Remarks on verb echo answers and head movement in Japanese

Tomoya Tanabe and Ryoichiro Kobayashi
Hokkaido University and Tokyo University of Agriculture

1   Introduction

Japanese is a strictly head-final language. For this reason, it has been hotly debated whether syntactic head movement exists in the language. While scholars such as Otani & Whitman (1991), Funakoshi (2014), and Hayashi & Fujii (2015), argue for its existence, researchers such as Hoji (1998), Fukui & Sakai (2003), and Kobayashi (2016, to appear) argue against it. Recently, Sato & Maeda (2021) have presented an argument for the existence of syntactic head movement in Japanese based on their observations of Verb-Echo Answers (**VEAs**). A VEA can be used as a response to a polar question. (1A), in which only the verbal complex is expressed, is interpreted as an affirmative answer to (1Q).

(1) Q: Naomi-wa sara-o   arai-masi-ta-ka?
         Naomi-TOP dish-ACC wash-POL-PST-Q
         'Did Naomi wash the dishes?'
     A: Arai-masi-ta-yo.
         wash-POL-PST-PRT
         lit. 'Washed.' ('Yes, Naomi did.')

Sato & Maeda (2021) follow Holmberg (2016) and propose that (1A) is derived via Verb-stranding TP Ellipsis (**VTPE**) as in (2) (see also Sato & Hayashi 2018).[1] In VTPE, V first undergoes V-to-T-to-C movement, creating a V-T-C complex in syntax. Subsequently, ellipsis applies to the TP that contains the arguments, which derives a VEA such as (1A). Based on the analysis, Sato & Maeda (2021) argue that head movement occurs in Japanese in narrow syntax.

(2)   [$_{CP}$ [$_{TP}$ ~~Subject~~ [$_{VP}$ ~~Object~~ t_V] t_{V-T}] V-T-C]

This paper argues against this line of argument for head movement by proposing the following alternative analysis. In (3), all the heads stay in-situ in syntax and the arguments are elided via Argument Ellipsis (**AE**) (Oku 1998, Saito 2007, Takahashi 2006, among many others).[2,3] The V-T-C complex is then formed by a morpholog-

---

[1]For ease of exposition, the subject is in [Spec, TP] in (2). However, we are completely agnostic about whether the subject in Japanese raises to the TP-domain.

[2]See Landau (2020), who proposes that AE can apply to multiple arguments in a sentence

[3]Another possibility is that VEAs involve *pro*-drop, as depicted in (i).

(i)   [$_{CP}$ [$_{TP}$ *pro* [$_{VP}$ *pro* V] T] C]

Although we set aside this possibility, the discussion in this paper is neutral about the AE analysis and the *pro* analysis. We leave the AE vs *pro* debate concerning Japanese VEAs for future work (see Sato and Hayashi 2018, who argue against the *pro* analysis of VEAs).

ical merger (Halle & Marantz 1993) in the post-syntactic component.

(3)   [$_{CP}$ [$_{TP}$ ~~Subject~~ [$_{VP}$ ~~Object~~ V] T] C]

This paper shows that our alternative analysis in (3) is empirically superior to the VTPE analysis in (2), and concludes that VEAs in Japanese are explained with no recourse to head movement.

    The rest of this paper is organized as follows. Section 2 provides novel data which cannot be explained by the VTPE analysis. Section 3 reconsiders Sato and Maeda's (2021) observation that a voice mismatch is prohibited in VEAs and argues that a voice mismatch in a VEA results in unacceptability, rather than ungrammaticality. Section 4 discusses Sato and Maeda's (2021) argument that the scope relation between disjunction/*only* and negation reverses in VEAs due to syntactic NEG-raising. We extend Tanabe & Hara (2021) and demonstrate that our AE analysis coupled with discourse-based analyses accounts for a wider range of data. Section 5 concludes the paper.

2 Adverb-inclusive reading in Verb-echo answers

Sato & Maeda (2021) attempt to exclude the AE analysis of VEAs in (3) based on observations of null adjuncts (see also Sato & Hayashi 2018). Sugimura (2011) observes that not only arguments but also adjuncts can be null in Japanese VEAs, as (4) shows. As an answer to (4Q), (4A) has the adjunct-inclusive reading.

