Object Shift and Remnant VP-Topicalisation

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In the Scandinavian languages, a (pronominal) object may move from its base position behind the main verb to a position to the left of a sentential adverbial. This movement operation is called Object Shift (OS).

(1) Da a. *Jeg <u>kyssede</u>   ikke   _____ <u>hende</u>.
          *I   *kissed*   *not*   *her*
      b. Jeg <u>kyssede</u> <u>hende</u> ikke   _____ _____.

OS presupposes movement of the main verb; as shown in (2), it cannot cross a verb *in situ*.

(2) Da a. Jeg har   ikke   kysset <u>hende</u>.
          I   *have*   *not*   *kissed* *her*
      b. *Jeg har   <u>hende</u> ikke   kysset _____.

However, the main verb does not have to undergo head movement (V°-to-I°-to-C° movement) as in (1). OS is also possible in clauses with a non-finite main verb if the verb occurs in clause-initial position, (3). In fact, OS has to take place in this case, (4).

(3) Sw a. <u>Kysst</u> har   jag   <u>henne</u> inte   ___ ___   (bara hållit henne i handen).
          kissed *have* *I*   *her*   *not*   *only held her by hand-the*
                                                                          (Holmberg 1997: 205)
    Da b. <u>Kysset</u> har   jeg   <u>hende</u> ikke   ___ ___   (bare holdt hende i hånden).
          kissed *have* *I*   *her*   *not*   *only held her in hand.the*
                                                                          (Vikner 2005: 407)
    Ic c. <u>Kysst</u> hef   ég   <u>hana</u> ekki   ___ ___   (bara haldið í höndina á henni).
          kissed *have* *I*   *her*   *not*   *only held in hand.the on her*
                                                                          (Vikner 2005: 431)

(4) Sw a. *<u>Kysst</u>   har   jag   inte   ___ <u>henne</u>.
          kissed   *have* *I*   *not*   *her*   (Erteschik-Shir 2001: 59)
    Da b. *<u>Kysset</u> har   jeg   ikke   ___ <u>hende</u>.
          kissed   *have* *I*   *not*   *her*

The observation that the object only moves if the main verb has moved forms the basis of Holmberg's generalisation (Holmberg 1986: 165, 1997: 208).

(5) **Holmberg's Generalisation (HG)**   (Holmberg 1997: 208)
     Object Shift is blocked by any phonologically visible category preceding/c-commanding the object position within VP.

>   [Here "within VP" has to mean that only elements "properly inside" VP
>   (i.e. not adverbials or other elements adjoined to VP) may block object
>   shift.   E.E. & S.V.]

The definition in (5) is vague with respect to whether precedence and/or c-command of a phonologically visible category blocks movement. In the 1999 version of the paper, Holmberg formulates HG in terms of asymmetric c-command. For reasons to become clear in section 2.1 below, we pursue the first option, taking HG to be the consequence of a violable condition on order preservation (cf. Déprez 1994, Müller 2001b, Sells 2001, Williams 2003, and Fox & Pesetsky 2005).

Holmberg (1997, 1999) supposes that HG is a derivational condition, not a representational one. OS of an infinitival clause subject is possible as long as there is no intervening non-adverbial material, (6)a. A violation of HG as in (6)c cannot be repaired by subsequent operations as in (6)d that place the blocking element to the left of the shifted object; in other words, HG may not be violated at any point in the course of derivation.

(6)   Sw a.   Jag   såg   henne   inte   ___   [IP _____ arbeta].
               I   *saw*   *her*   *not*   *work*
        b.   Jag   har   inte   sett   [IP henne arbeta].
               I   *have*   *not*   *seen*   *her*   *work*
        c.   *Jag   har   henne   inte   sett   [IP _____ arbeta].
        d.   *Sett _____ arbeta   har   jag henne inte   _____

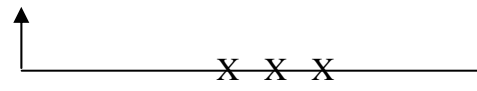   (Holmberg 1997: 206)

Holmberg concludes that the grammatical sentences in (3) cannot involve OS prior to remnant VP-topicalisation since that would violate HG, cf. (7). Rather, they must be derived by V°-topicalisation, with subsequent OS, cf. (8).[1]

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[1] Note that OS in the V°-topicalisation analysis is countercyclical: It targets a lower position than the previous movement of V°, violating Chomsky's (1993) Extension Principle (unless OS is adjunction and the Extension Condition is restricted to specifier positions / substitution).
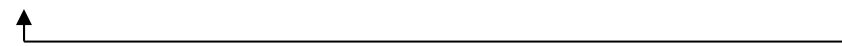
   Moreover, the V°-topicalisation analysis involves movement of an X° to an XP-position.

(7)   <u>Remnant VP-topicalisation? Holmberg (1997, 1999): NO!</u>

Sw a.   [$_{CP}$ har   [$_{IP}$ jag   [$_{VP1}$ inte   [$_{VP2}$ <u>kysst</u>   <u>henne</u>]]]]

   b.   [$_{CP}$ har   [$_{IP}$ jag   <u>henne</u>   [$_{VP1}$ inte   [$_{VP2}$ <u>kysst</u>   _____]]]]

X   X   X

violation of HG!!!

   c.   [$_{CP}$ [$_{VP2}$ <u>Kysst</u> _____] har   [$_{IP}$ jag   <u>henne</u>   [$_{VP1}$ inte   _____]]]

(8)   <u>V°-topicalisation? Holmberg (1997, 1999): YES!</u>

Sw a.   [$_{CP}$ har   [$_{IP}$ jag   [$_{VP1}$ inte   [$_{VP2}$ <u>kysst</u>   <u>henne</u>]]]]

   b.   [$_{CP}$ [$_{V°}$ <u>Kysst</u>]   har   [$_{IP}$ jag   [$_{VP1}$ inte   [$_{VP2}$ _____   <u>henne</u>]]]]

   c.   [$_{CP}$ [$_{V°}$ <u>Kysst</u>]   har   [$_{IP}$ jag   <u>henne</u>   [$_{VP1}$ inte   [$_{VP2}$ _____   _____]]]]

However, if V°-topicalisation would be possible, we would expect the sentences in (9)b/(10)b to be acceptable, contrary to fact.

