Verb phrase anaphora in a verb second language^{*}

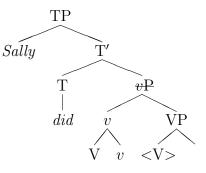
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1 Varieties of "VP" ellipsis

Aux-stranding VP ellipsis English (e.g. Hankamer 1971, Sag 1976, Johnson 2001)¹

(1) Harvey paid me yesterday and Sally **did** too.



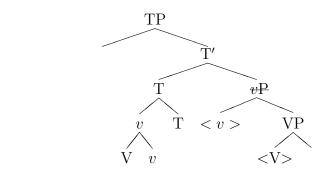
V-stranding VP ellipsis Hebrew and Irish (Goldberg 2005, McCloskey 1991:272–280)

(2) Hebrew (Goldberg 2005:14, ex. (10))

- a. Tazmini et Dvora la-mesiba? invite[Fut2Fsg] ACC Dvora to.the-party '(Will) (you) invite Dvora to the party?'
- b. Kvar hizmanti.
 already invite[Past1sg]
 '(I) already invited [Dvora to the party].'

^{*}This talk is based on joint work with Michael Houser, Ange Strom-Weber, and Maziar Toosarvandani (all UC Berkeley). Some of the data presented here are from text corpora (DK87-90 and Korpus 2000), some are from a transcribed corpus of spoken Danish (BySoc), some are from descriptive grammars, some are collected from newspapers and works of fiction, and some are from work with four Danish speakers, Gry Mirjam Schiær Feldhütter, Peter Feldhütter, Mikael Engelstoft Hansen, and Anna Gritt Schiær-Petersen, all living in the East Bay.

¹I use the traditional term VP ellipsis, but I put VP in quotes because, as will become clear, it is not strictly speaking a VP that goes missing in the examples examined below.



(3)

v-stranding VP ellipsis Farsi complex predicates (Toosarvandani 2006)

(4) otu zadan otu = non-verbal element (N), zadan = light verb <math>(v)iron HIT 'to iron'

Ellipsis targets the complement of the light verb (Toosarvandani 2006:2, ex (4)):

(5) sohrāb piranhā-rā otu na-zad vali rostam **zad** [piranhā-rā otu] Sohrab shirts-acc iron neg-HIT:past:3sg but Rostam hit:past:3sg 'Sohrab didn't iron the shirts, but Rostam did iron the shirts.'

$$(6) \qquad \qquad \begin{array}{c} TP \\ & &$$

(2) and (5) share core properties of English VP ellipsis:

- antecedent and target can be separated by sentence or utterance boundary
- requires a linguistic antecedent
- target can be embedded, and inside an island
- allows strict or sloppy readings of pronouns inside ellipsis site
- requires licensing by inflectional head (T in English, Hebrew, Irish, v in Farsi)

Their proposals The difference in surface realization of VP ellipsis is due to independent syntactic properties of the individual languages:

- main verbs raise to T in Irish and Hebrew, but not in English
- \bullet in Farsi complex predicates v has independent phonological expression; English v does not

 \mathbf{My} goal – Investigate VP an aphora in a V2 language, specifically VPE and VPP in Danish: ^2

[DK87 - 90]

[DK87-90]

(7) VP Ellipsis (VPE)

Jeg har prøvet at male det ... men jeg kan ikke ___. I have tried to paint it but I can not I have tried to paint it ... but I can't.

(8) **VP** Pronominalization (VPP)

- a. Kan vi slet ikke snakke om det? can we NPI not talk about it Can't we talk about it at all?
- b. Selvfølgelig kan vi **det**. of-course can we DET Of course we can.

Both exhibit core properties of English VPE

• V2 configuration:

 $\begin{bmatrix} CP & XP & \text{finite-verb} & \begin{bmatrix} TP & \dots & \langle XP \rangle & \dots \end{bmatrix} \end{bmatrix}$

Expectations:

- 1. the proform involved in VPP should participate in movement to initial position
- 2. VPE (and VPP) should, under certain circumstances, strand a finite main verb
- 1. is borne out by the data, 2. is not
- What does this tell is about verb movement and about V2?
- How is Danish different from Hebrew and Irish?

