

ON THE UNAVAILABILITY OF NP-ELLIPSIS WITH JAPANESE RELATIVE CLAUSES *

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1. Introduction

Well attested since Jackendoff (1971), English permits so-called ‘N’-ellipsis’, reformulated as ‘NP-ellipsis’ under the DP hypothesis (Abney 1987). Accordingly, not only (1a) but also (1b) is grammatical.

- (1) a. Jiro criticized Taro’s attitude, but Yoshio criticized Hanako’s attitude.
b. Jiro criticized Taro’s attitude, but Yoshio criticized Hanako’s.

However, an NP cannot always be elided in DP. For example, (2b) is ungrammatical, in contrast to (2a):

- (2) a. Jiroo criticized the attitude, but Yoshio criticized the attitude.
b. *Jiroo criticized the attitude, but Yoshio criticized the.

Lobeck (1990) as well as Saito and Murasugi (1990) (henceforth S&M) argue that the contrast between (1b) and (2b) follows from which positions *Hanako’s* and *the* occupy within the DP. The structure of the word sequence *Hanako’s attitude* in (1a) is as in (3):

- (3) [_{DP} Hanako’s [_{NP} attitude]]

Here, *Hanako’s* occupies DP SPEC. This structure contrasts with that of the DP *the attitude*, where *the* is located in D, not in DP SPEC, as shown in (4):

- (4) [_{DP} [_D the [_{NP} attitude]]]

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The fact that (2b), in contrast to (1b), is ungrammatical, leads to the generalization that only when DP SPEC is filled, can NP be elided.

S&M show that this “DP SPEC” requirement on NP-ellipsis is also operative in Japanese; consider that in (5), parallel to (1b), the NP *taido* ‘attitude’ can be elided:¹

- (5) Jiroo-wa [DP Taroo-no [NP *taido*]]-o hihanshita ga, Yoshio-wa
 -TOP -GEN attitude-ACC criticized though -TOP
 [DP Hanako-no ([NP *taido*]])-o hihanshita.
 -GEN attitude-ACC criticized

‘Jiro criticized Taro’s attitude, but Yoshio criticized Hanako’s.’

According to S&M, the NP *taido* can be deleted because *Hanako-no* occupies DP SPEC, parallel to (1a).

This DP SPEC requirement leads to the prediction that NP-ellipsis should not be permitted if DP SPEC is not filled. This expectation is fulfilled. Given the assumption that relative clauses are adjoined to NP, thus not in DP SPEC, Saito, Lin and Murasugi (2008) (henceforth SL&M) propose that Japanese relative clauses cannot trigger NP-ellipsis, as exemplified in (6):

- (6) [[Taroo-ga kinoo atta] hito]-wa yasashii ga, [[Hanako-ga
 -NOM yesterday saw person-TOP kind though -NOM
kinoo atta] *(hito)]-wa kowai.
 yesterday saw person-TOP scary

‘The person Taro saw yesterday is kind, but the person Hanako saw yesterday is scary.’ (SL&M 2008: 263)

In this example, the NP *hito* ‘person’ cannot be elided because the relative clause is not in DP SPEC. In essence, for S&M and SL&M, the contrast between (5) and (6) shows that only arguments can trigger NP-ellipsis: There is an argument/adjunct asymmetry with respect to the availability of NP-ellipsis.

However, following Abe (2006) and Kadowaki (2005), Takahashi (2011) claims that Japanese relative clauses do allow NP-ellipsis. For instance, in (7a) *syujyutsu* ‘operation’ can be absent in the second conjunct, as shown in (7b):²

¹ Abbreviations used in this paper are as follows:

ACC = accusative, CL = classifier, DIST = distributive affix, GEN = genitive, NOM = nominative, PASS = passive, RC = relative clause, TOP = topic.

² Mihara’s (1994: 212) example, given (i), which involves the abstract noun *syujyutsu* ‘operation’, shows that Kamio’s (1983) condition that the pronominal *no* can only replace concrete nouns is too restrictive:

- (7) a. [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo yesterday was done operation-TOP simple was though today yoteisareteiru] syujyutsu]-wa kanari muzukashii.
is planned operation-TOP very difficult

‘(lit.) The operation that was done yesterday was simple, but the operation that is planned today is very difficult.’

- b. [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo yesterday was done operation-TOP simple was though today yoteisareteiru]-no]-wa kanari muzukashii.
is planned-NO-TOP very difficult

Likewise, *kankei* ‘relation’ can be missing in the second conjunct, as shown in (8b):³

-
- (i) [kinoo-no syujyutsu]-wa kantan datta ga, [kyoo-no]-wa muzukashisoo da.
yesterday-GEN operation-TOP simple was though today-one-TOP difficult-seem is
‘(lit.) Yesterday’s operation was simple, but today’s one seems difficult.’

See Section 6 for relevant discussion on Kamio’s (1983) condition on the pronominal *no*.

³ Takahashi’s (2011: 139) original example with *kankei* ‘relation’ is given in (i):

- (i) [[[aisatsu-suru]-dake]-no kankei]-wa yoi ga, [[[okane-o greeting-do-only-GEN relation-TOP good though money-ACC kashikari-suru]-dake]-no]-wa yokunai.
borrowing • lending-do-only-NO-TOP not good

‘(lit.) The relation in which they only greet is good, but the relation in which they only borrow and lend money is not good.’

In (i), the relative clause is accompanied by *dake* ‘only.’ In order to avoid any potential intervening factors with *dake*, this paper deals with examples without the element under question. Notice that if *dake* is omitted in (i), as shown in (ii), the meaning of the second conjunct changes; it means that borrowing and lending money is not good.

- (ii) [[aisatsu-suru] kankei]-wa yoi ga, [[okane-o kashikari-suru]-no]-wa
greeting-do relation-TOP good though money-ACC lending • borrowing-do-NO-TOP
yokunai.
not good

‘The relation that they greet is good, but to lead and borrow money is not good.’

- (8) a. [[amerika-ga nihon-to kizuita] kankei]-wa ryookoo da ga,
 America-NOM Japan-with built relation-TOP good is though
 [[*pro* tyuugoku-to kizukoo-to shiteiru] kankei]-wa saki-ga
 China-with trying to build relation-TOP future-NOM
 futoomei da.
 unclear is

‘The relation that the United States built with Japan has been good, but the relation that she is trying to build with China is unclear about its future.’

- b. ?[[amerika-ga nihon-to kizuita] kankei]-wa ryookoo da ga,
 America-NOM Japan-with built relation-TOP good is though
 [[*pro* tyuugoku-to kizukoo-to-shiteiru]-no]-wa saki-ga
 China-with trying to build-NO-TOP future-NOM
 futoomei da.
 not obvious is

On the surface, these examples appear to show that Japanese relative clauses can trigger NP-ellipsis, contrary to SL&M’s claim. Accordingly, the grammatical contrast between (6) on the one hand, and (7b) and (8b) on the other, clearly calls for further research examining the nature of relative clauses in Japanese. This paper, as a consequence, investigates whether Japanese relative clauses allow NP-ellipsis. In addition, there appears to be one difference between the former example and the latter examples. Only in (7b) and (8b), the relative clauses are accompanied by *no*. These two issues are clearly interrelated, and this paper addresses the status of the *no* attached to a relative clause in studying the availability of NP-ellipsis with a relative clause.

The paper is organized as follows: following this introduction, Section 2 clarifies the two questions to be raised in this paper; (1) whether Japanese permits NP-ellipsis triggered by relative clauses, and (2) whether the *no* attached to a relative clause, as in (7b) and (8b), is the Genitive Case marker or the pronominal *no*. Section 3 summarizes SL&M’s (2008) and Takahashi’s (2011) mechanisms of NP-ellipsis, resulting in different answers to these two questions. SL&M deny the existence of the NP-ellipsis in question and *no* is the pronominal *no*. Takahashi, on the other hand, argues for such an NP-ellipsis, and *no* is the Genitive Case marker. In Section 4 to Section 6, we turn to provide three arguments for SL&M’s stance that Japanese relative clauses cannot trigger NP-ellipsis and show that what appears to be an instance of NP-ellipsis, in fact, involves the pronominal *no*. Section 4 shows that split and non-linguistic antecedents are acceptable in cases where NP-ellipsis with a relative clause appears to have taken place. This section also shows that sloppy interpretation is unavailable in some cases where a relative clause appears to have triggered NP-ellipsis in Japanese, while its Chinese counterpart does allow sloppy interpretation in the same context. The fact that Chinese, but not Japanese, relative clauses easily yield sloppy interpretation is naturally accommodated under the hypothesis made by SL&M, and further supported by Miyamoto (2010), that Chinese relative clauses, but not their Japanese counterparts, make use of

Kaynean (1994) relative clause formation. Section 5 discusses the nominal-internal distributive interpretation of numeral quantifiers (NQs) with the distributive affix *zutsu* (Miyamoto 2009). Miyamoto argues that NQs with *zutsu* form a relative clause under the nominal-internal distributive reading. Miyamoto's proposal then enables us to use the availability of nominal-internal distributive interpretation as a test to see whether an NQ+*zutsu* behaves as a relative clause. We show that there is a case where NP-ellipsis by the relative clause formed by an NQ with *zutsu* would incorrectly create a configuration that should permit the reading in question. This over-generation is shown not to arise if NP-ellipsis is not available with Japanese relative clauses. Section 6 discusses Kamio's (1983) claim that abstract nouns cannot be replaced by the pronominal *no*. It will be concluded that in examples such as (7b) and (8b), which appear to involve NP-ellipsis, the possibility of the pronominal *no* is not fully excluded. Thereby, we maintain SL&M's proposal on NP-ellipsis based on Kamio's condition. Finally, Section 7 contains concluding remarks.

