**The parallels between ellipsis and copy deletion: A case for post-syntactic head movement**

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**Claim:** I argue that the unexpected interaction of head movement on the one side with VP ellipsis (VPE) and VP topicalizaton (VPT) on the other side in Mainland Scandinavian compared to other (non-Scandinavian) languages allows us to determine the locus of both head movement and (VP) ellipsis to be the post-syntax rather than the syntax proper. The parallel behaviour of (verb-stranding) VPE and (verb-doubling) VPT further suggests that copy deletion and ellipsis are the same PF operation underlyingly differing only in their trigger. **Background:** For head movement there still is an ongoing debate about whether it takes place in the syntax proper (Lechner 2007, Roberts 2010, Keine & Bhatt 2016) or post-syntactically (Chomsky 2001; Schoorlemmer & Temmerman 2012; Zwart 2016). Similarly, for ellipsis there are proposals where the non-pronunciation of material (most commonly triggered by the [E]-feature) is realized post-syntactically therefore counter-bleeding any syntactic operations on this material (Merchant 2001, 2004; van Craenenbroek 2010) or in the syntax proper thereby bleeding such syntactic operations (Aelbrecht 2010; van Craenenbroek and Lipták 2008; Johnson 2013). In cases of verb-stranding VP ellipsis (VVPE), the verb is pronounced despite being the head of the elided VP (marked with < and > in (1)).

(1) Eu dei um livro pra Maria e o Pedro também deu <um livro pra Maria>.
I gave a book to.the Maria and the Pedro also gave a book to.the Maria
'I gave a book to Maria, and Pedro did, too.' (Santos 2009: 28)

Commonly, the lack of V ellipsis in (1) is attributed to the verb undergoing some head movement to a higher head outside of the ellipsis site prior to actual non-pronunciation of VP (2).

(2) …o Pedro também deu <[$_{VP}$ $t_{deu}$ um livro pra Maria ]>②
①

Standardly, this interaction between HM and ellipsis is easily explained by the intrinsic ordering of the two: HM takes place in the syntax and realization of ellipsis in the post-syntax. **Puzzle:** Mainland Scandinavian (MSc, taking Norwegian as an exemplar, Danish and Swedish behave the same) lacks VVPE (3) despite independently exhibiting both VPE (Sailor 2009; Thoms 2012) (4) and, as is well-known, head movement of V out of VP (V-to-C, Vikner 1995).

(3) *Johan leste ikke *Lolita*, men Marie leste <[$_{VP}$ *Lolita*]>.
Johan read.PST not *Lolita* but Marie read.PST *Lolita*
Int: 'Johan didn't read *Lolita*, but Marie did.' (Thoms 2012:9)

(4) Jan kan løse problemet, men Kari kan ikke <[$_{VP}$ løse problemet]>.
Jan can solve problem.the but Kari can not solve problem.the
'Jan can solve the problem, but Kari can't.' (Bentzen et al. 2013:99)

As HM is bled by ellipsis here, in contrast to what is expected if HM is syntactic and ellipsis post-syntactic, both must take place in the same module, their order of application determined by some (extrinsic or intrinsic) mechanism. **Previous Account:** Sailor (2018), assuming that HM is syntactic and ellipsis also has a syntactic trigger, proposes that the difference between languages like Portuguese and languages like MSc is that the former have V-to-T movement while the latter show V-to-C movement. If the trigger for ellipsis is T, and ellipsis is syntactic in the sense that elided material is inaccessible for operations by higher heads, then C being derivationally posterior to T comes too late to trigger HM of V out of the elided VP in MSc (5). In Portuguese, T triggers both ellipsis and HM at the same time thus allowing the verbal head to raise to T prior to elision of VP (6).

(5) Step 1: [$_{TP}$ $T_{[E]}$ <[$_{VP}$ V Obj ]> ]
Step 2: [$_{CP}$ C [$_{TP}$ $T_{[E]}$ <[$_{VP}$ V Obj ]> ]]
✗

(6) Step 1: [$_{TP}$ $T_{[E]}$ [$_{VP}$ V Obj ]]
Step 2: [$_{TP}$ V+$T_{[E]}$ <[$_{VP}$ V Obj ]> ]

**Parallel puzzle:** Although this elegantly explains the data and ties the interaction of HM and ellipsis to the derivational order of their triggers it fails to extend to another domain in which

MSc's behaviour is deviant from that of other languages, namely verb-stranding VPT (VVPT). In Portuguese (a.o.), topicalization of the VP leaves a copy of the verbal head (7).