²I use the following abbreviations in the glosses: COM = common gender, DEF = definite, NEU = neuter gender, NPI = negative polarity item, PART = discourse particle, PASS = passive, PL = plural, POSS = possessive, REFL = reflexive, SUP = superlative. I gloss the VP proform det DET. As (8a) shows, the proform is identical to the 3rd sg neuter pronoun. I return to this in section 3.2.

2 V2 and VPA

2.1 Verb Second (V2)

V2 is a core syntactic property of most Germanic languages, including Danish:

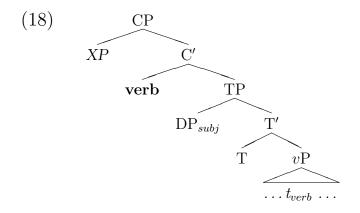
- some phrasal element appears in initial position (in *italics*)
- finite verb (aux or main) appears in second position (in **bold**)

(9)	Hende havde han genkendt forrige tirsdag. her had he recognized last Tuesday 'He had recognized her last Tuesday.'	[direct object + aux]
(10)	Fra hjernen kom de i hvert fald ikke. from brain-DEF came they in any case not. 'They didn't come from the brain.'	[PP complement + main]
(11)	Ham var der aldrig nogen der havde mistanke til. him was there never anyone that had suspicion to 'There was never anyone who was suspicious of him.'	[object of P + copula]
(12)	Slagteren har du vel givet besked. butcher-DEF have you PART given word 'I take it that you have told the butcher.'	[indirect object + aux]
(13)	At hun også er den frygteligste, ved han ikke. That she also is the terrifying-SUP knows he not 'He doesn't know that she is also the most terrifying on	[CP complement $+$ main] e.'
(14)	Morsomt fandt de det ikke. [predicate of funny found they it not. 'They didn't find it funny.'	of a small clause + main]
(15)	Så meget gentog verden sig vel ikke. that much repeated world REFL PART not 'One wouldn't think that the world would repeat itself the	[adverbial + main] nat much.'
(16)	Fundet nogen løsning har de endnu ikke. found any solution have they yet not. 'They haven't found a solution yet.'	[non-finite $VP + aux$]

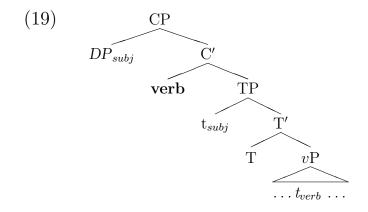
(17) Ida **åbnede** igen sine øjne. Ida opened again REFL-POSS eyes Ida opened her eyes again.

Analytically, there are two components to V2:

- finite verb (aux or main) moves to highest head position (C^0)
- some XP moves to (or occupies) highest specifier position (Spec-CP)
 - if XP is not subject, (9)–(16), we get XVSO:



- if XP is subject, (17), we get SVO:



Note There is some debate about the analysis of V2 in subject-initial clauses, specifically whether these should be analyzed as CPs (e.g. Vikner 1995, Schwartz and Vikner 1996) or IPs/TPs (e.g. Travis 1991 and Zwart 1997). Here I take the former position. The issue is not crucial to my immediate concerns here, though I do believe it is relevant for a full understanding of exactly when the VPP proform must front and when it may stay in situ (see section 3.1).

5

2.2 Two VPA constructions in Danish

VPE Amply attested and judged grammatical, but restricted use compared to English, possibly due to the existence and very widespread use of VPP (see Appendix).

 $_$ = ellipsis site

(20) Jeg har prøvet at male det ... men jeg kan ikke __.
I have tried to paint it but I can not
I have tried to paint it ... but I can't. [DK87-90]

- (21) [CONTEXT: There is nothing wrong with our system ...]
 Enten følger spillerne det, eller også gør de ikke __.
 either follows players.DEF it, or also do they not
 Either the players follow it (= the system), or they don't. [Korpus 2000]
- (22) Snydebilleder hedder de vist. Vel gør de ej ___.
 cheat.pictures be.called they supposedly well do they not
 I believe thay are called cheating pictures. No they aren't!' [Korpus 2000]

(23) Men jeg ser ingen forbindelse til den danske statsborger Niels Lassen. Gør De __? but I see no connection to the danish citizen Niels Lassen. Do you But I don't see any connection to the Danish citizen Niels Lassen. Do you?