2. Where to Start: Murasugi (1991)

As highlighted in Section 1, we believe that the examination of the status of the *no* attached to a relative clause, as boldfaced in (9), provides an indication of whether a relative clause can trigger NP-ellipsis:

- (9) [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo
yesterday was done operation-TOP simple was though today
yoteisareteiru]-**no**]-wa kanari muzukashii.
is planned-NO-TOP very difficult

'The operation that was done yesterday was simple, but the operation that is planned today is very difficult.'

Here, four possibilities illustrated in (10a-c), are considered for the structure of the subject, [_{RC} *kyoo yoteisareteiru*]-*no*, of the second conjunct:

- (10) a. [[_{CP}[_{TP}... Relative Clause ...]-no] *e*] (no = C)
b. [[... Relative Clause ...] no] (no = Pronominal Relative Head)
c. [[... Relative Clause ...]-no *e*] (no = Genitive Case Marker)
- (i) The gap *e* is created by NP-ellipsis.
(ii) The gap *e* is the base-generated empty pronoun *pro*.

Among these four possibilities, Murasugi (1991) excludes the possibilities given in (10a) and (10cii).

Notice first that long-distance dependency is not possible in Japanese adjunct relative

clauses. In (11), *riyuu* ‘reason’ cannot refer to the reason why Taro swam.

- (11) [NP [RC Hanako-ga [[Taroo-ga oyoida]-to] omotteiru] riyuu]
 -NOM -NOM swam-that think reason
 ‘the reason Hanako thinks that Taro swam’

This suggests that relative clauses cannot make use of Op-movement, making the intended long-distance interpretation available. Based, in part on this fact, Saito (1985) and later Murasugi (1991) argue that Japanese relative clauses are TP in category. Under the TP hypothesis of relative clauses, the fact that the interpretation under question is unavailable in (11) is naturally expected because there is no CP SPEC available for the Op to be raised to. Since Japanese relative clauses lack CP, there is also no C position the complementizer *no* can occupy. Thus, (10a) is not an available option.

There is also a reason to cast doubt on (10cii) (Kadowaki 2005; Kitagawa and Ross 1982). It has been observed that the relative clause accompanied by *no* yields derogatory connotation (Kuroda 1976-1977). Notice, for example, that the second conjunct of (12) connotes that the person whom Hanako saw yesterday is not someone who deserves respect, and therefore, a conflict results between the derogatory connotation arising from the presence of *no* and the honorific form of the verb.

- (12) #[[Taroo-ga kinoo atta] sensei]-wa suugaku-o oshieteirassaru ga,
 -NOM yesterday saw teacher-TOP math-ACC teach though
 [[Hanako-ga kinoo atta]-no]-wa rika-o oshieteirassaru.
 -NOM yesterday saw-NO-TOP science-ACC teach

‘The person Taro saw yesterday teaches math, but ~~the person~~ Hanako saw yesterday teaches science.’

Importantly, the covert pronoun *pro* does not exhibit this derogatory connotation, as shown in (13):

- (13) Tanaka-sensei-ga suugaku-o oshieteirassaru.
 -NOM math-ACC teach
pro rika-mo oshieteirassaru.
 science-also teach

‘Prof. Tanaka teaches math. He also teaches science.’

The presence of the derogatory connotation in (12) thus leads to the exclusion of (10cii) as well.

Murasugi’s (1991) contribution to our argument is essential, that NP-ellipsis is not available with Japanese relative clauses, and allows us to assume that (10a) and (10cii) are not options available with Japanese relative clauses, leaving us with (10b) and (10ci).

SL&M’s proposal leads to (10b) since NP-ellipsis is not available with adjuncts in general, thus with relative clauses. Alternatively, Takahashi (2011) argues for (10ci).

3. Can Relative Clauses Trigger NP-ellipsis?

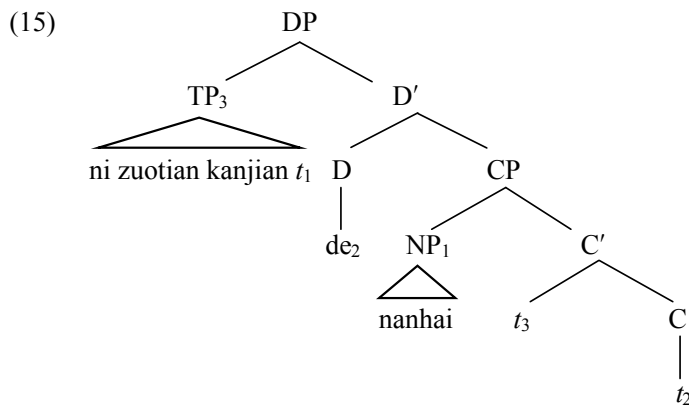
Having explored the foundations of this paper, we are now ready to illustrate SL&M’s and Takahashi’s, two competing proposals, and provide the theoretical basis for NP-ellipsis. This section focuses on cases where NP-ellipsis appears to be triggered by a relative clause.

3.1. Saito, Lin and Murasugi (2008)

Based on the comparative study of Chinese and Japanese relative clauses, Simpson (2002) and SL&M claim that Chinese relative clauses are of Kaynean (1994) type. The essence of their proposal is illustrated by the example in (14).²

- (14) [[Wo zuotian kanjian] de nanhai] bi [[ni zuotian kanjian] de
 I yesterday see DE boy than you yesterday see DE
(nanhai) geng youqian.
 boy more rich
 ‘The boy I saw yesterday is richer than the boy you saw yesterday.’
 (SL&M: 263)

Under the Simpson–SL&M proposal, the boldfaced DP has the structure given in (15).



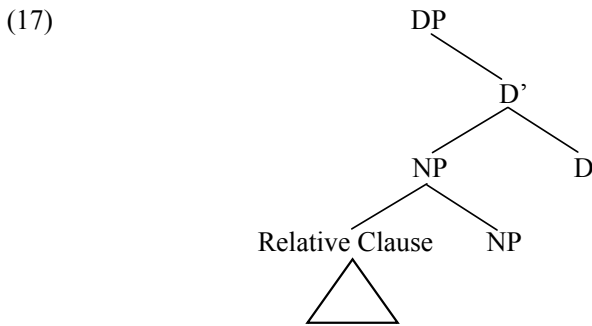
In (15), first, the relative head NP *nanhai* ‘boy’ is raised out of the relative clause TP to CP SPEC, as shown in (16a). Second, *de*, which is generated in C, is raised to D, which makes the SPEC’s of DP and CP “equidistant” from the CP complement position (Lin, Murasugi, and Saito 2001).³ The head-movement in point is illustrated in (16b). Finally, the relative clause TP is raised to DP SPEC, as shown in (16c).

- (16) a. [DP [CP [NP **nanhai**]₁ [C [TP ni zuotian kanjian **t₁**] de]]]

- b. [DP [D **de**₂ [CP [NP nanhai]₁ [C [TP ni zuotian kanjian t₁ t₂]]]]]
- c. [DP [TP ni zuotian kanjian t₁]₃ [D de₂ [CP [NP nanhai]₁ [C t₃ t₂]]]]]

Notice that Chinese relative clauses can trigger NP-ellipsis (see also Aoun and Li 2003; Huang, Li, and Li 2009). For example, the boldfaced NP *nanhai* ‘boy’ can be elided in (14). Under this Kaynean approach to Chinese relative clauses, the NP-ellipsis in question does not pose any problem for the argument/adjunct asymmetry introduced in Section 1, since TP is in fact a complement of C in (15).

SL&M argue that Japanese relative clauses, on the other hand, are base-generated in an NP-adjoined position, as illustrated in (17):⁴



Accordingly, an NP-adjoined relative clause cannot move to DP SPEC due to the prohibition against A'-to-A movement (Chomsky 1973; May 1979; Fukui 1993, among others). Thus, Japanese relative clauses cannot satisfy the DP SPEC requirement. As a result, NP-ellipsis is not available with relative clauses in Japanese, as shown in (6), repeated here as (18):

- (18) [[Taroo-ga kinoo atta] hito]-wa yasashii ga, [[Hanako-ga
 -NOM yesterday saw person-TOP kind though -NOM
 kinoo atta] *(hito)]-wa kowai.
 yesterday saw person-TOP scary

‘The person Taro saw yesterday is kind, but the person Hanako saw yesterday is scary.’ (SL&M 2008: 263)

If SL&M’s proposal is accurate, the remaining task is to account for the grammaticality of examples such as (7b), repeated here as (19), which appear to support the hypothesis that relative clauses do license NP-ellipsis in Japanese:

⁴ See also Murasugi (2000a, b).