(7) [$_{VP}$ Temperar aquele peixe ] o cozinheiro **temperou** (mas…)
season.INF that fish the cook seasoned (but…)
'As for seasoning that fish, the cook seasoned it (but…).' (Bastos-Gee 2009: 162)

The standard analysis of (7) follows the same logic as in (2): HM moves the verbal head out of a lower copy of the VP (to T) prior to the latter's deletion (indicated by striking through) by some copy deletion (CD) mechanism (8).

(8) …o cozinheiro temperou ~~[$_{VP}$ t$_{temperou}$ aquele peixe ]~~②
①

As HM has been taken to be syntactic and CD to be post-syntactic, counter-bleeding as in (8) is expected as the only possible result of an interaction between the two.

Strikingly, MSc (Norwegian as example, D and S behave the same) again behaves unexpected. It independently shows VPT (9-a) and VP-evacuating V-to-C movement but not VVPT (9-b).

(9) a. [$_{VP}$ (Å) lese boken ] vil han t$_{VP}$ i dag.
to read.INF book.DEF wants he in day
'Read the book, he wants to do today.'
b. *[$_{VP}$ (Å) lese boken ] leste han ikke i dag.
to read book.DEF read he not in day
Int. 'As for reading the book, he did not read it today.'

As CD, unlike HM and ellipsis, has never been suggested to have a syntactic trigger, the bleeding relation in (9-b) cannot be due to a Sailor-style intrinsic derivational timing. Nonetheless, the curious parallel behaviour of MSc w.r.t. both VVPE and VVPT coupled with the strikingly parallel logic of analysis suggests a unified treatment of both. **Proposal:** Since accounts of the MSc behaviour in VVPE and VVPT relying on the intrinsic ordering between modules or merging time of triggering heads fail, and because both E and CD interact with HM in bleeding and counter-bleeding relations, I propose that both HM and ellipsis must take place in the same module as CD, namely the post-syntax, where they obey a language-specific extrinsic ordering that must be established during language acquisition (see Arregi & Nevins 2012; Schoorlemmer 2012, for post-syntactic ordering of operations). In Portuguese-like languages, this ordering is HM < CD, E while it is CD, E < HM in MSc. Placing V-to-T movement in the syntax and V-to-C movement in the post-syntax might also be able to derive the patterns. However, such a modular bipartition of HM, if it is tenable at all, has been argued to be the other way around (Harizanov & Gribanova 2018). Further, as both E and CD are non-pronunciation operations, albeit with different triggers ([E-feature] vs. c-commanding copy), I suggest that they are the same PF-operation. Therefore, no PF-operation can be ordered between them. **Prediction:** If a language has both VPE and VPT, then it should show the same behaviour w.r.t. verb-stranding/-doubling. Also, due to free ordering of CD, E vs. HM, there should be no link of this behaviour to the height of the HM-trigger. In Afrikaans, the first prediction is borne out: VPE and VPT behave alike and parallel to MSc in showing no V-stranding/-doubling.

(10) a. *Die boek skryf skryf hy (maar hy wil dit nie publiseer nie).
the book write write he (but he will it not publish not)
b. *Jan skryf 'n boek en Marie skryf ook.
Jan write a book and Marie write too

Since it is a language with V-to-C rather than V-to-T movement, however, it does not provide evidence for the second prediction. **Selected References: Aelbrecht, L.** (2010). *The syntactic licensing of ellipsis*. John Benjamins. **Arregi, K. & Nevins, A.** (2012). *Morphotactics: Basque Auxiliaries and the Structure of Spellout*. Springer. **Harizanov, B. & Gribanova, V.** (2018). Whither head movement? *NLLT*. **Sailor, C.** (2018). The typology of head movement and ellipsis: A reply to Lipták and Saab. *NLLT*.