Remarks on syntactic head movement in Japanese: A reply to Sato and Maeda (2021)

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1 Introduction

- It has been hotly debated whether syntactic head movement exists in Japanese. While some researchers argue for its existence (Otani and Whitman, 1991; Koizumi, 2000; Funakoshi, 2012, among others), others argue against it (Fukui and Sakai, 2003; Kobayashi, 2016, to appear, among others).
- Japanese is a strictly head-final language. Therefore, there is no overt evidence for children to acquire string vacuous head movement (cf. Fukui and Sakai, 2003).
- Recently, Sato and Maeda (2021) argue for the existence of head movement based on the observations of Verb-Echo Answers (VEAs).
- Reexamining Sato and Maeda (2021), we propose an alternative analysis which does not assume head movement and show that our analysis has empirical advantages over Sato and Maeda's (2021) analysis.

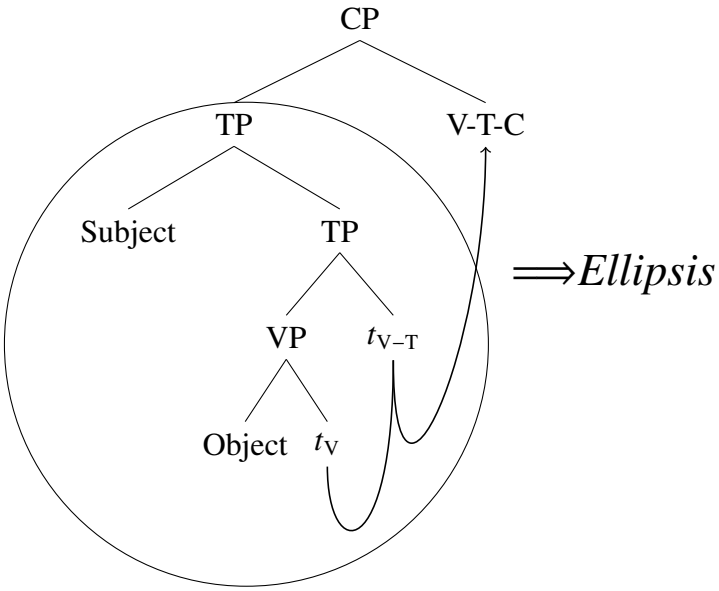
1.1 Verb-stranding TP Ellipsis analysis of VEA (Sato and Maeda, 2021)

- A VEA can be used as a response to a polar question. (1A) is interpreted as an affirmative answer to (1Q).

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

- Sato and Maeda (2021) follow Holmberg (2016) and propose that (1A) is derived via Verb-stranding TP Ellipsis (VTPE) as illustrated in (2).
- TP is elided after V undergoes V-to-T-to-C movement (see also Sato and Hayashi, 2018).

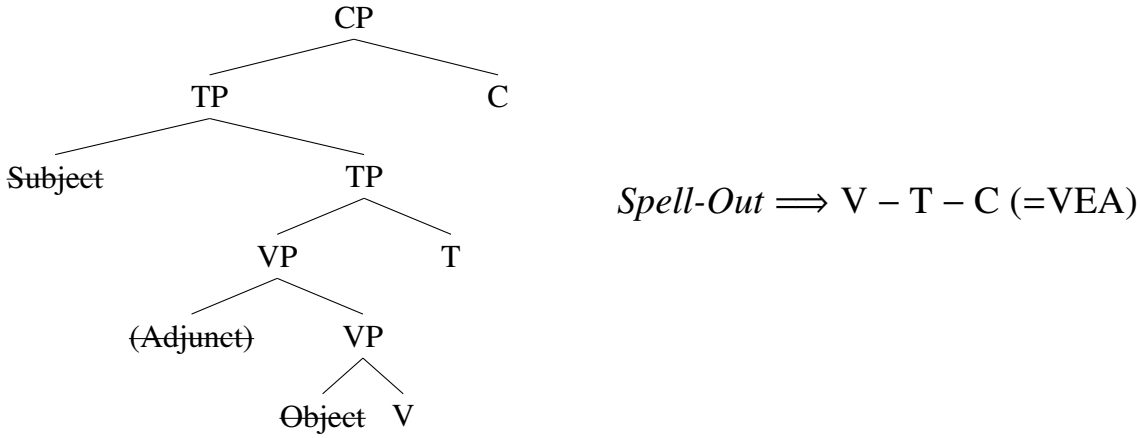
(2)



1.2 Proposal

- All the heads stay in-situ in syntax.
- TP-internal constituents are elided individually (This proposal is in line with Landau (2020)).

(3) (~~XP~~ = *Ellipsis*)

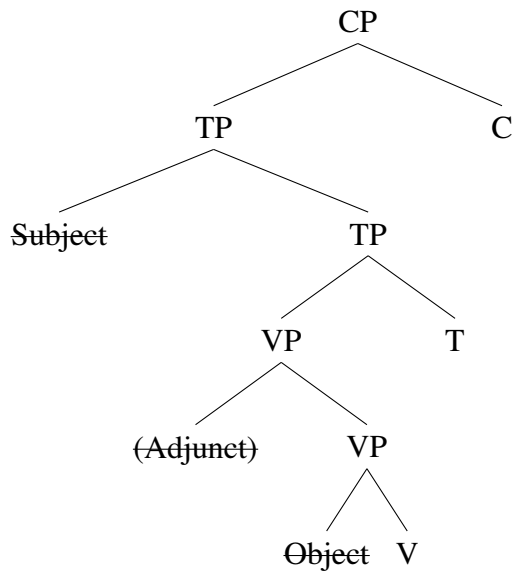


- Arguments are elided by *argument ellipsis* (Oku, 1998; Saito, 2007; Takahashi, 2006, among many others) and adjuncts are elided by *adjunct ellipsis* (Collins, 2015, 2017; Oku, 2016; Kobayashi, 2020; Landau, 2020).
- The verbal complex is spelled-out with an emphatic stress to express *verum focus* (Höhle, 1992), which emphasizes the truth value of its propositional content.

