

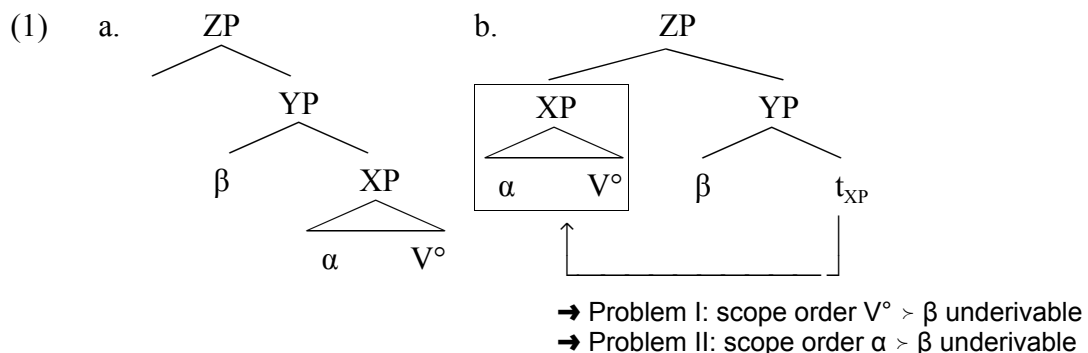
A PUZZLE FOR REMNANT MOVEMENT ANALYSES OF V2

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In this squib, I address some implications of an unspectacular, yet critical consequence of remnant movement (RM) approaches towards verb movement (in particular V2) indicating that it is hard for these analyses to express elementary generalizations about the relation between word order and interpretation.

1. V2 AND REMNANT MOVEMENT

RM theories of head movement² (HM) share the assumption - translated into a graph representation in (1) - that dislocated verbs have not been fronted by a designated process targeting heads, but reach their surface position inside a larger phrase XP.



RM approaches generate two predictions as to the c-command relations between categories inside XP and nodes the verb has crossed over (such as β in (1)b) which set them apart from standard accounts of HM. First, one is led to expect that the c-command

¹I am indebted to Elena Anagnostopoulou, Øystein Nilsen, Wolfgang Sternefeld, Susi Wurmbrand, an anonymous reviewer and in particular Ian Roberts for comments.

²See Hinterhölzl (1997); Müller (2004); Nilsen (2003: 109 and 138), a.o.; see also Fanselow (1987, 2002); Koopman and Szabolcsi (2000) for discussion of this and related issues.

domain of the verb V° in (1)b cannot be extended beyond XP. In Lechner (2005a/b, 2006), it is demonstrated that this claim is falsified by the observation that certain cases of head movement apparently feed new scope orders. This finding, which indicates that V° may obtain scope over a node β that V° has passed on its way, cannot be expressed by the parse in (1)b, as embedding V° under XP prevents V° from c-commanding β , and further (covert) movement of V° contradicts the axioms of RM theories.

Second, RM analyses entail that in V2 configurations - contexts in which ZP in (1) takes the value CP, and in which XP only contains a single phrase α preceding V° - the initial constituent α cannot take scope higher than XP (see Lechner 2005a). In this squib, I briefly explicate why this second corollary is also contradicted by the data, adding a second challenge for RM accounts of HM. (For further arguments against RM analyses of V2 see Biberauer and Roberts, in progress.)

An important qualification is in order here. In what follows, I will not consider theories that trivialize RM by replicating the structural relations created by standard HM derivations inside the fronted XP. A trivialized variant of (1) in this sense would proceed as in (2) (suggested by Øystein Nilsen). In (2)a, α and V° raise across β individually, followed by evacuation of β in (2)b. Finally, the RM-step in (2)c shifts XP, which now contains only α and V° , to the left of β :