(4)   Q: Kazuma-wa sara-o   teineini arai-masi-ta-ka?
            Kazuma-TOP dish-ACC carefully wash-POL-PST-Q
            'Did Kazuma wash the dishes carefully?'
       A: Arai-masi-ta-yo.
            wash-POL-PST-PRT
            OK:'Yes, Kazuma washed the dishes carefully.' (adjunct-inclusive)

The adjunct-inclusive reading in (4A) is unexplained by the AE analysis because AE cannot apply to adjuncts (Oku 1998). In contrast, the adjunct-inclusive reading is explained if we assume that (4A) is derived via VTPE since it elides the adjunct as well as the arguments as shown in (5) (cf. Hayashi & Fujii 2015, Funakoshi 2016).

(5)   [$_{CP}$ ~~[$_{TP}$ Kazuma [$_{VP}$ dish carefully t_V] t_{V-T}~~] V-T-C]

However, the rest of this section demonstrates that null adjuncts are observed in VEAs when VTPE is not an available option in syntax. It follows that adjunct-inclusive readings in VEAs do not substantiate the VTPE analysis.

2.1 Verbal Identity in Verb-stranding TP-ellipsis

Funakoshi (2014, p. 347) proposes that verb-stranding VP ellipsis must satisfy an identity condition, which can be summarized as follows:

(6)   The stranded verbs must be identical. If they are not identical, they must at least be contrasted in meaning.

Since what is important is the identity of the stranded verb (not the category of the elided constituent), the condition should also hold for VTPE. Thus, the VTPE analysis predicts that null adjuncts are observed only in constructions which satisfy (6). With this in mind, consider (7). The verbs in question, namely *humitsubusu* 'trample down' and *moyasu* 'burn' are neither identical nor contrasted in meaning; hence (6A) does not satisfy the identity condition in (6). Accordingly, the VTPE analysis predicts that null adjuncts are not derived in (7A). However, the fact is that when (7A) follows (7Q), it has the adjunct-inclusive reading.

(7)　Q:　Gozira-ga　　[$_{AdvP}$ issyunnoutini] biru-o　　humitsubusi-ta-no?
　　　　Godzilla-NOM　　in.an.instant　building-ACC trample-PST-Q
　　　　'Did Godzilla trample down the building in an instant?'
　　A:　(Iya,) Moyasi-ta-yo.
　　　　 no　burn-PST-PRT
　　　　OK: 'Godzilla burned down the building in an instant.' (adverb-inclusive)

(8) as a whole can be naturally interpreted as follows: "Did Godzilla trample down the building in an instant? – No, he burned down the building in an instant". This poses problems for the VTPE analysis of null adjuncts. Likewise, in (8), the verbs, *taosu* 'defeat' and *nomikomu* 'gulp down' do not satisfy (6). Nonetheless, the unpronounced adjunct *ikioiyoku* 'vigorously' is interpreted in (8A); the interpretation that *Kirby gulped down Yoshi vigorously* is easily accessible.

(8)　Q:　Kaabii-ga [$_{AdvP}$ ikioiyoku] Yosshii-o taosi-ta-no?
　　　　Kirby-NOM　　vigorously Yoshi-ACC defeat-PST-Q
　　　　'Did Kirby vigorously defeat Yoshi?'
　　A:　(Iya,) Nomikon-da-yo.
　　　　 no　gulp.down-PST-PRT
　　　　OK: 'Kirby vigorously gulped down Yoshi.' (adverb-inclusive)
　　　　(Note: In Smash Bros., Kirby may gulp down his enemies, but he does
　　　　not defeat them by doing so.)

The data show that adjuncts can be null in a VEA even if (6) is not satisfied. Put in another way, the results indicate that null adjuncts can be derived without VTPE.

　　Based on the observation, we propose that null adjuncts in VEAs are derived by *Adjunct Ellipsis* (Collins 2015, 2017, Oku 2016, Kobayashi 2020). The analysis is precisely illustrated in (9), where adjunct ellipsis applies to the adjunct alone and AE applies to the arguments. Since adjunct ellipsis does not need to satisfy the identity condition in (6), (8) explains why the adjunct can be null in (7).