(9)   Da a.   Jeg   har   ikke   <u>smidt</u>   <u>den</u>   ud.
             I   *have*   *not*   *thrown*   *it*   *out*
      b.   *<u>Smidt</u>   har   jeg <u>den</u>   ikke   ____   ___   ud.

(10)   Da a.   Jeg   har   ikke   <u>stillet</u>   <u>det</u>   på bordet.
             I   *have*   *not*   *put*   *it*   *on table-the*
      b.   *<u>Stillet</u>   har   jeg <u>det</u>   ikke   ____   ___   på bordet.

Against Holmberg (1997, 1999), we would like to suggest that remnant VP-topicalisation is possible, though it is subject to certain restrictions.

1.2 Fox & Pesetsky's (2005) remnant VP-Topicalisation approach

As Fox & Pesetsky (2005) mentions, remnant VP-topicalisation is possible in Swedish under certain conditions: In double object constructions, topicalisation of a non-finite main verb may take along the IO, stranding the DO in shifted position, (11)a. By contrast, stranding of an IO pronoun alone is not possible, (11)b.

(11) Sw a. ?[$_{VP}$ Gett <u>henne</u> <u>___</u>] har jag <u>den</u> inte.
given her have I it not

       b. *[$_{VP}$ Gett <u>_____</u> <u>den</u>] har jag <u>henne</u> inte.   (Fox & Pesetsky 2005: 25)

Fox & Pesetsky (2005) accounts for this asymmetry as well as for HG in general in terms of order preservation: OS may only take place if the order among (non-adverbial) elements is maintained.

> Fox & Pesetsky (2005) suggests that the mapping between syntax and phonology, i.e. Spell-out, takes place at various points in the course of derivation (including at VP and at CP), whereby the material in the Spell-out domain D is linearized; see also Chomsky (2000, 2001). The crucial property of Spell-out is that it may only add information about the linearization of a newly constructed Spell-out domain D' to the information cumulatively produced by previous applications of Spell-out. Established information cannot be deleted in the course of derivation. Consequently, HG derives from ordering contradictions. OS may only take place if it results in ordering statements at CP that match those established at Spell-out of VP. As illustrated in (12), OS is thus only possible if the main verb itself moves too.
>
> (12)   a. Spell-out VP: [$_{VP}$ <u>V</u> <u>O</u>]   ordering statement: **V<O**
>   b. Spell-out CP: [$_{CP}$ S <u>V</u>   <u>O</u> [$_{VP}$ __ __]]   ordering statement: **V<O**
>   c. Spell-out CP: [$_{CP}$ <u>V</u> Aux S <u>O</u> [$_{VP}$ __ __]]   ordering statement: **V<O**
>   b. Spell-out CP: *[$_{CP}$ S Aux   <u>O</u> [$_{VP}$ <u>V</u> __]]   ordering statement: **O<V**
>
> Correspondingly, the asymmetry between stranding of an IO and stranding of a DO by remnant VP-topicalisation illustrated in (11) above is expected by order preservation. Stranding of an IO, but not stranding of a DO gives rise to contradictory ordering statements at the various Spell-out domains: At VP, "IO<DO" is established, which is maintained at the Spell-out of CP in (11)a but not in (11)b.
>
> Note that Fox & Pesetsky (2005) predicts that movement operations that do not obey HG have to proceed successive cyclically: The underlined constituents in (13) have to move through the edge of VP prior to linearisation of the VP domain to prevent ordering contradictions at the Spell-out of CP; cf. (14). These movement operations comprise various instances of A-movement and A-bar-movement operations, such as Scandinavian Negative Shift (see Christensen 2005), *wh*-movement, topicalisation, and subject raising.

(13) Da a. Måske   har   han   <u>ingen bøger</u>   læst   _____.
         probably   has   he   no books   read

      b. <u>Hvad</u>   har   du   læst   _____?
         what   have   you   read

      c. <u>Bøgerne</u> har   jeg   læst   _____.
         books-the have   I   read

      d. Måske   blev   <u>bøgerne</u>   læst   _____.
         perhaps   were   books-the   read

(14)   a. VP: [$_{VP}$ <u>V</u> <u>O</u>]]
        b. Spell-out VP: [$_{VP}$ <u>O</u> [$_{VP}$ <u>V</u> ___]]   ordering statement: **O<V**
        c. Spell-out CP: [$_{CP}$ <u>O</u> Aux   S   [$_{VP}$ ___ [$_{VP}$ <u>V</u> ___]]   ordering statement: **O<V**

Hence, the crucial difference between the various movement operations in (13) and OS is that the former may - and indeed must – go through the edge of VP, whereas, as Fox & Pesetsky (2003) states, in their analysis OS cannot involve movement through the edge of VP.

2 An OT approach to Object Shift and remnant VP-Topicalisation

2.1 Asymmetry I: Stranding of a DO vs. Stranding of an IO

Following Fox & Pesetsky (2005), we assume that HG results from a condition on order preservation, as stated by the constraint in (15).

(15)   ORDER PRESERVATION (ORDPRES):
        If the foot of the chain of some non-adverbial element α precedes the foot of the chain of some element β, the head of the chain of α also precedes the head of the chain of β.

OS is motivated by the constraint SHIFTPRON which outranks the constraint STAY that prohibits movement.[2]

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[2] In Icelandic, not only weak pronouns but also full DPs may undergo OS.

(i)   Ic a. Af hverju   las   Pétur   aldrei   <u>þessa bók</u>?
            why   read   Pétur   never   this book
        b. Af hverju   las   Pétur   <u>þessa bók</u>   aldrei   _____?   (Vikner 2005: 417)

Full DP Shift is motivated by a more general version of SHIFTPRON, called SHIFT.

(ii)   SHIFT:
        A [-foc] element precedes and c-commands the lowest VP (of the same clause) that contains all other VPs and all VP-adjoined adverbials.

(16)   SHIFTPRONOUN (SHIFTPRON):
         A weak pronoun precedes and c-commands the lowest VP (of the same clause) that
         contains all other VPs and all VP-adjoined adverbials.

(17)   STAY:
         Trace is not allowed.   (Grimshaw 1997: 374)

SHIFTPRON is satisfied if the pronoun is adjoined to the top VP, as illustrated in (18) below. The ranking ORDPRES >> SHIFTPRON predicts that OS is only possible if it maintains the base order of elements. The main verb does not necessarily have to undergo V°-to-I°(-to-C°) movement for OS to be possible. What is crucial is that the main verb moves to a position to the left of the target position of OS, such that the relative order between verb and object is preserved. This can also be achieved by placing a non-finite verb in topic position as in (3); cf. Tableau 1.