- | | | | |
|-----|----|--|--|
| (2) | a. | $[_{XP} \alpha V^\circ [\beta t_\alpha t_{V^\circ}]]$ | <i>Move α and V° across β</i> |
| | b. | $[\beta [_{XP} \alpha V^\circ [t_\beta t_\alpha t_{V^\circ}]]]$ | <i>Evacuate β</i> |
| | c. | $[[_{XP} \alpha V^\circ [t_\beta t_\alpha t_{V^\circ}]] [\beta t_{XP}]]$ | <i>RM of XP</i> |

On this conception, V2 formation involves all movement operations that would also be implicated in a regular HM derivation - in addition to RM. As a result, the analysis

Furthermore, given that the temporal-aspectual modifier *once* needs to combine with a predicate denoting expression, the category XP which has been fronted in (4)c needs to reconstruct. This can be achieved in one of two ways: either the trace is assigned the same semantic type as XP, say a property of events (type $\langle s, t \rangle$, where s is the type of eventualities). Then, the content of XP will be automatically converted into the trace position in semantics by Semantic Reconstruction, as sketched in (5):

- (5) a. LF: $[_{CP} [_{XP} \text{everybody lost}]_{\langle s, t \rangle} [_{\langle \langle s, t \rangle, t \rangle} \lambda 1 [_{YP} \text{once } t_{1, \langle s, t \rangle}]]]$ \rightarrow
 b. Semantics: $[_{CP} [_{YP} \text{once} [_{XP} \text{everybody lost}]_{\langle s, t \rangle}]]]$
Semantic Reconstruction of XP

If this analytic option is adopted, the strict sequential ordering of the derivation from LF to semantics dictates that the universal may undergo scope shifting only prior to reconstruction. As a result, the upper bound of the scope domain for *everybody* is set by the highest node the universal can reach by covert movement at LF. Since independent constraints effectively limit the scope of the universal to XP (see discussion of (7)b, (8)c and (9)b below), the derivation in (5) cannot generate the scope order $\forall > \exists$.

Alternatively, the derivation could appeal to reconstruction of XP at LF, resulting in the LF representation (6).

- (6) LF: $[_{CP} [_{YP} \text{once} [_{XP} \text{everybody lost}]]]$ *Reconstruction of XP at LF*

But it is unlikely that the surface scope reading $\forall > \exists$ can be obtained from (6), either. This is so as the RM analysis in (4) mimics in all relevant respects the derivation of predicate fronting, a construction which is known to induce Scope Freezing (Huang 1993: 125; Sauerland and Elbourne 2002: 296; Pafel 1998: 174). Scope Freezing is

illustrated by (7). While the canonical V2 sequence (7)a can be construed with surface scope (*a Spaniard* > *never*), this reading is absent from the predicate fronting construction in (7)b. Only (7)a is satisfied by models in which e.g. all but one Spaniard won, indicating that VP-topicalization interferes with the subject's ability to obtain scope over XP.³

- (7) a. Ein Spanier hat hier noch nie gewonnen *never* > \exists/\exists > *never*
 a Spaniard has here never won
 b. [_{XP} Ein Spanier gewonnen] hat hier noch nie *never* > $\exists/*\exists$ > *never*
 a Spaniard won has here never
 'A Spaniard has never won here'

What is of significance for present purposes is that the RM account treats regular V2 sequences as instances of VP-fronting. Both constructions are generated by moving XP, which contains α and a predicate (but see also see fn. 5). As a consequence, it is incorrectly predicted that whatever limits the scope of *a Spaniard* in (7)b to the fronted XP, should also prevent *everybody* in (4) (or *a Spaniard* in (7)a) from gaining scope above XP in regular V2 clauses.

The paradigm (8) presents qualitatively different evidence supporting the same conclusion. (8)a, which serves as a control, admits for what Carlson (1987) calls the *internal* interpretation for the relational modifier *different*, on which winning players

³Øystein Nilsen notes that the Norwegian VP-topicalization (i) displays ambiguity, challenging the claim that predicate fronting induces Scope Freezing.