(9)　　[$_{CP}$ [$_{TP}$ ~~Subject~~ [$_{VP}$ **Adjunct** ~~Object~~ V] T] C]

2.2　Adverbs outside the scope of negation

As illustrated in (10), applying VTPE in a negative sentence requires V to undergo a V-to-NEG-to-T-to-C movement. Thus, under the VTPE analysis, elements elided via VTPE always fall within the scope of negation (indicated by shading).

(10)　　[$_{CP}$ [$_{TP}$ ~~Subject~~ [$_{TP}$ [$_{NegP}$ [$_{VP}$ ~~Object~~ t_V] t_{V-NEG}] $t_{V-NEG-T}$]] V-**NEG**-T-C]

3

Indeed, one of Sato and Maeda's (2021) arguments for the VTPE analysis of VEAs comes from their observation that the raised NEG in VTPE obligatorily takes scope over the elided elements in the TP, which we discuss in Section 4. It follows that the analysis predicts that elided adjuncts also fall within the scope of negation.

In order to test this prediction, we consider data involving the adjunct *iwareta-toorini* 'as one was told'. The adjunct allows both the wide scope and the narrow scope readings in relation to negation; hence, it provides us with an empirical testing ground. (11) illustrates the ambiguity; it is ambiguous between the manner adverb interpretation of the adjunct (i.e., the NEG > Adjunct reading) and the sentential adverb interpretation of the adjunct (i.e., the Adjunct > NEG reading).

(11)   Kenta-wa iwaretatoorini geemu-o si-nak-atta.
        Kenta-TOP as.he.was.told dish-ACC do-NEG-PST
        OK: 'Kenta did not play the video game in the way he was told to.' (NEG > Adjunct)
        OK: 'Kenta did not play the video game following what he was told (he was told not to play the video game).' (Adjunct > NEG)

The VTPE analysis predicts that if the adjunct is elided, the resulting VEA has only a NEG > Adjunct reading since NEG in the V-NEG-T-C complex scopes over the adjunct contained in the elided TP. To see whether the prediction is correct, consider the following example. Interestingly, (12A) allows an adjunct-inclusive reading not only under the NEG > Adjunct but also under the Adjunct > NEG reading.

(12)   Q: Kenta-wa [$_{AdvP}$ iwaretatoorini] geemu-o si-nak-atta(-no)?
            Kenta-TOP   as.one.was.told game-ACC do-NEG-PST-PRT
            'Did Kenta not play video games as he was told?'
      A: Si-nak-atta-yo.
            do-POL-NEG-PST-PRT
            OK: 'Kenta did not play the video game in the way he was told to.' (NEG > Adjunct)
            OK: 'Kenta did not play the video game following what he was told (he was told not to play the video game).' (Adjunct > NEG)

For those who find the Adjunct > NEG reading difficult to get in (12A), specifying a context may be helpful. The context is such that the adjunct is unambiguous; it is understood only as a sentential adverb. Nonetheless, *Kenta's* answer to Yuka's question has the adjunct-inclusive reading.

(13)   Context: *Yuka*, *Kenta's* mother, told *Kenta* not to play video games over the weekend, when she was away from home. When she returned home at the end of the weekend, *Yuka* asks *Kenta*:
      Yuka: Anata-wa [$_{AdvP}$ iwaretatoorini] geemu-o si-nak-atta(-no)?
            you-TOP   as.one.was.told game-ACC do-NEG-PST-PRT
            'Did you not play video games as he was told?'
      Kenta: Si-nak-atta-yo.
             do-POL-NEG-PST-PRT
            NOT: 'I did not play the video game in the way you told me to.' (NEG

> Adjunct)

ок: 'I did not play the video game following what I was told (I was told not to play the video game).' (Adjunct > NEG)

The Adjunct > NEG reading in the VEA is unexplained under Sato and Maeda's (2021) VTPE analysis, where the raised NEG obligatorily takes the wide scope with respect to the TP-internal elements. (14) illustrates this point. NEG in VTPE ends up in a higher position than the adjunct, regardless of the adjunct's position.

(14)   [$_{CP}$ [$_{TP}$ ~~Subj~~ [$_{TP}$ **Adj** [$_{TP}$ [$_{NegP}$ [$_{vP}$ ~~Obj~~ t_v] t_{V-NEG}] $t_{V-NEG-T}$]]] V-**NEG**-T-C]

Here again, the adjunct ellipsis analysis explains the result in (13).[4] In (15), NEG does not raise, and hence the adjunct that is higher than NEG can be elided.