(18)   Da
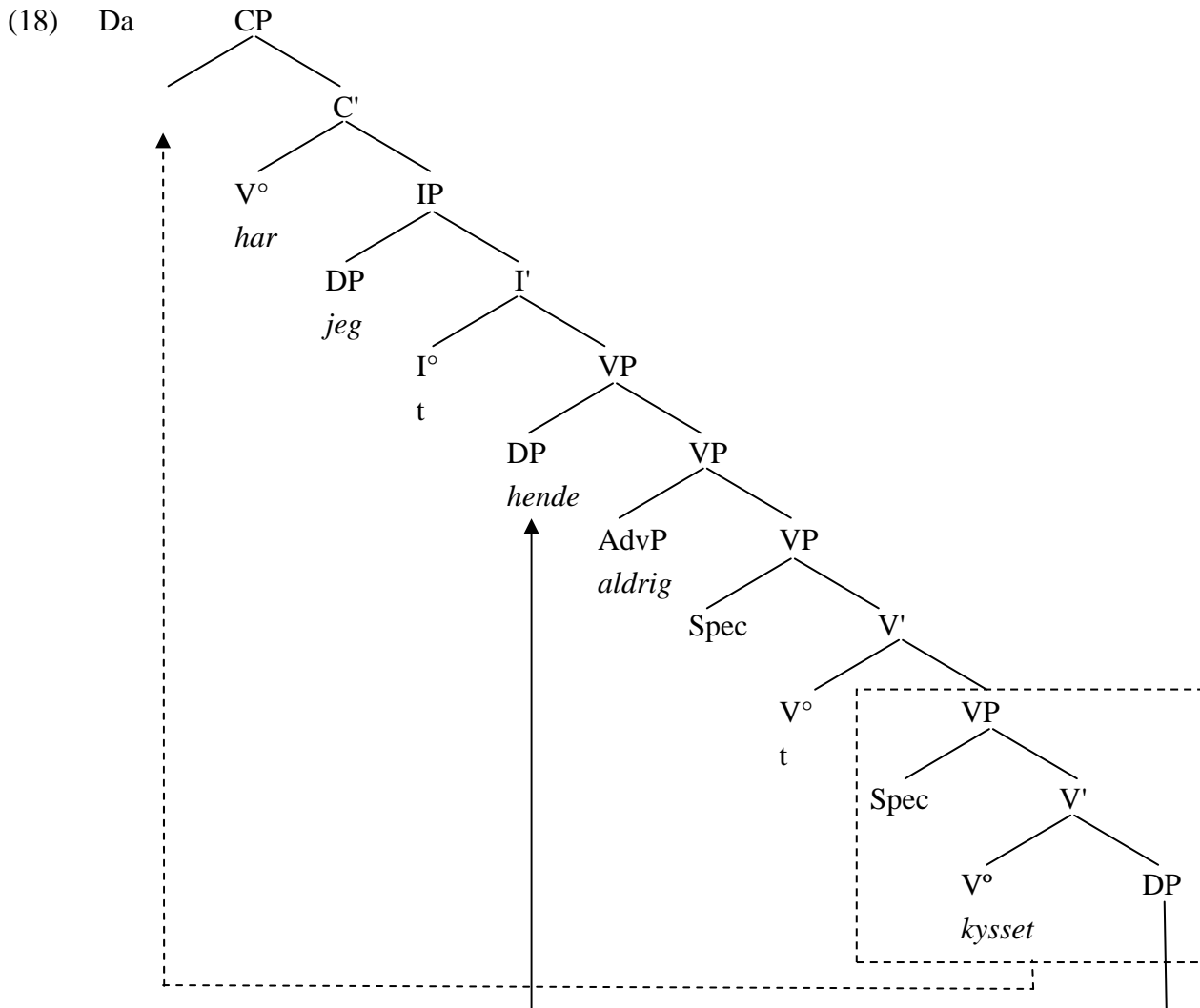
Tableau 1

Da:	ORD PRES	SHIFT PRON	STAY	ex.
☞ 1a Sub Aux Adv <u>V</u> <u>Pron-Obj</u>		*		(2)a
1b Sub Aux <u>Pron-Obj</u> Adv <u>V</u> t_{Obj}	*!		*	(2)b
2a Sub <u>V</u> Adv t_V <u>Pron-Obj</u>		*!		(1)a
☞ 2b Sub <u>V</u> <u>Pron-Obj</u> Adv t_V t_{Obj}			*	(1)b
3a <u>V</u> Aux Sub Adv t_V <u>Pron-Obj</u>		*!		(4)b
☞ 3b <u>V</u> Aux Sub <u>Pron-Obj</u> Adv t_V t_{Obj}			*	(3)b

(Only STAY-violations induced by OS are listed.)

We propose that when a non-finite main verb occurs in topic position, then the pronominal object undergoes OS prior to remnant VP-topicalisation. In Holmberg's (1997, 1999) approach such remnant VP-topicalisation is ruled out by the assumption that HG is derivational, i.e. that it cannot be violated at any point in the derivation, compare (7) above. The OT constraint ORDPRES, by contrast, is representational: Constraint violations are computed based on the final structure of the candidates. Hence, although the individual steps of OS might violate ORDPRES, this is of no consequence as long as the verb is subsequently placed in front of the shifted object such that their precedence relation is re-established.

The asymmetry between stranding of an IO and stranding of a DO in (11), repeated in (19), can be captured by the ranking ORDPRES >> SHIFTPRON.

(19)   Sw a. ?[_{VP} Gett   <u>henne</u> ___]   har   jag <u>den</u>   inte.
               given   *her*   *have* *I* *it*   *not*
        b. *[_{VP} Gett   _____ <u>den</u>]   har   jag <u>henne</u> inte.   (Fox & Pesetsky 2005: 25)

Note that also both objects of a double object construction may be taken along, (20)a, or both of them may be stranded by remnant VP-topicalisation, (20)b.

(20)   Da a. [_{VP} Givet <u>hende</u> <u>den</u>]   har   jeg   ikke.
                given *her*   *it*   *have* *I*   *not*
        b. ?[_{VP} Givet ____ ___]   har   jeg <u>hende</u> <u>den</u>   ikke.

