP above *v*P but below TP is followed by *v*P deletion. However, this analysis will not do, since it is well known since Kuno (1978) that Japanese lacks this process entirely, as shown by the ill-formedness of (49).

(49) * Taroo-ga ~~[$_{VP}$ hon-o katta]~~ kara, Hanako-mo hon-o katta.
Taroo-Nom book-Acc bought because Hanako-also book-Acc bought
'Intended Interpretation: Since Taroo bought a book, Hanako also bought a book.'

Thus, I conclude that the movement plus deletion analysis à la Kim (1997, 1998) is problematic.

3.5. *Argument Ellipsis Accounts*: *Oku (1998), Kim (1999), Saito (2004), Takahashi (2006, 2008, to appear)*

Various researchers on Korean and Japanese, including Oku (1998), Kim (1999), Saito (2004), and Takahashi (2006, 2008, to appear) have recently proposed that certain cases of null arguments in these languages are analyzed as NP/DP ellipsis rather than empty pronouns (Kuroda 1965). For reasons of space, I repeat only one argument in favor of this analysis made from Takahashi (2008, to appear) based on what he calls *quantificational null objects*; see the above-mentioned works for various arguments based on the sloppy reading (Oku 1998), inalienable possession constructions (Kim 1999), cleft constructions (Saito 2004), and "parasitic gap-like" constructions (Takahashi 2006). Consider examples in (50a, b) and (51a, b).

(50) a. Hanako-ga taitei-no sensei-o sonkeisiteiru.

Hanako-Nom most-Gen teacher-Acc respect

'Hanako respects most teachers.'

b. Taroo-mo *e* sonkeisiteiru.

Taroo-also respect

'(Lit.) Taroo respects, too.' (Takahashi 2008: 310)

(51) a. Hanako-ga taitei-no sensei-o sonkeisiteiru.

Hanako-Nom most-Gen teacher-Acc respect

'Hanako respects most teachers.'

b. Taroo-mo karera-o sonkeisiteiru.

Taroo-also them-Acc respect

'Taroo respects them, too.' (Takahashi 2008: 310)

Both the null argument *e* in (50b) and the lexical pronoun *karera* in (51b) are intended to take the object quantifier *taiteino sensei* 'most teachers' in (50a)/(51a). Takahashi (2008: 310) observes that the lexical pronoun in (51b) functions as an E-type pronoun in the sense of Evans (1980); (51b) 'means only that Taroo respects those teachers that Hanako respects.' Importantly, however, the sentence in (50b) with the null object not only allows this E-type pronoun reading but also 'the

interpretation that Taroo respects most teachers, where the null object serves as a full-fledged quantifier meaning most teachers (thus, the set of teachers that Taroo respects can be different from the set of teachers that Hanako respects). If the empty null object in (50b) were analyzed as a case of null pronominal (as argued on various grounds in Hoji 1985, Kuroda 1965, Ohso 1976 and Saito 1985), this quantificational reading would not be accounted for. On the other hand, the argument ellipsis account provides a natural analysis for this reading in (50b), as shown in (52a, b), where the null object is a genuine quantifier, not an empty pronoun, that undergoes ellipsis in the PF component under identity with the object.

(52) a. Hanako-ga taitei-no sensei-o sonkeisiteiru.
Hanako-Nom most-Gen teacher-Acc respect
b. Taroo-mo ~~taitei-no sensei-o~~ sonkeisiteiru.
Taroo-also most-Gen teacher-Acc respect (Takahashi 2008: 310)

Given the wide range of cases of null arguments in Japanese/Korean that supports the Argument Ellipsis account, it would be important to see whether this analysis could also extend to gapping in Japanese. The answer is in the negative because, as suggested by an anonymous reviewer, there seem to be significant differences between gapping and argument ellipsis. Among others, argument ellipsis can take place across sentential boundaries, as shown in (53a, b). This does not

hold for gapping, however, which can take place only in coordinate structures, as mentioned above and illustrated in (54a, b).

(53) a. Speaker A: John-ga zibun-no gakusei-o hometa.
John-Nom self-Gen student-Acc praised
'John praised his student.'

b. Speaker B: Bill-mo *e* hometa.
Bill-also praised
'(Lit.) Bill praised, too. = Bill praised his student, too.'

(54) a. * Speaker A: John-ga zibun-no gakusei-o *e*
John-Nom self-Gen student-Acc
'(Lit.) John his student. = John praised his student'

b. Speaker B: sosite Bill-ga zibun-no TA-o hometa.
and Bill-Nom self-Gen TA-Acc praised
'(Lit.) and Bill his TA. = Bill praised his TA.'

According to the Argument Ellipsis analysis, the object in (53b) is elided at PF under identity with the object in (53a). The ungrammaticality of (54a) shows that this analysis cannot be

extended to gapping in Japanese. The fact that gapping is limited to coordinate structure is naturally accounted for by the coordinate + dependent ellipsis analysis, whereby verb gapping results when one of the heads of the bivalent lexical item ([0, V] P) remains unpronounced in conformity with the Disanaphora Law.

4. Conclusions

In this paper, I have proposed that gapping in Japanese is best analyzed by the coordinate and dependent ellipsis theory proposed by Williams (1997). I have shown that this analysis provides a natural explanation for several syntactic, semantic, and phonological properties associated with this construction that would remain unexplained under the Right-Node-Raising Analysis (Saito 1987), the LF Copy Analysis (Abe and Hoshi 1997), the PF String Deletion Analysis (Mukai 2003), the Movement + Deletion Analysis (Sohn 1994/Kim 1997, 1998), and the Argument Ellipsis Analysis (Oku 1998; Kim 1999; Saito 2003; Takahashi 2006, 2008).

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