(15)   [$_{CP}$ [$_{TP}$ ~~Subject~~ [$_{TP}$ **Adjunct** [$_{TP}$ [$_{NegP}$ [$_{vP}$ ~~Object~~ V] NEG] T]]] C]

This section has shown that observations regarding adjunct-inclusive readings in VEAs are better explained by our analysis, which posits that VEAs are derived by applying AE to the arguments and adjunct ellipsis to the adjuncts.

3 Voice mismatches in Verb-echo answers

Sato & Maeda (2021) argue that a voice mismatch in VEAs results in ungrammaticality, as in (16A). They claim that the impossibility of voice mismatches in VEAs supports their VTPE analysis because sluicing in English, which can be analyzed as an instance of TP-ellipsis, disallows voice mismatches in (17b) (Merchant 2001).

(16)   Q: Kenta-wa Yuka-o   sikari-masi-ta-ka?
            Kenta-TOP Yuka-ACC scold-POL-PST-Q
            'Did Kenta scold Yuka?'
        A: *Shikar-are-masi-ta-yo.
            scold-PASS-POL-PST-PRT
            lit. 'Was scolded.' (Intended: 'Yuka was scolded by Kenta.')

(17)   a. I know someone scolded John, but I don't know who.
        b. *I know someone scolded John, but I don't know by whom.

If (16A) involves VTPE, then a syntactic identity condition which prohibits voice mismatches in TP-ellipsis explains the ungrammaticality of both (16A) and (17b).[5] While we agree that (16A) is "bad" to some degree, we argue that (16A) is not ungrammatical due to syntactic identity but it is unacceptable due to discourse factors.

First of all, the unacceptability of voice mismatches does not characterize VEAs in Japanese. (18) is a case of AE rather than TP-ellipsis, and yet a voice mismatch is unacceptable to some extent. The fact is not surprising since congruent question-answer pairs normally do not tolerate a voice mismatch (see Weir 2017, for detailed

---

[4]As mentioned above, the *pro*-analysis of null arguments in VEAs is also a potential alternative.
[5]The line of arguments was first presented in Sato & Hayashi (2018).

discussion). Yet, some speakers find (18A) more acceptable than (16A), and one may claim that the contrast supports the VTPE analysis.

(18)   Q: Kenta-wa Yuka-o   sikari-masi-ta-ka?
                Kenta-TOP Yuka-ACC scold-POL-PST-Q
                'Did Kenta scold Yuka?'
      A: ??Yuka-wa sikar-are-masi-ta-yo.
                Yuka-TOP scold-PASS-POL-PST-PRT
                lit. 'Yuka was scolded.' (Intended: 'Yuka was scolded by Kenta.')

Nonetheless, we maintain that the contrast (if exists) is also explained by a pragmatic analysis as follows: In (16A), neither of the arguments is expressed. Thus, a heavy burden is on the listener to infer 'who was scolded by whom' from contextual clues(, which are absent in the constructed example). (18A) may be more acceptable than (16A) because the information about 'who was scolded' is expressed, and the information about 'by whom Yumi was scolded' is easily inferred on the basis of the question being addressed by the conversation participants. The line of pragmatic analysis is supported by (19). (19A) is a VEA, and yet it is more acceptable than (16A) arguably because it is clear in the discourse that the utterer of (19A) is the one who was scolded by *Kenta* (as pointed out by Satoshi Oku (p.c.)).

(19)   Q: Kenta-wa anata-o sikari-masi-ta-ka?
                Kenta-TOP you-ACC scold-POL-PST-Q
                'Did Kenta scold you?'
      A: Shikar-are-masi-ta-yo.
                scold-PASS-POL-PST-PRT
                lit. 'Was scolded.' (Intended: 'I was scolded by Kenta.')

Importantly, the contrast between (16A) and (19A) is not explained if they are derived via VTPE. Sato and Maeda's (2021) analysis based on syntactic identity on TP-ellipsis wrongly predicts (19A) to be ungrammatical on a par with (16A).

In this section, we have shown that the alleged impossibility of voice mismatches in VEAs does not support Sato and Maeda's (2021) VTPE analysis.

4   Negative scope reversal in Verb-echo answers?

Now we discuss scopal interactions between disjunction/*only* and NEG in VEAs. We demonstrate that scope patterns support our analysis over the VTPE analysis.

