

Varieties of VP-fronting*

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1 Introduction

In this paper, I discuss fronting of predicates and predicate phrases in German. As is well known, topicalization in this language (as in many others) can apply to predicates of various “sizes”, as shown in the following examples:

- (1) a. Gelesen hat Jürgen das Buch
read has Jürgen.NOM the book.ACC
- b. Einen Fisch gefangen hat nur Amina
a fish.ACC caught has only Amina.NOM
- c. Ein Auto geschenkt hat Horst seiner Schwester
a car.ACC given has Horst.NOM his sister.DAT
- d. Eine Frau ihren Mann verprügelt hat hier
a woman.NOM her husband.ACC beaten up has here
bisher noch nie
so far never

Throughout this paper, I will use the term “VP-fronting” as a descriptive label subsuming all cases illustrated in (1a)–(1d).¹

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VP-fronting of the type shown in (1a) has famously been analyzed as involving remnant movement, i.e. extraction of *das Buch* from VP followed by fronting of $[_{VP} t \text{ gelesen}]$ (Webelhuth and den Besten 1987; Müller 1998). In section 2 below I will argue that this analysis is wrong; what is topicalized is not the verbal phrase but the bare head. I will provide some direct empirical evidence for this view and show that it easily avoids some of the most truculent shortcomings of the remnant-movement alternative.

For cases represented by (1b) and (1c), I will argue in section 3 that these involve topicalization of VP, in the latter case of a proper subconstituent of VP (as proposed by Fanselow 2002). It will be shown that fronting of partial VPs generally respects constituency (i.e., fronting of a constituent α must not exclude β if β is contained in α), while deviations from this general pattern are accounted for in terms of partial deletion of the two copies of VP, which in turn is licensed in specific information-structural contexts; again, remnant movement will be shown to be obsolete.

In section 4 I will analyze the rarely discussed case of v^*P -fronting (“ v^*P ” understood as the verbal projection including the external argument). As shown in (1d), German allows for fronting of verb phrases that contain an external argument. While the implementation of this is straightforward (C attracts v^*P), I will discuss—and, in part, reject—a number of constraints on this construction postulated by Haider (1990) and show that it conforms neatly to the claims made in the preceding sections.

As concluded in section 5, the picture that emerges from the discussion is that C, which I will assume to be the topicalizing head, is unrestricted by minimality and hence free to target any syntactic object in its domain. That is, C can equally attract heads and phrases, and moreover attracts only as much material as is necessary for the intended interpretation.²

2 V-topicalization as A-bar head movement

As mentioned in the introduction, V-topicalization as in (2a) (= (1a)) has typically been analyzed as involving fronting of a remnant-VP (2b):

- (2) a. Gelesen hat Jürgen das Buch
 read has Jürgen.NOM the book.ACC
 b. $[_{VP} t_i \text{ gelesen}]$ hat Jürgen das Buch_i t_{VP}

Notice first that once we follow Chomsky (1993) and conceive of “traces” as copies/occurrences, silencing the object copy inside the fronted VP is a non-trivial issue, given the lack of c-command between the two occur-

rences. I will set these worries aside here, focusing on empirical problems instead.³

It is worth bearing in mind that the analysis in (2b) was originally motivated by X-bar theory and its corollaries: only an XP can occupy SPEC-C. Once we drop these phrase-structural stipulations, however, alternative analyses are possible; in particular, A-bar head movement of the bare predicate (V or the complex head $\sqrt{R}-v$, as per Marantz 1997).⁴ This analysis has been put forth by Holmberg (1999) and Vicente (2007, 2009) for Swedish V-topicalization and Spanish predicate clefts, respectively. Let us now consider evidence from German which supports Holmberg’s and Vicente’s conclusions.

