Resolving the movement paradox in Verb Projection Raising. In favor of base-generation and covert predicate raising.

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Abstract

This paper addresses and reanalyzes a movement paradox in Verb Projection Raising (VPR): While XPs contained in the VPR complement are transparent for extraction, they are scopally frozen, i.e. only allow surface scope. XPs outside the VPR-constituent, however, show mixed evidence w.r.t. movement vs. base-generation: There are no movement effects (no focus projection, freezing) in canonical orders except for scope reconstruction. In non-canonical orders, on the other hand, movement effects emerge. We propose to solve the paradox with a base-generation approach adapted from Fanselow (2001, 2003a/b) where free word order is licensed by means of covert verb incorporation. By means of a new implementation of predicate raising this automatically explains the scope facts by giving modals a possibility to outscope XPs at LF.

1   Verb Raising and Verb Projection Raising

Before describing the paradox we will briefly introduce the notions of Verb Raising (VR)[1] and Verb Projection Raising (VPR). In the earliest descriptions VR and VPR involve adjunction of V or VP to a higher head. In the case of VR it is the dependent verb that adjoins to the higher verb (Evers 1975).[2] Adjunction can be to the left as in Standard German (SG) or to the right as in Dutch or Zurich German (ZG), on which we

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[1]I will use the following abbreviations: Adj = adjunct; Arg = argument; Dat = dative; DS = D-structure; Gen = genitive; H & R = Haegeman & van Riemsdijk (1986); Inf = infinitive; Pl = plural; SG = Standard German; SS = S-structure; Subj = subjunctive; VPR = Verb Projection Raising; VR = Verb Raising; WF = West Flemish; ZG = Zurich German

[2]The description is simplified in that we have labeled the embedded clauses as VPs instead of S and have omitted the pruning mechanism that would apply to it.

will focus in this article. Starting out with an OV-structure this results in the following derivation for ZG:

(1)   a.   dass er [VP1[VP2 de Muetter es Buech schänke] wett]   D-structure⇒
             that he   the mother a book give.INF wants
       b.   dass er [VP1[VP2 de Muetter es Buech __1] wett+schänke1]   S-structure
             that he   the mother a book   wants+give.INF   (ZG)

In VPR the entire VP-projection or part of it adjoins to the higher verb (den Besten & Edmonson 1983). Example (2) illustrates full VP-raising, (3) shows partial VPR:

(2)   a.   dass er [VP1[VP2 de Muetter es Buech schänke] wett]   DS ⇒
             that he   the mother a book give.INF wants
       b.   dass er [VP1 __1 [wett + [VP2 de Muetter es Buech schänke]1]]   SS   (ZG)
(3)   a.   dass er [VP1[VP2 de Muetter [V' es Buech schänke]] wett]   DS ⇒
             that he   the mother   a book give.INF wants
       b.   dass er [VP1[VP2 de Muetter __1] [wett + [V' es Buech schänke]1]]   SS   (ZG)

While the adjunction analysis of VR is still adopted by many nowadays, adjoining projections to heads has been abandoned for reasons of structure preservation. Before discussing more recent approaches to VR/VPR we will lay out the movement paradox.

2   The movement paradox in Verb Projection Raising

The first observation is that XPs contained in the VPR complement, i.e. VP$_2$ from above or part of VP$_2$ that is putatively moved, are transparent for extraction (Haegeman & van Riemsdijk 1986: 450):

(4)   Was1 häsch wele   [VP em   Rägeli [__1 für Büecher] chauffe]?
       What have.2s wanted   the.DAT Regula   for books buy.INF (ZG)

At the same time, the VPR complement is opaque for scopal elements, i.e. they always take narrow scope with respect to the governing verb, usually a modal. As soon as the constituent appears above the raised VP, however, it can have wide or narrow scope with respect to the modal. Importantly, these facts are independent of the VR/VPR-distinction; what counts is whether the XP is inside or outside the VPR complement (cf. also Haegeman & van Riemsdijk 1986, Haegeman 1992: 110ff.):

(5)   a.   dass er i de Ferie   *wett* [**2 Fraue** küsse] VPR: *2 > want
             that he in the vacation wants 2 women kiss.INF   want > 2
       b.   dass er i de Ferie   **2 Fraue** *wett* küsse   VR: 2 > want
             that he in the vacation 2 women wants kiss.INF   want > 2
       c.   dass er **2 Fraue** *wett* [i de Ferie   küsse] VPR: 2 > want
             that he 2 women wants in the vacation kiss.INF   want > 2 (ZG)

What these facts suggest is that – for some reason – QR is not an option in (5a) and that given that there is not only surface scope in (5b/c), there must be a mechanism

to derive the inverse scope. Before introducing our analysis, we will briefly sketch the most important previous accounts of VPR.[3]

3 Previous accounts

3.1 Haegeman & van Riemsdijk (1986): reanalysis + inversion

In their influential contribution Haegeman & van Riemsdijk (H&R) analyze VR and VPR as a two-step process. It first involves (i) reanalysis of the higher verb with a) the dependent V, (7a) = VR or b) the entire dependent VP, (7b) = VPR or V', (7c) = partial VPR (Vx is the reanalyzed node); then (ii), reanalysis is followed by PF-inversion. The starting point is an OV-structure (6).

(6) dass de Hans [$_{VP1}$[$_{VP2}$ emene Studänt es Buech schänke] wett] DS
that the John a.DAT student a book give.INF wants

(7) a. dass de Hans [$_{VP}$ emene Studänt es Buech [$_{Vx}$[$_V$ schänke] [$_V$ wett]]]
dass de Hans [$_{VP}$ emene Studänt es Buech [$_{Vx}$ [$_V$ wett] [$_V$schänke]]]
b. dass de Hans [$_{Vx}$ [$_{VP}$ emene Studänt es Buech schänke] [$_V$ wett]]
dass de Hans [$_{Vx}$ [$_V$ wett] [$_{VP}$ emene Studänt es Buech schänke]]
c. dass de Hans [$_{VP}$ [emene Studänt] [$_{Vx}$ [$_{V'}$ es Buech schänke] [$_V$ wett]]]
dass de Hans [$_{VP}$ [emene Studänt] [$_{Vx}$ [$_V$ wett] [$_{V'}$ es Buech schänke]]]

Since VPR does not involve movement, transparency for extraction as in (4) is expected. Haegeman & van Riemsdijk (1986: 453) also provide an account of the scope facts. Given that extraction is possible, it seems difficult to formulate a ban on QR; therefore, they reject the possibility of QR. Instead they account for the scope facts by means of a multi-dimensional analysis which is part of their reanalysis approach: Simplifying somewhat, one tree (usually the one on top) represents the unrealized structure that directly expresses the theta-relations while the other one connected to the lexical items

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[3]One of the reviewers suggested that extraposition of PPs may illustrate an inverse movement paradox: While extraction from extraposed PPs is barred, the PP seems transparent for scope. He gives the following example:

(i) weil die meisten Männer hätten tanzen wollen mit 2 der Promigäste most > 2
since the most men had.SUBJ dance.INF wanted with 2 the.GEN VIP.guests 2 > most
'because most men would have liked to dance with two of the VIP guests'

I do not have space to explore this in any detail and will confine myself to pointing out that the literature contains claims to the contrary: First, Müller (1998: 175) gives examples with extraction from extraposed PPs:

(ii) Wo$_1$ hat keiner __$_2$ gerechnet [$_{PP}$ __$_1$ mit]$_2$?
what has no-one counted with

Second, Haider (1997: 131) argues that extraposed PPs cannot extend their scope. A particular clear case is the following contrast involving sentential negation: If the PP is in the middle it can have scope over 'be', in extraposed position it cannot:

(iii) dass er mit nichts zufrieden war ¬>*be* (iv) dass er zufrieden war mit nichts * ¬ > *be*
that he with nothing content was *be*>¬ that he content was with nothing *be* > ¬

represents the reanalyzed structure. Concretely, the representation for a sentence like (7a/b/c) will thus also involve a structure similar to (6) (modulo any movement operations that take place from DS to SS). This co-presence and the different c-command relations between the two dimensions account for the scope facts: Since the modal always c-commands the XPs in the theta-structure, i.e. (6), it has scope over the XPs in any case, whether they end up above the modal in the reanalyzed structure or not. What varies is the scope of the XPs: If they are within the reanalyzed constituent Vx like both XPs in (7b) or *es Buech* in (7c), they fail to c-command the modal (they are embedded within a VP/V'). If, however, they are outside and thus above the reanalyzed structure Vx as in (7a) or *emene Studänt* in (7c), then they can c-command the modal, thereby leading to a wide-scope reading. Reanalysis thus extends the scope of XPs that are not affected by it.

Despite its virtues, especially the handling of the scope facts,[4] this approach has been abandoned largely for conceptual reasons: Reanalysis and multidimensional representations were considered uneconomical, cf. e.g. von Stechow & Sternefeld (1988), Sternefeld (1991). Furthermore, in addition to conceptual counterarguments, Haegeman (1992: 142-147) provides empirical evidence against the reanalysis approach. For reasons of space, we cannot reproduce these arguments here. But we would like to point out that H&R's approach has nearly the same empirical coverage as the approach to be proposed below and therefore certainly has its merits. Given the recent rise of multidimensional analyses of various phenomena in syntax (Right Node Raising, amalgams etc.) some of the conceptual counterarguments may turn out to be irrelevant and put an analysis along the lines of H&R back on the map.

3.2   Haegeman (1992): VPR = scrambling + VP-extraposition

Haegeman (1992: 148-209) provides an analysis of both VR and VPR. While she takes VR to involve incorporation of the lower verb into the higher one as in (1), VPR is analyzed as extraposition, i.e. as adjunction of the lower VP to the higher VP (and eventually to TP/AgrP, which we ignore here; the underlying order is OV):[5]

(8)   a.   dass er [$_{VP1}$[$_{VP2}$ es Buech läse]   wett]   DS
           that he   a book read.INF wants

      b.   dass er [$_{VP1}$[$_{VP1}$ ___$_1$ wett] [$_{VP2}$ es Buech läse]$_1$]   SS
           that he   wants   a book read.INF

Partial VPR is analyzed parallel to remnant topicalization: The DP that is not affected by VPR is first scrambled out and adjoined to VP$_1$. Thereafter, VP$_2$ is adjoined to VP$_1$:

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[4]One case is not accounted for by H&R under the original definitions, as pointed out in Haegeman (1992: 142ff.): In partial VPR as in (7c) the reanalyzed structure involves a V'. Since intermediate projections are taken not to count for scope in H&R (1986: 454), an XP should be able to extend its scope and end up scoping over the modal even if contained inside the VPR constituent. This is not correct. In an example like (7c) *es Buech* can only have narrow scope with respect to the modal. I believe, though, that an appropriate reformulation of the c-command condition could take care of this.