1.3 Goal

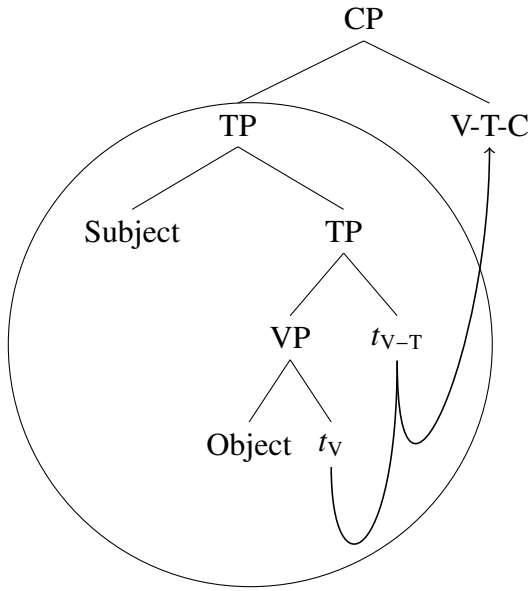
- The goal of this talk is to show that our analysis in (4) is superior to the analysis in (5).
- We provide novel set of data which supports our analysis in (4) over the VTPE analysis in (5).

(4)



Spell-Out $\Longrightarrow$ V – T – C (=VEA)

(5)



$\Longrightarrow$*Ellipsis*

- Roadmap
  - Section 2: Adverb-inclusive reading in VEA
  - Section 3: Voice mismatches in VEA
  - Section 4: Scope patterns of disjunction/*only* with respect to negation
  - Section 5: Conclusion

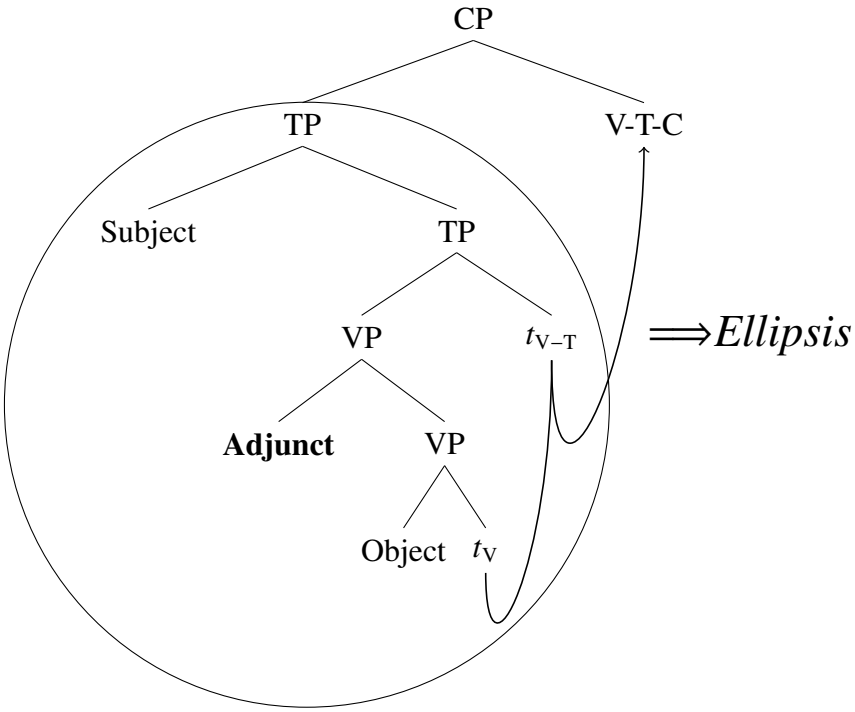
2 Adverb-inclusive reading in VEA

- The VEA in (6A) has an adverb-inclusive reading; it is most likely interpreted as an affirmative answer to (6Q): 'Yes, Ken washed the dishes carefully' (see Sugimura, 2011).

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

- Sato and Maeda (2021) claim that the adverb-inclusive reading is derived via VTPE, which elides the adverb contained within the TP, as depicted in (7).

(7)



2.1 Verbal Identity in VTPE

- Funakoshi (2014) proposes that verb-stranding VP ellipsis must satisfy the following identity condition.

  (8) The stranded verbs must be identical. If they are not identical, they must at least be contrasted in meaning (summarized by the authors; see the Appendix for details).

- Since what is important is the identity of the stranded verb (**not the size of the elided constituent**), the condition should also hold for VTPE.

- (9) and (10) show that an adverb-inclusive reading is obtained in a VEA even if (8) is not satisfied.

- (9A) and (10A) have the adverb-inclusive reading.