- (19) [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo yesterday was done operation-TOP simple was though today yoteisareteiru]-**no**]-wa kanari muzukashii.
is planned-NO-TOP very difficult

‘(lit.) The operation that was done yesterday was simple, but ~~the operation~~ that is planned today is very difficult.’

Between the two remaining possibilities; (10b) and (10ci), highlighted in Section 2, we are led to choose the former under SL&M; no NP-ellipsis is possible with Japanese relative clauses, and thus, the *no* attached to a relative clause must be the pronominal *no*.

Notice that the pronominal *no* requires the NP-modifier, as shown in the contrast between (20a, b):⁵

- (20) a. Taroo-ga [NP [AP takai] no]-o katta.
-NOM expensive one-ACC bought

‘Taro bought an expensive one.’

- b. *Taroo-ga [NP no]-o katta.
-NOM one-ACC bought

‘(lit.) Taro bought an one.’

If Japanese relative clauses are adjoined to NP, it comes as no surprise that they can also license the pronominal *no*. Thus, the licensing of the pronominal *no* is also naturally accommodated under SL&M’s proposal.

3.2. Takahashi (2011)

Takahashi (2011) argues that Japanese relative clauses do, however, license NP-ellipsis; examples of which are repeated here as (21a, b):

- (21) a. [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo yesterday was done operation-TOP simple was though today yoteisareteiru]-no]-wa kanari muzukashii.
is planned-NO-TOP very difficult

‘(lit.) The operation that was done yesterday was simple, but ~~the operation~~ that is planned today is very difficult.’

⁵ See Murasugi (1991) for relevant discussion.

- b. ?[[amerika-ga nihon-to kizuita] kankei]-wa ryookoo da ga,
 America-NOM Japan-with built relation-TOP good is though
 [[*pro* tyuugoku-to kizukoo-to-shiteiru]-no]-wa saki-ga
 China-with trying to build-NO-TOP future-NOM
 futoomei da.
 not obvious is

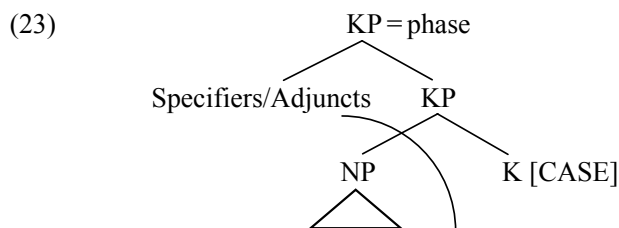
‘The relation that the United States built with Japan has been good, but ~~the relation~~ that she is trying to build with China is unclear about its future.’

As indicated with the brackets, *syujyutsu* ‘operation’ and *kankei* ‘relation’ can be absent. Here, in order to exclude the possibility in (10b), Takahashi, following SL&M, uses the abstract nouns in his examples, assuming Kamio’s (1983) condition that abstract nouns cannot be replaced by the pronominal *no*.⁶ Accordingly, for Takahashi, (21a, b), having the abstract nouns as the target of the ellipsis operation, necessarily involve NP-ellipsis.

Takahashi accounts for the availability of NP-ellipsis with Japanese relative clauses, based on three assumptions:

- (22) a. A head with a Case-feature is a phase head.
 b. Only complements of phase heads can undergo ellipsis.
 c. Phase heads require edges when phase head complements undergo ellipsis.
 (Takahashi 2011: 158)

How Takahashi’s proposal works is illustrated in (23):

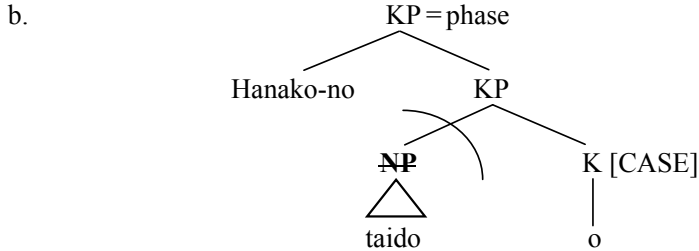


First, Takahashi assumes that Kase Phrase (KP) is the highest nominal projection headed by a Case marker with a Case feature, [CASE], which needs to be valued. Second, some element must be adjoined to KP when NP-ellipsis is intended. If these two conditions are met, the NP complement can be elided. For instance, in (24a), the word sequence *Hanako-no taido-o* is assumed to have the structure given in (24b):

⁶ But see Section 6.

- (24) a. Jiroo-wa [Taroo-no [taido]]-o hihanshita ga, Yoshio-wa
 -TOP -GEN attitude-ACC criticized though -TOP
 [Hanako-no [_{NP} ~~taido~~]]-o hihanshita.
 -GEN attitude-ACC criticized

‘Jiro criticized Taro’s attitude, but Yoshio criticized Hanako’s.’



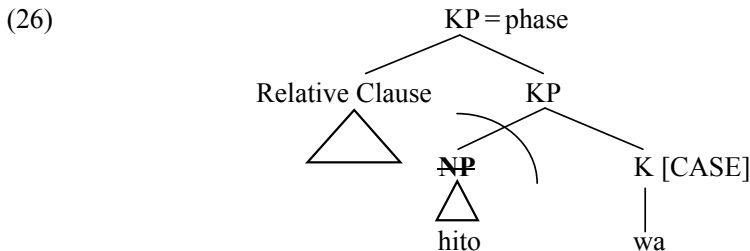
In (24b), the ACC Case marker projects KP with [CASE], and *Hanako-no* is adjoined to KP. As a result, the NP *taido* can be elided.⁷

Importantly, Takahashi proposes that not only arguments but also adjuncts can act as a KP-adjoined element that licenses NP-ellipsis, and therefore, relative clauses should also license NP-ellipsis. According to Takahashi, this expectation is fulfilled, as already shown in (7b) and (8b). However, as the ungrammaticality of (25) shows, the prediction is not quite so straightforward:

- (25) *[[Taroo-ga kinoo atta] hito]-wa yasashii ga,
 -NOM yesterday saw person-TOP kind though
 [[Hanako-ga kinoo atta] ~~hito~~]-wa kowai.
 -NOM yesterday saw person-TOP scary

‘The person Taro saw yesterday is kind, but ~~the person~~ Hanako saw yesterday is scary.’

Notice the lack of an obvious difference between (24b) and (26) below:



⁷ Takahashi (2011) also provides an alternative account for the availability of NP-ellipsis under the assumption that Genitive Case is structural. Although this alternative may have important implications for the framework he assumes, this revision is not crucial for the purpose of this paper.

Observing the ungrammaticality of (25), Takahashi proposes that relative clauses (when they are not followed by *no*) cannot license NP-ellipsis (Takahashi 2011: 188). In short, for Takahashi, (25) is ungrammatical not because Japanese relative clauses cannot trigger NP-ellipsis, but because the Genitive Case marker *no* is not attached to the relative clause. As expected, (25) drastically improves if *no* is attached to the relative clause, as shown in (27):

- (27) [[Taroo-ga kinoo atta] hito]-wa yasashii ga,
 -NOM yesterday saw person-TOP kind though
 [[Hanako-ga kinoo atta]-**no**]-wa kowai.
 -NOM yesterday saw-NO-TOP scary

‘The person Taro saw yesterday is kind, but ~~the person~~ Hanako saw yesterday is scary.’

Accordingly, Takahashi suggests a curious restriction on NP-ellipsis: KP-adjoined elements must bear Genitive Case ‘only’ when they license NP-ellipsis. A question naturally arises as to why Genitive Case is required when the NP is elided, and it is prohibited when the NP remains overt, as shown in (28).

- (28) *[[Taroo-ga kinoo atta] hito]-wa yasashii ga,
 -NOM yesterday saw person-TOP kind though
 [[Hanako-ga kinoo atta]-**no** hito]-wa kowai.
 -NOM yesterday saw-NO person-TOP scary

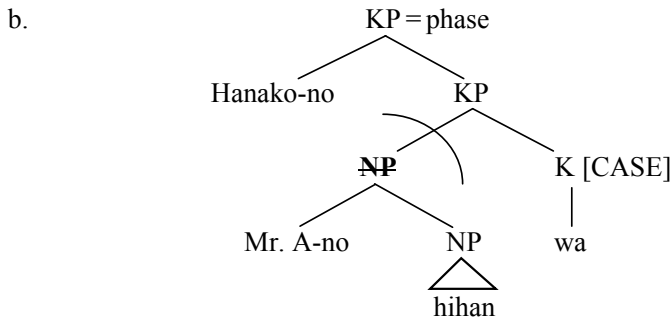
‘The person Taro saw yesterday is kind, but the person Hanako saw yesterday is scary.’