4.1   Disjunction and negation

In languages like English, a disjunction can take both a wide and narrow scope with respect to its clause-mate negation, as in (20). In Japanese, however, disjunction does not take scope below its clause-mate negation, as in (21) (Goro 2007). While (21) means that *(Hayato didn't eat bread) or (Hayato didn't eat rice)* (OR>NEG), it cannot mean that *Hayato didn't eat bread or rice* (NEG>OR).

(20)   Ronald did not eat bread or rice. (OR>NEG, NEG>OR)

6

(21) Hayato-wa pan-ka-kome-o   tabe-nak-atta. (OR>NEG, *NEG>OR)
      Hayato-TOP bread-or-rice-ACC eat-NEG-PST
      lit. 'Hayato did not eat bread or rice.'

Sato & Maeda (2021) adopt Shibata (2015) and assume that the OR>NEG reading is derived in the structure (22), where the disjunctive phrase occurs higher than NegP.[6]

(22)   [CP [TP Subject [TP bread-or-rice [TP [NegP [VP $t_{bread-or-rice}$ V] **NEG**] T]]]C]

Based on this assumption, Sato & Maeda (2021) provide the following example to support their VTPE analysis of VEAs. They report that the otherwise unavailable NEG>OR reading becomes available in the VEA in (23A). Interestingly, (23A) does not seem to allow the OR>NEG reading (see also Funakoshi 2013, Maeda 2019).

(23) Q: Hayato-wa pan-ka-kome-o   tabe-ta-no?
          Hayato-TOP bread-or-rice-ACC eat-PST-PRT
          'Did Hayato eat bread or rice?'
      A: Tabe-nak-atta-yo. (*OR>NEG, NEG>OR)
          eat-NEG-PST-PRT
          lit. 'Did not eat.'

Sato & Maeda (2021) propose that the observation can be explained by the VTPE analysis in (24), in which the raised NEG takes scope over the disjunction.

(24)   [CP [TP ~~Subj~~ [TP ~~b-or-r~~ [NegP [VP $t_{b\text{-}or\text{-}r}$ t_V] $t_{V\text{-}NEG}$] $t_{V\text{-}NEG\text{-}T}$]] V-**NEG**-T-C]

However, as Sato & Maeda (2021, p. 370) themselves acknowledge in a footnote, the VTPE analysis faces the counter-example in (25). The VEA which follows the negative question has the OR>NEG reading (see also Sakamoto 2016, Maeda 2019). This is unaccounted for if the VEA is derived via VTPE as illustrated in (24).

(25) Q: Hayato-wa pan-ka-kome-o   tabe-nak-atta-no? (OR>NEG, *NEG>OR)
          Hayato-TOP bread-or-rice-ACC eat-NEG-PST-PRT
          'Did Hayato not eat bread or rice?'
      A: Tabe-nak-atta-yo. (OR>NEG, *NEG>OR)
          eat-NEG-PST-PRT
          lit. 'Did not eat.'

Our analysis straightforwardly explains the OR>NEG reading in (25A). As depicted in (26), the subject and the disjunctive phrase are elided by AE. Since the disjunctive phrase falls within the scope of negation, the OR>NEG reading in (25A) is obtained.

(26)   [CP [TP ~~Subject~~ [TP ~~bread-or-rice~~ [NegP [VP $t_{bread\text{-}or\text{-}rice}$ V] **NEG**] T]] C]

On the other hand, the AE analysis does not explain the NEG>OR reading in (23A).

---

[6]Shibata (2015) proposes that the disjunction "acyclically" merges to the argument only after it moves to a position above NegP. For ease of exposition, the analysis is not precisely illustrated in (22).

However, we point out that the judgement reported in Sato & Maeda (2021) is dubious. For us and five informants we consulted, the most likely interpretation of (23A) is that *Hayato ate neither bread nor rice* rather than *it is not the case that Hayato ate bread or rice* (i.e., NEG>OR). Given this, we propose that the source of the seemingly available NEG>OR reading in (23A) is (27A). Notice that (27A) does not involve disjunction, and yet it is truth-conditionally equivalent to NEG>OR.[7]

(27)　Q:　Hayato-wa pan-ka-kome-o　tabe-ta-no?
　　　　　Hayato-TOP bread-or-rice-ACC eat-PST-PRT
　　　　　'Did Hayato eat bread or rice?'
　　　A:　(Iya,) Hayato-wa pan-mo　　kome-mo tabe-nak-atta-yo.
　　　　　 no　Hayato-TOP bread-also rice-also　eat-NEG-PST-PRT
　　　　　'Hayato ate neither bread nor rice.'

