A Hybrid Analysis of Null Argument Constructions in Japanese

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1 Introduction

Many languages allow for so-called "null argument constructions", in which one or more syntactic arguments are phonologically dropped, but are interpreted as if they were present. (1b) is an example from Japanese.¹

(1) a. Bill-wa kuruma-o arat-ta.
Bill-TOP car-ACC wash-PST
'Bill washed a car.'
b. John-mo Δ arat-ta.
John-also wash-PST
(Lit.) 'John also washed Δ.'

One of the central questions in the study of null argument constructions is: What mechanism is responsible for creating the null site? There are basically two possibilities: a null pronoun or ellipsis.

- (2) John-mo Δ arat-ta. (=(1b))
 - a. John-mo pro arat-ta. (null pronoun analysis)
 - b. John-mo kuruma-o arat-ta. (ellipsis analysis)

Presenting new arguments, this paper will show that there are at least some cases of Japanese null argument constructions for which the null pronoun analysis is not available. In these cases, ellipsis should be responsible for creating the null site.

The second question, then, arises: What type of ellipsis is involved? Many authors (e.g., Oku 1998, Şener and Takahashi 2010, Sakamoto 2017) have suggested that all instances of ellipsis in these constructions should be analyzed as argument ellipsis, and not as verb-stranding VP ellipsis. The two types of ellipsis are different in their targets; the former directly targets an argument (the subject or object, see the authors cited above), while the latter targets VP, and deletes the object contained in it while stranding the verb (see e.g. Otani and Whitman 1991). Contrary to the widely held view, this paper will suggest that verb-stranding VP ellipsis as well as argument ellipsis is available in Japanese null argument constructions.

The structure of this paper is as follows: in Section 2, I will present new syntactic facts about Japanese null argument constructions that cannot be explained under the null pronoun analysis. The challenges come from a null argument in antipronominal contexts (e.g. Postal 1998) and overt extraction from the null site. In Section 3, I will suggest that verb-stranding VP ellipsis as well as argument ellipsis is available in Japanese null argument constructions. Support for this comes from *-sika* negative polarity items (Takita 2009). I will show that argument ellipsis is contingent upon raising of the target argument, and provide an account of why. Under the "hybrid" analysis to be proposed here, it is predicted that argument ellipsis should become the only available option to elide the object in cases where verb-stranding VP ellipsis is blocked. In Section 4, I will show that this prediction is borne out. In Section 5, I will provide a conclusion.

2 New Arguments for Ellipsis

Previous studies on Japanese null argument constructions have focused on showing that the null

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¹See McCloskey 2011 for Irish, Lipták 2012 for Hungarian, Gribanova 2013a,b for Russian, and Landau 2018 for Hebrew.

site in these constructions can have an interpretation that an overt pronoun cannot have. For example, Sakamoto 2017, among others, shows that the null site can have a quantificational reading. Consider (3).

- (3) a. Sannin-no mahootukai-ga Taroo-ni kita. ai-ni three-GEN wizard-NOM Taroo-DAT see-to came 'Three wizards came to see Taroo.'
 - b. Δ Hanako-ni-mo kita. ai-ni Hanako-DAT-also see-to came (Lit.) ' Δ came to see Hanako, too.'

E-type; quantificational

(Saab 2019:128, see also Sakamoto 2017:28, (16))

In (3b), the null site can have an E-Type reading and a quantificational reading. Under the latter reading, the set of wizards that came to see Taroo can be different from the one that came to see Hanako. This fact suggests that the null pronoun analysis is not available for (3b). Note, however, that pronouns have a variety of uses (see e.g. Tomioka 2003), and one may want more simple and straightforward facts that show that the null pronoun analysis is not the only option for Japanese null argument constructions. In this section, I will present new syntactic facts that cannot be explained under the null pronoun analysis.

2.1 Null Argument in Antipronominal Contexts

The first challenge to the null pronoun analysis comes from so-called "antipronominal contexts". Postal 1998 observes that there are some contexts that do not allow a pronoun to appear. These contexts are called antipronominal contexts, and idiomatic contexts and change-of-color contexts are typical instances of them.