Because of these alternatives, it is necessary to assume that it is specified in the input which constituents are to be placed in topic position (= bold in the tableaux below). Stranding of an element that should appear in topic position then violates TOPIC whereas taking along too much material does not violate this constraint, see Tableau 2 and Tableau 3.

(21)   TOPIC: Elements with a [+topic] feature occur in Spec,CP.

Tableau 2: VP-topicalisation that takes along both IO and DO

Da/Sw	Topic: V & Pron-IO & Pron-DO	TOPIC	ORD PRES	SHIFT PRON	STAY	ex.
☞ a	[$_{VP}$ **V Pron-IO Pron-DO**] Aux Sub Adv t_{VP}			**		(20)a
b	[$_{VP}$ **V Pron-IO** t_{DO}] Aux Sub **Pron-DO** Adv t_{VP}	*!		*	*	(19)a
c	[$_{VP}$ **V** t_{IO} **Pron-DO**] Aux Sub **Pron-IO** Adv t_{VP}	*!	*	*	*	(19)b
d	[$_{VP}$ **V** t_{IO} t_{DO}] Aux Sub **Pron-IO Pron-DO** Adv t_{VP}	*!*			**	(20)b

Tableau 3: Remnant VP-topicalisation that strands both IO and DO

Da/Sw	Topic: V	TOPIC	ORD PRES	SHIFT PRON	STAY	ex.
a	[$_{VP}$ **V** Pron-IO Pron-DO] Aux Sub Adv t_{VP}			*!*		(20)a
b	[$_{VP}$ **V** Pron-IO t_{DO}] Aux Sub Pron-DO Adv t_{VP}			*!	*	(19)a
c	[$_{VP}$ **V** t_{IO} Pron-DO] Aux Sub Pron-IO Adv t_{VP}		*!	*	*	(19)b
☞ d	[$_{VP}$ **V** t_{IO} t_{DO}] Aux Sub Pron-IO Pron-DO Adv t_{VP}				**	(20)b

As Tableau 2 and Tableau 3 show, SHIFTPRON favours stranding of a pronoun which is, however, only possible if the pronoun is not marked [+topic]. The asymmetry between stranding of a DO and stranding of an IO is expected by the ranking ORDPRES >> SHIFTPRON. OS of a DO maintains the ordering relations in remnant VP-topicalisations, satisfying ORDPRES (see Tableau 4). Note that it is crucial for the remnant VP-topicalisation constructions that ORDPRES refers to precedence rather than c-command relations: While the precedence relations are maintained in (19)a, the c-command relations are not - neither the verb nor the IO c-commands the shifted DO. In contrast, remnant VP-topicalisation does not re-establish the base order relations if the IO is stranded. Consequently, the violation of ORDPRES rules out stranding of the IO in OS position, compare Tableau 5 below. Instead, the IO has to be taken along by VP-topicalisation, giving rise to neutralization: Despite the different input specifications with regard to topichood, the same candidate (namely, candidate a) arises as output in Tableau 2 and Tableau 5. (But stranding of the IO is possible if it does not result in a violation of ORDPRES, namely if both objects are stranded as in (20)b.)

Tableau 4: Remnant VP-topicalisation that strands DO

Da/Sw	Topic: V & Pron-IO	TOPIC	ORD PRES	SHIFT PRON	STAY	ex.
a	[VP **V Pron-IO** Pron-DO] Aux Sub Adv tVP			**!		(20)a
☞ b	[VP **V Pron-IO** tDO] Aux Sub Pron-DO Adv tVP			*	*	(19)a
c	[VP **V** tIO Pron-DO] Aux Sub **Pron-IO** Adv tVP	*!	*	*	*	(19)b
d	[VP **V** tIO tDO] Aux Sub **Pron-IO** Pron-DO Adv tVP	*!			**	(20)b

Tableau 5: No remnant VP-topicalisation that strands IO

Da/Sw	Topic: V & Pron-DO	TOPIC	ORD PRES	SHIFT PRON	STAY	ex.
☞ a	[VP **V** Pron-IO **Pron-DO**] Aux Sub Adv tVP			**		(20)a
b	[VP **V** Pron-IO tDO] Aux Sub **Pron-DO** Adv tVP	*!		*	*	(19)a
c	[VP **V** tIO **Pron-DO**] Aux Sub Pron-IO Adv tVP		*!	*	*	(19)b
d	[VP **V** tIO tDO] Aux Sub Pron-IO **Pron-DO** Adv tVP	*!			**	(20)b

Similarly, the unacceptable sentence in (6)d, repeated here as (22)c, is ruled out by the ranking ORDPRES >> SHIFTPRON. These data led Holmberg (1997, 1999) to assume that remnant VP-topicalisation is not possible.

(22)   Sw a.   Jag   har   inte   sett   <u>henne</u> arbeta.
            I   *have*   *not*   *seen*   *her*   *work*
        b.   [VP Sett   <u>henne</u> arbeta] har   jag   inte.
        c.   *[VP Sett   _____ arbeta] har   jag <u>henne</u> inte.   (Holmberg 1997: 206)

Tableau 6

Sw:	Topic: V & V	TOPIC	ORD PRES	SHIFT PRON	STAY	ex.
☞ a	[VP **V** <u>Pron</u> **V**] Aux Sub Adv			*		(22)b
b	[VP **V** tPron **V**] Aux Sub <u>Pron</u> Adv		*!		*	(22)c

Moreover, the analysis predicts that stranding of the object is unacceptable in constructions in which the object is followed by other elements within VP, e.g. in constructions with a particle verb or a verb with an additional PP-complement, see (23)b/(24)b. In contrast, topicalisation of the full VP as in (23)a/(24)a is possible.

(23) Da a. [_VP_ Smidt <u>den</u> ud] har jeg ikke.
thrown it out have I not

    b. *[_VP_ Smidt ___ ud] har jeg <u>den</u> ikke.

(24) Da a. [_VP_ Stillet <u>det</u> på bordet] har jeg ikke.
put it on table-the have I not

    b. *[_VP_ Stillet ___ på bordet] har jeg <u>det</u> ikke.

From the discussion in the previous sections, we might expect that all that matters is that the remnant object is at the edge of the the VP right before this VP is topicalised. However, not all objects on the right edge may be left behind during VP-topicalisation: The object of an infinitival clause cannot be stranded by remnant topicalisation of the main clause VP although it is the rightmost element within that VP.