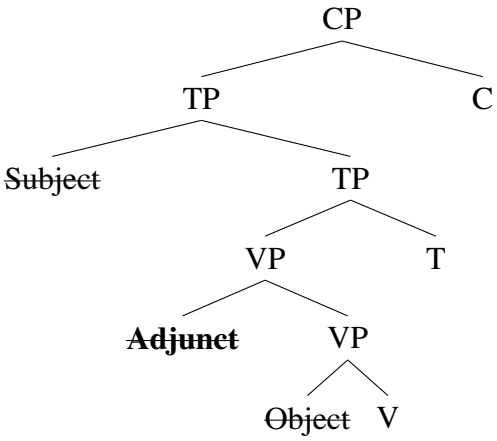
(9) Q: Gozira-ga [$_{AdvP}$ issyunnoutini] biru-o humitsubusi-ta-no?
Godzilla-NOM in.an.instant building-ACC trample-PST-Q
'Did Godzilla trample down the building in an instant?'
A: (Iya,) Moyasi-ta-yo.
no burn-PST-PRT
lit. 'Burned.'
OK: 'Godzilla burned down the building in an instant' (adverb-inclusive)

(10) Q: Kaabii-ga [$_{AdvP}$ ikioiyoku] Yosshii-o taosi-ta-no?
Kirby-NOM vigorously Yoshi-ACC defeat-PST-Q
'Did Kirby defeat Yoshi vigorously?'
A: (Iya,) Nomikon-da-yo.
no gulp.down-PST-PRT
lit. 'Gulped down.'
OK: 'Kirby gulped down Yoshi vigorously.' (adverb-inclusive)

(Note: In Smash Bros. Kirby may gulp down his enemies, but he does not defeat them by doing so.)

- An adverb-inclusive reading is not a hallmark of VTPE.
- (9) and (10) are derived not via VTPE but by adjunct ellipsis (Collins, 2015; Oku, 2016; Kobayashi, 2020; Landau, 2020) plus argument ellipsis, as depicted in (11) (see Landau, 2020, for arguments that argument ellipsis can apply to mutiple arguments in a sentence).

(11)



Spell-Out $\Longrightarrow$ V – T – C

2.2 Adverbs outside the scope of negation

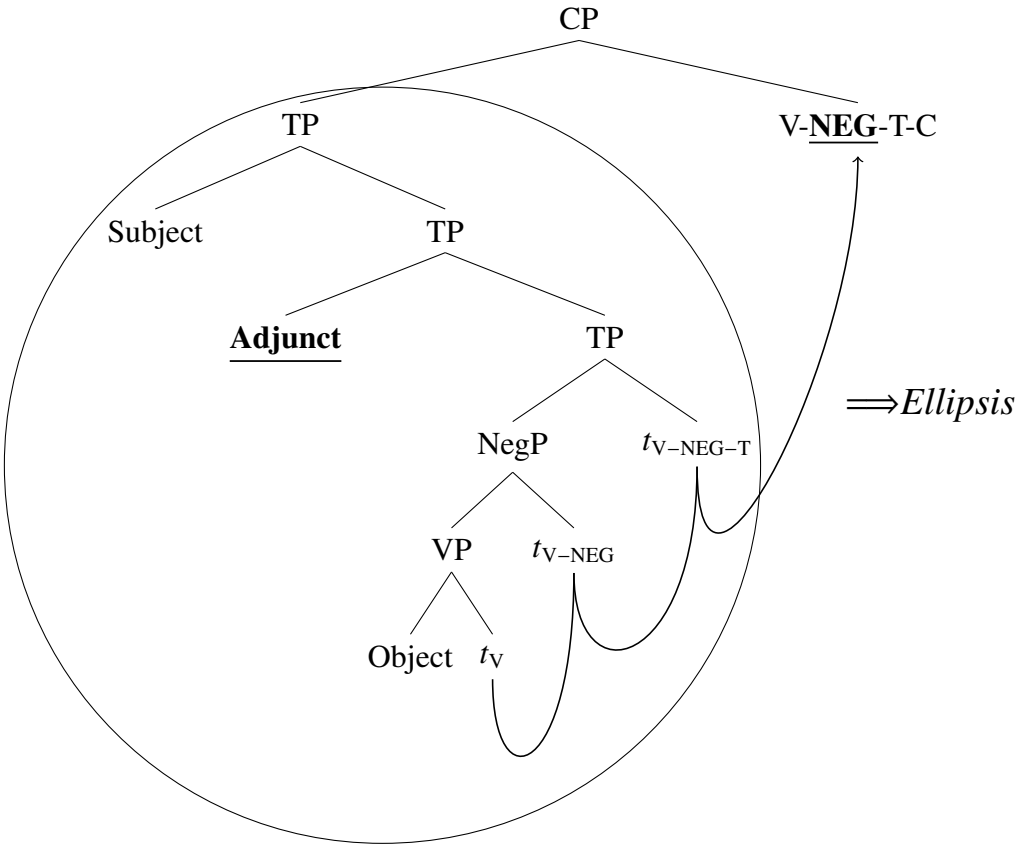
- (12) further supports our analysis; (12A) has the adverb-inclusive reading under the Adverb>Neg reading.[1]

(12) Q: Ken-wa [$_{\text{AdvP}}$ iitsukedoorini] geemu-o si-mas-en-desi-ta-ka? (**Adverb**>**Neg**)
Ken-TOP as.one.was.told game-ACC do-POL-NEG-COP-PST-Q
'Did Ken not play video games as he was told?'
A: Si-mas-en-desi-ta-yo. (**Adverb**>**Neg**)
do-POL-NEG-COP-PST-PRT
lit. 'Did not do.'
OK: 'Ken did not play video games following what he was told (he was told not to play video games).' (Adverb-inclusive)

- Sato and Maeda (2021) argue that NEG raising involved in VTPE changes scope possibilities (see Section 4 of this handout).