(i) St^oar foran hver bygning gjør nøyaktig to vakter.
 stands in front of each building does exactly two guards.
 'Stand in front of every building, exactly two guards did.'

However, Sauerland & Elbourne (2002: fn. 24) caution that English examples which meet the profile of (i) can be given a generic interpretation, and therefore admit *illusiv* wide scope for the universal (on scope illusions see Fox & Sauerland 1996). Thus, contexts such as (i) do not elicit reliable evidence as for syntactic restrictions on scope.

vary with winning events.

- (8) a. Schon zweimal hat ein anderer Fahrer hier gewonnen ^{ok}internal
 already twice has a different driver here won
 ‘A different driver has already won twice here’
 b. Ein anderer Fahrer hat hier schon zweimal gewonnen ^{ok}internal
 a different driver has here already twice won
 c. Ein anderer Fahrer gewonnen hat hier schon zweimal ^{*internal}
 a different driver won has here already twice
 ‘A driver which was different from *that* one has won twice’

This internal, distributive reading is also available for the regular subject-first sequence (8)b, but disappears if the subject is topicalized together with the participle, as in (8)c⁴. *Different* in (8)c can only be assigned the external, deictic reading according to which a player different from a contextually fixed individual has won twice. This is unexpected for RM analyses, for which both (8)b and (8)c are the product of fronting a category that contains the subject and the predicate.

Finally, Scope Freezing is also attested with topicalized predicates that embed objects. (In fact, these cases are much more common in German than the severely limited instances of VP-fronting with subjects.) In canonical V2 sequences, order again matches c-command, the object in (9)a may accordingly scope over the subject to its right:

- (9) a. Einen spanischen Roman hat niemand gelesen $\exists > \neg\exists/\neg\exists > \exists$
 a Spanish novel read nobody read
 ‘Nobody has read a Spanish novel.’
 b. Einen spanischen Roman gelesen hat niemand $\exists > \neg\exists/*\neg\exists > \exists$
 a Spanish novel read has nobody
 ‘A Spanish novel, nobody has read.’

⁴As is more generally the case with German, scope inversion in (8)b is contingent on raising falling intonation.

By contrast, fronting of a (remnant) VP/vP as in (9)b results in Scope Freezing, as can be seen from the fact that situations in which all Spanish books except for one have been read falsify (9)b. Nevertheless, RM analyses use the same factorization for (9)a and (9)b.

To summarize, theories that derive V2 by RM entail that regular V2 clauses and configurations involving VP-topicalization share the same derivational history. As a result, one is wrongly led to expect that wide scope for sentence initial categories should be as impossible in regular V2 clauses ((4), (7)a, (8)b and (9)a), as it is in VP-fronting ((7)b, (8)c and (9)b).

Naturally, proponents of RM might adopt an analysis for predicate fronting that renders the construction sufficiently different from V2 in order to subject only the former to the principles responsible for Scope Freezing. It is far from obvious which shape such an alternative analysis for predicate fronting should take, though.⁵ In absence of such a proposal, the observation that precedence and c-command systematically match in even the most elementary contexts which permit measuring the c-command relations by scope diagnostics poses a serious challenge for RM accounts of V2.⁶

⁵A reviewer points out that according to Müller (2004), VP-fronting involves an additional step of *predicate scrambling*. Scrambling out of scrambled predicates is moreover blocked by Müller's (i) (which, among others, excludes (11)c and (12)c below):

(i) *Unambiguous Domination Principle*
If XP has been displaced by type- α movement, no category can be extracted out of XP by type- α movement. (modified from Müller 2004)

Predicate scrambling cannot be made responsible for Scope Freezing, though. This is so because the missing wide scope readings in VP-topicalization is not produced by scrambling, but by whatever mechanism enables QPs to scope above XP in canonical V2 clauses (QR).

⁶A reviewer suggests to resolve the problem by inverse linking (QR of α out of X) or by relaxing c-command along the lines of Kayne (1994) and Reinhart (1983). Both solutions cannot exclude wide scope with VP-topicalization, though, which leaves Scope Freezing unaccounted for.