[5]Essentially the same analysis is proposed for VPR by den Besten & Rutten (1989: 56, fn. 8), van den Wyngaerd (1989) and den Besten & Broekhuis (1992). The latter differ from Haegeman in that they reanalyze VR as VPR with prior scrambling of all arguments.

(9) a. dass de Hans [$_{VP1}$[$_{VP2}$ de   Muetter es Buech schänke] wett] DS
         that the John   the.DAT mother a book give.INF wants

     b. dass de Hans [$_{VP1}$[de   Muetter]$_1$ [$_{VP1}$[$_{VP2}$__$_1$ es Buech schänke] wett]]
         that the John   the.DAT mother   a book give.INF wants

     c. dass de H. [$_{VP1}$[$_{VP1}$ [de   Muetter]$_1$ [$_{VP1}$__$_2$ wett]] [$_{VP2}$__$_1$ es Buech
         that the J.   the.DAT mother   wants   a book
         schänke]$_2$]
         give.INF

As for the transparency data in (4), Haegeman (1992: 121, 223, fn. 6) proposes that
wh-movement precedes VP-adjunction, that is, as with scrambling, the wh-phrase first
adjoins to VP$_1$ (perhaps after first adjoining to VP$_2$), then VP$_2$ is adjoined to VP$_1$ and
then the wh-phrase moves on to Spec, CP. The analysis is thus very similar in spirit to
the remnant movement analysis of extraposition in Müller (1998).

Turning to the scope facts, the opacity of the VPR complement (5a) is attributed to
a ban on QR from non-L-marked positions (pp. 203f.). The scopal ambiguity in VR,
(5b), is assumed to follow from either a) QR of the indefinite, which adjoins it to VP$_2$
where the indefinite and the modal are taken to mutually c-command each other or
b) assigning the sentence two different structures, one where the indefinite remains
inside VP$_2$ (narrow scope) and one where it is scrambled (= adjoined) to VP$_1$ (wide
scope). The structure for option a), QR, looks as follows:

(10)   [$_{VP1}$ [$_{VP2}$ XP$_1$ [$_{VP2}$ __$_1$__$_2$]] V1+V2$_2$]

Option b (2 structures) involves the following representations:

(11) a. [$_{VP1}$ [$_{VP2}$ XP__$_2$] V1+V2$_2$]
     b. [$_{VP1}$ XP$_1$ [$_{VP1}$ [$_{VP2}$ __$_1$__$_2$] V1+V2$_2$]]

As discussed in detail in den Dikken (1994: 74f., 1995: 97f.), Haegeman's account of the
movement paradox does not work in the representational Barriers framework since
both the traces of putative QR and traces of overt wh-movement will have to be (an-
tecedent –) governed at LF so that one does not expect a difference between (4) and
(5a). Admittedly, things may be different in a strongly derivational framework where
the difference in timing of extraction will indeed result in the observed asymmetry.
Therefore, one cannot dismiss Haegeman's proposal so easily.

Concerning the treatment of the scope ambiguities in (5b/c), there emerges a cer-
tain inconsistency: While the two possible solutions sketched above work for (5b), they
do not seem to work for (5c), where the indefinite ends up outside the VPR comple-
ment: Here, the ambiguity cannot follow from two different structures (scrambled vs.
non-scrambled) since the object must be adjoined to VP$_1$ to escape adjunction of VP$_2$
to the right. In that position the XP c-commands the modal, but the reverse is arguably
not the case (this seems to be the assumption in Haegeman 1992: 205; unfortunately,
she is not explicit about the precise definitions of c-command that she assumes). It
is unclear then how to derive the narrow scope reading of the indefinite. The only
possibility seems to be reconstruction of the scrambled XP (which in turn necessitates
reconstruction of the adjoined VP$_2$). Consequently, for a consistent treatment of scope
in the framework of Haegeman (1992) one has to assume for both (5b/c) that scram-

bling to VP$_1$ creates the wide-scope reading while the narrow scope reading obtains after reconstruction. If QR is not taken to be responsible for scope, the scopal opacity in (5a) then follows from the surface position of the QP. Reconstruction of scrambled XPs may cause concern since scrambling is well-known not to reconstruct for binding (e.g. Bayer & Kornfilt 1994). I refrain from discussing the plausibility of reconstructing scrambling here as there is a simple way of avoiding it (cf. 3.4 below). There are, however, quite a number of serious problems with the scrambling operation necessary for partial VPR (9c) and wide-scope in VR (11b). These will be addressed in section 4. Finally, extraposition has become suspect as an operation in recent years because a) it is movement to the right, in violation of the Antisymmetry hypothesis (Kayne 1994), b) because there is no obvious trigger, at least not one that can be easily stated in Minimalist terms, and c) because it does not seem to have any semantic effects (i.e. it obligatorily reconstructs, cf e.g. Haider 1997). Consequently, it would be highly desirable to find a solution that does without extraposition. Some of these issues are addressed in more detail in Hinterhölzl's (2006: 80ff.) discussion of Haegeman (1992).

3.3 Scrambling + PF-inversion

Von Stechow & Sternefeld (1988) and Broekhuis (1993) have independently proposed analyses of VPR that involve PF-inversion between V1 and VP$_2$ instead of adjunction of VP$_2$. Furthermore, as opposed to H&R (1986), no reanalysis is involved. Applied to sentences like (2) this results in the following derivation (the basis is an OV-order):

(12)   a. dass er [$_{VP1}$[$_{VP2}$ de Muetter es Buech schänke] wett]   DS
              that he   the mother a book give.INF wants
       b. dass er [$_{VP1}$ wett [$_{VP2}$ de Muetter es Buech schänke]]   PF (after inversion)
              that he   wants   the mother a book give.INF

Partial VPR as in (3) involves scrambling of an XP out of VP$_2$ prior to PF-inversion:

(13)   a. dass er [$_{VP1}$[$_{VP2}$ de Muetter es Buech schänke] wett]   DS
              that he   the mother a book give.INF wants
       b. dass er [$_{VP1}$ de Muetter$_1$ [$_{VP1}$[$_{VP2}$__$_1$ es Buech schänke] wett]]   scrambling
              that he   the mother   a book give.INF wants
       c. dass er [$_{VP1}$ de Muetter$_1$ [$_{VP1}$ wett [$_{VP2}$__$_1$ es Buech   PF
              that he   the mother   wants   a book
              schänke]]]
              give.INF

As for VR, while von Stechow & Sternefeld (1988) adopt verb incorporation as in (1), Broekhuis (1993), following den Besten & Broekhuis (1992), proposes that it is also derived by means of PF-inversion, which is preceded by scrambling of all XPs of VP$_2$:

(14)   a. dass er [$_{VP1}$[$_{VP2}$ de Muetter es Buech schänke] wett] DS
              that he   the mother a book give.INF wants
       b. dass er [$_{VP1}$ de Muetter$_2$ es Buech$_1$ [$_{VP1}$[$_{VP2}$ __$_2$__$_1$ schänke] wett]]
              that he   the mother a book   give.INF wants

    c.   dass er [$_{VP1}$ de Muetter$_2$ es Buech$_1$ [$_{VP1}$ wett   [$_{VP2}$ __$_2$__$_1$ schänke]]]
          that he   the mother a book   wants   give.INF

The transparency for wh-extraction as in (4) is unproblematic given that VP$_2$ is in its base-position. As for scope, the absence of ambiguity in (5a) cannot be linked to some ban on QR because VP$_2$ is in its base-position at LF. Instead, the scope readings must be read off the surface structure. To obtain the ambiguity in (5b/c), the indefinite must be interpreted either in its derived position, i.e. adjoined to VP$_1$, or in its base-position at LF after reconstruction. This account is thus quite simple and captures the movement paradox in a straightforward way. However, serious problems will be shown to arise with the scrambling operation adopted here in (13) and (14). They will be discussed after the next approach is introduced, which also makes use of scrambling.

3.4   Den Dikken (1994/1995/1996): The size of the complement

Den Dikken adopts an antisymmetric VO-analysis of Dutch and German. The VPR complement is thus in its base-position. Den Dikken assumes that VR and VPR differ in the size of the complement that the higher verb can take. In VR, the complement is just a VP and the agreement projections occur above it. In VPR, however, the complement is larger, arguably a TP; as a consequence, the agreement projections are within the VPR complement.[6]

(15)   a.   [$_{VP1}$ AgrO mod [$_{VP2}$ inf]]   VR
        b.   [$_{VP}$ mod [$_{TP}$ AgrO inf]]   VPR

We will reproduce two arguments in favor of TP-status here with ZG-equivalents of the West Flemish (WF) data used by den Dikken. First, overt subjects are possible within the VPR complement (den Dikken 1996: 89); the results are best with epistemic modals:

(16)   Es het   sölle **öpper**   de Wage wäsche.
       it had.SUBJ should someone the car   wash.INF
       'Someone should have washed the car.'

Second, the VPR-constituent can contain a temporal adverbial which locates it in a different point in time than the matrix clause (den Dikken 1995: 107f., 1996: 78ff.):

(17)   dass si **geschter** hät wele   [ires Chläid **am Mittwuch**   chauffe]
       that she yesterday has wanted her dress on Wednesday buy.INF
       'that yesterday she wanted to buy her dress on Wednesday'

Further arguments for TP-status involve floating quantifiers (H&R 1986: 445) and negative concord (Haegeman 1992: 113ff., den Dikken 1995: 102, 1996: 78).[7]

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[6]In VR, only the object is generated in the dependent VP. The external theta-role of V2 is assigned to the specifier of V1 via some process of argument structure composition that takes place if two VPs are stacked immediately on top of each other. The modal is taken to lack an external theta-role of its own.

[7]The position of clitics in WF also provides evidence for TP status: They normally occur above TP and are also licensed in the VPR complement (Hinterhölzl 2006: 79). Interestingly, they can also climb into the matrix clause (Haegeman 1992: 109). In ZG, clitics have to occur in the matrix clause, they are not licensed within the VPR complement. I do not know what causes this difference.

To account for the scope facts, den Dikken adopts Aoun & Li's (1991) scope principle:

(18)   X has scope over Y if X c-commands a link of the chain containing Y

In the case of VR, the object moves across the modal for case-checking so that ambiguity results. In VPR, however, the object checks its case within the complement so that it does not cross the modal. Consequently, the modal always outscopes the XP:

(19)   a. $[_{\text{AGROP}}\ Obj_1\ [_{AgrO'}\ \text{AgrO}\ [_{\text{VP1}}\ V_{\text{MODAL}}\ [_{\text{VP2}}\ \text{V2}\ \_\!\_{}_1\ ]]]]$ VR (5b)

     b. $[_{\text{VP1}}\ V_{\text{MODAL}}\ [_{\text{TP}}\ [_{\text{AGROP}}\ Obj_1\ [_{AgrO'}\ \text{AgrO}\ [_{\text{VP2}}\ \text{V2}\ \_\!\_{}_1\ ]]]]]$ VPR (5a)

As for extraction as in (4), den Dikken seems to assume that movement to a case-checking position does not lead to opacity of that DP (cf. also Broekhuis 2006: 38, fn. 2). Under these premises, the movement paradox is accounted for. The assumption is not trivial, though, especially in the light of more recent incarnations of the Minimalist Program where movement for case checking and scrambling target the same position, viz. Spec, vP. Furthermore, it is not embedded into a systematic theory of freezing. We will come back to this issue in the discussion of Hinterhölzl's proposal in 10.2.1.