- (4) a. *Herbert claimed to have made [(that) (much) headway] on the project but he never made it. (idiomatic context)
 - b. *They painted their porch green, but I refused to paint mine it. (change-of-color context) (Postal 1998:33-35)

These two contexts are antipronominal in Japanese, too. Let us first look at idiomatic contexts in Japanese. Here "the possessor-raising constructions" are used (Kishimoto 2013, see also Sakamoto 2019). The possessor-raising constructions have two variants: the genitive-possessor variant and the dative-possessor variant. The example in (5a) is an instance of the genitive-possessor variant, and the one in (5b) is an instance of the dative-possessor variant.³

- (5) a. Mary-no koto-ga [Bill-no atama]-ni nakat-ta. Mary-GEN thing-NOM Bill-GEN head-LOC NEG-PST (Lit.) 'For Bill, Mary was something not in mind.'
 - b. Bill-ni-wa Marv-no koto-ga atama-ni nakat-ta. Bill-DAT-TOP Mary-GEN thing-NOM head-LOC **NEG-PST** (Lit.) 'For Bill, Mary was something not in mind.'

We will come back to the syntax of the possessor-raising constructions in the next section. What is crucial here is that in these examples, atama-ni na-i (lit.) '...is not in one's head' is an

(Kishimoto 2013: (3))

²Note that the null site here is the subject. Since the subject is assumed to appear outside of the VP, the analysis that makes use of VP-ellipsis is not an option here, either.

³In Kishimoto's 2013 examples, the dative possessor is not marked with the topic marker -wa. To me and my consultants, the dative possessor is more natural with the topic marker. See also Sakamoto 2019: fn.13.

⁽i) Ken-ni toki-no koto-ga kioku-ni ar-u. Ken-DAT that time-GEN event-NOM memory-LOC be-PRS 'Ken remembers the event at that time.'

idiomatic expression, meaning 'do not have...in mind', and more crucially, if *atama* 'head' is replaced with the locative pronoun *soko* 'there', as in (6b), the sentence becomes ungrammatical.⁴

- (6) a. Bill-ni-wa Mary-no koto-ga atama-ni nakat-ta.

 Bill-DAT-TOP Mary-GEN thing-NOM head-LOC NEG-PST (Lit.) 'For Bill, Mary was something not in mind.'
 - b. *John-ni-mo Mary-no koto-ga soko-ni nakat-ta.

 John-DAT-also Mary-GEN thing-NOM there-LOC NEG-PST (Lit.) 'For John, too, Mary was something not there.'

Similarly, if the color term selected by a change-of-color verb is replaced with a pronoun, as in (7b), the sentence becomes ungrammatical.⁵

- (7) a. Bill-wa kabe-o midori-iro-ni nut-ta.

 Bill-TOP wall-ACC green-color-into paint-PST

 'Bill painted the wall green.'
 - b. *John-wa yane-o sore-ni nut-ta.

 John-TOP roof-ACC it-into paint-PST

 'John painted the roof it.'

If the null site in Japanese null argument constructions is always created by a null pronoun, we should never be able to find it in the antipronominal contexts. However, we can easily find a null argument in these contexts.

(8) (With (6a) as the antecedent)

John-ni-mo Mary-no koto-ga Δ nakat-ta. John-DAT-also Mary-GEN thing-NOM NEG-PST (Lit.) 'For John, too, Mary was something not in mind.'

(9) (With (7a) as the antecedent)

John-wa yane-o Δ nut-ta. John-TOP roof-ACC paint-PST 'John painted the roof green.'

In (8) and (9), *atama-ni* and *midori-iro-ni* are phonologically dropped, respectively, and the sentences are still grammatical. These sentences contrast sharply with (6b) and (7b). This suggests that the sentences in (8) and (9) involve ellipsis.

2.2 Overt Extraction from Null Site

Another challenge to the null pronoun analysis comes from "possessor raising". Here the possessor-raising constructions are used again. We saw in (5) above that the possessor-raising constructions have two variants: the genitive-possessor variant and the dative-possessor variant. Another

⁴The locative pronoun can appear in non-idiomatic contexts:

⁽i) a. Bill-wa hon-o tana-ni oi-ta.