Another curious condition Takahashi proposes is that when two or more elements which can be adjoined to KP, are present, the lower one can be adjoined to NP. For instance, in (29a), *A-san-no* ‘Mr. A’s’ must be located within NP, as shown in (29b), so that it can be deleted with the rest of the material in NP.

- (29) a. [Hanako-no A-san-no hihan]-wa ii ga, [Taroo-no ~~A-san-no~~
 -GEN Mr. A-GEN criticism-TOP good though -GEN Mr. A-GEN
~~hihan~~]-wa yoku-na-i.
 criticism-TOP not good

‘Hanako’s criticisms of Mr. A is good, but Taro’s ~~criticisms of Mr. A~~ is not.’

(Takahashi 2011: 161)



Under Takahashi's proposal, we are therefore left with another question of why such a condition holds.

3.3. Summary

SL&M propose that only arguments can trigger NP-ellipsis while Takahashi argues that not only arguments but also adjuncts license NP-ellipsis. Accordingly, the *no* attached to the relative clause receives different analyses; it must be the pronominal *no* under SL&M's proposal whereas it is the Genitive Case marker under Takahashi's proposal. In the next three sections, we present three arguments supporting SL&M's proposal that NP-ellipsis cannot be executed with a relative clause as its trigger.

4. Antecedents

In this section, we focus on how the antecedent is determined in cases where NP-ellipsis appears to have taken place. Specifically, we examine whether split and non-linguistic antecedents are acceptable and whether sloppy interpretation is available in the cases under question.

4.1. Split and Non-Linguistic Antecedents

The first argument in favor of SL&M's proposal comes from the availability of split and non-linguistic antecedents.⁸ Notice that VP-ellipsis in English, for example, does not allow split antecedents, as shown in (30):

(30) Taro can swim fast, and Hanako can run fast. *Jiro can [_{VP} *e*], too.

⁸ The two tests that are used in this section are owed to Kadowaki (2005). Kadowaki's purpose was to show that Japanese NP-ellipsis in general makes use of the schematic structure given in (10cii), repeated here as (i):

(i) [[_{RC} ...]-no *pro*] (no = Genitive Case marker)

We, however, do not share his conclusion, and instead, assume with Murasugi (1991) that (10cii) is not tenable in Japanese NP-ellipsis. (see also Section 2)

The elided VP cannot mean that Jiro can both swim and run fast. By the same token, NP-ellipsis also does not allow split antecedents, as shown in (31):

- (31) Taro's book of physics was very expensive, and Hanako's book of chemistry was also very expensive. *Jiro's [NP *e*] were both rather cheap, too.

The elided NP cannot be interpreted as Jiro's book of physics and his book of chemistry. These examples show that the unavailability of split antecedents is an indication that ellipsis takes place.

Now, if what appears to be Japanese NP-ellipsis with a relative clause is a genuine instance of NP-ellipsis, we predict that split antecedents are not acceptable. This prediction, however, is not borne out, as shown in (32):

- (32) [(sensei-ga taihen oisogashii-node,) [[raisyuu-no Tanaka-sensei-no
Prof. -NOM very busy-because next week-GEN -Prof.-GEN
kooen]-wa ichi-ji-kan-o yoteishiteiru]]. [sono ato-no
lecture-TOP one-hour-period-ACC has scheduled that after-GEN
kyoodoo kenkyuu-nikansuru uchiawase]-mo ichi-ji-kan-o yoteishiteiru.
joint research- concerning meeting-also one-hour-period-ACC has scheduled

ippoo, [[Sato-sensei-ga ohikiuke-ni natta]-no]-wa
on the other hand -Prof.-NOM accepted -NO-TOP
ni-ji-kan-zutsu-ga yoteisareteiru.
two-hour-period-DIST-NOM is scheduled

‘(lit.) Because Prof. Tanaka has been very busy, his lecture next week is scheduled to be (just) one hour long. The meeting concerning their joint research after that is also scheduled to be one hour long. On the other hand, ~~the lecture and the meeting concerning their joint research~~ that Prof. Sato has accepted to be responsible for are both scheduled to be two hour long.’

Importantly, the sentence concerning Prof. Sato contains the distributive affix *zutsu*, which requires a plural element to distribute over; accordingly, as given in the English translation, this sentence means that Prof. Sato is planning to give a two-hour lecture and a two-hour meeting regarding the joint research project. This example therefore shows that what appears to be a case with NP-ellipsis with a relative clause permits split antecedents. It is not clear how this fact can be accommodated under Takahashi's NP-ellipsis-based proposal. Notice that the parallelism requirement for ellipsis cannot be met in (32), and the entities under question must be identified contextually.

There are even cases where no linguistic antecedent is present, and the sentences remain grammatical, as exemplified in (33):

(33) (Context)

It was the day for a meeting to decide a topic for the joint research project. After the meeting, one student asked his friends:

[[Kita-san-ga teianshita]-**no**]-wa doo omotta. muzukashi-sugiru-yo-na.
 -Mr.-NOM proposed-NO-TOP how thought difficult-too

‘What did you think about ~~the topic~~ that Mr. Kita proposed? It’s too difficult, isn’t it?’

In (33), what Mr. Kita proposed is a possible topic for the joint research project. No obvious linguistic antecedent is present here, and the sentence is still fully acceptable. This example thus constitutes further support for the view that the interpretation of what appears to be NP-ellipsis triggered by a relative clause is context-dependent, and the antecedent does not have to be linguistically present.

In short, the fact that the availability of split and non-linguistic antecedents in examples with what appears to be NP-ellipsis triggered by a relative clause shows that independent of whether a genuine NP-ellipsis is available with Japanese relative clauses, the option of the pronominal *no*, that is, (10b) in Section 2, must be available.

4.2. Strict/sloppy Interpretation

The claim that the antecedent is determined contextually is also supported by the fact that there are cases where sloppy interpretation is difficult to obtain with the cases under question.

Notice first that typical NP-ellipsis examples are ambiguous between strict and sloppy interpretation, although one interpretation is favored over the other depending on context. For example, (34) is ambiguous between the two readings under question.

(34) [Taroo-no [[jibun-no otooto]-no hihan]]-wa ii ga,
 -GEN self-GEN younger brother-GEN criticism-TOP good though
 [Jiroo-no *e*]-wa yoku-na-i.
 -GEN -TOP not good

‘Taro’s criticisms of his own younger brother is good, but Jiro’s is not.’

In (34), the second conjunct can describe the situation in which Jiro also criticized Taro’s younger brother; this is an instance of strict interpretation, but can also mean that Jiro also criticized his own younger brother, and represents sloppy interpretation.

The ambiguity in (34) is reminiscent of the strict/sloppy ambiguity that we observe in VP-deletion. For example, (35b), which follows (35a), is ambiguous between the same two types of interpretation:

- (35) a. Hanako criticized her idea.
 b. Kazuko did [_{VP} e], too.

(35b) can mean that Kazuko also criticized Hanako's idea (strict reading). Alternatively, it can also refer to the situation that Kazuko also criticized her own idea (sloppy reading). Thus, the parallelism between (34) and (35b) constitutes evidence for the hypothesis that NP-ellipsis is involved in (34).

Provided that the presence of the sloppy interpretation indicates that ellipsis has taken place, we predict that if Japanese relative clauses can trigger NP-ellipsis, sloppy interpretation be present, parallel to (35b). With this prediction in mind, we are now ready to examine the availability of sloppy reading in cases of what appears to be NP-ellipsis triggered by a relative clause.

4.2.1. Japanese Relative Clauses

(36) is a case in point:⁹

⁹ (i) represents the case where a phrase containing *jibun* 'self' precedes a relative clause:

- (i) Taroo-wa [[[jibun-no ani]-no [[LI-ni saitaku-sareta] ronbun]]-ga ichiban da]-to
 -TOP self-GEN elder brother-GEN -by was accepted paper-NOM best is-that
 omotteiru.
 think

'Taro thinks that his own elder brother's paper that was accepted by LI is the best.'

The reflexive necessarily refers to Taro here. Of our interest is which example in (ii) can follow (i) describing the situation in which Jiro also thinks that his own elder brother's paper in L(inguistic) I(nquiry) is the best. (iia, b) clearly allow this sloppy interpretation. (iic) is a case in point.

- (ii) a. Jiroo-mo [[[jibun-no ani]-no [[LI-ni saitaku-sareta] ronbun]]-ga
 -also self-GEN elder brother-GEN -by was accepted paper-NOM
 ichiban da]-to omotteiru.
 best is-that think

'Jiro also thinks that his own elder brother's paper that was accepted by LI is the best.'