4   Scrambling without movement effects?

Attractive though it may seem, there are certain aspects of den Dikken's analysis that we consider undesirable. First, postulating movement for case-checking is unattractive in languages with free word order like German and its dialects (Fanselow 2001). Since free word order is also found within the VPR complement, movement to agreement projections (which would enforce strict ordering) is insufficient for ZG. The following example illustrates non-basic accusative-dative order for a ditransitive verb:[8]

(20)   ?Er hät [wele   das Buech vom Chomsky sinere Muetter schänke].
       he has wanted that book   of.the Chomsky his.DAT mother give.INF

The internal arguments can also occur in reversed order outside the VPR-constituent:

(21)   dass er **s** **Buech sinere** **Muetter** wett   [zum Geburtstag schänke]
       that he the book   his.DAT mother wants to.the birthday   give.INF

Den Dikken adopts a scrambling mechanism different from movement for case checking for such cases. Applied to partial VPR (5c) we obtain:

(22)   a.   dass er **2 Fraue** *wett* [i de Ferie   küsse] VPR: 2 > want;
          that he 2 women wants in the vacation kiss.INF   want > 2

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[8]Object-subject order within the VPR complement, on the other hand, can be accommodated, cf. den Dikken (1996: 89) who assumes that the subject remains in Spec, VP and the object moves to AgrOP or spec, vP. Haegeman (1992) and Broekhuis (1993) on the other hand can accommodate examples like (20) by assuming scrambling within VP$_2$, i.e. by adjoining an XP to VP$_2$.

b.   dass er [**2 Fraue**]$_1$ *wett* [$_{TP}$ [$_{AGROP}$ __$_1$ AgrO i de Ferie __$_1$ küsse]]

          scrambling   *case−checking*

Since the scrambling chain crosses the modal, ambiguity is correctly predicted.

However, there are strong arguments against a scrambling operation in partial VPR: We will present evidence that what den Dikken takes to be scrambling has crucially different properties (cf. also Hinterhölzl 2006: 105ff. for similar discussion). Importantly, this criticism also applies to the approach by Haegeman (1992) and the PF-inversion account of von Stechow & Sternefeld (1988) and Broekhuis (1993) who would also have to assume scrambling in these cases.[9]

First, material that is usually taken not to be able to scramble can occur in higher positions. Here are examples with an idiomatic NP and a predicative AP:

(23)   a.   dass er **känere Flüüg** hät chöne [öppis   z Leid   tue]
           that he no.DAT fly   has could something to suffering do.INF
           'that he could not harm anyone'
      b.   dass er sis Bier hät **küelt** wele   [uf d   Wanderig mitnee]
           that he his beer has cooled wanted on the hike   take.along.INF
           'that he wanted to take his beer cooled with him on the hike'

Second, putatively scrambled DPs in partial VPR (24b) do not prevent focus projection (in canonical order, contra Fanselow 2003a: 208; stress is on the capitalized DP, but the entire VP can be interpreted as focused). Partial VPR, full VPR and VR thus all allow focus projection as long as the arguments occur in canonical order.

(24)   a.   Er hät **de**   **Muetter** s Buech vom CHOMSKY wele   schänke.
           he has the.DAT mother the book of.the Chomsky   wanted give.INF
           'He wanted to give mother the book by Chomsky.'
      b.   Er hät **de**   **Muetter** wele   [s Buech vom CHOMSKY schänke].
           he has the.DAT mother wanted the book of.the Chomsky give.INF
      c.   Er hät wele   [**de**   **Muetter** s Buech vom CHOMSKY schänke].
           he has wanted the.DAT mother the book of.the Chomsky give.INF

Finally, extraction from objects is possible not only if the object is inside the VPR constituent as in (4), but also if it occurs outside it in partial VPR. There are *no freezing effects*:[10]

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[9]Additionally, they all have to posit scrambling for the wide-scope reading of VR-examples like (5b). Since these show the same non-scrambling properties like partial VPR, the problems are more general.

[10]Diagnosing freezing effects presupposes a worked-out theory of freezing which we cannot provide here. Descriptively, we will assume the strongest possible position here: Any constituent that has undergone movement becomes an island for extraction. Classical accounts based on the CED (Condition of Extraction Domains) fail because extraction takes place from a non-complement in (25). In the recent approach by Müller (2010) only last-merged specifiers of phases are opaque. Given that every XP is taken to be a phase in that approach and given that the XPs from where extraction takes place in (25) are the highest elements in the projection of *chöne/wele*, they are predicted to be opaque for extraction, irrespective of whether movement is involved or not. This prediction is not borne out.

(25)   a.   Was₁ het de Hans söle   [__₁ für Büecher] chöne ohni   Hilf läse?
              what has the John should   for books   could without help read.INF
              'What kind of books should John have been able to read without any help?'
        b.   Was₁ tänksch, dass de H hät [__₁ für Lüüt] wele   vo siine Idee
              what believe.2s that the J has   for people wanted of his   ideas
              überzüüge?
              convince
              'What kind of people do you think John wanted to convince of his ideas?'

Here are three examples showing that corresponding local scrambling behaves differently with respect to these tests:

(26)   a.   *dass de Peter sis Bier **küelt**   morn   uf d   Wanderig mitnimmt
              that the Peter his beer cooled tomorrow on the hike   takes.along
        b.   Er hät **s   Buech** vom Chomsky de   MUETTER zäiget.
              he has the book   of.the Chomsky the.DAT mother   shown
              (no focus projection)
        c.   *Was₁ hät [__₁ für Büecher] de   Hans geschter kchaufft?
              what has   for books   the.NOM John yesterday bought

So far we can conclude that adopting scrambling for partial VPR is problematic. As the next section will show, things are somewhat more complex.

5   Movement effects emerge in non-canonical order

While arguments of the lower verb that occur outside the VPR complement did not show any movement effects in the previous section, we are now going to show that such effects do emerge in partial VPR once the constituents occur in non-canonical positions, usually in very high positions. First, elements that are normally thought not to scramble cannot occur in higher positions (e.g. above the subject):[11]

(27)   a.   *dass **känere Flüüg** *de Hans* hät chöne [öppis   z Leid   tue]
              that no.DAT fly   the John has could something to suffering do.INF
        b.   *dass de Hans sis Bier hät **küelt**   morn   wele   [uf d   Wanderig
              that the John his beer has cooled tomorrow wanted on the hike
              mitnee]
              take.with

---

[11]As correctly pointed out by one of the reviewers, the ungrammaticality of (26a) and (27b) is due to the sequence predicative adjective > temporal adverb within the same verbal projection. If in (27b) the temporal adverb occurs in a lower projection the result is well-formed (offered by reviewer):

(i)   dass de Hans sis Bier hät küelt   wele   morn   uf d   Wanderig mitnee
        that the John his beer has cooled wanted tomorrow on the hike   take.along.INF

From a scrambling perspective this could be interpreted as showing that only short/low scrambling is possible but not scrambling to higher positions. For our purposes it is sufficient to observe that to derive cases like (23b) under scrambling, an operation has to be posited that is substantially different from clausal scrambling operations that lead to reordering.

Second, focus projection is blocked in non-canonical order (narrow scope on 'mother'). Again, VR, full and partial VPR pattern alike:

(28) a. Er hät **s Buech vom Chomsky** de MUETTER wele schänke.
he has the book of.the Chomsky the.DAT mother wanted give.INF

b. Er hät **s Buech vom Chomsky** wele [de MUETTER schänke].
he has the book of.the Chomsky wanted the.DAT mother give.INF

c. ?Er hät wele [**s Buech vom Chomsky** de MUETTER schänke].
he has wanted the book of.the Chomsky the.DAT mother give.INF

Third, freezing effects re-emerge in non-canonical order (especially with movement from above the SU):

(29) *Was$_1$ hät [__$_1$ **für Lüüt**] *de Hans* [wele vo siine Idee überzüüge]?
what has for people the John wanted of his ideas convince.INF

Here, partial VPR patterns with regular scrambling in (26). At first sight, the facts from the last two sections suggest that sometimes scrambling is involved and sometimes it is not in the derivation of partial VPR like (5c). It thus seems as if the movement paradox is exacerbated. In the next section we will introduce a new account of VPR that resolves the paradox and provides a straightforward explanation of the scope properties of the examples in (5) without adopting scrambling.[12]

6 A base-generation approach

In this section I will propose a base-generation approach to VPR that draws heavily on work by Fanselow (2001, 2003a/b) on free word order (cf. Bayer & Kornfilt 1994: 35ff. for a similar approach). The basic idea is that theta-role assignment can be delayed:[13]

(30) An argument A can be merged with a projection P only if the head of P (or a sublabel of the head) selects A as an argument (Fanselow 2003a: 207)

Since no reference to argument hierarchy is involved, theta-roles of the same head can be discharged in free order.[14] The crucial part of the merge condition is in parenthesis:

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[12]The pattern described for partial VPR in sections 4 and 5 finds almost perfect parallels in the domain of remnant movement (Fanselow 2002: 100), Hinterhölzl (2002: 137) and the Third construction, cf. Bayer & Kornfilt (1994: 45), Wöllstein-Leisten (2001), and Geilfuss (1991), who refers to the putative scrambling facts presented in section 4 as pseudo-scrambling This shows that a proper understanding of the selective movement effects are indispensable for a proper understanding of verb clusters.

[13]Fanselow (2001) contains a number of flaws (cf. Assmann & Heck 2009 for discussion), especially the assumption that theta-role assignment only requires c-command by the predicate. This wrongly predicts that arguments can be merged below the projection of its predicate. The new definition in (30) avoids this complication. Together with the assumption of cyclic incorporation the account is more compatible with recent strongly derivational instantiations of the Minimalist Program.

[14]Additional assumptions are necessary for languages like Dutch and West Flemish which have VR, restructuring and (only West Flemish) VPR but do not allow the order of arguments to be reversed (unless focal stress/focal particles are involved, in which case one may be dealing with A'-movement – thanks to one of the reviewers for clarification of this point). Scrambling can only change argument – adverb orders in these languages. It seems therefore, that the argument hierarchy must be preserved in the mapping in these languages, cf. e.g. Neeleman (1994).