[Leif Davidsen De gode søstre, Lindhardt og Ringhof, 2002, p. 144]

- (24) Vi har ikke fanget noget, har I? we have not caught anything have you.PL We haven't caught anything. Have you? [Korpus 2000]
- (25) de ligner da også hinanden gør de ikke? they resemble sure-enough also each.other do they not They certainly look like each other, don't they? [BySoc]

VPP Ubiquitous in the language, noted in descriptive grammars (e.g. Hansen 1967:31, Diderichsen 1968:178, Allan et al. 1995:158–9), but no analysis.³

det = VPP proform; variable position (§3.1)

(26)	a. Ved I hvor det ligger? know you-PL where it lies Do you know where it is?		
	b. Selvfølgelig gør vi det . of-course do we DET Of course we do.	[DK87-90]	
(27)	En del af dem klarer sig, andre gør det ikke. a part of them deal-with REFL others do DET not Some of them survive, others don't. [DK87-90]		
(28)	Han siger han kan hækle, men det kan han ikke. he says he can crochet but DET kan he not <i>He says that he can crochet, but he can't.</i> [elicited]		
(29)	a. [Sampson] " Selv vores historie er kompliceret. Kender De til den?" even our history is complicated. Know you to it? Even our history is complicated. Do you know about it?		
	b. [Toftlund] "Ikke synderligt." not particularly		
	c. [Sampson] "Næh, hvorfor skulle De også det ?" sagde han og :	fortsatte: " continued	
	[Leif Davidsen De gode	<i>søstre</i> , p. 166]	
(30)	a. [Sampson] Vi har holdt øje med hende i flere år. we have held eye with her in several years We have kept an eye on her for several years.		
	b. [Toftlund] Det har alle åbenbart. DET has everyone apparently <i>It seems that everyone has.</i>		
	[Leif Davidsen De gode	<i>søstre</i> , p. 167]	

VP anaphoric constructions are found throughout the Germanic languages. For data and discussion see Lødrup (1994) on Norwegian auxiliary+det, Källgren and Prince (1989) on Swedish göra det, Winkler (1998) and López and Winkler (2000) on the German es construction, van Craenenbroeck (2004:125-260) on Dutch Short Do Replies, and Kehler and Ward (1999) and Kehler and Ward (2004) on English do so and do it. A next goal of the current project is to compare Danish VPP to these constructions.

VPP: deep or surface anaphora? Surface by Hankamer and Sag (1976) criteria (see Lødrup (1994) for relevant discussion):

- exhibits the Missing Antecedent Phenomenon:
- (31) Jeg har aldrig redet på en kamel, men **det** har Ivan og han siger at *den* stank I have never ridden on a camel but DET has Ivan and he says that it-COM stank forfærdeligt. terribly. I have never ridden a camel, but Ivan has and he says it stank terribly.
 - requires/prefers syntactic parallelism:

(32) PASSIVE \sim ACTIVE

?? Skraldespanden skulle tømmes og jeg gjorde **det**. garbage-bucket-DEF should empty-PASS and I did DET Intended: The garbage can needed to be emptied and I emptied it.

- (33) TRANSITIVE \sim INTRANSITIVE
 - * Jeg ville hænge hesteskoen over døren og **det** gør den nu. I wanted hang horse-shoe-DEF over door-DEF and DET does it-COM now Intended: I wanted to hang the horseshoe over the door and it hangs there now.
 - Moreover VPP is found with passives (synthetic and analytic):
- Så tiltrække-s de to af hinanden ganske som alle andre positive og (34)a. then attract-PASS the two by the other just as allother positive and negative ladninger gør det. [Korpus 2000] negative charges do DET. The two are then attracted by each other just like all other positive and negative charges are.
 - b. Det var første gang jeg ønskede at blive afsat, og **det** blev jeg. [DK87-90] it was first time I wanted to become dismissed and DET blev jeg. It was the first time I had wanted to be dismissed and I was.
 - and unaccusatives:
- (35) Bare bilen ville bryde sammen lige nu! Men **det** gjorde den selvfølgelig ikke! just car.DEF would break together right now but DET did it of.course not If only the car would break down right now! But of course it didn't!

[DK 87-90; modified]

These facts suggest that the vP that surfaces as det has internal syntactic structure at some point in the derivation.

