

Verb phrase anaphora in a verb second language*

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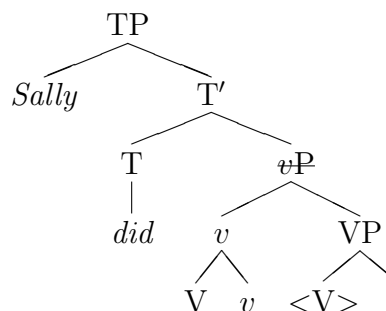
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1 Varieties of “VP” ellipsis

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, Irish, Swahili (Goldberg 2005, McCloskey 1991:272–280)

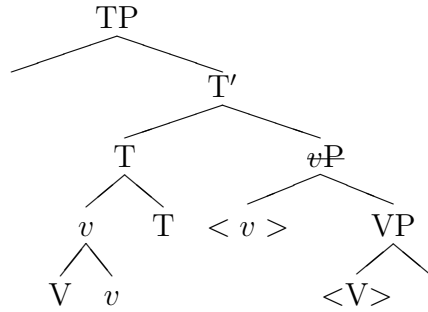
- (2) Hebrew (Goldberg 2005:2, ex. (2))

- a. Šalaxt etmol et ha-yeladim le-beit-ha-sefer?
send[Past2Fsg] yesterday ACC the-children to-house-the-book
'(Did you) send [yesterday the children to school]'
- b. Šalaxti.
send[Past1sg]
'(I) sent.'

*This talk is based on joint work with Michael Houser, Angela Strom-Weber, and Maziar Toosarvandani (all UC Berkeley). Some of the data presented here are from corpora (DK87-90 and Korpus 2000), 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 zad
iron hit
'to iron'

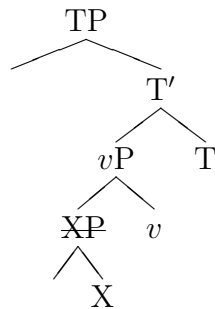
otu = non-verbal element (N), *zad* = light verb (*v*)

Ellipsis targets the complement of the light verb:

(5)

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

(6)



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
- in Farsi complex predicates *v* has independent phonological expression; English *v* does not

My goal Investigate VP anaphora in a V2 language, specifically VPE and VPP in Danish:

(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.

[DK87-90]

(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.

[DK87-90]

Both exhibit core properties of English VPE

- V2 configuration:

[_{CP} XP finite-verb [_{TP} ... <XP> ...]]

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 us about verb movement and about V2?
- How is Danish different from Hebrew and Irish?

¹I 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

2 V2 and VPA

2.1 Verb Second (V2)

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

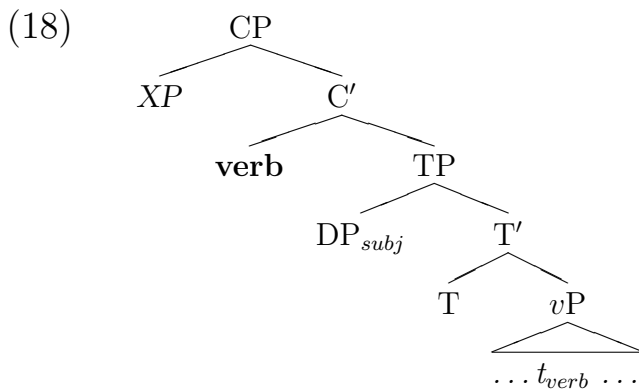
- some phrasal element appears in initial position (in *italics*)
- finite verb (aux or main) appears in second position (in **bold**)

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

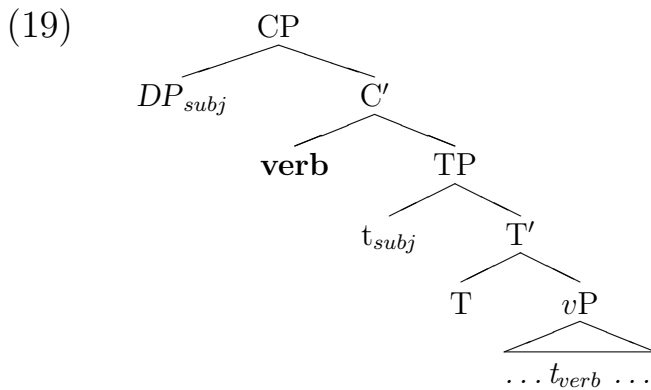
- (17) *Ida åbnete igen sine øjne.* [subject + main]
 Ida opened again REFL-POSS eyes
Ida opened her eyes again.

Analytically, there are two components to V2:

- finite verb (aux or main) moves to highest head position (C^0)
- some XP moves to highest specifier position (Spec-CP)
 - if XP is not subject, (9)–(16), we get XVS0:



- 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).

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.