3. AN ALTERNATIVE REMNANT MOVEMENT ACCOUNT: FURTHER PROBLEMS

Müller (2004: 189) and Ian Roberts (personal communication) observe that RM approaches also have access to an alternative analytical option, which might be better suited for deriving the problematic surface scope order of (3) (repeated from above).

- (3) Jeder verlor einmal ∀ > ∃
 ‘Everybody lost once’

This alternative derivation of (3), sketched in (10), differs from (4) in the position the adjunct *einmal* / ‘once’ occupies relative to the subject in the pre-movement configuration, and some imminent consequences this change entails:

- (10) Derivation of scope order *everybody* > *once* (2nd attempt)
- a. [_{vP} everybody [once lost]]
 - b. [once₁ [_{vP} everybody [t₁ lost]]] *Merge once & subject*
 - c. [[_{vP} everybody [t₁ lost]]₂ [once₁ t₂]] *Evacuation of once*
RM of vP
 - d. [once₁ [_{vP} everybody [t₁ lost]]] *Reconstruction of vP*
 - e. [_{vP} everybody [once lost]] *Reconstruction of once*

As depicted by (10)a, the adjunct *once* is merged with then VP first, and then the subject joins the derivation. Next, subsequent to evacuation of *once* in (10)b, RM shifts the remaining vP into SpecCP, as illustrated by (10)c. Two reconstruction steps in (10)d and (10)e finally derive the surface scope order by restoring the initial constituency of (10)a.

But this alternative strategy also encounters serious complications, which make it unlikely to succeed. As far as I can see, there are at least three reasons for not adopting (10) as a procedure for generating the string in (3).

3.1. IMPERCEPTIBLE EVACUATION MOVEMENT STEPS

First, the analysis contradicts the general laws of (standard, den Besten/Thiersch style) RM (see Haider 1993; Müller 1998; a.o.). In general, VP-topicalization must not move a category that includes a non-left peripheral trace. To illustrate, in double object constructions with basic word order $IO_{DAT} - DO_{ACC} - V$, the IO and the verb cannot be fronted to the exclusion of the DO (see (11)). And if verb projects the base order $IO_{ACC} - DO_{DAT}$, as in (12), the verb must not front with the accusative, stranding the dative. Similar observations can be made for DO - IO - V frames and unaccusatives (Frey 1993; Haider 1993):

- (11) a. Sie hat einem Freund_{DAT} einen Fehler nachgewiesen
she has a friend a mistake proven
‘She proved that a mistake made a mistake’
b. [_{DAT} einen Fehler_{ACC} nachgewiesen] hat sie einem Freund_{DAT}
a mistake proven has she a friend
c. ??[einem Freund_{DAT} t_{ACC} nachgewiesen] hat sie einen Fehler_{ACC}
a friend proven has she a mistake
- (12) a. Sie hat einen Freund_{ACC} einer Gefahr_{DAT} ausgesetzt
she has a friend (to) a danger exposed
‘She has exposed a friend to a danger’
b. [_{ACC} einer Gefahr_{DAT} ausgesetzt] hat sie einen Freund_{ACC}
(to) a danger exposed has she a friend
c. ??[einen Freund_{ACC} t_{DAT} ausgesetzt] hat sie einer Gefahr_{DAT}
a friend exposed has she (to) a danger

Judgements are relative, and can be improved by focus, but the contrasts are real. Crucially, the derivation in (10) assigns to (3) the same parse as to the c-examples above. But if adjuncts moved in the derivation of simple V2 clauses, the evacuation step (10)b should be detectable in the same degraded acceptability that characterizes (11)c and