Thus, the structure of (23A) is (28), where all the arguments are elided by AE.

(28)　　[$_{CP}$ [$_{TP}$ ~~Subject~~ [$_{NegP}$ [$_{VP}$ ~~bread-also rice-also~~ V] NEG] T] C]

While the AE analysis accounts for the observations in (23) and (25), a question remains as to why (23A) does not have the OR>NEG reading. AE should be able to derive a structure like (26), in which the disjunctive phrase above NEG is elided.

　　Yet, this seemingly mysterious scope pattern can be explained by Tanabe and Hara's (2021) analysis based on question-answer congruence. Let us reconsider the question-answer pair in (23). (23Q) asks whether there is a food among bread and rice that *Hayato* ate. Notice that the OR>NEG reading of (23A), *(Hayato didn't eat bread) or (Hayato didn't eat rice)* does not provide an answer. (29) shows that the OR>NEG reading is false if and only if both *Hayato ate bread* (p) and *Hayato ate rice* (q) are true. This means that answering (23Q) by (23A) under the OR>NEG reading amounts to providing an insufficient answer as follows: *Hayato may have eaten bread or rice, but he may have eaten neither. At least, he did not eat both.* This provides neither an affirmative answer nor a negative answer to (23Q).

(29)

$p \vee q$	p	q	$\neg p$	$\neg q$	$\neg(p \vee q)$ NEG>OR	$\neg p \vee \neg q$ **OR>NEG**
T	T	T	F	F	F	**F**
T	T	F	F	T	F	**T**
T	F	T	T	F	F	**T**
F	F	F	T	T	T	**T**

In contrast, asserting that *Hayato ate neither bread nor rice* provides a negative answer to (23Q), and thus it is available in (23A). This reveals that the otherwise available OR>NEG reading of (23A) can be excluded by question-answer congruence.

　　The line of pragmatic analysis is compatible with the observation that the OR>NEG

---

[7]Funakoshi (2013) also suggests that an apparently available NEG>OR reading in a null object construction is not derived from the NEG>OR structure but from *pro*. As repeatedly mentioned above, the *pro* analysis is also a potential alternative analysis to the VTPE analysis.

reading is available if the question is a negative question, as in (25). The negative question in (25Q) asks whether there is a food among bread or rice that *Hayato* did not eat. The OR>NEG reading of (25A) , which asserts that there is a food among bread or rice that *Hayato* did not eat gives an affirmative answer to (25Q).

To summarize our discussion in this subsection, we have shown that the AE analysis coupled with a discourse-based analysis successfully explains the contrast between (23A) and (25A), which the VTPE analysis cannot explain.

4.2 *-dake* 'only' and negation

This subsection demonstrates that the scope patterns of *-dake* 'only' in relation to negation is also better explained by the AE analysis. Sato & Maeda (2021) claim that the negation obligatorily takes scope over *-dake* 'only' in (30A).

(30)   Q: Kana-wa pan-dake   tabe-ta-no?
            Kana-TOP bread-only eat-PST-PRT
            'Did Kana eat only bread?'
        A: Tabe-nak-atta-yo. (*ONLY>NEG, NEG>ONLY)
            eat-NEG-PST-PRT
            lit. 'Did not eat.'

Sato & Maeda (2021) propose to explain the NEG>ONLY reading in (30A) by the VTPE analysis in (31), where the raised NEG scopes over *-dake* 'only'.

(31)   [$_{CP}$ [$_{TP}$ ~~K~~ [$_{TP}$ ~~bread-only~~ [$_{NegP}$ [$_{VP}$ $t_{\text{b-only}}$ t_V] $t_{\text{V-NEG}}$] $t_{\text{V-NEG-T}}$]] V-**NEG**-T-C]

However, the VTPE analysis again faces the following counter-example. In (32), the VEA answers a negative question, and it has only the ONLY>NEG.