- b. Jiroo-mo [[[jibun-no ani]-no [[LI-ni saitaku-sareta]-no]]-ga
 -also self-GEN elder brother-GEN -by was accepted-NO-NOM
 ichiban da]-to omotteiru.
 best is-that think

- c. Jiroo-mo [[[LI-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -also -by was accepted-NO-NOM best is-that think

The interpretation that the native speakers of Japanese reported is that Jiro also thinks that someone's paper in LI is the best. The most salient interpretation is the strict interpretation. However, in the context in which Jiro believes his own elder brother the best linguist, (iic) could be about Jiro's own

elder brother's paper in LI. In other words, (iic) can be about the paper in LI written by someone salient in the given context. Also, (iiia, b) refer to Jiro's own elder brother's paper in JEAL whereas (iiic) is about the paper in JEAL written by someone under discussion.

- (iii) a. Jiroo-wa [[jibun-no ani]-no [[JEAL-ni saitaku-sareta] ronbun]]-ga
 -TOP self-GEN elder brother-GEN -by was accepted paper-NOM
 ichiban da]-to omotteiru.
 best is-that think
 'Jiro thinks that his own elder brother's paper that was accepted by JEAL is the best.'
- b. Jiroo-wa [[[jibun-no ani]-no [[JEAL-ni saitaku-sareta]-no]]-ga
 -TOP self-GEN elder brother-GEN -by was accepted-NO-NOM
 ichiban da]-to omotteiru.
 best is-that think
- c. Jiroo-wa [[[JEAL-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -TOP -by was accepted-NO-NOM best is-that think

Suppose that (iva, b) were the structure of (iic) and (iiic). Then, under the hypothesis that Japanese relative clauses can trigger NP-ellipsis, we are forced to assume that these two examples must involve "deletion" of discontinuous elements:

- (iv) a. Jiroo-mo [[~~jibun-no~~—~~ani-no~~ [[LI-ni saitaku-sareta]-no ~~ronbun~~]]-ga
 -also self-GEN elder brother-GEN -by was accepted-NO paper-NOM
 ichiban da]-to omotteiru.
 best is-that think
- b. Jiroo-wa [[~~jibun-no~~—~~ani-no~~ [[JEAL-ni saitaku-sareta]-no ~~ronbun~~]]-ga
 -TOP self-GEN elder brother-GEN -by was accepted-NO paper-NOM
 ichiban da]-to omotteiru.
 best is-that think

Given the reasonable assumption that discontinuous elements cannot be the target of an ellipsis operation, (iva, b) cannot be the structure of (iic) and (iiic). Rather, we have to assume that the reflexive is not present in (iic) and (iiic), as shown in (va, b):

- (v) a. Jiroo-mo [[[LI-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -also -by was accepted-NO-NOM best is-that think
- b. Jiroo-wa [[[JEAL-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -TOP -by was accepted-NO-NOM best is-that think

Accordingly, the NP *ronbun* may be deleted. If (va,b) are correct structures for (iic) and (iiic), it is not surprising that the paper in LI or JEAL could be written by someone salient in the context, consistent with the judgments of the subjects.

Under the SL&M's proposal, on the other hand, we assume that (iic) and (iiic) are instances of the pronominal *-no*. Consequently, the author of the paper in LI or JEAL must also be given contextually. Thus, The word sequence with *jibun* 'self' preceding a relative clause does not provide any evidence for either of the proposals.

- (36) Taroo-wa [[[LI-ni saitaku-sareta] [[jibun-no ani]-no ronbun]]-ga
 -TOP -by was accepted self-GEN elder brother-GEN paper-NOM
 ichiban da]-to omotteiru.
 best is-that think

‘Taro thinks that his own elder brother’s paper that was accepted by LI is the best.’

As a continuation to (36), (37a-c) and (38a-c) are all natural:

- (37) a. Jiroo-mo [[[LI-ni saitaku-sareta] [[jibun-no ani]-no ronbun]]-ga
 -also -in was accepted self-GEN elder brother-GEN paper-NOM
 ichiban da]-to omotteiru.
 best is-that think

‘Jiro also thinks that his own elder brother’s paper that was accepted by LI is the best.’

- b. Jiroo-mo [[[LI-ni saitaku-sareta] [[jibun-no ani]-no]]-ga
 -also -by was accepted self-GEN elder brother-NO-NOM
 ichiban da]-to omotteiru.
 best is-that think

- c. Jiroo-mo [[[LI-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -also -by was accepted-NO-NOM best is-that think

- (38) a. Jiroo-wa [[[JEAL-ni saitaku-sareta] [[jibun-no ani]-no
 -TOP -by was accepted self-GEN elder brother-GEN
 ronbun]]-ga ichiban da]-to omotteiru.
 paper-NOM best is-that think

‘Jiro thinks that his own elder brother’s paper that was accepted by JEAL is the best.’

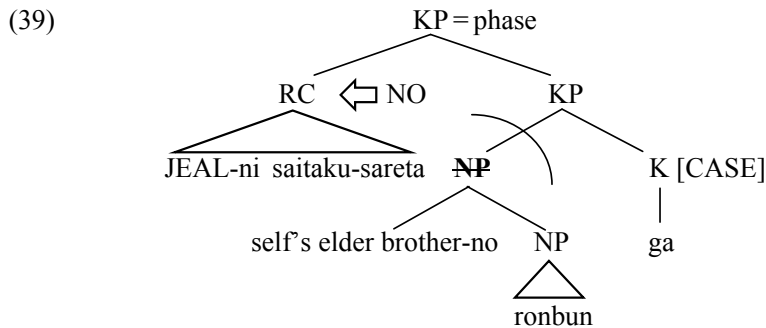
- b. Jiroo-wa [[[JEAL-ni saitaku-sareta] [[jibun-no ani]-no]]-ga
 -TOP -by was accepted self-GEN elder brother-NO-NOM
 ichiban da]-to omotteiru.
 best is-that think

- c. Jiroo-wa [[[JEAL-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -TOP -by was accepted-NO-NOM best is-that think

However, there is a difference between (37a, b) and (38a, b) on the one hand, and (37c) and (38c) on the other. The former only allow sloppy interpretation due to the presence of the reflexive *jibun*; Jiro refers to his own elder brother’s paper, accepted by LI or JEAL. In contrast, according to the informants, the latter refer to someone’s paper in LI or JEAL. The most likely interpretation as a continuation of (36) is that Jiro is also thinking about Taro’s

elder brother's paper. Of significance is the fact that it is very difficult to understand these sentences as Jiro referring to his own elder brother's paper. That is, (37c) and (38c) do not allow sloppy interpretation as easily as the typical NP-ellipsis example in (34) does.

The fact that the sloppy interpretation is difficult to obtain in (37c) and (38c) is surprising under Takahashi's NP-ellipsis-based proposal. For example, Takahashi would assign the structure in (39) to the embedded subject of (38c):

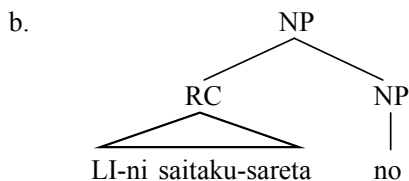


As highlighted in Section 3.2, Takahashi assumes that when NP-ellipsis is intended, KP-specifiers/adjuncts can be inside NP, being a target of the ellipsis operation. Thus, in (39), it is of no surprise that *jibun-no ani-no* ‘self-GEN elder brother-GEN’ can also be elided. Consequently, the unavailability of the sloppy reading in (37c) and (38c) constitutes evidence against his approach.

In contrast, under SL&M's proposal, (37c) and (38c) are instances of the pronominal *no*. Thus, the embedded subject of (37c), repeated here as (40a), for example, should have the structure given in (40b):

- (40) a. Jiroo-mo [[[LI-ni saitaku-sareta]-no]-ga ichiban da]-to omotteiru.
 -also -by was accepted-NO-NOM best is-that think

‘Jiro also thinks that the one that was accepted by LI is the best.’



- c. the one that was accepted by LI

Given that (40b) is the Japanese counterpart of (40c), it comes as no surprise that the author of the paper must be identified from the context. In the above examples, (36) introduces Taro's elder brother's paper into the context, and accordingly, the most salient interpretation of the examples in (37c) and (38c) would be about Taro's elder brother's paper(s). At the

same time, if the right context is conceived of, the pseudo sloppy interpretation, which a few of our informants allowed, may also be anticipated.

It is worth noting at this point that the clear-cut sloppy interpretation is not available in (37c) and (38c) suggests that Japanese relative clauses do not make use of Kaynean relative-clause formation (see Section 3.1). In the following section, we would like to develop our interpretations by comparing the behavior of Japanese relative clauses with their Chinese counterparts. Of importance here is the proposal made by SL&M and supported by Miyamoto (2010) that Chinese relative clauses do trigger NP-ellipsis, making use of Kaynean head raising. If this is accurate, we predict that the Chinese counterparts of (37c) and (38c) permit the sloppy interpretation, in contrast to these Japanese examples.