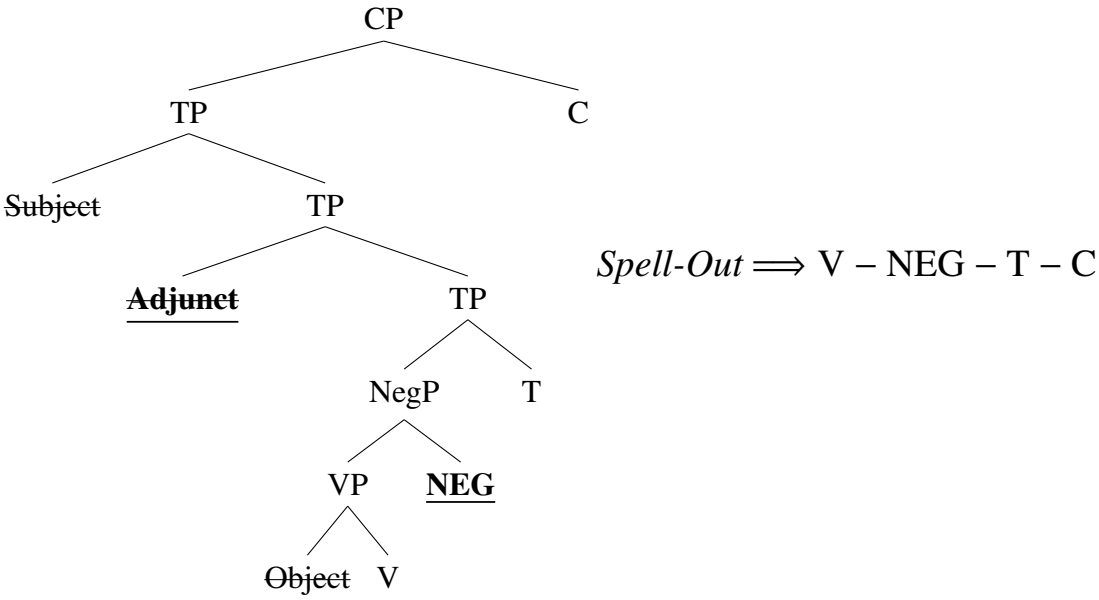
[1]The adverb can be interpreted as a VP adverb (or, manner adverb), which we set aside here.

(13)



- If (12A) is derived via VTPE as in (13), NEG should take scope over the adjunct. Thus, the Adverb>Neg should not be available in (12A).
- Our analysis in (14) explains the Adverb>Neg reading in VEAs.

(14)



- This section has shown that observations regarding adverb-inclusive readings in VEAs are better explained by the current analysis.

3 Voice mismatches in VEA

3.1 Evidence for VTPE?

- Sato and Maeda (2021) argue that a voice mismatch in VEAs results in ungrammaticality.

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

- Sluicing in English, which can be analyzed as TP-ellipsis, disallows voice mismatches (16b) (Merchant, 2001).

(16) 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.

- Sato and Maeda (2021) argue that the impossibility of voice mismatches in VEAs supports the VTPE analysis.

3.2 Question-answer congruence: A pragmatic analysis

- We argue that (15A) is unacceptable (**rather than ungrammatical**) because it yields an incongruent question-answer pair (cf. Weir, 2017).

- (17) shows that a voice mismatch is unacceptable in sentences that do not involve VEAs.

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

- The unacceptability of (15A) is not due to a syntactic identity condition on TP ellipsis.

- Some speakers find (17A) more acceptable than (15A). Nonetheless, we maintain that the contrast (if exists) is also explained by a pragmatic analysis as follows:[2]

- In (15A), 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).

- (17A) may be more acceptable than (15A) because the information about 'who was scolded' is expressed, and the information about 'by whom Yumi was scolded' is easily inferred.

- The line of pragmatic analysis is supported by (18). (18A) is a VEA, and yet it is more acceptable than (15A) arguably because it is clear in the discourse that the utterer of (18A) is the one who was scolded by Ken (as pointed out by Satoshi Oku (p.c.)).

[2]We thank an anonymous reviewer for bringing our attention to this speaker variation.

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

- The contrast between (15A) and (18A) is not explained if both VEAs are derived via VTPE.
- This section has shown that the impossibility of voice mismatches in VEAs does not support Sato and Maeda's (2021) VTPE analysis.

4 Negative scope reversal in VEA?

4.1 Disjunction and negation

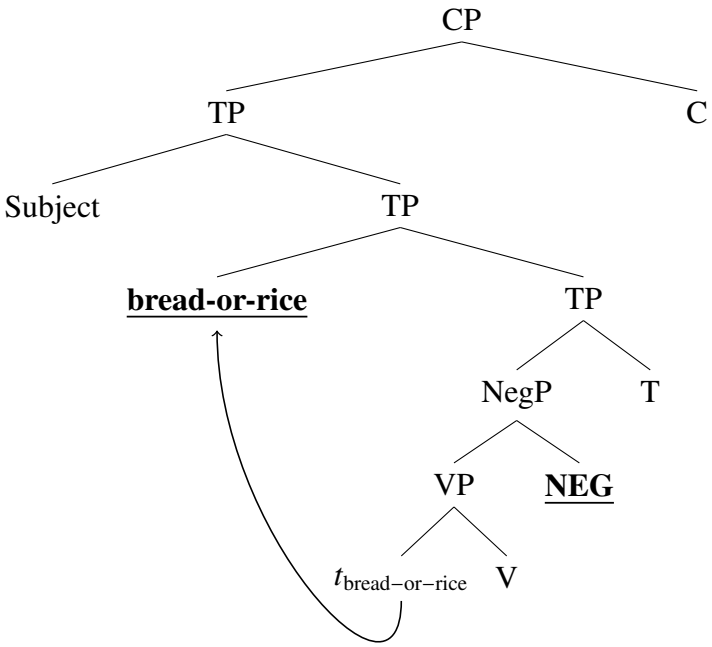
- Negation in Japanese does not take scope over disjunction (19).