2.3 V2 and VPA: expected interactions

Given the analysis of V2 (XP fronts to Spec-CP and finite verb raises to C^{0}) we expect VPA to interact with V2 in two ways:

- 1. the proform involved in VPP could from to Spec-CP:
 - \bullet it has the right syntactic properties: it's an XP, not an \mathbf{X}^0
 - it has the right discourse pragmatic properties: given the antecedence requirement on anaphora, the anaphor has the right properties to be a topic and topics can sit in Spec-CP (Diderichsen 1968:191–2)
- 2. a finite main verb could be stranded by VPE and by VPP if the arguments on previous page are accepted:
 - if there are no auxiliaries the main verb leaves the vP (for C^0), as in (10), (13), (14), (15)
 - if head movement takes place in the narrow syntax, and ellipsis takes place later (in the PF), the result would be "remnant ellipsis", as argued for VPE in Hebrew and Irish by Goldberg (2005) and McCloskey (1991).

3 What we find

3.1 Fronting of VP anaphor to Spec-CP

The first expectation is borne out. VPP *det* may front to Spec-CP, yielding *det*-verb[fin]-subject order:

(36)	exis	ndes der ikke en billigere løsning? Det gør der sikkert. t there not a cheaper solution? DET does there probably t't there a cheaper solution? There probably is. [DK87-90]
(37)	a.	[Sampson] Vi har holdt øje med hende i flere år. we have held eye with her in several years We have kept an eye on her for several years.
	b.	[Toftlund] Det har alle åbenbart. DET has everyone apparently It seems that everyone has.

[Leif Davidsen De gode søstre, p. 167]

It may also occur in situ (contra Vikner (1988:11)):

- (38) a. [Sampson] "... Selv vores historie er kompliceret. Kender De til den?" even our history is complicated. Know you to it? Even our history is complicated. Do you know about it?
 - b. [Toftlund] "Ikke synderligt." not particularly
 - c. [Sampson] "Næh, **hvorfor** skulle De også **det**?" sagde han og fortsatte: "... Well, why should you also DET said he and continued Why should you, he said and continued ...

[Leif Davidsen De gode søstre, p. 166]

- (39) a. Ved I hvor det ligger? know you-PL where it lies Do you know where it is?
 - b. Selvfølgelig gør vi det. of-course do we DET Of course we do.

[DK87-90]

(40) [CP Hvis det viser sig at være nødvendigt at flytte hovedkontoret til USA], if it shows REFL to be necessary to move head-office to USA gør vi måske det ... do we perhaps DET
If it turns out to be necessary to move the head quarters to the US, we might (do so) ... [Korpus 2000]

- [Lise Carlsen] ... jeg er træt af, at min mand bare forsvinder og ikke (41)a. am tired of that my husband just disappears T and nok gider ringe hjem og spørge, hvordan hans gravide kone har det. Om home and ask be-bothered call pregnant wife Whether how his has it. fødslen måske er gået i gang for tidligt" birth-DEF maybe is gone in step too early I am tired of the fact that my husband just disappears and can't be bothered to call home and ask how his prequent wife is doing. If labor has perhaps started early.
 - b. Hans hjerte begyndte at hamre. Som om han havde løbet langt og hurtigt. his heart started to pound. As if he had run far and fast.
 - c. [Per Toftlund] Er den **det**? Hvad siger du? ... is it-COM DET what say you Has it? What are you saying?

[From Leif Davidsen De gode søstre, p. 147]

Descriptive generalization The VPP proform fronts to Spec-CP unless:

- i. VPP occurs in an embedded clause that does not allow topicalization, e.g. (34a), OR
- ii. some element with higher priority occupies that position.

Element with higher priority include:

- a wh-phrase; hvorfor (why) in (38)
- certain adverbials; *selvfølgelig* (of course) in (39)
- the antecedent of a conditional; embedded CP in (40)
- the null operator involved in polar questions; (41)
- subjects that are interpreted as (contrastive?) topic:
 - and re (others) in (42) vs. han (he) in (43):
- (42) En del af dem klarer sig, andre gør det ikke.
 a part of them deal-with REFL others do DET not
 Some of them manage, others don't. [DK87-90]
- (43) *Han siger han kan hækle, men **han** kan **det** ikke. (cf. Vikner 1988:11, ex. (iib)) he says he can crochet but he can DET not

- in-situ det impossible with expletive subject: (44) vs. (36)

(44) Findes der ikke en billigere løsning? ***Der** gør **det** sikkert. exist there not a cheaper solution? there does DET probably

Challenge How to understand "higher priority"—nature of features involved, locality, discourse functions of Spec-CP (Branigan and MacKenzie 2002, Sturgeon 2006)

What about VPE?