A verb can assign theta-roles after it has incorporated into (and thus has become a sublabel of) another head. This implies that incorporation extends the theta-marking domain. This view is clearly non-standard and also implies a different approach to case-checking; essentially, case-checking will have to be done at the point of merge of an argument and thus will be a concomitant effect of merge. Consequently, case-checking/valuation does not involve Agree in a free word order language like German (this is basically the reason why arguments can appear in any order). In a simple clause, V always incorporates into v and the resulting V+v-complex subsequently incorporates into T. This licenses the merger of arguments of V in the projections of v and T:

(31) $[_{TP}$ XP $[[V_1+v]_2+T]\_\_\_2\_\_\_1]$
                          Θ (*e.g.theme*)

The mechanism can be extended to VR/VPR and coherent constructions (Fanselow 2001): The embedded V incorporates into the matrix V and then into matrix v/T. As a consequence, arguments of the dependent verb can be merged in the projection of the modal/Aux/restructuring verb:

(32) $[_{MODP}$ XP $[V_1+Mod]$ $[_{VP}\_\_\_1]]$ e.g. lit: 'a book wanted to read'
                          Θ (*e.g.theme*)

We assume that V-incorporation always takes place, but in many cases it does so abstractly, i.e. covertly. This holds for V-incorporation into T in V-final clauses, in VPR and in coherent constructions in the form of the Third Construction (where the verbs do not form a cluster on the surface).[15] Furthermore, incorporation is taken to apply cyclically. We thus adopt a single-output syntax where in many cases the lower copy of the verb will be realized, cf. Roberts (1997), Bobaljik (2002). The possible surface orders can be quite varied among varieties of German and are taken to be due to individual spell-out or linearization options, cf. Barbiers (2005/2009) and Salzmann (2010) for discussion. Importantly, we take incorporation to be full verb movement and not just feature movement; this aspect will be crucial in the account of the scope facts below. Finally, we assume that incorporation of verbs is triggered by strong c-selectional (Matushansky 2006) and/or verb status features (Bayer et al. 2005).[16,17]

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[15]One of the reviewers asks about the evidence for abstract incorporation. The major motivation are the agreement relationships beween the heads (c-selection/verb status), which are often expressed by overt incorporation (cf. e.g. VR and coherent constructions in SG).

[16]We assume that this is sufficient to guarantee the locality of theta-role assignment. Arguments of the V of a CP-complement thus cannot be merged in the higher clause (which would correspond to scrambling across finite clauses) because the lower verb cannot incorporate into the matrix V due to the intervening C, which does not incorporate.

This is an area that arguably constitutes the major shortcoming of the proposal in Boskovic & Takahashi (1998) who assume free base-generation and LF-movement (mostly lowering) into theta-positions. Since the lowering mechanism is rather unconstrained – it even allows upward movement into theta-positions, it seems inadequate for the (Zurich) German facts. Admittedly, the approach was designed to account for scrambling in Japanese, which has substantially different properties.

[17]One of the reviewers has correctly pointed out that there is a conceptual link between the availability of strong verb status features and the extension of theta-role assignment that remains unexpressed in the current analysis. I hope to be able to tackle a formalization of this relationship in future research.

7 Accounting for the properties of VR/VPR

7.1 Facts to be accounted for

The following facts need to be accounted for: (i) We have to deal with the selective movement effects: While section 4 presented evidence against a movement account for partial VPR cases like (5c), section 5 showed that movement effects can be diagnosed once the XP occurs in a higher position. (ii) We need to account for the scope facts in (5): There is no ambiguity if the XP is within the VPR cluster, (5b), while ambiguity obtains if the XP is outside the VPR constituent, (5c), or in VR, (5a).

7.2 Selective movement effects

The fact that elements of which it is normally assumed that they do not scramble can occur in – putatively – derived positions is accommodated as follows: Since we assume that arguments, but also adjuncts, can be freely merged (things are more complex with certain adverbials, cf. 7.4) nothing in principle rules out merging such elements in higher positions. This does not imply that all orders will be equally acceptable and equally unmarked. Rather, what the computational system generates is filtered by surface structure constraints as e.g. in Müller (1999), which will filter out certain orders altogether (e.g. predicative adjectives in high positions) or will assign a marked status to certain orders (with concomitant lack of focus projection), cf. also Fanselow (2003a/b). This implies that the difference between the facts in section 4 and 5 is not derived syntactically. The criticism against the scrambling solutions in the previous sections thus essentially boils down to a general criticism of a movement approach to free word order of which VPR is an instantiation. As for the selective freezing effects, we follow Meinunger (2000) and Fanselow (2003a/b) in assuming that what bars extraction from XPs in the middle field is not whether the XP has already undergone movement but rather its specificity/topicality: Once the XP receives a specific/topical interpretation, it is opaque for extraction. Since this usually correlates with a high position one gets the impression of a freezing effect with scrambling that targets a high position. In this sense, VPR simply mirrors what is found in simple clauses: If the XP is non-topical and thus tends to occur in a low position within the clause where it is merged, extraction is fine (25) even if the XP does not overtly occur in the projection of its predicator; if however, it is topical and as a consequence is merged high in the clause, extraction fails (29).[18]

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[18]There is one systematic embarrassment for this base-generation approach (cf. also Assmann & Heck 2009): It fails to account for the possibility to „scramble" from XPs in non-complement positions. XPs that occur outside the VPR complement, but in a low position as in the sentences in section 4 are not only transparent for wh-extraction, but also for scrambling:

(i) dass niemert [über de Chomsky]₁ het   [es Buech __₁] chöne [i äim Jaar schriibe]
    that no.one about the C.   had.SUBJ a book   can.INF in one year write.INF
    'that no one could have written a book about Chomsky within one year'

Scrambling from NPs is only discussed in Fanselow (2001) and – like scrambling from VP – reanalyzed as base-generation. Applied to the definition used in (30) above, an argument of N can be merged outside NP if N (abstractly) incorporates into the head of the projection where the argument is merged. While this works in case the NP is in a complement position – N then incorporates into V and XP can be merged

7.3   Scope

Turning now to the scope facts, we have to distinguish two cases: a) The argument-QP is base-generated in the projection of the modal (VR, VPR as in (5b/c); b) the argument-QP is base-generated within the VPR complement, e.g. as in (5a):[19]

(33)   a. $[_{TP}$ T $[_{VP}$ *QP Mod* $[_{VP/TP}$ (XP)V]]]   (5b/c)
         b. $[_{TP}$ T $[_{VP}$ *Mod* $[_{TP}$ *QP* V]]]   (5a)

In both cases, the embedded V abstractly incorporates into the matrix V and the newly formed cluster then incorporates into v and T. In (33a) this allows the high merger of an argument of the embedded V. While the syntax of verb movement is the same in both configurations, the consequences differ due to the different merge position of the XP:

In the first configuration with the QP in the projection of the modal, the modal ends up in matrix T and c-commands the QP. As a consequence, the *mod > XP* reading obtains, cf. (34a). Wide scope of the QP, on the other hand, follows from reconstruction/ interpretation of the lower copy of the modal, cf. (34b). The two LFs for (33a) look as follows (we assume that the lexical verb is always interpreted in the lowest position):

(34)   a. $[_{TP}$ [~~V_1~~+*Mod*]$_2$+T $[_{VP}$ *QP* [~~V_1~~+~~*Mod*~~]$_2$ $[_{VP/TP}$ (XP) V$_1$]]]
         b. $[_{TP}$ [~~V_1+*Mod*~~]$_2$+T $[_{VP}$ *QP* [~~V_1~~+*Mod*]$_2$ $[_{VP/TP}$ (XP) V$_1$]]]

Note that for this account to work, covert head movement must not be executed as feature movement. Rather, it also involves the semantic and thus scopal properties of the heads so that covert head movement can lead to semantic effects (cf. Matushansky 2006: 104 and Lechner 2007: 11ff. for discussion of semantically active head-

in any projection that contains N – it is by no means clear how this should be possible in cases like (i) where the NP is not a complement of V and fails to satisfy the c-command condition on incorporation (only heads that are c-commanded can be incorporated). Potentially, abstract incorporation of N does not take place until V has incorporated into matrix T in (i). This would, however, be in conflict with cyclicity.

Alternatively, one could take a very different position and argue that there is no scrambling from NPs altogether. What looks like scrambling in (i) would then be reanalyzed as a case of adverbial modification of the verb (cf. de Kuthy 2002, or, as suggested by one of the reviewers, as involving a three-place verb). Since such analyses are usually also applied to wh-movement, the entire argument involving freezing seems to break down: the transparency in configurations like (25) would then no longer indicate anti-freezing but would be the trivial consequence of the fact that there is no extraction in the first place. While (i) thus arguably cannot be used as an argument against freezing, things are different with examples like (25), which involve *was für*-split: Here the reanalysis analysis is not an option since it is restricted to PPs. Consequently, (25) would then indeed involve proper extraction and would indicate anti-freezing. To be fair, alternative analyses are available for *was-für* split, viz. remnant movement (Abels 2003) so that even this case may eventually turn out to be irrelevant for the freezing argument.

[19]We use a mixed V-VP/OV-system as in Cooper (1995), Barbiers (2000) where VP/CP complements occur as right-hand complements of V while all other complements appear to the left. See Salzmann (2010) for an explicit account that makes use of linearization parameters operative at PF. For the data at hand, an account that starts out with a consistently left-branching syntax and derives the right-branching order by means of PF-inversion between V and VP/CP delivers equivalent results.

For reasons that will become clear shortly, we treat VR and VPR as essentially the same thing. The only difference is that in cases of VR the dependent VP (rather: TP, cf. 7.4.2) does not contain any constituents other than the verb (the arguments against a unification advanced in Haegeman 1994 do not apply to ZG). See Salzmann (2010) for a proposal of how to explain why certain languages (notably Standard Dutch) are restricted to VR and disallow VPR.

movement).