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

4.1.1 Sato and Maeda's (2021) argument for NEG-raising

- Sato and Maeda (2021) follow Shibata (2015) and assume that the disjunctive phrase is higher than NEG, which occurs between V and T.[3]

(20)



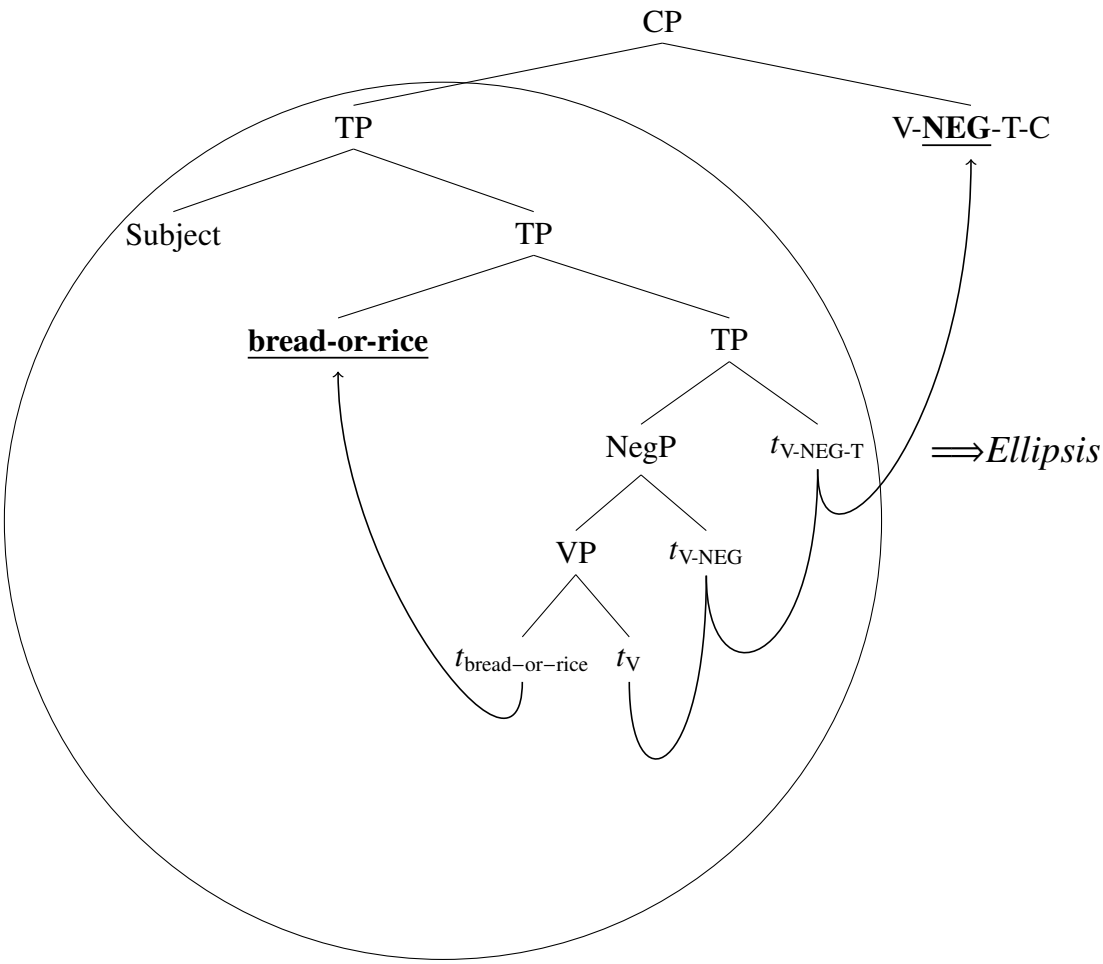
[3]Shibata (2015) proposes that the disjunction "acyclically" merged to the object only after it moves out of VP. The analysis is not illustrated in (20) in a precise way for ease of exposition.

- Sato and Maeda (2021) argue that (21A) has only the NEG>OR reading: it is not the case that Ken ate bread or rice (NEG>OR) (see also Funakoshi, 2013; Maeda, 2019, for similar observations).

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

- Sato and Maeda (2021) claim that the interpretation is explained if we assume that (21A) is derived via VTPE after syntactic NEG raising to the CP-domain above the disjunction.

(22)



4.1.2 An analysis based on question-answer congruence

- The OR>NEG reading in (21A) is excluded by question-answer congruence (Tanabe and Hara, 2021).

- The OR>NEG reading (Ken didn't eat bread) or (Ken didn't eat rice) does not provide an answer to (21Q): Did Ken eat bread or rice?

- The OR>NEG reading is false if and only if Ken ate both, thus it provides only the information that it is not the case that Ken ate both (it is possible that Ken ate either bread or rice, but it is also possible that Ken ate neither).

(23)

$p \vee q$	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**

- (24) shows that the OR>NEG reading is not an acceptable answer regardless of whether the answer contains an ellipsis or not.