4.2.2. Chinese Relative Clauses

Cases in point are given in (42a, b) and (43a, b), which follow (41): (42a) is the Chinese counterpart of (37a) whereas (42b) is the Chinese counterpart of (38a).¹⁰

- (41) Zhangsan renwei [[[bei LI jieshou de] ziji-de gege-de lunwun]
 think PASS LI accept DE self-GEN elder brother-DE paper
 shi zui-hao-de].
 be best

‘Zhangsan thinks that his elder brother’s paper which is accepted by LI is the best.’

- (42) a. Lisi ye renwei [[[bei LI jieshou de] ziji-de gege-de
 too think PASS LI accept DE self-GEN elder brother-DE
 lunwun] shi zui-hao-de].
 paper be best

‘Lisi also thinks that his elder brother’s paper which is accepted by LI is the best.’

- b. Lisi renwei [[[bei JEAL jieshou de] ziji-de gege-de
 think PASS JEAL accept DE self-GEN elder brother-DE
 lunwun] shi zui-hao-de].
 paper be best

‘Lisi thinks that his elder brother’s paper which is accepted by JEAL is the best.’

Here, all the examples contain the reflexive *ziji* ‘self’ without NP-ellipsis, accordingly, sloppy interpretation is forced in these examples.

Of importance is the fact that sloppy interpretation is also available in (43a, b), the Chinese counterparts of (37c) and (38c):

¹⁰ I thank J. Lin for Chinese data and their grammatical judgments.

- (43) a. ?Lisi ye renwei [[bei LI jieshou de] shi zui-hao-de].
too think PASS LI accept DE be best

‘Lisi also thinks that ~~his own elder brother’s paper~~ which is accepted by LI is the best.’

- b. ?Lisi renwei [[bei JEAL jieshou de] shi zui-hao-de].
think PASS JEAL accept DE be best

‘Lisi thinks that ~~his own elder brother’s paper~~ which is accepted by JEAL is the best.’

We take the contrast between Japanese and Chinese relative clauses with respect to the availability of sloppy interpretation to be further support for SL&M’s hypothesis that there is a structural difference in relative clauses between these two languages. For our purpose, this cross-linguistic contrast with respect to the availability of sloppy interpretation provides additional support for the hypothesis that Japanese relative clauses do not trigger NP-ellipsis.

4.3. Summary

We have provided evidence that split and non-linguistic antecedents are allowed in cases with what appears to involve NP-ellipsis with Japanese relative clauses. We have also shown that Japanese relative clauses do not readily allow sloppy interpretation in some cases where NP-ellipsis appears to have taken place. By way of contrast, Chinese relative clauses do permit the interpretation under question in exactly the same context. We therefore conclude that Japanese relative clause do not license NP-ellipsis while their Chinese counterparts can do so. This contrast is straightforwardly accounted for under Simpson/SL&M’s proposal.

5. Nominal-Internal Distributive Interpretation

We turn to another argument to support the hypothesis that Japanese relative clauses do not license NP-ellipsis. This time, the argument comes from the availability of nominal-internal distributive interpretation, discussed in Miyamoto (2009).

5.1. Relative Clause-based Analysis of Nominal-Internal Distributive Interpretation

This section begins with an explanation of what nominal-internal distributive interpretation is, along with Miyamoto’s (2009) analysis. As with cases with NQs, NQs with *zutsu* can appear in three different positions, as shown in (44):

- (44) a. Taroo-ga ni-satsu-zutsu-no hon-o katta (-koto)
-NOM two-CL-DIST-GEN book-ACC bought(-fact)

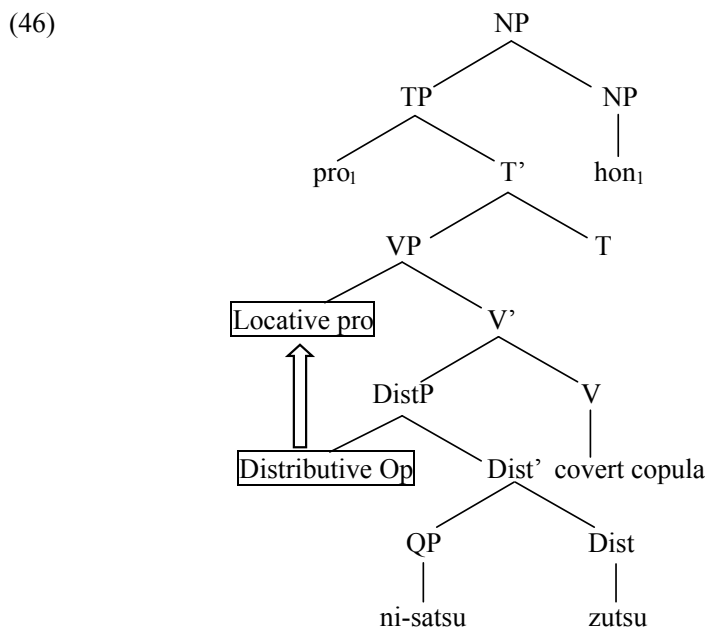
‘Taro and Hanako bought two books each.’

- b. Taroo-ga hon ni-satsu-zutsu-o katta (-koto)
 -NOM book two-CL-DIST-ACC bought(-fact)
- c. Taroo-ga hon-o ni-satsu-zutsu katta (-koto)
 -NOM book-ACC two-CL-DIST bought(-fact)

These examples permit various interpretations including (45a) and (45b). Of significance is the fact that (45c) is available only in (44a). Miyamoto names the interpretation in (41c) ‘the nominal-internal distributive interpretation.’

- (45) a. Taro bought two books each three weeks ago and last week.
 b. Taro bought two books each at the bookstore in New York and the bookstore in Boston.
 c. Taro bought the books in twos.

Given the assumption that the distributive affix always requires an element to distribute over in syntax, the nominal-internal distributive interpretation, too, necessitates such an element. Miyamoto claims that, under the interpretation in (45c), the distribution over the covert locative *pro* takes place within the object NP. Given the assumption that locative *pro* is an argument of Tense (with an eventive verb), the presence of locative *pro* requires the presence of TP. This amounts to saying that *ni-satsu-zutsu* ‘two-CL-DIST’ is a relative clause. Accordingly, the structure of the object NP is as shown in (46):



Within the relative clause TP, the distributive operator is raised and adjoined to the locative *pro*, which enables the distribution of sets of two books over the locations to be possible.

Miyamoto argues that this relative clause realizes the nominal-internal distributive interpretation in the same way that distributive interpretation is possible in (47) in spite of the fact that there is no overt NP over which distribution of sets of two books can take place.

- (47) hon-ga ni-satsu-zutsu da.
book-NOM two-CL-DIST is

‘The books are in twos.’

5.2. Over-Generation of Nominal-Internal Distributive Interpretation

Considering that the presence of nominal-internal distributive reading indicates that the NQ-*zutsu* forms a relative clause, we examine (48):

- (48) zenzen ure-nai-node, sono-mise-wa, (san-bon-zutsu-no enpitsu-de-wa naku,) at all sell-not-because that-store-TOP three-CL-DIST-NO pencil-for-TOP not go-hon-zutsu-no enpitsu-no henkyaku-o kimeta. five-CL-DIST-NO pencil-GEN return-ACC decided

‘That store decided to return the pencils in fives(, not the pencils in threes) because they did not sell well.’

In (48), the intended nominal-internal distributive interpretation is clearly available. This means that *san-bon-zutsu-no* and *go-hon-zutsu-no* form a relative clause in this example.

Now, compare (48) with (49) below:

- (49) zenzen ure-nai-node, sono-mise-wa, (san-bon-zutsu-no enpitsu-de-wa naku,) at all sell-not-because that-store-TOP three-CL-DIST-NO pencil-for-TOP not go-hon-zutsu-no henkyaku-o kimeta. five-CL-DIST-NO return-ACC decided

‘(intended) That store decided to return the pencils in fives(, not the pencils in threes) because they did not sell well.’

Of significance is the fact that (49) does not allow the intended nominal-internal distributive interpretation. The interpretation salient in this example is that the store decided to return five pencils a time. The question to be raised here is why the intended nominal-internal distributive interpretation is prohibited in this example. This question is particularly important since under the NP-ellipsis-based account, i.e., Takahashi’s proposal, we could interpret (49) as having the NP *enpitsu* deleted in (50):

- (50) zenzen ure-nai-node, sono-mise-wa, (san-bon-zutsu-no enpitsu-de-wa naku,) at all sell-not-because that-store-TOP three-CL-DIST-NO pencil-for-TOP not [go-hon-zutsu-no ~~enpitsu~~] henkyaku-o kimeta. five-CL-DIST-NO pencil return-ACC decided

The following determines how such an interpretation might be possible.