In the second configuration where the QP is merged below the modal, (33b), scopal opacity follows since the modal c-commands the QP irrespective of whether predicate raising is reconstructed (35b) or not (35a) – the QP does not move (we exclude QR). We thus get the following two possible LFs for (33b):

(35)   a. $[_{TP} \; [\text{\sout{$V_1$}} + Mod]_2 + T \; [_{VP} \; [\text{\sout{$V_1 + Mod$}}]_2 \; [_{TP} \; QP \, V_1]]]$
           b. $[_{TP} \; [\text{\sout{$V_1 + Mod$}}]_2 + T \; [_{VP} \; [\text{\sout{V_1}} + Mod]_2 \; [_{TP} \; QP \, V_1]]]$

The scope facts are thus an automatic side-effect of the predicate-raising approach.[20]

7.4   On the size of the VR complement – additional scope facts

7.4.1   Scrambling accounts

In this section we will discuss two additional types of scope facts that are important for a proper understanding of VR and VPR. Both were already noted in Haegeman & van Riemsdijk (1986: 446f.) and Haegeman (1992). First, adverbials outside the VR/VPR complement are ambiguous between high and low construal, i.e. they either have scope over the higher or just over the lower verb; if, on the other hand, they occur inside the VPR constituent, only the low construal is possible (we use translated examples of Haegeman 1992: 110, 113):[21]

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[20]Base-generation approaches like Bader & Schmid (2009) that also base-generate the verb cluster itself have difficulties accounting for scope ambiguities because in certain configurations the modal will fail to c-command the QP. Take a VR or VPR-example with two indefinite objects outside a 3-verb cluster headed by an auxiliary, as schematically depicted in the following structure:

(i)   [IO [DO [Aux [Mod V]]]]

Importantly, both the DO and the IO can have narrow scope with respect to the modal:

(ii)   dass de Lehrer eme Schüeler es Buech hät wele   schänke   IO > modal
          that the teacher a.DAT pupil   a book has wanted give.INF   modal > IO

To extend the scope of the modal, some percolation mechanism is necessary. Percolation of the features of the modal up to the aux may be sufficient to handle narrow scope of the DO, but since the aux fails to c-command the IO, the narrow scope reading of (ii) remains unexplained. For such cases to be tractable under the Bader & Schmid approach, a different structural condition on scope (m-command?) seems unavoidable.

[21]Haegeman & van Riemsdijk (1986: 446) actually use examples with ambiguous temporal adverbials. While adverbials outside the VR/VPR constituent can indeed easily modify the embedded verb, it is difficult to construct examples where the adverb can actually also modify the matrix verb, i.e. the modal. Here is one example where the presence of an additional adverbial *nüme* 'no longer' disambiguates the example:

(i)   dass er morn   (nüme)   wett   (bi öis) verbiichoo
          that he tomorrow no.longer wants at us drop.by.INF
          a.   'that tomorrow he will no longer want drop by at our place' (with *nüme*)
          b.   'that he wants to drop by at our place tomorrow' (without *nüme*)

See Bouma (2003) for more data of this type.

(36) a. dass de Hans de Peter *drüümaal* das Buech laat läse   let > 3 times
          that the John the Peter three.times that book   lets read.INF 3 times > let

      b. dass de Hans de Peter *drüümaal* laat das Buech läse   let > 3 times
          that the John the Peter three.times lets that book   read.INF 3 times > let

      c. dass de Hans de Peter das Buech laat *drüümaal* läse   let > 3 times
          that the John the Peter that book   lets three.times read.INF *3 times > let

Under the wide-scope reading of *drüümaal* there are three instances of causation; under the narrow scope reading there is only one instance of causation. Under movement approaches to VR/VPR, the low construal of *drüümaal* in (36a/b) is not unproblematic. For (36b), all scrambling approaches reviewed here would have to assume scrambling of the adverbial from VP_2 to VP_1 with optional reconstruction. Scrambling of adverbials is a controversial issue that I will come back to in the next subsection. What these facts certainly imply is that VP_2 contains more structure than just a VP. (36a) raises interesting issues: Under OV-approaches (Haegeman and Broekhuis) it can be handled by means of variable attachment sites (adjunction to VP_2 or VP_1) if VR is a possibility (Haegeman) or by means of scrambling to VP_1 plus reconstruction (Broekhuis 1993). Crucially, however, the facts cannot be accounted for under den Dikken's approach where VP_2 is explicitly taken to be just a bare big VP – there would be no base-position for the adverbial into which it could reconstruct (the problem is hinted at in den Dikken 1994: 87, fn. 113).

The same problem obtains with ambiguities in the interpretation of modals: indefinites that occur above the modal 'can' are ambiguous between a deontic/root ('someone is able to …') and an epistemic interpretation ('it is possible that someone …'). If, however, the subject occurs inside the VPR complement only an epistemic interpretation is possible (the *-n* on *chan* in (37c) is a linking consonant).

(37) a. dass de Wage öppert   cha repariere   √ root
          that the car   someone can repair.INF   √ epistemic
          'that someone can repair the car'

      b. dass öppert   cha de Wage repariere   √ root
          that someone can the car repair.INF   √ epistemic

      c. dass de Wage chan [öppert   repariere]   *root
          that the car   can   someone repair.INF   √ epistemic

Under the OV-approaches, the ambiguity in (37b) follows from scrambling of the subject from VP_2 to VP_1 plus optional reconstruction. (37a) can also be accounted for via scrambling + reconstruction (Broekhuis 1993) or, if VR is a possibility (Haegeman 1992), by assigning two different structures to it, i.e. with the subject either in $SpecVP_2$ or $SpecVP_1$ (in the first case, the modal is a raising verb, in the second case it is a control verb). As with the previous phenomenon, (37a) is problematic for den Dikken because the subject cannot come from VP_2 since the subject theta-role of VP_2 is projected in $SpecVP_1$ (recall fn. 6). The ambiguity thus remains unaccounted for.

7.4.2 The base-generation account

In the base-generation account proposed here, the ambiguities are the result of covert verb movement. We will begin with the ambiguity of the modal: If the subject of V2 is merged within the VPR complement, e.g. as a specifier of V2 (37c), it will always be in the c-command domain of the modal (regardless of reconstruction) so that only an epistemic interpretation is possible; the derivation is essentially as in (35) and we get the following LFs for (37c).

(38) a. $[_{TP} [\overline{V_1} + Mod]_2 + T [_{VP} [\overline{V_1 + Mod}]_2 [_{TP} SU V_1]]]$
      b. $[_{TP} [\overline{V_1 + Mod}]_2 + T [_{VP} [\overline{V_1} + Mod]_2 [_{TP} SU V_1]]]$

In (37a/b), the subject of the lexical verb is merged higher, in the projection of the modal. Since the modal can be interpreted above or below the subject, the two readings are easily obtained, basically as in (34), as the two LFs show:

(39) a. $[_{TP} [\overline{V_1} + Mod]_2 + T [_{VP} SU [\overline{V_1 + Mod}]_2 [_{TP} (XP) V_1]]]$
      b. $[_{TP} [\overline{V_1 + Mod}]_2 + T [_{VP} SU [\overline{V_1} + Mod]_2 [_{TP} (XP) V_1]]]$

The adverbial facts are more interesting as it is far from clear how an adverbial that modifies the embedded verb can occur outside the projection of that verb. While the base-generation mechanism can readily handle merger of arguments in higher projections, it is at first sight unclear how adverbials are to be treated since they are not arguments of verbs and therefore cannot be licensed by V-incorporation into higher heads. We would like to propose the following: If adverbials are merged as specifiers of functional heads, one can extend the predicate raising approach: suppose that in examples like (36a/b) a functional head F is merged below the causative verb. When V incorporates into *laat*, it will carry F along so that it can license the adverb within the projection of the causative verb (checking of the relevant feature of F can be delayed):

(40) a. dass de Hans de Peter **drüümaal**   laat [**F** das Buech läse]
          that the John the Peter three.times lets   that book read.INF
      b. dass de Hans de Peter **drüümaal** [läse$_1$ +**F**]$_2$+ laat [__$_2$ das Buech
          that the John the Peter three.times read.INF   lets   that book
          __$_1$]

The ambiguity in the interpretation of the adverbial then results from predicate raising and optional reconstruction (interpretation of the lower copy of *laat*, basically as in (34)). We thus get the following LFs for (36b):

(41) a. dass de Hans [[l̶ä̶s̶e̶$_1$ +**F**]$_2$+ *laat*]$_3$+T de Peter **drüümaal** [[l̶ä̶s̶e̶$_1$ +**F**]$_2$+
          that the John read.INF   lets   the P.   three.times read
          l̶a̶a̶t̶]$_3$ [[l̶ä̶s̶e̶$_1$ +**F**]$_2$ das Buech läse$_1$]
          lets   read   that book read
      b. dass de Hans [[l̶ä̶s̶e̶$_1$ +**F**]$_2$+ *l̶a̶a̶t̶*]$_3$+T de Peter **drüümaal** [[l̶ä̶s̶e̶$_1$ +**F**]$_2$+
          that the J.   read.INF   lets   the P.   three.times read
          laat]$_3$ [[l̶ä̶s̶e̶$_1$ +**F**]$_2$ das Buech läse$_1$]
          lets   read   that book read

This analysis treats adverbials and arguments on a par, which implies that adverbials can be scrambled. This clashes with much of the literature where scrambling of adverbials is normally ruled out on the basis of examples like the following (the example is, of course, fine with high construal of the adverb; SG, Fanselow 2001: 401):

(42)   *dass [**morgen** 1 [TP niemand [CP PRO __1 ein Buch zu lesen]   versprach]]
         that tomorrow   no.one   a   book to read.INF promised

However, the facts are not so straightforward. As pointed out in Fanselow (2003a: 214), some selected adverbials resist scrambling while certain adjuncts do seem to scramble (these are coherent constructions):

(43)   a. ??dass man **im   Hotel** niemandem zu wohnen versprechen sollte   ARG
            that one in.the hotel nobody.DAT to live.INF promise.INF should
            'that one should not promise anyone to live in the hotel'   (SG)

        b.   dass man **in diesem Hotel** niemandem zu essen   empfehlen
             that one in this   hotel nobody.DAT to eat.INF recommend.INF ADJ
             kann
             can
             'that one cannot recommend anyone to eat in this hotel'   (SG)

   Examples like (43b) show that adverbials can be licensed within the projection of the higher verb. What seems to be the case, though, is that they are much more restricted in their reordering possibilities: While they may be merged in higher clauses, they have to occur very low (cf. also den Besten & Broekhuis 1992: 30 for similar facts). I take these restrictions to follow from independent surface structure generalizations.[22,23]

8   Further arguments in favor of verb movement

In this section we will provide two additional arguments in favor of verb movement and against a scrambling account.

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[22]This also applies to the contrast between (23b) and (26a) above: As long as the predicative adjective is in the c-command domain of its subject, it may also occur in the higher clause (at this point I am not sure whether the adjective is licensed by means of incorporation of some functional head as in (40) or whether it is independently licensed in the matrix clause as long as it is c-commanded by its subject).

[23]The scope facts in VR with Inf>Mod order are the same as with Mod>Inf order, i.e. indefinites are ambiguous (while WF disallows this order, it is possible in Standard Dutch, SG and also in ZG):

(i)   dass er 2 Fraue   küsse   wett   2 > want
        that he 2 women kiss.INF wants   want> 2 ZG

Under OV-approaches, the ambiguity follows from optional scrambling to VP$_1$ (cf. also Bobaljik & Wurmbrand 2005). Under den Dikken's VO approach, the facts follow if it is additionally assumed that the dependent verb overtly incorporates into the modal. As long as the object moves across the modal, the scope facts come out right. In Salzmann (2010), such orders are analyzed as the result of overt PF-incorporation of the dependent verb. The scope facts can then be analyzed as in (34).