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

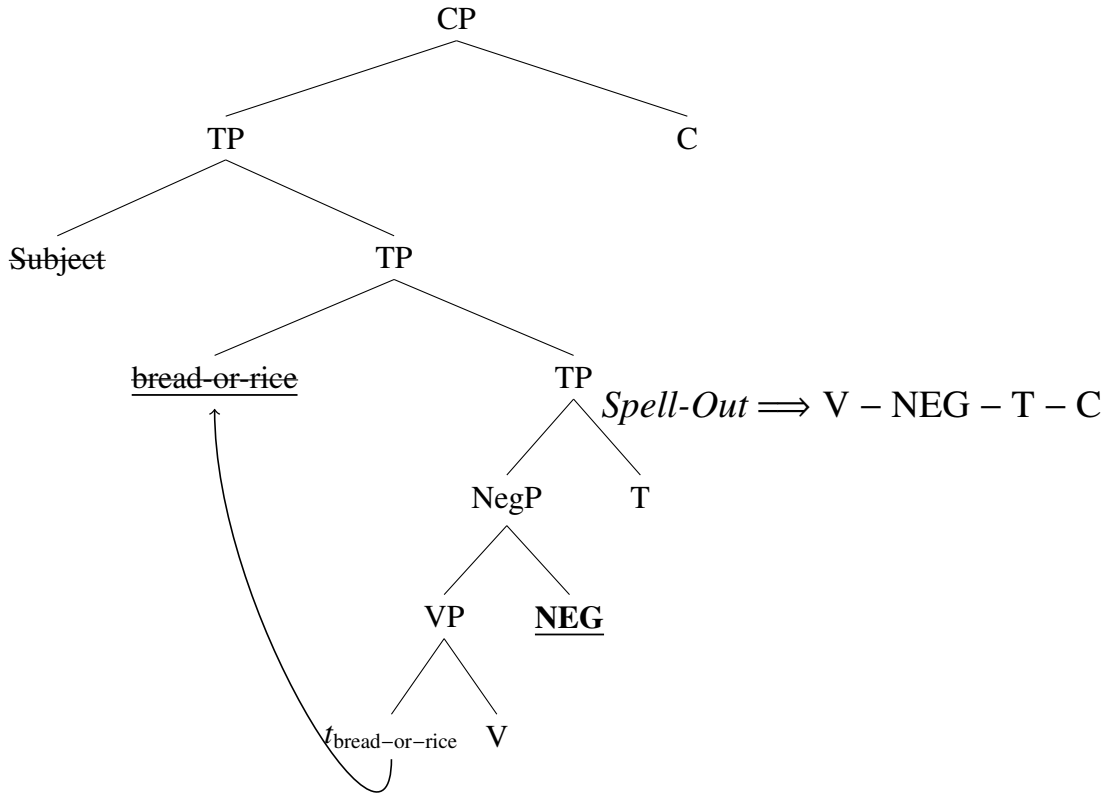
- The OR>NEG reading is available in (25A) because it provides an appropriate positive answer to the negative question in (25Q), namely 'You are right. Ken didn't eat either bread or rice ' (see Sakamoto, 2016; Maeda, 2019, for similar observations).[4]

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

- Our analysis in (26) explains the OR>NEG reading in (25A).

[4]Unlike languages like English, *hai* 'yes' in Japanese is an affirmative answer to a negative question. Thus, the question-answer pair that corresponds to (25Q)-(25A) is literally translated as 'Does Ken not speak Spanish or French?-Yes, he doesn't (speak Spanish or French)', which is unacceptable in English.

(26)



- The VTPE analysis undergenerates the OR>NEG reading in (25A) since the analysis requires NEG to always stay higher than the disjunctive phrase.[5]

- A question arises as to why the NEG>OR reading is obtained in (27A)(=(21A)) without NEG raising (the judgement is Sato and Maeda's (2021)).

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

- The source of the seemingly available NEG>OR reading in (27A) is (28A). (28A) does not involve disjunction, and yet it is truth-conditionally equivalent to NEG>OR (see Funakoshi, 2013).

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

[5] Sato and Maeda (2021, p. 370) acknowledge the problem and leave it open for future research.

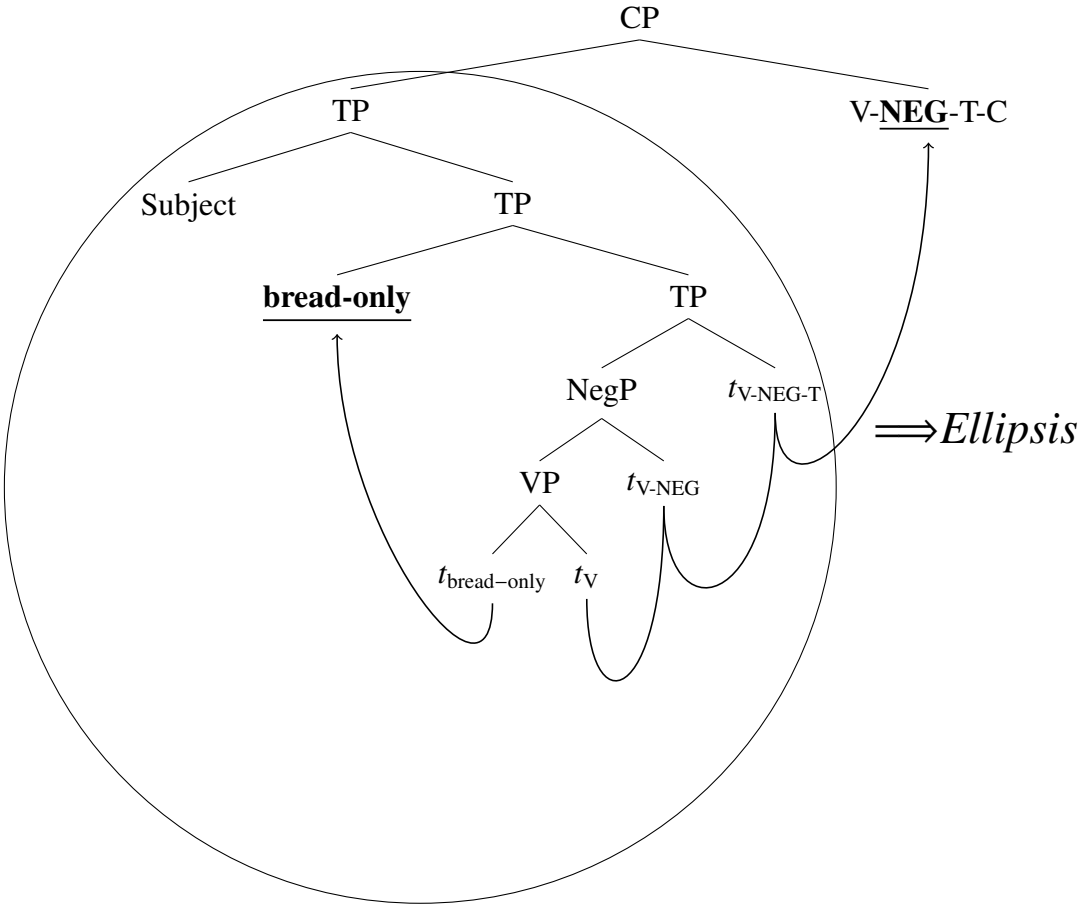
- The scopal interaction between disjunction and negation in VEAs is also explained by question-answer congruence. The VTPE analysis which assumes NEG raising fails to explain the OR>NEG reading obtained in a VEA.