- Can the target of VPE participate in V2?⁴
- No, (45b) can only be understood as a question:

 $^{^4\}mathrm{in}$ the spirit of Johnson's (2001) proposals for English VPE.

- (45) a. Du blev ikke længe ude. you stayed not long out You didn't stay our very long.
 - b. Gjorde jeg ikke? Aahnej did I not – oh-no Didn't I? Oh well.

[Hansen 1967:31]

- Does this show that V2 is a phonologically defined configuration?
- That depends on the analysis of polar questions, which are phonologically V1, but have been argued to be V2 due to a null operator in Spec-CP (Vikner 1995:49)

3.2 Verb movement and remnant ellipsis

The second expectation – that VPE and VPP could strand a finite main verb – is not borne out:

(46) *Vore øjne opfatter det ikke, men biers øjne **opfatter**. our eyes perceive it not but bees-POSS eyes percieve Intended: Our eyes don't perceive it, but bees' eyes do percieve it.

In such contexts a finite form of the verb gøre (do) is obligatory (Houser et al. 2006):

(47) Vore øjne opfatter det ikke, men biers **gør** _____. [Korpus 2000] our eyes perceive it not but bees-Poss do *Our eyes don't perceive it, but bees' (eyes) do.*

Showing this for VPP requires controlling for various other construals of the test sentences since the VPP proform *det* has other uses, including:

- 3rd person singular neuter pronoun:
- (48) a. Hvad med komfuret? what about stove-DEF-NEU What about the stove?
 - b. Jeg slukkede for \det I turn-off-PAST for it I turned it off.

- CP/propositional anaphor:
- (49) De har fundet fejlen og **det** er godt. they have found error-DET and it is good *They have found the error and that's good.*
- (50) a. De kommer først i morgen. they arrive first in morning. They are not arriving until tomorrow.
 - b. Jeg ved **det** godt, men ... I know it well but I know (that), but ...

Using a verb like *bo* (live), which takes a locative PP complement, we see that stranding of the main verb is impossible in VPP as well, whether the proform is fronted or not :

- (51) a. * Jeg bor ikke i Svaneparken, men det bor mine børn.
 I live not in Svaneparken but DET live my children
 Intended: I don't live in Svaneparken, but my children do live in Svaneparken.
 - b. *Jeg bor ikke i Svaneparken, men mine børn bor det.
 I live not in Svaneparken but my children live DET
 Intended: I don't live in Svaneparken, but my children do live in Svaneparken.

As with VPE, gore support obligatory in this context:

(52) Jeg bor ikke i Svaneparken, men det gør mine børn ... [Korpus 2000]
 I live not in Svaneparken but DET do my children
 I don't live in Svaneparken, but my children do ...

A tentative proposal (developed in Houser et al. 2006)

- VPE and VPP bleed verb movement:
 - the relevant part of verb movement is in the PF (Chomsky 2001:37–38, Zwart 2001)⁵
 - ellipsis "happens" earlier (Merchant 2001:72ff), perhaps at Convergence (Baltin 2005)
- gøre is inserted to express the feature on T (à la do-support in English)

 $^{^5\}mathrm{Contra}$ Matushansky (2006)

4 Back to Hebrew and Irish

Question Why would VP ellipsis bleed verb movement in Danish, but not in Hebrew and Irish?

Two possibilities

- i. Verb movement is also in the PF in these languages, ellipsis happens later in the derivation.
- ii. The timing of ellipsis is the same, but verb movement is in the narrow syntax in Hebrew and Irish.