What needs clarifying in (50) is the status of the *no* attached to *go-hon-zutsu*. Given Takahashi's condition on NP-ellipsis that KP adjuncts must bear Genitive Case when they survive ellipsis, *go-hon-zutsu*, being a relative clause, must receive Genitive Case. Thus, under his proposal, *no* must be an instance of the Genitive Case marker. This is in accordance with Watanabe's (2010) suggestion that the appearance of *no* is regulated by the morphological properties. As acknowledged in SL&M's note 1, cited by Watanabe, *No-Insertion Rule*, shown in (51), is morphological in nature: (-tense) means no overt realization of tense. Accordingly, this results in the contrast between (52a) and (52b):

(51) [NP ... XP(-tense) N^α] [NP ... XP(-tense) Mod N^α], where Mod = no

(52) a. Taroo-ga syujinkoo-no monogatari
-NOM protagonist-NO story

‘a story in which Taro is the protagonist’

b. Taroo-ga syujinkoo dearu(*-no) monogatari
-NOM protagonist is -NO story

(SL&M: 250)

The same contrast obtains with NQ+*zutsu*, as shown in (53a, b):

(53) a. go-hon-zutsu-no enpitsu
five-CL-DIST-NO pencil

‘the pencils in fives’

b. go-hon-zutsu dearu(*-no) enpitsu
five-CL-DIST are -NO pencil

We might then assume that *go-hon-zutsu* is subject to (51) and the Genitive Case marker, *no*, is attached to this relative clause.

Furthermore, provided that the overt/covert distinction plays a crucial role in (51), if the NP *enpitsu* is elided, there seems no reason to supply *no* to this deleted NP. This is parallel to the fact that (54b), but not (54c), can follow (54a):¹¹

¹¹ Based on the contrast between (ia) and (ib), Watanabe (2010) suggests that when two linking elements exist, one of them must be deleted.

(i) a. go-nin-no mendoo-o mi-nakerebanaranai.
five-CL-NO care-ACC see-must

‘I have to take care of five (students)’

- (54) a. Taroo-wa Hanako-no sankoosyo-o karita.
 -TOP -NO reference book-ACC borrowed
 ‘Taro borrowed Hanako’s reference book.’
- b. Taroo-wa (kanojyo-no) nooto-mo karita.
 -TOP her -NO notebook-also borrowed
 ‘Taro borrowed her notebook.’
- c. *Taroo-wa-no nooto-mo karita.
 -TOP-NO notebook-also borrowed

Accordingly, under the NP-ellipsis-based account, (48) should be changed to (49) with the relative head elided, as shown in (50). Since *go-hon-zutsu-no* constitutes a relative clause, we now incorrectly predict that the nominal-internal distributive interpretation be available with the word order sequence given in (49) as well as in (48). Accordingly, the fact that the intended distributive reading is absent in (49) provides another argument against Takahashi’s NP-ellipsis-based account.¹²

-
- b. *go-nin-no-no mendoo-o mi-nakerebanaranai.
 five-CL-NO-NO care-ACC see-must

¹² Notice that the intended nominal-internal distributive interpretation is available in (i):

- (i) zenzen ure-nai-node, sono-mise-wa, (san-bon-zutsu-no-de-wa naku,)
 at all sell-not-because that-store-TOP three-CL-DIST-one-for-TOP not
 go-hon-zutsu-no-no henkyaku-o kimeta.
 five-CL-DIST-one-GEN return-ACC decided

‘That store decided to return the ones in fives(, not the ones in threes) because they did not sell well.’

It is not clear from Takahashi’s discussion whether he allows the pronoun *no* to appear in this particular example. Conversely, under SL&M, a relative clause, being adjoined to NP, should be able to license pronoun *no*, as noted in Section 3.1: accordingly, *go-hon-zutsu* can form a relative clause in (i) with the structure in (ii) below, and this example permits the nominal-internal distributive interpretation.

- (ii) [NP [NP [RC go-hon-zutsu]-no]-no henkyaku]
 five-CL-DIST-NO-NO return

The *no* that attaches to the relative clauses is an instance of pronominal *no*. Here the *NO*-reduction rule (Kamio 1983) deletes the Genitive *no*, attached to the relative clause, as illustrated in (iii):

- (iii) [NP [RC go-hon-zutsu]-~~no~~ no]

Then, the Genitive Case marker *no* is attached to this NP, due to the *NO*-Insertion Rule in (51). In (i), in contrast to (49), therefore, *go-hon-zutsu* can behave as a relative clause; accordingly, the intended interpretation is correctly expected.

Under SL&M, by way of comparison, since NP-ellipsis is not possible with relative clauses, thus with *go-hon-zutsu*, (49) cannot be understood to involve the elision of the NP *enpitsu*. In addition, the floating quantifier option is also excluded in this particular context, given the fact that numeral floating quantifiers in general cannot appear inside the nominal projection. For instance, (55b) is ungrammatical, in contrast to (55a):

- (55) a. Taroo-wa sankoosyo-o san-satsu katta.
 -TOP reference book-ACC three-CL bought
 ‘Taro borrowed Hanako’s reference book.’
- b. *Taroo-wa sankoosyo-no (san-satsu(-no)) henkyaku-o shita.
 -TOP reference book-NO three-CL (-NO) return-ACC did
 ‘Taro returned three reference books.’

Consequently, among the three positions for an NQ with *zutsu* in (44), (49) must be understood as (56) under SL&M:

- (56) zenzen ure-nai-node, sono-mise-wa, (san-bon-zutsu-no enpitsu-de-wa naku,) at all sell-not-because that -store-TOP three-CL-DIST-NO pencil-for-TOP not [*pro go-hon-zutsu*]-no henkyaku-o kimeta.
 five-CL-DIST-NO return-ACC decided
 ‘(intended) That store decided to return the pencils in fives(, not the pencils in threes) because they did not sell well.’

(56) enables a variety of interpretations, but not the nominal-internal distributive interpretation. One possible interpretation is of the distribution of sets of five pencils over times. Crucially, SL&M’s proposal correctly predicts the absence of the nominal-internal distributive interpretation in (49).

5.3. Summary

This section has shown that if relative clauses could trigger NP-ellipsis, the nominal-internal distributive interpretation would be over-generated in sentences such as (49). Under SL&M, what appears to be a case with NP-ellipsis is a case with the schematic structure given in (57):

- (57) [_{DistP} Distributive Op [_{Dist} [_{QP} *pro* NQ]-zutsu]]-Case Marker

Under Miyamoto (2009), this structure correctly predicts the absence of the nominal-internal distributive interpretation.

The fact that the positions available for NQs-*zutsu* are equated to those of NQs implies that what appears to involve NP-ellipsis triggered by a NQ is also an instance of the schematic structure given in (58a) in examples like (58b):

- (58) a. [_{QP} [_Q *pro* NQ]]-Case Marker
 b. [go-nin-no mendoo]-o mi-nakerebanaranai.
 five-CL-GEN care-ACC see-must
 ‘I have to take care of five.’

(Watanabe 2010: 65)

However, the detailed examination of such cases is beyond the scope of this paper, and leaves issues relating to the possibility of QP-triggered NP-ellipsis for future research.¹³

6. Kamio’s (1983) Condition on Pronominal *NO*

The arguments presented in the previous two sections lead to the conclusion that relative clauses cannot trigger NP-ellipsis and the *no* attached to the relative clause in Takahashi’s examples must be analyzed as the pronominal *no*. However, and importantly, Takahashi uses abstract nouns for the target of NP-ellipsis, assuming Kamio’s (1983) condition that states that an abstract noun cannot be replaced by the pronominal *no*. According to Takahashi, therefore, his examples must have involved NP-ellipsis. The purpose of the current section is to reexamine the properties of nouns Takahashi assumes are abstract nouns, and suggests that nothing prevents the pronominal *no* from appearing in Takahashi-type examples.

Kamio (1983) proposes that the pronominal *no* can stand for concrete nouns, but not for abstract nouns. Kamio gives the following examples to illustrate this generalization:

- (59) a. [_{RC} katai sinnen-o motta] hito
 firm conviction-ACC had person
 ‘the person with a firm conviction’
 b. *[_{RC} katai no-o motta] hito
 firm one-ACC have person
 ‘(intended) the one with a firm conviction’

In (59b), the abstract noun *sinnen* ‘conviction’ is replaced by the pronominal *no*, and this NP/DP is ungrammatical.

Based on Kamio’s (1983) restriction on the pronominal *no*, S&M provide examples with an abstract noun for the target of ellipsis. They thus ensure that their examples are genuine instances of NP-ellipsis. One instance in (30), repeated here as (60), is where the abstract noun *hihan* ‘criticism’ is used.

¹³ See Ochi (2012), S&M, SL&M, Takahashi (2011), and Watanabe (2010) for discussion on the availability of NP-ellipsis to be triggered by numeral quantifiers.

- (60) [Taroo-no [jibun-no shinyuu]-no hihan]-wa ii ga,
 -GEN self-GEN close friend-GEN criticism-TOP is good though
 [Jiroo-no e]-wa yoku-na-i.
 -GEN -TOP is not good

‘Taro’s criticisms of his own close friend is good, but Jiro’s is not.’

Given Kamio’s condition, *no* of *Jiroo-no* must be understood as the Genitive Case marker, not the pronominal *no*; NP-ellipsis must have taken place in (60).