4.2 *-dake* 'only' and negation

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

- Sato and Maeda (2021) argue that the obligatory NEG>ONLY reading in (29A) is also explained if we assume that (29A) is derived via VTPE, where NEG raises to C and takes scope over *-dake*.

(30)



- The scopal interaction between *-dake* 'only' and negation is also explained by question-answer congruence (Tanabe and Hara, 2021).

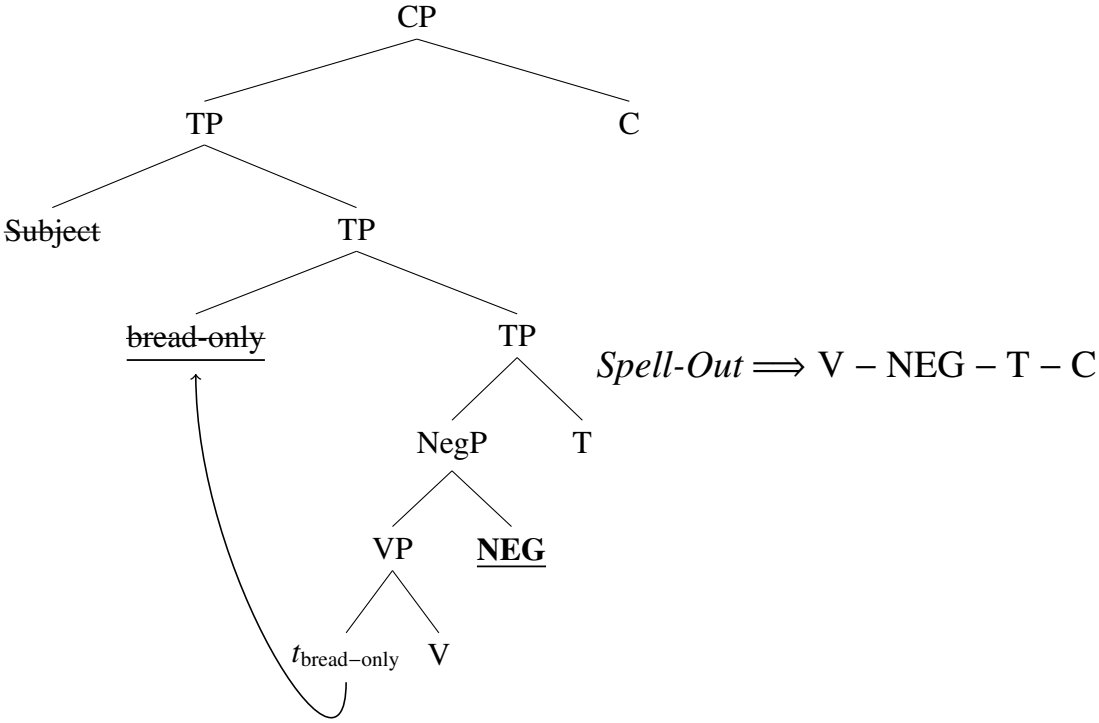
- Asking (29Q): 'Is it only bread that Ken ate?' presupposes that Ken ate bread and asks whether it is the case that he didn't eat anything else (other than bread). The ONLY>NEG reading, which asserts that Ken didn't eat bread, causes a presupposition failure, hence it is an unacceptable answer to the question.

- Again, the VTPE analysis undergenerates the ONLY>NEG reading in (31A). If the VEA is derived via VTPE, the negation must always take scope over only, contrary to the fact.

(31) Q: Ken-wa pan-dake tabe-nak-atta-no? (ONLY>NEG, *NEG>ONLY)
Ken-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
lit. 'Did not eat.'

- Our analysis correctly predicts (31A) to have the ONLY>NEG reading because (31A) is an appropriate positive answer to (31Q).

(32)

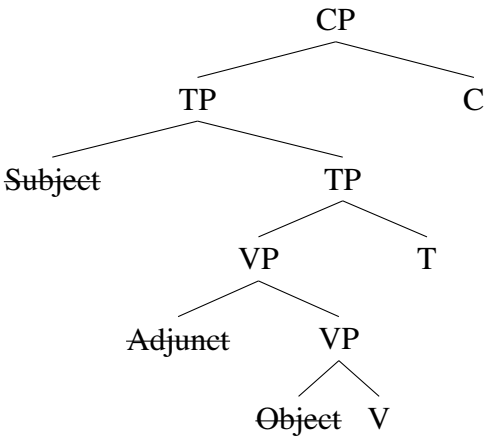


- Here again, we argue that the seemingly available NEG>ONLY reading in (33A1)(=(29A)) arises from (33A2), which does not involve the logical operator 'only' (see Sato, 2020, for relevant discussion).