Bill-TOP book-ACC shelf-LOC put-PST

^{&#}x27;Bill put a book on the shelf.'

b. John-mo soko-ni oi-ta.

John-also there-LOC put-PST

^{&#}x27;John put a book there, too.'

⁵The color term can be replaced with a pronoun in other contexts:

⁽i) a. Bill-wa Mary-no syatu-no midori-iro-ga suki-da.

Bill-TOP Mary-GEN shirt-GEN green-color-NOM fond.of-be.PRS

'Bill is fond of the green color of Mary's shirt.'

b. John-mo sore-ga suki-da.

John-also it-NOM fond.of-be.PRS

^{&#}x27;John is fond of it too.'

example of each is given in (10).

- (10) a. Mary-no taido-ga [Bill-no ki]-ni sawat-ta.

 Mary-GEN attitude-NOM Bill-GEN mind-LOC harm-PST

 (Lit.) 'Mary's attitude was something that hurt Bill's feelings.'
 - b. Bill-ni-wa Mary-no taido-ga ki-ni sawat-ta.
 Bill-DAT-TOP Mary-GEN attitude-NOM mind-LOC harm-PST (Lit.) 'For Bill, Mary's attitude was something that hurt feelings.'

Kishimoto 2013 suggests that the dative-possessor variant is derived from the genitive-possessor variant, via overt movement of the possessor. Novel evidence from island sensitivity confirms this analysis. Let us look at (11b), which is a case of the relative clause island. Compare this with a case of the complement clause in (12b).

'Bill criticized Mary's attitude that hurt John's feelings.'

b. *John-ni-wa [Bill-wa [RCti ki-ni sawat-ta [Mary-no taido]i]-o John-DAT-TOP Bill-TOP mind-LOC harm-PST Mary-GEN attitude-ACC hihan-si-ta]. criticize-PST

(Lit.) 'For John, Bill criticized Mary's attitude that hurt feelings.'

(12) a. Bill₁-wa [Mary-no taido-ga [zibun₁-no ki]-ni sawat-ta to]
Bill-TOP Mary-GEN attitude-NOM self-GEN mind-LOC harm-PST COMP it-ta.
say-PST

(Lit.) 'Bill₁ said that Mary's attitude was something that hurt self₁'s feelings.'

b. Zibun₁-ni-wa [Bill₁-wa [Mary-no taido-ga ki-ni sawat-ta self-DAT-TOP Bill-TOP Mary-GEN attitude-NOM mind-LOC harm-PST to] it-ta.

COMP say-PST

(Lit.) 'For self₁, Bill₁ said that Mary's attitude was something that hurt feelings.'

raising, and the constituent Mary-no koto-ga [t_i atama]-ni contains the trace of the raising.

Now let us look at (13) below. In (13), the dative possessor has undergone overt possessor

(13) a. Bill_i-ni-wa Mary-no koto-ga [t_i atama]-ni nakat-ta. Bill-DAT-TOP Mary-GEN thing-NOM head-LOC NEG-PST (Lit.) 'For Bill, Mary was something not in mind.'

If the null site in Japanese null argument constructions is always created by a null pronoun, a constituent containing a trace should never become phonologically null, since a null pronoun cannot host a trace. However, as shown in (14), *Mary-no koto-ga [ti atama]-ni* can be phonologically dropped. This suggests that the sentence in (14) involves ellipsis.^{6,7}

⁶Sakamoto 2019 argues that overt extraction out of null arguments is not possible. His argument is based on the contrast between (iA) and (iA').

⁽i) A: Dare-kara_i-no Taroo-wa [DP t_i tegami]-o yonda no? who-from-GEN Taro-TOP letter-ACC read Q (Lit.) 'From whom did Taro read a letter?'

B: Bill da yo. Bill COP SFP 'Bill.'

A: Zyaa, dare-kara_i-no Hanako-wa [DP t_i tegami]-o yonda no? then who-from-GEN Hanako-TOP letter-ACC read Q

(14) (With (13) as the antecedent)

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John-ni-mo Mary-no koto-ga [t: atama]-ni nakat-ta.