(25) Da a. [_VP_ Set [_IP_ ham [_VP_ fotografere <u>hende</u>]]] har jeg ikke.
seen him photograph her have I not

    b. *[_VP_ Set [_IP_ ham [_VP_ fotografere ___]]] har jeg <u>hende</u> ikke.

Thus, besides the linear restriction, there would seem to also be a structural restriction, ruling out the leaving behind of an object which is too deeply embedded.

    Also the object of a Swedish particle verb cannot be left behind during remnant VP-topicalisation even though the particle precedes the object in Swedish and therefore stranding of the object would not violate ORDPRES.

(26) Sw a. [_VP_ Kastat bort <u>den</u>] har jag inte.
thrown out it have I not

    b. *[_VP_ Kastat bort ___] har jag <u>den</u> inte. (Gunlög Josefsson, p.c.)

However, OS is possible in particle verb constructions where the particle is topicalised and the verb undergoes V2, (27):

(27) Sw a. <u>UT</u> kastade dom <u>mej</u> inte __ ___ (bara ned för trappan).
out threw they me not (only down the stairs)

    b. (Ja, ja, jag ska mata din katt, men) <u>IN</u> släpper jag <u>den</u> inte __ ___.
(All right, I will feed your cat but) in let I it not

<div align="right">(Holmberg 1997: 209)</div>

We would like to suggest that the shifted object can only move out of the VP in (26)b in two steps, first by adjoining to the PrtP and then by adjoining to the VP. (The VP is what undergoes topicalisation to Spec,CP, and although the individual steps of the object shift violate ORDPRES, this is of no consequence, as ORDPRES violations are only computed on the final structure):

(28) Sw [$_{VP}$ t [$_{VP}$ **kastat** [$_{PrtP}$ t [$_{PrtP}$ **bort** t]]]] = (26)b
thrown *out*

If we furthermore assume that adjunction to the PrtP is only necessary because PrtP and VP here do not have the „same" head, then we have a difference between the above situation and double object constructions like the following (where remnant topicalisation is possible):

(29) Sw [$_{VP}$ t [$_{VP}$ **gett** [$_{VP}$ t **henne** t]]] = (11)a
given *her*

where there is no intermediary trace adjoined to the lower VP. We now would like to suggest that the reason why the absence of the intermediary trace is important is that it is possible to topicalise the (higher) VP in (29) without bringing along any intermediary trace (i.e. what is topicalised is the inner segment of the higher VP). In contrast, even if what is topicalised in (28) is only the inner segment of the VP, an intermediary trace would still have to come along to Spec,CP, viz. the trace adjoined to PrtP. One possible reason why intermediary traces are not allowed to come along to Spec,CP could be that they have to be licensed by being c-commanded by the next higher link in the chain (which does not hold under VP-topicalisation), whereas a trace in its base position (which has to come along to Spec,CP in both (28) and (29)) may be licensed in a different way, e.g. simply by being in a thematic position. The difference between (27) and (26) is now that in (27), only the PrtP is topicalised (the verb is also moved, but by a different movement, V2) and so there does not have to be an intermediary trace inside Spec,CP.

2.2   Asymmetry II: Subject vs. Object

The ranking ORDPRES >> SHIFTPRON thus predicts that remnant VP-topicalisation may strand an object in shifted position as long as the precedence relations are maintained (and its base position is not too deeply embedded). Consequently, only an object that is right-peripheral in VP may be left behind, giving rise to the asymmetry between stranding of an IO and stranding of a DO.

In addition, there is an asymmetry between stranding of an object and stranding of a subject by remnant VP-topicalisation, indicating that a non-peripheral trace in the topicalised VP is not a problem as such. The base order of elements does not have to be maintained by remnant VP-topicalisation if the remnant occurs in subject position (as in passives), see (30)a/(31)a vs. (30)b/(31)b.

(30) Da a. *[$_{VP}$ Smidt ___ ud] har jeg <u>den</u> ikke.
thrown *out* *have* *I* *it* *not*

b. [$_{VP}$ Smidt ___ ud] blev <u>den</u> ikke.
thrown *out* *was* *it* *not*

(31) Da a. *[VP Stillet ___ på bordet] har jeg det ikke.
put *on table-the* *have* *I* *it* *not*

  b. ?[VP Stillet ___ på bordet] blev det ikke.
put *on table-the* *was* *it* *not*

This contrast is accounted for if the constraint that triggers subject movement to Spec,IP, SUBJECT, outranks ORDPRES.[3] (Note that the acceptability of subject raising out of a verb particle construction indicates that depth of embedding does not play a role for subject movement either.)

Tableau 7

Da:	Topic: V & Prt	SUBJECT	ORD PRES	SHIFT PRON	STAY	ex.
☞ 1a	[VP **V** <u>Pron-Obj</u> **Prt**] Aux Sub Adv			*		(23)a
1b	[VP **V** t_Obj **Prt**] Aux Sub <u>Pron-Obj</u> Adv		*!		*	(30)a
2a	[VP **V** <u>Pron-Sub</u> **Prt**] Aux e Adv	*!		*		-
☞ 2b	[VP **V** t_Sub **Prt**] Aux <u>Pron-Sub</u> Adv		*		*	(30)b

2.3 Asymmetry III: Remnant VP-Topicalisation out of a Main vs. an Embedded Clause

Moreover, there is an asymmetry between remnant VP-topicalisation out of a main clause and remnant VP-topicalisation out of an embedded clause.

While finite verb movement takes place in main clauses, (32), it does not in embedded clauses; consequently, OS is prohibited in embedded clauses, (33).

(32) Da a. *Hvorfor e Peter aldrig læste den?
why *Peter* *never read it*

  b. Hvorfor læste Peter den aldrig ___ ___?
(Vikner 2005: 394)

(33) Da a. Jeg spurgte hvorfor Peter e aldrig læste den.
I asked why Peter never read it

  b. *Jeg spurgte hvorfor Peter læste den aldrig ___ ___.
(Vikner 2005: 396)

A full VP may be topicalised from both main clauses and embedded clauses.

---

[3] Accordingly, constraints triggering other movement operations such as *wh*-movement or topicalization that are not subject to HG, (13), outrank ORDPRES (e.g. WHSPEC, TOPIC >> ORDPRES). The contrast between different movement devices as to whether or not they are subject to HG is thus accounted for by differences in the ranking of their constraints relative to ORDPRES.