(12)c. This is clearly not the case.⁷

3.2. UNATTESTED SCOPE ORDERS

Assume, for the sake of the argument, that the movement step (10)c implicated in the formation of V2 clauses is simply different from observable instances of RM in that it ignores all known laws for predicate fronting (among them Scope Freezing and the trace peripherality condition encountered above). Even then, the RM analysis would need to resolve yet another conflict. Notably, if the evolution of the tree in (10) were correct, then RM should not only admit the derivation of the surface scope order, but should also produce the inverted scope reading. In fact, the latter should even be privileged - and therefore presumably more prominent - as it requires only the first reconstruction step (see (10)d).⁸ But this prediction is not borne out. Unless rising falling intonation is employed, which suspends the effects of scope rigidity, the examples in (13) can only be interpreted with surface scope (as is, by the way, expected under the conservative V2 analysis):

⁷Two additional, more general objections against adjunct movement are that (i) adjuncts are standardly assumed not to scramble (at least in German); and that (ii) permitting adjunct movement would force one to give up a useful heuristic strategy for testing the location of other categories that is based on the positional stability of adjuncts in the clause.

⁸One could of course stipulate that RM derivations always involve reconstruction of all movements involved. This position not only considerably weakens the arguments for the existence of these two hypothesized derivational steps in the first place. It also fails to address the fact that the more promising of the two derivations (viz. (4), which does not face the problems presented in section 3) cannot establish the correct c-command relations even with the help of massive reconstruction.

- (13) a. Ein Kandidat wußte {immer} die Antwort {immer} $\exists > \forall / * \forall > \exists$
one candidate knew {always} the answer {always}
 ‘One candidate always knew the answer’
 b. Einer starb in jeder Schlacht $\exists > \forall / * \forall > \exists$
one died in every battle
 ‘Somebody died in every battle’

The RM step (10)d is also not undone for NPI-licensing⁹, as shown by (14).

- (14) *Auch nur einer verlor nie
even a single one lost never
 ‘Even a single one has never lost’

This observation is not surprising by itself, as NPI licensing is surface oriented. What is surprising, though, is the fact - documented by (15) - that application of the second alleged reconstruction step (= (10)e) all of a sudden restores a suitable context for NPIs:

- (15) Niemand verlor jemals
nobody lost ever
 ‘Nobody has ever lost’

Thus, the RM analysis must adopt a highly unnatural principle according to which NPI licensing can be undone under reconstruction only if reconstruction applies twice, to the licensing category as well as to the NPI.

3.3. IMPLAUSIBLE BASE POSITION FOR THE ADVERB

Finally, it is far from obvious whether *einmal* ‘once’ can indeed be merged directly with VP, as required by the alternative RM derivation (10). More specifically, the syntactic behavior of *einmal* presumably parallels that of other manner or aspectual adverbs such

⁹A similar argument is independently made by Biberauer and Roberts (in progress) for Swedish.

as *schon* ‘already’, *immer* / ‘always’, *fast nie* / ‘almost never’ or *selten* / ‘seldom’. But these modifiers are widely held to attach outside vP. *Schon* / ‘already’, for one, is a perfect adverbial which partakes in the formation of the (existential) perfect. Assuming, as is general practice, that perfect semantics (and probably also perfect morphology) is contributed by a node above vP, *already* must originate in a vP-external position. It follows that the alternative algorithm (10) can at best not be extended to examples such as (16), a clause which is structurally isomorphic to (3):

- (16) Jeder ist schon da
everybody is already here
‘Everybody has already arrived’

Moreover, if the syntax treats *once* and *already* alike, the RM account can not even be used to generate (3).

In sum, the alternative RM derivation for the surface scope order of (3) provided by (10) does not fare better than the original attempt in (4). Reversing the hierarchical positions between subject and adjunct adds, if anything, additional complications to the analysis.

4. CONCLUSION

The inability to provide a satisfactory account for basal correlations between precedence and c-command presents a serious problem for RM accounts. At the same time, these generalizations constitute strong support for the conservative conception of head movement in terms of dislocation (or remerge) of terminals nodes.

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