8.1 Hinterhölzl's paradox

Hinterhölzl (2006: 113f.) provides one example that is clearly incompatible with a scrambling account. Consider the following VPR-example involving a causative verb (this is a translation of the West Flemish example used in Hinterhölzl; cf. also Bouma 2003: 37f. for similar data):

| (44) | dass er d Schüeler **2 Stuck** laat *drüümal* üebe. | 2 p > 3 x |
| | that he the students 2 pieces lets three.times rehearse.INF | *3 x > 2 p |

The indefinite can have wide or narrow scope with respect to the causative verb in this example, as is expected given covert verb movement (under wide scope, there are two specific pieces that the students are told to practice three times, under narrow scope they are just told to practice the same two pieces three times, but which pieces they practice is irrelevant). What is crucial is that under narrow scope of the indefinite, it must have wide scope w.r.t. the adverbial. This is unexpected under a scrambling/movement account as the indefinite would arguably come from below the adverbial – the base-position of objects is below frequency adverbials.[24] Under verb movement the facts are as expected because the relative scope between the indefinite and the frequency adverbial is fixed, only the scope of the verb can change via predicate raising.[25]

8.2 Negative indefinites

Further evidence for verb movement comes from the interaction between VPR and negative indefinites (NI, Penka 2007). While NIs have been frequently used in the argumentation for scope (Haegeman & van Riemsdijk 1986, Haegeman 1992, den Dikken 1994/1995), what these approaches have failed to take into account is a third reading that negative indefinites allow. This third reading is often referred to as the split reading whereby the negative and the indefinite part are split by some scopal element. Consider the following VPR-example (the split reading is the third one):

(45)	dass **kän Profässer** [törf bi de Prüefig aawesend sii]	¬ prof > may
	that no professor may at the exam present be	may > ¬ prof
	'that no professor must be present during the exam'	¬ > may > a prof

It should be pointed out that not all readings are equally salient, especially the narrow scope reading (may > ¬ prof) is difficult to obtain in this context. It can, however, be forced by using certain particles (cf. Penka & von Stechow 2001: 267ff.). Interestingly, if the negative indefinite is within the VPR-constituent, only the narrow-scope reading is possible (cf. also von Stechow 1992: 240 for this observation):

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[24]This criticism also applies to the LF-lowering approach of Boskovic & Takahashi (1998).

[25]A similar point can be made with the relative scope of multiple adjuncts (Bouma 2003: 34ff.): They are restricted to surface scope. If they were to involve scrambling from the embedded VP, reversed scope interpretations would in principle be conceivable. The facts discussed here also follow under Hinterhölzl's remnant movement account that we address in section 10.

(46) dass bi de Prüefig törf [(au mal) **kän Profässer** debii   sii]   *¬ pr > may
      that at the exam   may once   no professor present be   may > ¬ pr
      'it is allowed that no professor is present during the exam'   *¬ > may > a pr

One straightforward explanation for this is that negative indefinites are actually the spell-out of two parts, an abstract negation + a non-negative indefinite. Crucially, for them to be realized as one word they have to be adjacent in surface syntax, i.e. at PF (Penka 2007: 103f.). If in (46) the abstract negation and the indefinite are within the VPR constituent, amalgamation is successful and the narrow scope reading obtains. The wide scope reading is impossible since both elements are in the c-command domain of the modal. The split scope reading would require the abstract negation to be located above the modal. But in that case the adjacency would be disrupted so that amalgamation fails. As a consequence, the split reading is not available:

(47) *Op¬ *may* [a professor ...]

The only grammatical derivation involves both the abstract negation and the indefinite within the VPR-constituent. Since there is no intervening material, they can be spelled-out together. In this case, however, there is no effect on scope:

(48) *may* [Op¬ a professor ...]

Let us look at how a scrambling approach would analyze (45): To obtain the wide-scope reading (= de re reading), the indefinite must be scrambled into the matrix clause while the abstract negation is directly merged in the matrix clause. Finally, both elements are interpreted there:

(49) Op¬ [a X]$_1$ Mod [$_{VP}$ ... ___$_1$]   wide-scope: scrambling of indefinite + high merger of Neg

To obtain the split reading, the indefinite is again merged below, then scrambled into the matrix clause (so that both elements can be spelled out as one element) while the negation is directly merged in the matrix clause. Subsequently, the indefinite is reconstructed (or scope is computed according to Aoun & Li 1991, which makes reconstruction unnecessary):

(50) Op¬ [a̶ X̶]$_1$ Mod [$_{VP}$ ... [a X]$_1$]   split reading: scrambling + reconstr. of the indefinite + high merger of Neg

While the previous derivations seem rather innocuous, the derivation for the narrow-scope reading (de dicto) of (45) raises concerns: Since both the abstract negation and the indefinite are interpreted in the scope of the modal, they have to originate within the VPR-constituent. Then, since the NI is realized in the matrix clause, they both have to be scrambled into the matrix clause so that they can be spelled-out as one word there. Subsequently, both elements have to be reconstructed (or scope is computed as in Aoun & Li 1991):

(51) [O̶p̶¬̶]$_2$ [a̶ X̶]$_1$ Mod [$_{VP}$ [Op¬]$_2$ [a X]$_1$]   narrow scope: scrambling + reconstruction of both indefinite and negation

Scrambling of negation is, of course, a rather problematic operation, but seems inevitable under a scrambling approach, irrespective of whether a VO or an OV-approach is adopted. The derivation actually raises additional questions: From the perspective of economy one might expect the derivation in (51) to be blocked by the one in (48) where both negation and indefinite are directly generated in the complement of the modal and remain there. Furthermore, to obtain the correct interpretation it is crucial that reconstruction affects both the negation and the indefinite (or, under Aoun & Li 1991, that both are assigned narrow scope with respect to the modal). It is not obvious, though, how this can be enforced since both elements move independently. Theoretically, it should be possible to get a reading where the indefinite is interpreted upstairs and the negation below, resulting in a different kind of split reading (a X > mod > neg), which, however, is never attested.[26]

Under verb movement, the various readings in (45) are obtained by interpreting the (abstractly incorporated) modal (cf. Lechner 2007: 17 on split readings with universals) in different positions (F_A/F_B are functional heads, F_A could be Neg and F_B T):

(52)   a.   in the surface position:
            $[_{XP}$ ~~Mod+F_A+F_B~~ Op¬ ~~Mod+F_A~~ no prof Mod $[_{VP} \dots]]$ ⇒   wide scope
       b.   between Op¬ & indefinite:
            $[_{XP}$ ~~Mod+F_A+F_B~~ Op¬ Mod+F_A no prof ~~Mod~~ $[_{VP} \dots]]$ ⇒   split scope
       c.   above Op¬:
            $[_{XP}$ Mod+F_A+F_B Op¬ ~~Mod+F_A~~ no prof ~~Mod~~ $[_{VP} \dots]$ ⇒   narrow scope

Since the adjacency requirement only holds at PF, disrupting the adjacency at LF as in (52b) is unproblematic. Under the assumption that there is a (empty) functional head between the indefinite and the negation, the various readings follow automatically under verb incorporation. In cases like (46), both negation and indefinite are generated in the complement of the modal and will therefore always have narrow scope with respect to the modal.[27]

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[26]The problems for the scrambling approach can perhaps be avoided if the selective reduction + choice function analysis of NIs by Abels & Martí (2010) is adopted.

[27]Similar interpretive possibilities obtain if adverbials co-occur with indefinites (modeled after Hinterhölzl 2006: 109ff.):

(i)   dass er öfter   öppert   wett bsueche
      that he more.often someone wants visit.INF

There are three possible readings: i) both the adverbial and the indefinite are in the scope of the modal (narrow scope), ii) both can outscope the modal (wide scope) and iii) the modal can take scope between the two, i.e. more often > want > someone. What is crucially ruled out, though, is an interpretation where the indefinite has scope over the frequency adverbial (e.g. when there is a specific X that one wants to visit more often). This last reading could be obtained under scrambling by interpreting the indefinite in its surface position and the adverbial in its reconstructed position inside the complement. Under predicate raising, this reading cannot be derived since adverbial and indefinite are interpreted in their surface position, the ambiguities only resulting from the position where the modal is interpreted (as in (52)).

9   Against a similar verb-movement account

The present account shares a number of similarities with the base-generation analysis of Sternefeld (2006) that is based on composition of argument structures and percolation of theta-roles for VR, VPR and coherent constructions (similar ideas were also put forward in Neeleman 1994 and Neeleman & van der Koot 2002). Since no movement is involved, the movement and non-movement facts can arguably be handled as in the present account. Differences emerge in two areas:

Since there is no movement, scope reconstruction as in (5b/c) is unexpected. Therefore, Sternefeld (2006: 682ff.) proposes LF-movement of the modal across the XP, an instance of QR head-movement. This captures the wide scope of the modal in (5b/c); the absence of ambiguities in (5a) follows since the modal always c-commands the XP. To account for the narrow-scope reading in (5b/c), QR has to be optional. Sternefeld's account thus has basically the same coverage as the one proposed above; it can also handle the difficult cases discussed in the previous section. There is a problem, however, when there are several verbal elements:

(53)   dass er **zwäine Schüeler** [**hät wele**   es Buech schänke]   2 stud > want
          that he two.DAT students has wanted a   book   give.INF   want> 2 stud

According to this analysis, 'want' has to cross the indefinite to gain wide-scope. As a consequence, it also has to cross 'have'. Sternefeld does not assume any cluster formation (p. 685). As a consequence, movement of 'want' across 'have' violates the head movement constraint. For the derivation to respect the head-movement constraint, 'have' would first have to move across the indefinite; the motivation for this movement step is somewhat unclear; QR does not seem to be an obvious choice. Abstracting away from this problem, another question arises: Where does the modal subsequently land when it moves across the indefinite? Moving to a position below 'have' as in Sternefeld (2006: 685) does not seem to be an option from the point of view of cyclicity. Thus, even though the approach accounts for many of the scope facts, there remain unsolved problems that the present account is not confronted with.

The second problem concerns the interpretation of adverbials discussed in 7.4: Since free word order and especially high merger can only be licensed by means of theta-role percolation in Sternefeld's approach, there is no way for a non-argument to be merged in the projection of the modal but to be semantically interpreted in the projection of the lexical verb.[28]

I conclude therefore that while Sternefeld's approach provides an elegant analysis of many aspects of the movement paradox, it fails in one technical and in one rather important empirical respect.

10   A comparison with Hinterhölzl (2006)

In this section we will compare our approach with that of Hinterhölzl, which is probably the most comprehensive recent approach to scrambling, Verb Raising, Verb Projec-

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[28]Admittedly, there have been proposals in non-derivational frameworks to handle reconstruction of adverbials, i.e. by treating adjuncts as arguments so that they can be inherited, cf. Bouma (2003).

tion Raising and Infinitival complementation. Given the limited scope of this paper, we will only be able to look at certain aspects of Hinterhölzl's work and therefore cannot do full justice to it.