(34) Da a. [_{VP} Set   <u>ham</u>]   har   jeg   ikke, ...
             seen   *him*   *have*   *I*   *not*

                       ... hvis jeg skal være ærlig, men jeg har talt i telefon med ham.
                         if I should be totally honest but I have spoken in phone with him

     b. [_{VP} Set   <u>ham</u>]   tror   jeg   ikke   at   du   har, ...
             seen   *him*   *believe*   *I*   *not*   *that*   *you*   *have*

                       ... men du kan måske nok have talt i telefon med ham.
                         but you may perhaps well have spoken in phone with him

Topicalisation of a remnant VP, by contrast, is only possible out of a main clause, (35)a, not out of an embedded clause in Danish: The stranded object may neither follow the finite auxiliary (in its base position), (35)b, nor may it precede it, (35)c:

(35) Da a. ?[_{VP} Set ____] har   jeg   <u>ham</u>   ikke, ...
           seen   *have* *I*   *him*   *not*

                   ... hvis jeg skal være ærlig, men jeg har talt i telefon med ham.
                   if I should be totally honest but I have spoken on phone-the with him

     b. *[_{VP} Set ____] tror   jeg   ikke   at   du   [_{V°} har]   <u>ham</u>, ...
           seen   *believe*   *I*   *not*   *that*   *you*   *have*   *him*

     c. *[_{VP} Set ____] tror   jeg   ikke   at   du   <u>ham</u>   [_{V°} har]   , ...
           seen   *believe*   *I*   *not*   *that*   *you*   *him*   *have*

                      ... men du kan måske nok have talt i telefon med ham.
                      but you may perhaps well have spoken in phone with him

This asymmetry shows that stranding must involve OS, because OS requires the (stranded) object to occur in a position to the left of the base position of a finite verb (SHIFTPRON), but it can only do so if this verb has itself left its base position (ORDPRES).
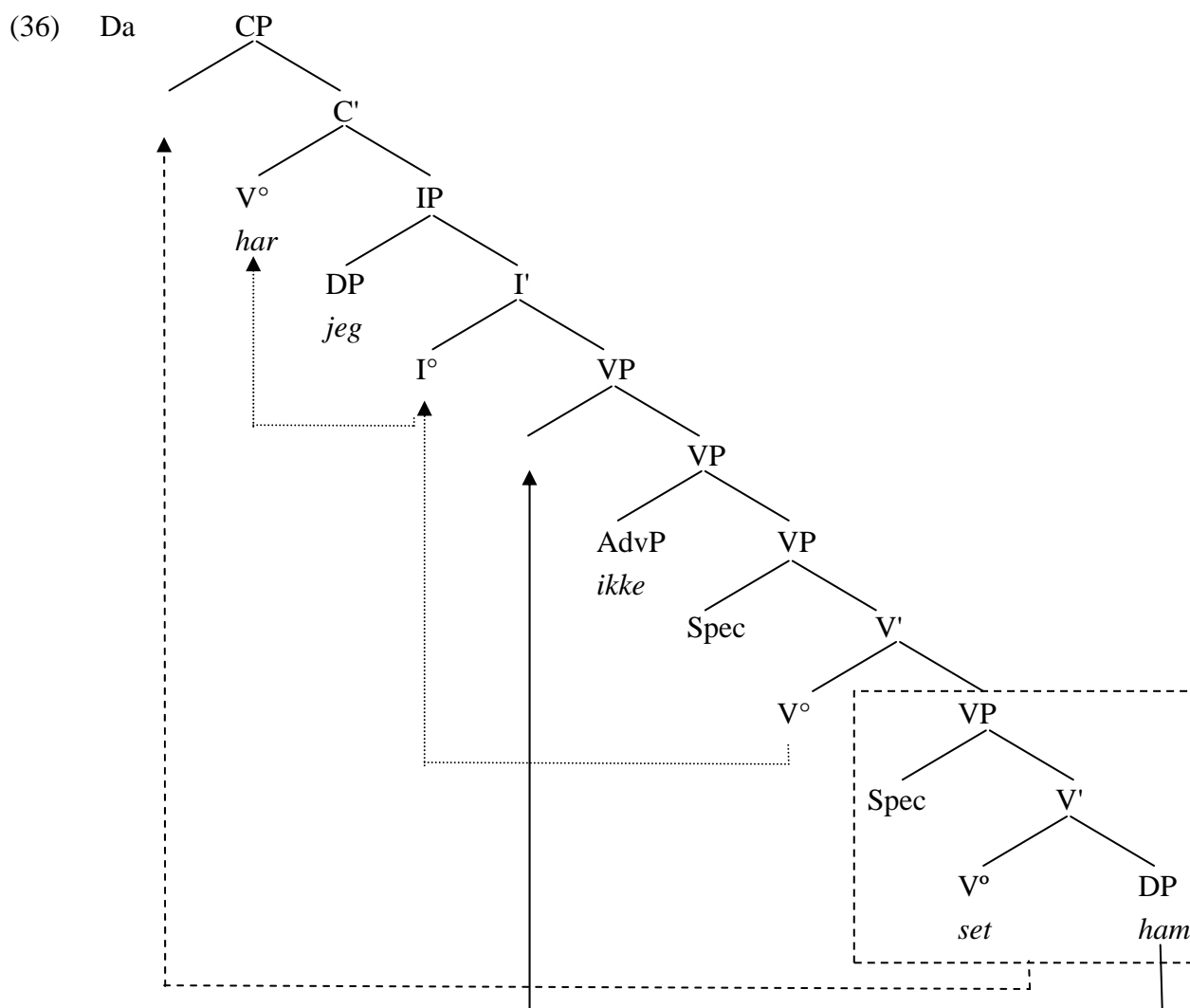
(36) Da

```
              CP
               |
               C'
         ┌─────┴─────┐
        V°           IP
        │         ┌──┴──┐
       har       DP     I'
       jeg    ┌──┴────────┐
             I°           VP
                      ┌───┴───┐
                     VP
                 ┌───┴───┐
               AdvP      VP
               ikke   ┌──┴──┐
                    Spec    V'
                         ┌──┴────┐
                        V°       VP
                             ┌───┴───┐
                           Spec      V'
                                  ┌──┴──┐
                                 V°     DP
                                 set    ham
```