In contrast, since relative clauses cannot trigger NP-ellipsis, the pronominal *no* is the only option available in (61b), derived from (61a):

- (61) a. [[Hanako-ga sensei-ni miseta] taido]-wa ii ga,
 -NOM teacher-to showed attitude-TOP good though
 [[Taroo-ga (sensei-ni) miseta] taido]-wa yoku nai.
 -NOM (teacher-to) showed attitude-TOP good not

‘The attitude with which Hanako showed to her teacher is good, but the attitude with which Taro showed to his teacher is not good.’

- b. *[[Hanako-ga sensei-ni miseta] taido]-wa ii ga,
 -NOM teacher-to attend attitude-TOP good though
 [[Taroo-ga (sensei-ni) miseta]-no]-wa yoku nai.
 -NOM (teacher-to) attend-NO-TOP good not

However, the abstract noun *taido* ‘attitude’ cannot be replaced by the pronominal *no* in this example, due to Kamio’s condition. As a result, (61b) is ungrammatical.

Now, the question is why (7b) and (8b), repeated here as (62b) and (63b), are grammatical in spite of the fact that the abstract nouns *syujyutsu* ‘operation’ and *kankei* ‘relation’ are used.

- (62) a. [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo
 yesterday was done operation-TOP simple was though today
 yoteisareteiru] syujyutsu]-wa kanari muzukashii.
 is planned operation-TOP very difficult

‘(lit.) The operation that was done yesterday was simple, but the operation that is planned today is very difficult.’

- b. [[kinoo okonawareta] syujyutsu]-wa kantan datta ga, [[kyoo
 yesterday was done operation-TOP simple was though today
 yoteisareteiru]-no]-wa kanari muzukashii.
 is planned-NO-TOP very difficult

- (63) a. [[amerika-ga nihon-to kizuita] kankei]-wa ryookoo da ga,
 America-NOM Japan-with built relation-TOP good is though
 [[*pro* tyuugoku-to kizukoo-to shiteiru] kankei]-wa saki-ga
 China-with relation-with trying to build relation-TOP future-NOM
 futoomei da.
 unclear is

‘The relation that the United States built with Japan has been good, but the relation that she is trying to build with China is unclear about its future.’

- b. ?[[amerika-ga nihon-to kizuita] kankei]-wa ryookoo da ga,
 America-NOM Japan-with built relation-TOP good is though
 [[*pro* tyuugoku-to kizukoo-to-shiteiru]-no]-wa saki-ga
 China -with trying to build-NO-TOP future-NOM
 futoomei da.
 not obvious is

In this regard, Quirk, Greenbaum, Leech, and Svartvik’s (1985: 299) view that “ But some [abstract non-count nouns] can be reclassified as count nouns where they refer to an instance of a given abstract phenomenon.” appears most relevant; consider, for example, Franklin D. Roosevelt’s 1941 State of the Union Address, proposing ‘four freedoms.’ Similarly, (64) can follow (62b) or (63b):

- (64) [sono futa-tsu-no syujyutsu/kankei]-wa seishitsu-ga mattaku
 this two-CL-GEN operation/relation-TOP characteristics-NOM quite
 kotonaru-kara da.
 different-because is

‘This is because these two operations/relations are quite different in nature.’

(64) shows that *syujyutsu* and *kankei* are counted, and thus, it is quite reasonable that these nouns represent instances. (63b), for instance, refers to two particular instances of relation between nations, and these two instances are compared (Kinsui 1994). Roosevelt’s address and (64), therefore, confirm that when an abstract noun refers to a particular instance of the property under question, the noun no longer behaves as a typical abstract noun. In short, examples such as (62b) and (63b) may not serve as typical examples involving an abstract noun. If so, it is perhaps unsurprising that the pronominal *no* can appear in these examples; if true, these examples do not constitute counter-evidence to SL&M’s proposal

Notice that in (61b), *taido* ‘attitude’ does not refer to particular ‘instances’ associated with this particular concept; accordingly, in contrast to (64), (65) is unacceptable, following (61b):

- (65) *[sono futa-tsu-no taido]-wa seishitsu-ga mattaku
 this two-CL-GEN attitude-TOP characteristics-NOM quite
 kotonaru-kara da.
 different-because is

‘(lit.) This is because these two attitudes are quite different in nature.’

We therefore consider *taido* in (61b) as a genuine instance of abstract nouns. As a result, given Kamio’s condition, the pronominal *no* is not allowed in this example, as shown above.

Importantly, the contrast between (61b) on the one hand, and (62b) and (63b) on the other poses a problem for Takahashi’s NP-ellipsis account. For Takahashi, since all the examples contain ‘abstract’ nouns, there is no obvious reason why the intended NP-ellipsis cannot take place in (61b); the ellipsis under question should be uniformly permitted in all three examples, contrary to fact. Accordingly, the ungrammaticality of (61b) constitutes our third argument supporting SL&M’s proposal based on Kamio’s condition on concrete/abstract distinction of nouns. Within the hypothesis that the *no* attached to a relative clause is the pronominal *no*, there is a means to understand Takahashi’s examples as well as examples containing a genuine abstract noun, although the question of how to account for the notion of ‘instances’ remains open for future research (see, for example, Givon 1993; Guillemin-Flescher 1999).

7. Concluding Remarks

This paper provides three arguments in support of SL&M’s proposal on NP-ellipsis in Japanese: (i) the availability of split and non-linguistic antecedents, and the difficulty of obtaining the sloppy interpretation in some cases; (ii) the over-generation of the nominal-internal distributive interpretation in a certain context; and (iii) the relevance of the concrete/abstract distinction on the pronominal *no*. First, in addition to the availability of split and non-linguistic antecedents, Japanese relative clauses, in contrast to their Chinese counterparts, do not easily permit sloppy readings that should be available if NP-ellipsis is involved. This fact is naturally accounted for, given SL&M’s proposal under which Chinese, but not Japanese, relative clauses are of the Kaynean type. Second, in a particular context, the nominal-internal distributive interpretation, which requires the NQ+*zutsu* to form a relative clause, is not available without an overt relative head. Under Takahashi’s proposal, this fact is very difficult, if not impossible, to explain since the NQ+*zutsu*, being a relative clause, can trigger NP-ellipsis and the relative head can be elided. Third, in Takahashi’s examples that he claims involve an abstract noun as the target of NP-ellipsis, the noun under question is not a typical instance of abstract nouns. This paper, accordingly, suggests that Takahashi does not succeed in excluding the possibility that the *no* involved in his examples is the pronominal *no*. In addition, in cases where a ‘pure’ abstract noun is used, the relative clause, in fact, cannot be accompanied by *no*, as predicted under Kamio’s condition. SL&M’s proposal, again, correctly captures this contrast between pure abstract nouns and abstract nouns in disguise.

One issue, left for future research, is on the contrasts between Tokyo dialect and dialects spoken in western Japan. In some of Kyushu dialects, the Genitive Case marker *no* is realized as *n(o)*, whereas the pronominal *no* appears as *to*. Given the conclusion that *-no* attached to the relative clause is the pronominal *no*, we expect that relative clauses should be accompanied with *to*, but not *n(o)*. This prediction seems to be borne out, as shown in the contrast between (66), Tokyo dialect, and (67), Nagasaki dialect:

- (66) a. Jiroo-wa [[JEAL-ni keisai-sareta] [[jibun-no otooto]-no
 -TOP -in was published self-GEN young brother-GEN
 ronbun]]-ga ichiban da]-to omotteiru.
 paper-NOM best is-that think
 ‘Jiro thinks that his own younger brother’s paper that was published in JEAL is the best.’
- b. Jiroo-wa [[[JEAL-ni keisai-sareta] [[jibun-no otooto]-no]]-ga
 -TOP -in was published self-GEN young brother-NO-NOM
 ichiban da]-to omotteiru.
 best is-that think
- c. Jiroo-wa [[[JEAL-ni keisai-sareta]-no]-ga ichiban da]-to omotteiru.
 -TOP -in was published-NO-NOM best is-that think
- (67) a. Jiroo-wa [[[JEAL-ni keisai-sareta] [[jibun-no otooto]-n
 -TOP -in was published self-GEN young brother-GEN
 ronbun]]-ga ichiban ya]-to omottoru.
 paper-NOM best is-that think
 ‘Jiro thinks that his own younger brother’s paper that was published in JEAL is the best.’
- b. Jiroo-wa [[[JEAL-ni keisai-sareta] [[jibun-no otooto]-n-to]]-ga
 -TOP -in was published self-GEN young brother-NO-one-NOM
 ichiban ya]-to omottoru.
 best is-that think
- c. Jiroo-wa [[[JEAL-ni keisai-sareta]-to]-ga ichiban ya]-to omottoru.
 -TOP -by was published-one-NOM best is-that think

(67c) certainly suggests that the direction we pursued in this paper is promising. However, we admit that there are some dialectal or idiolectal differences among native speakers of these dialects. Therefore, any decisive conclusion must wait for further study.

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