10.1 The derivation of VR and VPR

To be able to evaluate Hinterhölzl's approach with respect to the movement paradox we first need to become familiar with the basic ingredients of his analysis. The base-structure of the sentence is as follows (Hinterhölzl 2006: 92, 97):

(54) $[_{CP} [_{TP}$ [scr DPs [S-Adv $[_{NEGP} [_{FOC} [_{AGRP}$ [manner $[_{PredP} [_{AspP}$ Partic $[_{VP}$ V]]]]]]]]]]]]]

Hinterhölzl adopts a strictly antisymmetric approach with a VO-basis (55a). As a consequence, all constituents that appear preverbally have to be moved out of VP by means of licensing movement. The derivation for VR proceeds as follows (p. 108): First, arguments of the embedded verb, particles, predicates and directional PPs move out of VP, an instance of licensing movement (55b). Then, the remnant VP moves to the embedded Spec, CP (55c). Finally, the embedded remnant TP moves into Spec, PredP of the matrix clause (55d). Schematically, the steps look as follows (I use English words for ease of readability):

(55)   a.   John $[_{PREDP} [_{VP}$ wants $[_{CP} [_{TP} [_{VP}$ read the book]]]]]
        b.   John $[_{PREDP} [_{VP}$ wants $[_{CP} [_{TP} [_{AGRP}$ **[the book]$_1$** $[_{VP}$ read __$_1$]]]]]]
        c.   John $[_{PREDP} [_{VP}$ wants $[_{CP} [_{VP}$**read __$_1$**] $_2 [_{TP} [_{AGRP}$ [the book]$_{1\_2}$]]]]]
        d.   John $[_{PREDP} [_{TP} [_{AGRP}$ **[the book]$_{1\_2}$**]]$_3 [_{VP}$ wants $[_{CP} [_{VP}$ read __$_1$]$_2$ __$_3$]]]

The derivation of VPR is essentially the same except that a constituent larger than VP, e.g. AgrP, moves to Spec, CP; in the following structures that constituent contains the direct object (p. 114):

(56)   a.   John $[_{PREDP} [_{VP}$ wants $[_{CP} [_{TP} [_{VP}$ read the book]]]]] ⇒ licensing mvt
        b.   John $[_{PREDP} [_{VP}$ wants $[_{CP} [_{TP} [_{AGRP}$ **[the book]$_1$** $[_{VP}$ read __$_1$]]]]]] ⇒ AgrP to Spec, CP
        c.   John $[_{PREDP} [_{VP}$ wants $[_{CP} [_{AGRP}$ **[the book]$_1$** $[_{VP}$**read __$_1$**]]$_2 [_{TP}$__$_2$]]]] ⇒ TP to PredP
        d.   John $[_{PREDP} [_{TP}$__$_2]_3 [_{VP}$ wants $[_{CP} [_{AGRP}$ [the book]$_1$ $[_{VP}$ read __$_1$]]$_2$ __$_3$]]]

If something is not pied-piped to Spec, CP, it will be affected by TP-movement and end up in the matrix clause. This derives cases of partial VPR, e.g. (3).

10.2 How it compares to the base-generation approach

10.2.1 Selective Movement effects

Hinterhölzl takes the selective movement effects described in sections 4 and 5 to follow from two different operations: When movement/scrambling effects are absent, movement is still involved, but is an instance of licensing movement. The putatively fronted constituents in the examples in section 4 would thus be part of the remnant TP that is moved into matrix PredP (56d). When movement/scrambling effects are observed, we

are dealing with scrambling proper. The cases discussed in section 5 would thus involve an additional movement operation which takes them from the TP inside matrix PredP to a higher scrambling position, as indicated in (54).

We see the following problems: First, the claim that licensing mvt does not lead to freezing effects is essentially a stipulation, both constituents within the VPR-complement (Spec, CP) or constituents above the modal (remnant TP in Spec, PredP) are in positions normally characterized by freezing. However, like the account proposed above, Hinterhölzl (2002: 137) generally relates freezing effects to specificity. On his account, specificity always implies scrambling. This is why extraction in cases like (29) is impossible. Hinterhölzl's account thus seems on a par with what we proposed above. Still, freezing effects generally also obtain outside the domain of scrambling, i.e. if an element is in a non-topical position such as Spec, CP. From this perspective it still seems somewhat unsatisfactory that extraction from elements contained in the embedded Spec, CP in (56d) is licit, as e.g. in example (4).

Second, reordering of arguments is only possible with scrambling in Hinterhölzl's system while licensing movement of arguments targets AgrP in (54) and always leads to unmarked order (Hinterhölzl 2006: 92ff.). Given that scrambling is taken to lead to freezing effects, the transparency in the following example that involves reordering is surprising (SG, Fanselow 2001: 413):

(57) Was$_1$ hätte   denn [__$_1$ für Artikel] selbst Hubert nicht rezensieren wollen?
      what had.SUBJ PRT   for articles even   Hubert not   review.INF wanted

Of course, extraction is arguably possible because the DP is non-specific, but since it precedes the subject it should be in a scrambling position from where extraction is impossible, according to Hinterhölzl. The only way to avoid this problem is to sever freezing from scrambling as the latter does not always involve specificity, but this is not in the spirit of Hinterhölzl's account. A similar problem obtains with extraction from above negation, which is a scrambling position according to (54) (ZG):

(58) Was$_1$ hät er [__$_1$ für Zueschauer] **nöd** chöne vo siine Idee überzüüge?
      What has he   for spectators   not   could of his   ideas convince.INF

Again, since scrambling does not necessarily imply specificity, extraction is licit, but since Hinterhölzl links scrambling to high positions to specificity, this result is still unexpected.

10.2.2 Scope

Narrow scope of the QP in (5b/c) is straightforward: The remnant TP in Spec, PredP is reconstructed so that the indefinite is in the scope of the modal. It is less clear, however, how the wide-scope reading is obtained since the scopal elements are embedded in a TP in Spec, PredP from where they cannot c-command the modal (55d). Consequently, for them to gain wide-scope they would have to be moved to a higher position. The structure arguably looks as follows:

(59) [$_{CP}$ [$_{TP}$ [scr DPs [S-Adv [$_{NEGP}$ [$_{FOC}$ [$_{AGRP}$ [manner
      [$_{PREDP}$ [$_{TP}$ [$_{AGRP}$**[2 women]$_1$ __$_2$**]]$_3$ [$_{VP}$ wants [$_{CP}$ [$_{VP}$ kiss __$_1$]$_2$ __$_3$]]]]]]]]]]]

If QR is an option and if the freezing problem can somehow be avoided, the wide-scope reading can be derived. If, however, QR is not an option (which is likely to be the case in languages like ZG where scope relations can generally be read off the surface structure), an overt movement step, viz. scrambling, is necessary. However, there is evidence that the scopal XPs can have wide-scope without having undergone scrambling to the scr-position indicated in (59), recall (5b) where the indefinite is below an adverbial. If that temporal adverbial is in the position S-Adv in (59), then the object must be in a lower position. Specificity-driven scrambling therefore cannot be responsible for wide scope. According to Hinterhölzl (2006: 56ff.) there is a second trigger for scrambling, namely scope itself. Simplifying for reasons of space, formal scope features can be assigned to bare functional heads which are then merged above the element with respect to which the scrambled element needs to get wide scope. In the case at hand, the functional head would arguably be merged above PredP. Scrambling of the DP is then sufficient for it to gain wide scope with respect to the modal.

To account for the scopal opacity in (5a), Hinterhölzl (2006: 83) refers to earlier work by Lötscher (1978: 5) who shows that constituents within the VPR-constituent are focused. Hinterhölzl then goes on to argue that QR of focal elements is blocked because they have to be mapped into the nuclear scope (cf. also Lerner & Sternefeld 1984 and Sternefeld 1991: 120f. for essentially the same proposal). If QR is not an option, Hinterhölzl could also claim that scope interpretation follows from surface structure since the indefinite within the VPR complement is in the embedded Spec, CP and thus in the scope of the modal.

10.2.3 Negative indefinites

To facilitate understanding we will illustrate the derivation on the basis of an NI-example that is structurally closer to the previous examples (the modal particles in parentheses favor the narrow scope interpretation):

(60) dass er (au mal) kä Fläisch törf zum Fäscht mitbringe   ¬ meat > may
      that he once   no meet   may to.the party bring.with.INF may > ¬ meat
      'that he is allowed not to bring any meet (narrow scope)'   ¬ > may > meat

We will start with the narrow scope reading, which seems unproblematic: Arguably, both negation and the indefinite come from the embedded clause and are transported into the matrix clause via remnant TP-movement. Concretely, the object is first moved out of VP to Spec, AgrP (61b); thereafter, the remnant VP is moved to Spec, CP (61c). Finally, the embedded TP containing negation and the indefinite is moved to matrix Spec, PredP (61d) (for ease of exposition, we use the VR-variant of (60)):

(61) a. he [$_{\text{PREDP}}$ [$_{\text{VP}}$ may [$_{\text{CP}}$ [$_{\text{TP}}$ Op¬ [$_{\text{VP}}$ bring meat]]]]] $\Rightarrow$ mvt to AgrP
      b. he [$_{\text{PREDP}}$ [$_{\text{VP}}$ may [$_{\text{CP}}$ [$_{\text{TP}}$ Op¬ [$_{\text{AGRP}}$ [meat]$_1$ [$_{\text{VP}}$ bring __$_1$]]]]]] $\Rightarrow$ RM VP
      c. he [$_{\text{PREDP}}$ [$_{\text{VP}}$ may [$_{\text{CP}}$ [$_{\text{VP}}$ bring __$_1$]$_2$ [$_{\text{TP}}$ Op¬ [$_{\text{AGRP}}$ [meat]$_1$ __$_2$]]]]] $\Rightarrow$ RM TP
      d. he [$_{\text{PREDP}}$ [$_{\text{TP}}$ Op¬ [$_{\text{AGRP}}$ [meat]$_1$ __$_2$]]$_3$ [$_{\text{VP}}$ may [$_{\text{CP}}$ [$_{\text{VP}}$ bring __$_1$]$_2$ __$_3$]]]

Since negation and indefinite are adjacent, they can be realized as one word. The narrow scope interpretation obtains after reconstruction of the remnant TP (as with the

scrambling derivation discussed in 8.2, problems may arise with respect to economy since the same interpretation can be generated without movement).