Tableau 8

Da:	Topic: V	ORD PRES	SHIFT PRON	STAY	ex.
a	[$_{VP}$ **V** <u>Pron-Obj</u>] Aux Sub Adv t$_{VP}$		*!		(34)a
b	[$_{VP}$ **V** t$_{Obj}$] Aux Sub Adv <u>Pron-Obj</u> t$_{VP}$		*!	*	-
☞ c	[$_{VP}$ **V** t$_{Obj}$] Aux Sub <u>Pron-Obj</u> Adv t$_{VP}$			*	(35)a

(37) Da

CP

C'

tror jeg ikke   CP

Comp   IP
at

DP   I'
du

I°   VP

VP

Spec   V'

V°   VP
har

VP

Spec   V'

V°   DP
set   *ham*

X X X
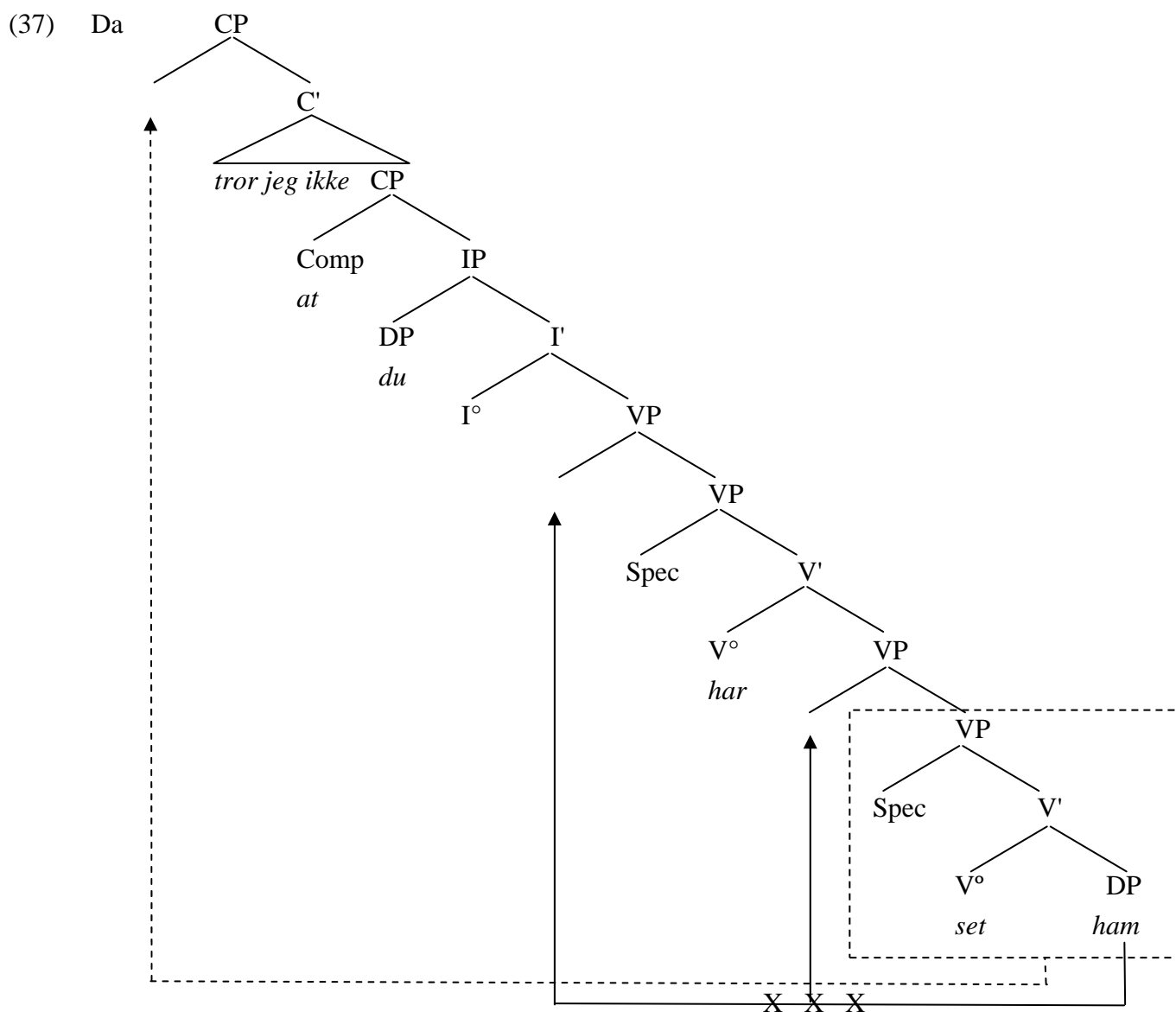
Tableau 9

Da: Topic: V	ORD PRES	SHIFT PRON	STAY	ex.
☞ a [_{VP} **V** <u>Pron-Obj</u>] V Sub Adv Comp Sub Aux t_{VP}		*		(34)b
b [_{VP} **V** t_{Obj}] V Sub Adv Comp Sub Aux <u>Pron-Obj</u> t_{VP}		*	*!	(35)b
c [_{VP} **V** t_{Obj}] V Sub Adv Comp Sub <u>Pron-Obj</u> Aux t_{VP}	*!		*	(35)c

The hypothesis that (a) a stranded object has to undergo movement to some position to the left of the finite verb and (b) that this movement is only possible if the finite verb itself has left its base position (i.e. that OS has to take place) seems to be supported by the fact that Icelandic which has Vº-to-Iº movement and thus also OS in embedded clauses marginally permits a remnant object in VP-topicalisation out of an embedded clause (as opposed to the Danish (35)b,c which are completely ungrammatical).

(38) Ic a. *Ég   spurði   af hverju Pétur e   aldrei <u>læsi</u> <u>hana</u>.
          I   *asked*   *why*   *Pétur*   *never* *read* *it*

      b.   Ég   spurði   af hverju Pétur <u>læsi</u> <u>hana</u> aldrei _____ _____.

                                                              (Vikner 2005: 396)

(39) Ic   ??[VP Kysst _____] hélt ég ekki að   þú   [Iº hefðir] <u>hana</u> oft, ...
              kissed   *think* *I*   *not*   *that* *you*   *have*   *her*   *often*
                                                      ... bara haldið í höndina á henni.
                                                      only held in hand.the on her
                                                      (Gunnar Hrafn Hrafnbjargarson, p.c.)

Note that remnant VP-topicalisation from embedded clauses is possible in passives, i.e. if the element left behind occurs in subject position. This follows from SUBJECT being ranked higher than HG, as in Tableau 7 above.