(32)   Q: Kana-wa pan-dake   tabe-nak-atta-no? (ONLY>NEG, *NEG>ONLY)
            Kana-TOP bread-only eat-NEG-PST-PRT
            'Did Ken not eat only bread?'
        A: Tabe-nak-atta-yo. (ONLY>NEG, *NEG>ONLY)
            eat-NEG-PST-PRT

The AE analysis in (33) straightforwardly explains the observation. The subject and the object suffixed with *-dake* 'only' are individually elided by AE.

(33)   [$_{CP}$ [$_{TP}$ ~~Kana~~ [$_{TP}$ ~~bread-only~~ [$_{NegP}$ [$_{VP}$ $t_{\text{bread-only}}$ V] **NEG**] T]] C]

The contrast between (30A) and (32A) with regard to the availability of the ONLY>NEG reading is again accounted for by Tanabe and Hara's (2021) discourse-based analysis. That is, (30Q) presupposes that *Kana* ate bread and asks whether it is the case that she did not eat anything else. On the other hand, the ONLY>NEG reading entails that *Kana did not eat bread*, which causes a presupposition failure. In contrast, (32A) with the ONLY>NEG reading provides an affirmative answer to (32Q).

Yet, if NEG does not raise to C, a question arises as to why the NEG>ONLY reading is derived in (30A). The NEG>ONLY reading reported in Sato & Maeda (2021),

however, is arguably not real. To our ears, the most salient interpretation of (30A) is *Kana did not eat bread (to begin with)*, where the meaning of 'only' is not present (see also Akiyama 2014, Moriyama 2017, Sato 2020). As mentioned above, this interpretation causes a presupposition failure; hence, the VEA sounds more natural if we add a comment that cancels the presupposition, as in (34A).

(34) Q: Kana-wa pan-dake   tabe-ta-no?
          Kana-TOP bread-only eat-PST-PRT
          'Did Kana eat only bread?'
      A: Iya, toiuka, tabe-nak-atta-yo. (*ONLY>NEG, ??NEG>ONLY)
          no   in.fact eat-NEG-PST-PRT
          OK: 'In fact, Kana did not eat bread to begin with.'

The alleged NEG>ONLY reading in (30A) therefore is derived from (35), in which the subject and the object (without *-dake* 'only') are simply elided by AE.[8]

(35)   [$_{CP}$ [$_{TP}$ ~~Kana~~ [$_{NegP}$ [$_{VP}$ ~~bread~~ V] NEG] T] C]

Overall, we have shown that the scopal interactions between *-dake* 'only' and negation in VEAs are also explained by the AE analysis.

5 Conclusion

This paper has revealed that the VTPE analysis of Japanese VEAs is inadequate. We have also shown that our AE analysis is empirically superior to the VTPE analysis of VEAs. Therefore, we conclude that the relevant observations of VEAs do not constitute evidence that syntactic head movement exists in Japanese.

Acknowledgement

References

Akiyama, Masahiro. 2014. The syntax of focus-doubling in Japanese. In Shigeto Kawahara & Mika Igarashi (eds.), *Formal Approaches to Japanese Linguistics (FAJL) 7*, 1–12. Cambridge, MA: MIT Working Papers in Linguistics.

Collins, Chris. 2015. Adjunct deletion. Manuscript., NYU.

Collins, Chris. 2017. Incomplete comparatives as ellipsis. Manuscript., NYU.

---

[8] As repeatedly mentioned above, the *pro* analysis can also account for the data in (34).

Fukui, Naoki & Hiromu Sakai. 2003. The visibility guideline for functional categories: Verb raising in Japanese and related issues. *Lingua* 113(4-6). 321–347.

Funakoshi, Kenshi. 2013. Disjunction and object drop. *Tampa Papers in Linguistics* 4. 11–20.

Funakoshi, Kenshi. 2014. *Syntactic head movement and its consequences*. College Park: University of Maryland dissertation.

Funakoshi, Kenshi. 2016. Verb-stranding verb phrase ellipsis in Japanese. *Journal of East Asian Linguistics* 25. 113–142.

Goro, Takuya. 2007. *Language specific constraints on scope interpretation in first language acquisition*. College Park: University of Maryland: Doctoral dissertation.