Observation that might favor ii. There is a difference in the function of verb movement in Danish on the one hand, and Hebrew and Irish on the other:

- Hebrew and Irish appear to have $v \to T$ for morphological reasons:
 - the morphology associated with tense features needs a host
- Danish has $v \to C$ for non-morphological reasons.
 - there is no $v \to T$ independent of $T \to C$ (Vikner 1995)
 - in embedded contexts without V2, the finite verb (main or aux) is realized below negation (in v):
 - (53) Jeg tog cyklen fordi jeg ikke **vidste** hvor bilnøglerne var. I took bicycle-DEF because I not knew where car-keys-DEF were I took my bike because I didn't know where the car keys were.
 - (54) Jeg tog cyklen fordi jeg ikke **kunne** finde bilnøglerne. I took bicycle-DEF because I not could find car-keys-DEF I took my bike because I couldn't find the car keys.
 - thus $v \to T$ cannot be triggered by morphological needs
 - $-v \rightarrow T$ (if it exists in Danish at all!) is a subpart of V2 (movement to C) and hence triggered, indirectly, by whatever causes V2, which is something non-morphological, possibly in the realm of discourse (Brandner 2004)
- Perhaps verb movement is in the narrow syntax in Hebrew and Irish because it serves a morphological need natural if insertion of lexical/phonological material follows narrow syntax (Late Insertion in Distributed Morphology) whereas verb movement for V2, as in Danish, is in the PF.

Conclusions

- V-stranding VPE in Hebrew and Irish raises two expectations about interaction of verb movement and VP ellipsis in a V2 language like Danish
- First is borne out: VPP can participate in V2 by proform moving to initial position.
- Second is not: a finite main verb cannot be stranded by VPE or VPP
- Resolution of this puzzle might hinge of the timing of verb movement wrt. ellipsis and that the function of verb movement in a given language (morphological or non-morphological) could determine whether verb movement happens in the narrow syntax or at PF.

Appendix

Four observations on the distribution of VPE and VPP in Danish:

Observation 1 VPP is less restricted semantically than do it and do so anaphora in English. None of the VPP examples in (26), (30), (34a-b), (36), and (52) have felicitous do so or do it counterparts in English. Presumably this is due the semantics of the antecedent VP in these examples and the restrictions on do so or do it identified by Kehler and Ward (1999).

Observation 2 Impressionistically, VPE is less frequent in Danish, as compared to

- a) VPP in Danish
- b) VPE in English

Observation 3 Impressionistically, Danish VPE occurs more frequently in embedded clauses than in non-embedded clauses. This is not reflected in the examples if VPE included in $\S2.2$, but in fact the examples in (55) and (56) are more typical.

- (55) Farver er Gøgl, når man behandler dem på den Manér hun gør ___. colors are entertainment when one treats them on the way she does Colors are entertainment when one treats them the way she does. [Hansen 1967:31]
- (56) a. Ved De i Tyskland skelner man mellem tre slags kaffe.
 know you in Germany distinguish one between three kinds coffee.
 Do you know that in Germany they distinguish between three kinds of coffee?
 - b. Der er Kaffee, som aldrig har set bønner. There is that never has seen beans. *There is* Kaffee, *which has never seen a coffee bean.*
 - c. Og der er Bohnen-Kaffee, som vel lige netop har _____. And there is that PART just enough has And there is Bohnen-Kaffee, which barely has.
 - d. Og så er der endelig Echt-Bohnen-Kaffee, som til gengæld aldrig har set And then is there finally that to repay never has seen andet end ægte kaffebønner! anything than genuine coffee-beans And finally there is Echt-Bohnen-Kaffee, which in turn has seen nothing but real coffee beans! [DK87-90]

Observation 4 In certain embedded environments, VPP is impossible or degraded, but VPE is fully grammatical (Dan Hardt, p.c.):

- Antecedent Contain Deletion:
- (57) Per Toftlund boede på samme hotel, som Teddy havde gjort (*det) nogle dage Per Toftlund lived at same hotel, as Teddy had done some days tidligere. earlier.

Per Toftlund stayed at the same hotel as Teddy had some days earlier.

[Leif Davidsen De gode søstre, p. 149]

• Comparative clauses:

(58) Vi kan producere mange flere grøntsager end vi gør (??det) nu og alligevel we can produce many more vegetables that we do now and still opretholde en gigantisk svineproduktion. maintain a gigantic pork-production We can produce many more vegetables that we do now and still maintain a gigantic pork production.

[Korpus 2000]

Questions

- (How) are these observations related?
- Is the lack of topicalization in (most) embedded clauses relevant for understanding the distribution of VPE and VPP in main vs. embedded clauses?
- Does the impossibility of VPP in (57) and (58) cast doubt on the claim that it is a surface anaphor?

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