The split-scope reading is also quite straightforward: Given the sentence structure in (54), abstract negation can only be in matrix NegP. The indefinite is transported from the embedded clause via remnant TP-movement to matrix Spec, PredP. The surface structure then looks roughly as follows:

(62)   he [$_{\text{NEGP}}$ Op¬ [$_{\text{PREDP}}$ [$_{\text{TP}}$ [meat]$_1$__$_2$]$_3$[$_{\text{VP}}$ may [$_{\text{CP}}$ [$_{\text{VP}}$ bring __$_1$]$_2$ __$_3$]]]]

For the split reading reconstruction of the remnant TP is sufficient, the indefinite thus ends up in the c-command domain of the modal. It is not quite clear, though, whether amalgamation will be successful here since there may be projections between Neg and the indefinite.

What is more difficult to derive, though, is the wide-scope reading. Again, the abstract negation is in matrix NegP while the indefinite comes from below via remnant TP-movement, as in (62). For the wide-scope reading to become possible, the indefinite has to c-command the modal. Consequently, it has to move out of the TP. If QR applies it would have to target some position below NegP. Given the sentence structure in (54), it is not obvious which position this could be. But since QR may be undesirable anyway (recall the discussion in 10.2.2 above), a scrambling derivation also needs to be considered. Given the sentence structure in (54), the only possible landing site for the indefinite is above the position of abstract negation if scrambling is specificity-driven:

(63)   [$_{\text{CP}}$ [$_{\text{TP}}$ [scr DPs [S-Adv [$_{\text{NEGP}}$ Op¬ [$_{\text{FOC}}$ [$_{\text{AGRP}}$ [manner
         [$_{\text{PREDP}}$ [$_{\text{TP}}$ [meat]$_1$ __$_2$]$_3$[$_{\text{VP}}$ may [$_{\text{CP}}$ [$_{\text{VP}}$ bring __$_1$]$_2$ __$_3$]]]]]]]]]]]]

As in the previous subsection, scope-driven scrambling must be involved here: A bare functional head with a scope feature must be merged to the structure. For the derivation to converge, this functional head must be merged right below the matrix NegP so that negation and indefinite can be amalgamated. This may, however, violate the economy conditions on the assignment of scope features in Hinterhölzl (2006: 58).

Alternatively, one could start out with a derivation where abstract negation and indefinite belong to the same TP and are both raised to matrix PredP via remnant TP movement. Then for the wide-scope reading both would have to undergo scope-driven scrambling to a higher position so that they can c-command the modal.

10.2.4   Reconstruction of adverbials

The low construal of adverbials discussed in 7.4 is unproblematic under Hinterhölzl's approach. Consider the following example:

(64)   er hät s geschter no **morn**   wele   [de   Muetter bringe]
         he has it yesterday still tomorrow wanted the.DAT mother bring.INF

The higher adverb is directly merged in the matrix clause while the lower adverb has been moved into the matrix clause via remnant TP-movement to Spec, PredP:

(65)   [$_{\text{CP}}$ [$_{\text{TP}}$ [scr DPs it$_1$ [S-Adv *yesterday* [$_{\text{NEGP}}$ [$_{\text{FOC}}$ [$_{\text{AGRP}}$ [manner
         [$_{\text{PREDP}}$ [$_{\text{TP}}$ [__$_1$ *still tomorrow* __$_2$]$_3$[$_{\text{VP}}$ wants [$_{\text{CP}}$ [$_{\text{VP}}$ read __$_1$]$_2$ __$_3$]]]]]]]]]]]]]

The low construal of the adverb obtains by means of reconstruction of the remnant TP.

10.2.5 Summary

To briefly summarize this detailed discussion of Hinterhölzl's approach: It provides a straightforward account of many of the puzzles discussed in this paper. Unsolved questions remain, though, with respect to freezing and the relationship between scrambling and specificity. Furthermore, wide-scope readings of negative indefinites may clash with the economy principles assumed in that work.

11 Open issues

In this final section I will briefly mention aspects of VPR that have been touched upon in the literature and that do not yet follow under the present proposal.

11.1 More scope facts

The first issue concerns additional scope facts. Haegeman & van Riemsdijk (1986: 451) argue that wh-in situ within the VPR complement is grammatical:

(66)   Ich wäiss nöd, wen   dass wänd   *für wele Kurs*   iisetze.
        I   know not   whom that   they.want for which course assign.INF
        'I don't know who they want to assign to which course.'

This seems to conflict with the scopal opacity noted in (5a). Haegeman (1992: 122) argues that this only holds for D-linked phrases and shows that Bare wh-elements are impossible inside the VPR constituent:

(67)   *Kweten nie wien dat-ter   goat *wien* anduden.
        I.know   not who   that-there goes who   indicate.INF
        'I don't know who will appoint whom.'

Since D-linked wh-phrases can be licensed without covert movement, the data in (66) are considered irrelevant for the opacity issue; (67), on the other hand, shows that there is scopal opacity according to Haegeman. Schönenberger & Penner (1995: 291), on the other hand, claim that wh-in situ inside the VPR constituent is fine with bare wh-elements in Bernese:

(68)   Ich wäiss nöd, wäär (dass) wott   *was* choufe.
        I   know not   who that   wants was buy.INF

We tend to agree with the judgment in (68); what is not discussed in the literature, though, are the possible readings of these in situ elements. It seems to us that (68), while grammatical, does not allow a multiple-pair reading but only a single-pair interpretation. For a multiple-pair reading to be possible, the wh-element has to occur outside the VPR complement:[29]

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[29]One of the reviewers mentions that he gets a multiple-pair reading in cases like (68) with D-linked wh-phrases:

(69)   Ich wäiss nöd, wäär (dass) *was* wott   choufe.
        I   know not   who that   was wants buy.INF

The interpretation of these facts (if they can be substantiated) then depends on one's treatment of wh-in-situ. Dayal (2002: 517) points out that multiple-pair readings can be blocked even in the absence of an island as e.g. in the following example:

(70)   *Which student* believes that Mary read *which book*?

According to Dayal, paired readings are subject to a very strict locality requirement. Given that the VPR complement can be analyzed as a TP (recall 3.4), the impossibility of the multiple pair reading in (68) may follow without assuming any opacity of the VPR constituent. The deviance of (67) remains unexplained for the moment.

    The second scope issue involves interaction between two QPs. Den Dikken (1996: 82ff.) argues that two QPs allow inverse scope as long as they are within the same clause/TP, but not if only one is within the VPR complement (we use ZG equivalents):

(71)   a. dass si   *zwäine Studänte vier Büecher* wänd gëë   2 > 4; 4 > 2
            that they two.DAT students 4   book   want give.INF
        b. dass si   wänd [*zwäine Studänte vier Büecher* gëë]   2 > 4; 4 > 2
            that they want two.DAT students 4   book   give.INF
        c. dass si   *zwäine Studänte* wänd [*vier Büecher* gëë]   2 > 4; *4 > 2
            that they two.DAT students want 4   book   give.INF

Schönenberger (1995: 371), on the other hand, claims that all examples are ambiguous. I tend to side with den Dikken, but the facts are very subtle and would require empirical verification. The issue is exacerbated by the fact that languages like German and its varieties are generally taken to show surface scope so that ambiguities are not expected in the first place. Given these uncertainties, I have to leave this issue for further research.

11.2   Causative constructions

Haegeman & van Riemsdijk (1986: 432) discuss a surprising fact involving ECM-verbs that was first noted in Lötscher (1978: 8): If the complement of the ECM verb undergoes VPR, the ECM-subject must not be contained within the VPR complement:

(72)   a. *dass er wil   *laa*   **siini Chind**   Medizin studiere
            that he wants let.INF his   children medicine study.INF
        b. dass er wil   **siini Chind**   *laa*   Medizin studiere
            that he wants his   children let.INF medicine study.INF

(i)   Ich wäiss nöme   *weli Buebe* händ   wele   mit *welne Mäitli* tanze
        I   know no.longer which boys   have.PL wanted with which girls   dance.INF
        'I no longer remember which boys wanted to dance with which girls.'

I tend to agree with this judgment and interpret it as another indication that the scope of D-linked in-situ *wh*-phrases is established differently than that of bare in-situ *wh*-quantifiers.

Under H&R's analysis, the facts follow because the ECM-subject is taken to be projected in Spec, TP so that it cannot be affected by reanalysis and inversion, which is restricted to VPs. But given the vP-internal subject hypothesis, such a solution is no longer available. Den Dikken (1994: 84f.) derives the facts by assuming that the ECM-subject can only be licensed in Spec, AgrOP of the causative verb.[30] Under the base-generation approach adopted here, the facts remain mysterious because the ECM-subject should be thematically licensed within the projection of *studiere*, from which it receives a theta-role. Furthermore, c-command by the ECM-verb should be sufficient for case-licensing (cf. the low subjects in (16); Broekhuis 1993: 37f. faces a similar problem). The only solution that comes to mind is reanalyzing the ECM-cases as instances of control so that the causee is an object of the causative verb and consequently has to appear within its projection. This is not implausible for perception verbs like 'see', 'hear' and the verb 'help' (Lötscher 1978: 8) where control paraphrases are available: 'I saw him as he was ...', 'I helped father in doing ...'. The control analysis is arguably also possible for the 'force' reading of *laa* 'let' ('I forced my children to ...'). However, a control interpretation does not seem to be available for the 'admit'-reading of *laa* 'let', but such a reading is possible in (72). It seems then, that the contrast between (16) and (72) illustrates a difference in case-licensing between nominative and accusative in German and its varieties: While c-command is sufficient for nominative in German, accusative requires the object to be within the projection of the case-licensor. (72) shows that what is crucial is the case-distinction, not the difference between external vs. internal argument. Why nominative and accusative differ in this respect is something I intend to address in future work.[31]

12 Conclusion

We have argued for a new approach to VR and VPR that involves base-generation. The VPR complement is taken to be in its base-position, which explains the transparency for extraction. Arguments are licensed in the projections of their predicators; covert predicate raising extends the theta-marking domain of the predicate and thus allows the merger of an argument of V in higher projections. This mechanism accounts for the absence of movement effects with arguments of V that occur outside the VPR complement. An intricate scope pattern (ambiguity of indefinites that are outside the VPR-complement, lack of ambiguity when they occur inside the VPR-complement) is analyzed as an automatic side-effect of covert predicate-raising: The various interpretations depend on where the modal is interpreted. Since the modal always c-commands the VPR complement, it will always have scope over scopal elements inside the VPR complement. With regard to indefinites outside the VPR complement, narrow scope is possible if the modal is interpreted in its reconstructed position below the QP. The analysis avoids the pitfalls of movement approaches and because of its applicability to the reconstruction of adverbials is also superior to base-generation approaches based on argument structure composition and theta-role percolation.

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[30]The same holds under Wurmbrand's (2001) approach where accusative is always licensed in case agreement projections so that the causee has to move out of the complement of the causative verb.

[31]As pointed out to me by Henk van Riemsdijk the facts would follow under the old notion of directionality of case assignment, which is, however, no longer available in Minimalism.

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