John-DAT-TOP Mary-GEN thing-NOM head-LOC NEG-PST (Lit.) 'For John, too, Mary was something not in mind.'
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3 Analysis

3.1 Ellipsis of -Sika NPIs and Hybrid Analysis

So far, we have seen that there are at least some cases of Japanese null argument constructions for which the null pronoun analysis is not available. In these cases, ellipsis should be responsible for creating the null site. The question here is: What type of ellipsis is it?

Two possibilities have been discussed in the literature, namely, verb-stranding VP ellipsis (henceforth VVPE) and argument ellipsis (henceforth AE). VVPE consists of verb raising and VP-ellipsis. It targets VP, and deletes the object contained in it while stranding the verb. AE directly targets an argument (the subject or object).

Many authors (e.g. Oku 1998) have suggested that all instances of ellipsis in these constructions should be analyzed as AE, and not as VVPE. Contrary to this view, I will suggest that VVPE, as well as AE, is available in these constructions. Support for this view comes from so-called "-sika negative polarity items" (Takita 2009, henceforth -sika NPIs).

-sika attaches to an NP, and gives rise to the meaning 'only NP' in the scope of negation. In simple cases like (15b), ellipsis of NP+-sika does not alter its meaning.

(15) a. Taroo-wa ringo-sika tabe-nakat-ta.

Taroo-TOP apple-SiKA eat-NEG-PST

'Taroo ate only apples.'

b. Hanako-mo ringo-sika tabe-nakat-ta. Hanako-also apple-SIKA eat-NEG-PST (Lit.) 'Hanako also ate only apples.'

(adapted from Takita 2009: (14) with a slight modification)

The same is true in cases like (16b). The sentences in (16) are instances of the dative-possessor variant of possessor-raising constructions.

- (16) a. Bill-ni-wa Mary-no koto-sika atama-ni nakat-ta.
 Bill-DAT-TOP Mary-GEN thing-SiKA head-LOC NEG-PST (Lit.) 'For Bill, Mary was the only thing in mind.'
 - b. John-ni-mo <u>Mary no koto sika atama ni</u> nakat-ta. John-DAT-also Mary-GEN thing-SIKA head-LOC NEG-PST (Lit.) 'For John, too, <u>Mary</u> was the only thing in mind.'

This fact shows that in both sentences in (16), the argument *Mary-no koto-sika* occupies a position below negation, as the other argument *atama-ni* does, i.e., they both occur in VP-internal positions. In (16b), the two VP-internal arguments are elided.

Now let us look at (17) below, where only one of the two arguments is elided. Unlike in (16b), the 'only Mary thing' meaning is not available here.

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(Lit.) 'Then, from whom did Hanako read a letter?'
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A':*Zyaa, dare-kara-no Hanako-wa [$_{DP}$ Δ] yonda no? (Sakamoto 2019: (21))

To me, neither (iA) nor (iA') is acceptable. I thus assume that this would not affect the current discussion.

⁷Sakamoto 2019:119-121 argues that a phonologically dropped locative can host a trace of covert possessor raising, using the genitive-possessor variant. Note that covert movement of the locative itself should yield the same result.

(17) (With (16a) as the antecedent)

John-ni-mo Mary-no koto-sika atama-ni nakat-ta.

John-DAT-also Mary-GEN thing-SIKA head-LOC NEG-PST (Lit.) 'For John, Mary was something not in mind.'

(Not 'For John, too, Mary was the only thing in mind.')

The contrast in meaning between (16b) and (17) suggests that in order for *Mary-no koto-sika* to have the 'only Mary thing' meaning, a bigger constituent containing it needs to be elided. On this view, (16b) is analyzed as (18). I assume that in (16b), the elided constituent is the VP, and VVPE is responsible for eliding it.

(18) John-ni-mo [Mary no koto-sika atama ni ty] V-Neg-T

What about the case of (17)? Note that in this example, although the 'only Mary thing' meaning is not available, the non-NPI meaning, i.e., the 'Mary thing' meaning, is still available. This suggests that in (17), *Mary-no koto-sika* has raised out of the scope of negation at the point when ellipsis applies, as illustrated in (19).