___ = 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) 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]
- (22) Jeg ville protestere, men kunne ikke _____.
I wanted protest but could not.
I wanted to protest, but couldn't. [DK87-90]
- (23) 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]
- (24) Vi kan producere mange flere grøntsager end vi gør ____ nu og alligevel opretholde
we can produce many more vegetables that we do now and still maintain
en gigantisk svineproduktion.
a gigantic pork-production
We can produce many more vegetables that we do now and still maintain a gigantic pork production. [Korpus 2000]

VPP Ubiquitous in the language, noted descriptive grammars (e.g. Hansen 1967:31, Diderichsen 1968:178, Allan et al. 1995:158–9), but no analysis.²

det = VPP proform; variable position (see 3.1)

- (25) 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]
- (26) 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]
- (27) Han siger han kan hække, men **det** kan han ikke.
 he says he can crochet but DET kan he not
He says that he can crochet, but he can't.
- (28) [From Leif Davidsen *De gode søstre* Lindhardt og Ringhof, 2002, p. 166]
- 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 ...
- (29) [From Leif Davidsen *De gode søstre* Lindhardt og Ringhof, 2002, p. 167]
- 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.

²Vikner (1988:11) cites some VPP examples in a footnote, but does not develop an analysis. Seemingly similar phenomena are documented for Norwegian by Lødrup (1994, 1996), for German by Winkler (1998) and López and Winkler (2000), and for Dutch van Craenenbroeck (2004). 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 also Lødrup (1994)):

- exhibits the Missing Antecedent Phenomenon:

(30) 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:

(31) PASSIVE ~ 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.*

(32) TRANSITIVE ~ 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:

(33) Så tiltrækkes de to af hinanden — ganske som alle andre positive og negative
 then attract-PASS the two by the-other just as all other positive and negative
 ladninger gør det. [korpus 2000]
 charges do DET.
*The two are then attracted by each other just like all other positive and negative
 charges are.*

- and unaccusatives:

(34) En mur falder ikke ned på én nat selvom den måske fysisk gør det.
 a wall falls not down on one night eventhough it-COM perhaps physically does DET
A wall does not fall down in one night, even if it does (so) physically. [k. 2000]

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 front to Spec-CP:
 - it has the right syntactic properties: it's an XP, not an 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
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-v[fin]*-subject order:

- (35) Findes der ikke en billigere løsning? **Det** gør der sikkert.
exist there not a cheaper solution? DET does there probably
Isn't there a cheaper solution? There probably is. [DK87-90]

- (36) [From Leif Davidsen *De gode søstre* Lindhardt og Ringhof, 2002, p. 167]

- 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.

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

- (37) [From Leif Davidsen *De gode søstre* Lindhardt og Ringhof, 2002, p. 166]
- 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 ...
- (38) 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]
- (39) [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]
- (40) [From Leif Davidsen *De gode søstre* Lindhardt og Ringhof, 2002, p. 147]
- a. [Lise Carlsen] ... jeg er træt af, at min mand bare forsvinder og ikke
I am tired of that my husband just disappears and nok
gider ringe hjem og spørge, hvordan hans gravide kone har det. Om
be-bothered call home and ask how his pregnant wife has it. Whether
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 pregnant 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?

Descriptive generalization The proform arising from VPP fronts to Spec-CP unless some element with higher priority occupies that position. Element with higher priority include:

- a *wh*-phrase; *hvorfor* (why) in (37)
- certain adverbials; *selvfølgelig* (of course) in (38)
- the antecedent of a conditional; embedded CP in (39)
- the null operator involved in polar questions; (40)
- subjects that are interpreted as (contrastive?) topic:

– *andre* (others) in (41) vs. *han* (he) in (42):

(41) 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]

(42) *Han siger han kan hække, men **han** kan **det** ikke.
 he says he can crochet but he can DET not

– in-situ *det* impossible with expletive subject: (43) vs. (35)

(43) 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

What about VPE?

- Can the target of VPE participate in V2?
- No, (44b) can only be understood as a question:

(44) 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:

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

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

- (46) 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:

- (47) a. Hvad med komfuret?
what about stove-DEF-NEU
What about the stove?
b. Jeg slukkede for **det**
I turn-off for it
I turned it off.

- CP/propositional anaphor:

- (48) 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.

- (49) 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 :

- (50) 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, *gøre* support obligatory in this context:

- (51) 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

- VPE and VPP bleed verb movement:
 - verb movement is in the PF (Chomsky 2001:37–38)³
 - ellipsis “happens” earlier (Merchant 2001:72ff), perhaps at Convergence (Baltin 2005)
- *gøre* is inserted to express the features on T (à la *do*-support in English)

4 Back to Hebrew, Irish, and Swahili

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

Two possibilities

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

³Though see Matushansky (2006) for counterarguments

Observation that might favor 2. There is a difference in the function of verb movement in Danish on the one hand, and Hebrew, Irish, and Swahili on the other:

- Hebrew, Irish and Swahili have $v \rightarrow T$ for morphological reasons:
 - the morphology associated with tense features needs a host
- Danish has $v \rightarrow C$ for non-morphological reasons.
 - there is no $v \rightarrow T$ independent of $T \rightarrow C$ (Vikner 1995)
 - in embedded contexts without V2, the finite verb (main or aux) is realized below negation (in v):

(52) 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.

(53) 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 $v \rightarrow T$ cannot be triggered by morphological needs
- $v \rightarrow T$ (if it exists!) 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, Irish and Swahili 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, Irish, Swahili raises 2 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.

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