(33) Q: Ken-wa pan-dake tabe-ta-no?
Ken-TOP bread-only eat-PST-PRT
'Did Ken eat only bread?'
A1: Tabe-nak-atta-yo.
eat-NEG-PST-PRT
?: 'It is not the case that Ken ate only bread.'(=NEG>ONLY)
A2: (Iya, toiuka) Ken-wa pan-o tabe-nak-atta-yo.
no in.fact Ken-TOP bread-ACC eat-NEG-PST-PRT
'(You are wrong.) Ken did not eat bread to begin with.'

5 Conclusion

- VEAs are derived by eliding the TP-internal constituents individually (cf. Landau, 2020)).
  (34)



Spell-Out $\Longrightarrow$ V – T – C

- The overall discussion shows that Sato and Maeda's (2021) analysis is inadequate, which supports the conclusion that syntactic head movement does not exist in Japanese (Fukui and Sakai, 2003; Kobayashi, 2016, to appear).

Abbreviation

ACC = accusative, COP = copula, DAT = dative, GEN = genitive, HON = honorification, NEG = negation, NOM = nominative, PASS = passive, POL = polarity, PRT = particle, PST = past tense, Q = question particle, TOP = topic marker.

Acknowledgement

Part of this research reported here was presented in "Workshop on ellipsis" at Kobe University, in September 2021. We thank the audience for their helpful comments. We also thank Satoshi Oku, Yurie Hara, and Kenta Mizutani for their valuable comments. This project is partially supported by JSPS KAKENHI Grant-in-Aid for Scientific Research (C) Grant Number JP21K00574 awarded to the second author. Needless to say, any shortcomings and errors of this paper are our own.

Appendix

• Further support for our in-situ analysis[6]

- Under Sato and Maeda's (2021) analysis, (35A) cannot be derived unless the V-T-C complex in the embedded CP raises to the V-T-C in the matrix clause.

(35) Q: Ken-wa [$_{CP}$ Eri-ga Yumi-o sikat-ta to] omoi-masi-ta-ka?
Ken-TOP Eri-NOM Yumi-ACC scold-PST that think-POL-PST-Q
'Did Ken think that Eri scolded Yumi?'
A: Sikat-ta to omoi-masi-ta-yo.
scold-PST that think-POL-PST-PRT
lit. 'Thought that scolded.' ('Yes, Ken did.')

- Inter-clausal head movement is generally prohibited. Therefore, the structure obtained via TP ellipsis is something like (36), where only the verbal complex in the matrix clause, i.e., *omoi-masi-ta-yo* 'think-POL-PST-PRT' in (35A) is pronounced.

(36) [$_{CP}$ Ken ~~[$_{TP}$ [$_{VP}$ [$_{CP}$ [$_{TP}$ [$_{VP}$ Eri Yumi t_V] $t_{V\text{-}T}$] V-T-C] t_V] $t_{V\text{-}T}$]~~ V-T-C]

- Our analysis in (37) explains (35A).

(37) [$_{CP}$ ~~Ken~~ [$_{TP}$ [$_{VP}$ [$_{CP}$ [$_{TP}$ [$_{VP}$ ~~Eri Yumi~~ V] T] C] V] T] C]

• How Verum focus is expressed

- In languages such as English and German, verum focus is normally expressed by the stress realized on an auxiliary. For instance, in the following example in English, verum focus is expressed by the stress on the auxiliary *did*.

(38) A: I can't believe that Mike hit you. (Did he really hit you?)
B: He [DID]$_F$ hit me.

- However, since auxiliaries in Japanese are affixes attached to a verbal stem, verum focus is expressed by an emphatic stress on verbal complexes (see Vermeulen, 2012).

• Funakoshi's (2014) identity condition

(ii) *Lexical identity condition on VPE*
Every lexical item of which the C-closure of the elided *v*P/VP consists must be identical to a lexical item of which the antecedent *v*P/VP consists.

(iii) The C-closure of α is the result of replacing contrasted parts of α with $\exists$-bound variables of the appropriate type.

(Funakoshi 2014, p.347)

[6]We thank an anonymous reviewer for bringing our attention to this construction.

• Question-answer congruence

- A congruent question-answer pair is defined under the Structured Meaning Approach as follows (von Stechow, 1990; Krifka, 2001):

(39) Criterion for congruent question-answer pair Q-A
where [[Q]] = <B,R> and [[A]] = <B′,F>:
B = B′ and F ∈ R (Krifka 2001, p. 296)

- The question meaning of (15Q) and the focus meaning of (15A) can be represented in (40a) and (40b), respectively.

(40) a. <B,R>=<$\lambda f.f$(Ken scolded Yumi),POLARITY>
POLARITY={Id, ¬}
b. <B′,F>=<$\lambda f.f$(Yumi was scolded by Ken),Id>

- (15Q-A) is an incongruent question-answer pair because they do not share an identity background (i.e., B ≠ B′) (cf. Weir, 2017).[7]

• Non-identity of particles in ellipsis

- The following example from Saito (2007, p. 217) shows that argument ellipsis tolerates non-idenity of particles.

(41) a. Taroo-wa zibun-no hahaoya-**o** tazune,
Taro-TOP self-GEN mother-ACC visit
'Taro visited his mother,'
b. Hanako-wa zibun-no hahaoya-**ni** denwa-o si-ta.
Hanako-TOP self-GEN mother-DAT phone-ACC do-PST
'Hanako called her mother.'
c. Hanako-wa [e] denwa-o si-ta.
Hanako-TOP phone-ACC do-PST
lit. 'Hanako called.'

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[7] Weir (2017) adopts the structured meaning approach in an attempt to explain the impossibility of voice mismatches in English fragment answers. However, Weir claims that voice mismatches result in ungrammaticality rather than unacceptability.

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