(19) John-ni-mo [Mary-no koto-sika]_i [NegP[VPti atama-ni V] Neg] T

If this is the case, it is natural to assume that (17) involves AE. Thus, the contrast between (16b) and (17) leads us to assume that both VVPE and AE are available in Japanese null argument constructions.

One might wonder why in (17) AE is contingent upon raising of the argument. This question will be discussed in the next section.

3.2 Why does raising occur?

We saw above that prior to AE, the target argument (the object) raises out of the VP. Why does this raising take place?

I propose that both the VP and the argument have an Ellipsis-feature (henceforth E-feature), and the E-feature on the argument cannot enter into an Agree relation with an ellipsis licensing head when the argument remains within the VP.⁸ This proposal is based on Aelbrecht's 2010 idea that ellipsis is licensed by an Agree relation established between a licensing head and an E-feature.⁹

To see how this works, let us go back to (16b), repeated here as (20). In this example, the Efeature on the VP enters into an Agree relation with the ellipsis licensing head, as illustrated in Figure 1 below. Throughout the derivation, *Mary-no koto-sika* remains in the VP, falling under the scope of negation.

(20) John-ni-mo Mary-no koto-sika atama-ni nakat-ta.

John-DAT-also Mary-GEN thing-SIKA head-LOC NEG-PST
(Lit.) 'For John, too, Mary was the only thing in mind.'

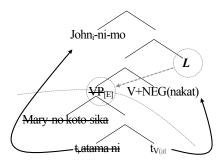
On the other hand, in (17), repeated here as (21), *Mary-no koto-sika* has to move out of the VP, because otherwise its E-feature cannot establish a local relation with the licensing head. This movement brings the argument out of the scope of negation, as illustrated in Figure 2.

(21) John-ni-mo <u>Mary-no koto-sika</u> atama-ni nakat-ta. John-DAT-also Mary-GEN thing-SIKA head-LOC NEG-PST (Lit.) 'For John, Mary was something not in mind.'

⁸Maeda 2019 also proposes an analysis using an E-feature. Note however that unlike the current analysis, his analysis does not assume that the locality of agreement plays an important role.

⁹Aelbrecht assumes that an E-feature resides on the head whose complement will be elided, but I assume here that the complement that will be elided itself bears an E-feature. See also Merchant 2001.

(Not 'For John, too, Mary was the only thing in mind.')



[E] = E-feature, L = licensing head

Figure 1 (=(16b)).

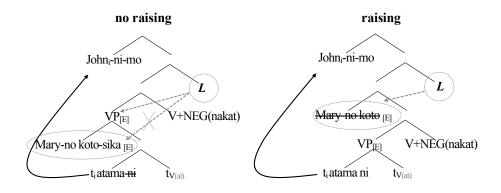


Figure 2 (=(17)).

In summary, we have seen that both VVPE and AE seem to be available in Japanese null argument constructions. AE is contingent upon raising of the target argument, and one possible account for this is that both the VP and the argument have an E-feature, and the E-feature on the argument can enter into an Agree relation with an ellipsis licensing head only when the argument raises out of the VP.

4 Prediction

If the current analysis is on the right track, we predict that AE should become the only available option to elide the object in cases where VVPE is blocked. I will show that this prediction is borne out. To set the stage, let us first consider a test for the presence or absence of VVPE. The test makes use of so-called "the adverb-including reading".

Funakoshi 2016 observes that Japanese null argument constructions can have the adverbincluding reading just like English VPE constructions can, although a context needs to be added to force an interpretation in which the VP-event has actually happened. This is illustrated in (23).¹⁰

(22) Bill washed the car carefully. John didn't. ≈ John washed the car but didn't do it carefully. (Landau 2018: (36))

¹⁰See also Oku 1998:171(27), Sener and Takahashi 2010:(12), and Sakamoto 2017:47-50.