Halle, Morris & Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In ken Hale & Samuel Keyser, J (eds.), *The view from the building 20: Essays in linguistics in honor of Sylvain Bromberger*, 111–176. Cambridge, MA: MIT Press.

Hayashi, Shintaro & Tomohiro Fujii. 2015. String vacuous head movement: The case of V-te in Japanese. *Gengo Kenkyu (Linguistic Research)* 147. 31–55.

Hoji, Hajime. 1998. Null object and sloppy identity in Japanese. *Linguistic Inquiry* 29(1). 127–152.

Holmberg, Anders. 2016. *The syntax of yes and no*. Cambridge: Cambridge University Press.

Kobayashi, Ryoichiro. 2016. Japanese V-te V compounds as post-syntactic compounds. *Studies in Generative Grammar* 26(2). 223–238.

Kobayashi, Ryoichiro. 2020. A case against the verb-stranding VP-ellipsis analysis in Japanese. In Tae Sik Kin & Sae-Youn Cho (eds.), *Proceedings of Seoul International Conference on Generative Grammar 22*, 298–304. Seoul: Korean Generative Grammar Circle.

Kobayashi, Ryoichiro. to appear. Against V-to-T-to-C movement in Japanese: A case study of non-constituent coordination. In George Tsoulas (ed.), *Proceedings of the 11th Edition of the Workshop on Altaic Formal Linguistics*, Cambridge, MA: MIT Working Papers in Linguistics. `https://ling.auf.net/lingbuzz/002705`.

Landau, Idan. 2020. On the nonexistence of verb-stranding VP-ellipsis. *Linguistic Inquiry* 51(2). 341–365.

Maeda, Masako. 2019. Argument ellipsis and scope economy. *Syntax* 22. 419–437.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.

Moriyama, Kazusige. 2017. Dake no koosakujo [Argument ellipsis with only-XP]. *Pre-proceedings of the 155th Meeting of the Linguistic Society of Japan* 240–245.

Oku, Satoshi. 1998. *A theory of selection and reconstruction in the minimalist program*. Storrs: University of Connecticut dissertation.

Oku, Satoshi. 2016. A note on ellipsis-resistant constituents. *Nanzan Linguistics* 11. 57–70. http://hdl.handle.net/2115/62827.

Otani, Kazuyo & John Whitman. 1991. V-raising and VP-ellipsis. *Linguistic Inquiry* 22(2). 345–358.

Saito, Mamoru. 2007. Notes on East Asian argument ellipsis. *Language Research* 43. 203–227.

Sakamoto, Yuta. 2016. Scope and disjunction feed an even more argument for argument ellipsis in Japanese. In Michael Kenstowicz, Theodore Levin & Ryo Masuda (eds.), *Japanese/Korean Linguistics*, vol. 23, Stanford, CA: CSLI Publications.

Sato, Yosuke. 2020. Focus mismatch under ellipsis in Japanese, polarity and head movement. In Tae Sik Kim & Sae-Youn Cho (eds.), *Proceedings of the 22nd Seoul International Conference on Generative Grammar*, 224–232. Seoul: Korean Generative Grammar Circle.

Sato, Yosuke & Shintaro Hayashi. 2018. String-vacuous head movement in Japanese: New evidence from verb-echo answers. *Syntax* 21(1). 72–90.

Sato, Yosuke & Masako Maeda. 2021. Syntactic head movement in Japanese: Evidence from verb-echo answers and negative scope reversal. *Linguistic Inquiry* 52(2). 359–376.

Shibata, Yoshiyuki. 2015. Negative structure and object movement in Japanese. *Journal of East Asian Linguistics* 24. 217–269.

Sugimura, Mina. 2011. *Domain extension: A study of restructuring predicates in Japanese and the role of head movement*. Montreal: McGill University dissertation.

Takahashi, Daiko. 2006. Apparent parasitic gaps and null arguments. *Journal of East Asian Linguistics* 15. 1–35.

Tanabe, Tomoya & Yurie Hara. 2021. Question under Discussion-based analysis of Japanese ellipses. In *Pre-proceedings of 162nd Meeting of the Linguistic Society of Japan*, 329–335. Online.

Weir, Andrew. 2017. Cointensional questions and their implications for fragment answer. In Robert Truswell (ed.), *Proceedings of the 21st annual Sinn und Bedeutung conference*, Edinburgh: University of Edinburgh.