(40) Da a. [VP Set   _____] blev <u>han</u>   ikke, ...
              seen   *was*   *he*   *not*

      b. [VP Set   _____] tror jeg ikke at   <u>han</u>   blev, ...
              seen   *think* *I*   *not*   *that* *he*   *was*
                                              ... men der var nok mange der hørte ham.
                                              but there were probably many who heard him

3   Conclusion

Holmberg (1997, 1999) considers occurrences of a non-finite verb in topic position such as (3) to result from V°-topicalisation. He assumes that HG is a matter of derivation rather than of representation, i.e. a violation of HG cannot be rescued by some subsequent operation, and hence the non-finite verb has to move before OS can take place, ruling out remnant VP-topicalisations altogether.

However, Fox & Pesetsky (2005) have presented data from double object constructions that clearly show that remnant VP-topicalisation is possible, as long as it does not involve a reversal of the base order of elements, which suggests that HG is representational. We have collected more data that corroborate Fox & Pesetsky's observation and we agree with them in the assumption that HG is to be accounted for in terms of order preservation. Their approach builds on the assumption that Spell-out applies at various points in the derivation (in particular, at VP and at CP) and that the information about the linearisation of the material of a newly constructed Spell-out domain must not contradict the cumulated information of previous applications of Spell-out. In this way, Fox & Pesetsky (2005) predict that OS differs radically from other types of (A- and A-bar-) movement that can result in a reversal of the order of elements, such as e.g. *wh*-movement or subject raising, in that the latter have to proceed successive cyclically through the left edge of VP while this is impossible for OS.

In contrast, in our OT approach, order preservation is required by a violable constraint. This means that it is the ranking of the ORDERPRESERVATION constraint relative to the constraints that motivate the various types of movement which accounts for the contrast as to whether or not a certain movement operation has to be order preserving. Hence, OS does not receive a special treatment in our approach; the properties distinguishing it from other movement types result from constraint interaction.

The linear conception of HG as expressed by the constraint ORDPRES and its dominance over the constraint that triggers OS, SHIFTPRON, predicts that only pronominal objects that originate in a right-peripheral position within VP might be left behind in OS position during remnant VP-topicalisation, accounting for the asymmetry in stranding of an IO and stranding of a DO observed by Fox & Pesetsky (2005). However, depth of embedding also plays a role for whether or not an object may have undergone OS out of a topicalised VP: The remnant VP in Spec,CP may not include an intermediary trace of a shifted object. Moreover, we presented new data that showed that subject raising does not underly either of these restrictions, and this may be accounted for by a different ranking of SUBJECT and SHIFTPRON relative to the corresponding prohibitions (including ORDPRES).

Finally, the asymmetry between main and embedded clauses as to the applicability of remnant VP-topicalisation in MSc illustrates that object stranding has to involve OS. Object stranding is only possible in sentences in which finite verb movement has taken place, something that would be expected if any object left behind during remnant VP-topicalisation would have to undergo OS (and that as always, OS has to respect order preservation).

Appendix: Structure Preservation

There are native speakers of Danish whose intuitions do not agree with the acceptability judgments given above. Rather than to subject remnant VP-topicalisation to a linear restriction, permitting stranding of an object in OS position as long as it does not change the base order of elements (cf. (19) and (20) above), these speakers do not allow for object stranding during remnant VP-topicalisation at all. Topicalisation of a full VP, in contrast, is judged acceptable.

(41) Da a. [$_{VP}$ Givet <u>hende</u> <u>den</u>] har jeg   ikke.
               given her   it   have I   not

 b. *[$_{VP}$ Givet ____ ___] har jeg <u>hende</u> <u>den</u> ikke.

 c. *[$_{VP}$ Givet <u>hende</u> ___] har jeg   <u>den</u> ikke.

 d. *[$_{VP}$ Givet ____ <u>den</u>] har jeg <u>hende</u>   ikke.

The pattern in (41) can be accounted for if in addition to order preservation, a constraint on structure preservation is considered to restrict OS (cf. Déprez 1994, Müller 2001, Sells 2001, and Williams 2003).

(42)   STRUCTURE PRESERVATION (STRUCPRES):
            If the foot of the chain of some non-adverbial element α c-commands the foot of the chain of some element β, the head of the chain of α also c-commands the head of the chain of β.

In other words, where ORDPRES says "preserve the sequence", STRUCPRES says "preserve the c-command relationships".

 Like ORDPRES, the constraint STRUCPRES and its dominance over SHIFTPRON predicts that OS cannot cross an intervening non-adverbial element: For example, OS across a verb *in situ* as in (43)b changes the c-command relation between the verb and the shifted object.

(43) Da a. Jeg spurgte hvorfor Peter   aldrig læste <u>den</u>.
               I   asked   why   Peter   never   read   it

 b. *Jeg spurgte hvorfor Peter <u>den</u> aldrig læste ___.

In contrast to ORDPRES, however, STRUCPRES (>> SHIFTPRON) rules out stranding of an object during VP-topicalisation. While the linear relations between the verb and the objects are maintained in (41)b,c above, their structural relations are not: The verb (and IO) in Spec,CP is too deeply embedded to c-command the stranded (IO and) DO. Consequently, STRUCPRES >> SHIFTPRON rules out stranding of an object during remnant VP-topicalisation while permitting topicalisation of a full VP.

Tableau 10: No remnant VP-topicalisation

Da	Topic: V	TOPIC	STRUC PRES	SHIFT PRON	ex.
☞ a	[$_{VP}$ **V** <u>Pron-IO</u> <u>Pron-DO</u>] Aux Sub Adv t$_{VP}$			*!*	(41)a
b	[$_{VP}$ **V** t$_{IO}$ t$_{DO}$] Aux Sub <u>Pron-IO</u> <u>Pron-DO</u> Adv t$_{VP}$		*!*		(41)b
c	[$_{VP}$ **V** <u>Pron-IO</u> t$_{DO}$] Aux Sub <u>Pron-DO</u> Adv t$_{VP}$		*!*	*	(41)c
d	[$_{VP}$ **V** t$_{IO}$ <u>Pron-DO</u>] Aux Sub <u>Pron-IO</u> Adv t$_{VP}$		*!*	*	(41)d

Hence, variation between speakers as to the strandability of objects during VP-topicalisation may be accounted for by a contrast in the ranking of two very similar constraints, one requiring order preservation, the other structure preservation.

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