- (23) Context: Bill and John each own a car. One day when it was raining, each of them drove his car through muddy roads to get home. Their cars got covered with mud. The next day, they went to a car washing station to clean their cars.
 - a. Bill-wa kuruma-o teineini arat-ta. Bill-TOP car-ACC carefully wash-PST 'Bill washed a car carefully.'
 - b. John-wa kuruma-o teineini arawa-nakat-ta. John-TOP carefully wash-NEG-PST car-ACC (Lit.) 'John didn't wash a car carefully.' (# 'John didn't wash a car.') (see also Funakoshi 2016: (17))

This fact can be understood if we assume that the elided constituent is the VP, to which the adverb teineini 'carefully' is adjoined:11

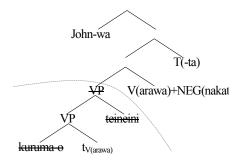


Figure 3: Adverb-including reading $\checkmark \rightarrow VVPE$.

Thus, the availability of the adverb-including reading indicates that the presence of VVPE. We can use this as a test to see whether VVPE occurs in a sentence.

Let us now return to our prediction: in cases where VVPE is blocked, AE should become the only available option to elide the object. Recall that VVPE consists of verb raising and VP-ellipsis. If verb raising is blocked, AE should become the only available option to elide the object while stranding the main verb, and in that case, the adverb-including reading should never become available.

Such a situation is indeed attested. Consider (24) below. In these examples, the focus particle -mo attaches to the verbs, blocking the verbal complex's raising. As the transcripts indicate, the verbal complex contains a covert disjunction, and the fact that it takes scope under negation confirms that the verbal complex is indeed in the scope of negation. When a verb is not attached to -mo, it moves up and creates a complex with negation, as shown in (23b) above. Adding -mo blocks this from happening, and in that case, the light verb si- is added to host the negation.

- kuruma-o teineini (24) a. Bill-wa fuki-mo arai-mo si-nakat-ta. carefully wipe-MO wash-MO car-ACC do-NEG-PST (Lit.) 'Bill neither wiped nor washed a car carefully.'
 - b. John-mo Δ fuki-mo arai-mo si-nakat-ta.

¹¹The examples in (i)-(iii) show that that the adverb *teineini* can attach either to VP or TP.

⁽i) Bill-wa [VP teineini [VP kuruma-o arat]]-ta. Bill-TOP carefully car-ACC wash-PST

^{&#}x27;Bill washed a car carefully.'

⁽ii) Bill-wa $[VP[VP kuruma-o t_i]$ teineini] arati-v-ta. Bill-TOP car-ACC carefully wash-PST 'Bill washed a car carefully.'

⁽iii) [TP Teineini [TP Bill-wa kuruma-o arat-ta]]. carefully Bill-TOP car-ACC 'Bill washed a car carefully.'

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John-also wipe-MO wash-MO do-NEG-PST (Lit.) 'John neither wiped nor washed a car, either. (Not 'John neither wiped nor washed a car carefully, either.')
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Crucially, in (24b), the adverb-including reading is not available. This shows that what occurs here is AE, and not VVPE. If it is VVPE, the adverb-including reading should be available, just like in the case of (23b) above and English VPE.

The adverb-including reading becomes available when both the object and the main verb are elided along with the adverb, as in (25b). The ellipsis involved here should not be AE, since AE cannot elide a verb.

- (25) a. Bill-wa kuruma-o teineini fuki-mo arai-mo si-nakat-ta.

 Bill-TOP car-ACC carefully wipe-MO wash-MO do-NEG-PST (Lit.) 'Bill neither wiped nor washed a car carefully.'
 - b. John-mo <u>kuruma o teineini fuki mo arai mo</u> si-nakat-ta. John-also car-ACC carefully wipe-MO wash-MO do-NEG-PST (Lit.) 'John neither wiped nor washed a car carefully, either.

5 Conclusion

In this paper, I have presented two new facts about Japanese null argument constructions that cannot be explained under the null pronoun analysis: a null argument in antipronominal contexts and overt extraction from the null site. These facts can only be accounted for by an ellipsis analysis.

Regarding the type of ellipsis, I have suggested that VVPE, as well as AE, is available in these constructions. Support for this has come from the interpretation of certain NPIs in Japanese. These data also show that AE must involve movement of the argument above the VP. I have provided an analysis of AE that captures this fact in terms of the locality on the licensing of ellipsis. Additionally, I have shown that when VVPE is not available, AE becomes the only option to elide an argument.

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