Consider first the fact that V-topicalization “disrupts” verb-object idioms. No idiomatic reading is available in (3):

- (3) a. Abgelassen hat Sonja Dampf
 let off has Sonja.NOM steam.ACC
 b. Gebissen hat Opa Helmut ins Gras
 bitten has grandpa Helmut.NOM into the grass

By contrast, the idiomatic reading is available when the entire VP is fronted:

- (4) a. Dampf abgelassen hat nur Sonja
 steam.ACC let off has only Sonja
 ‘Only Peter let off steam’
 b. Ins Gras gebissen hat letztes Jahr Opa Helmut
 into the grass bitten has last year grandpa Helmut.NOM
 ‘Grandpa Helmut kicked the bucket last year’

This asymmetry suggests that (3) and (4) do not have a common underlying structure: *qua* movement of V, the VP is analyzed as a compositional structure in (3); by contrast, it is analyzed as a non-compositional unit in (4). Topicalization of the nonverbal part of an idiom has the same effect of forcing a compositional analysis (cf. Frey 2005), whence the absence of an idiomatic reading in the following case:

- (5) Ins Gras hat nur Opa Helmut gebissen
 into the grass has only grandpa Helmut.NOM bitten

The contrast between (3) and (4) is thus readily explained if VP-fronting of the kind exemplified in (3) is analyzed as A-bar head movement. Notice, however, that on a remnant-movement theory, copies of *Dampf* and *ins Gras* are included in the fronted VP:⁵

- (6) a. [_{VP} ⟨Dampf⟩ abgelaassen] hat Sonja ⟨VP⟩
 b. [_{VP} ⟨ins Gras⟩ gebissen] hat Opa Helmut ⟨VP⟩

Given that copy reduction is a matter of the mapping from syntax to phonetic form (Chomsky 1993), (6) would underly the semantic interpretation of both (3) and (4), in which case the absence of the idiomatic reading in (3) is unexpected.⁶ By contrast, if (3) is analyzed as involving bare-V topicalization, the asymmetry follows immediately.⁷

A further strong argument for V-topicalization (and against remnant-VP fronting) is provided by extraposition facts. Relative-clause extraposition from an object DP, which I take to be rightward movement of the CP to a VP-adjoined position (Büring and Hartmann 1997), is illustrated in (7b):

- (7) a. ?Jürgen hat heute morgen das Buch, das er
 Jürgen.NOM has today morning the book.ACC that he.NOM
 gestern gekauft hat, gelesen
 yesterday bought has read
 b. Jürgen hat heute morgen das Buch gelesen, das
 Jürgen.NOM has today morning the book.ACC read that
 er gestern gekauft hat
 he.NOM yesterday bought has

Extraposition is even more strongly favored when VP is topicalized ((8a) vs. (8b)), but the relative clause cannot be stranded in this case (8c):

- (8) a. ??Das Buch, das er gestern gekauft hat, gelesen hat
 the book.ACC that he.NOM yesterday bought has read has
 Jürgen heute morgen
 Jürgen.NOM today morning
 b. Das Buch gelesen, das er gestern gekauft hat, hat
 the book.ACC read that he.NOM yesterday bought has has
 Jürgen heute morgen
 Jürgen.NOM today morning
 c. *Das Buch gelesen hat Jürgen heute morgen, das
 the book.ACC read has Jürgen.NOM today morning that
 er gestern gekauft hat
 he.NOM yesterday bought has

Crucially, topicalization of the bare predicate alone does not behave in a parallel manner. Even though it is in principle compatible with extraposition (cf. (9a)), it does not allow pied-piping of the extraposed relative

clause parallel to (8b), cf. (9b):^{8,9}

- (9) a. Gelesen hat Jürgen heute morgen das Buch, das
 read has Jürgen.NOM today morning the book.ACC that
 er gestern gekauft hat
 he.NOM yesterday bought has
- b. *Gelesen, das er gestern gekauft hat, hat Jürgen
 read that he.NOM yesterday bought has has Jürgen.NOM
 heute morgen das Buch
 today morning the book.ACC

The asymmetry between (8b) and (9b) is unexpected on the assumption that the topicalized element is a VP in both cases, hence structurally identical:

- (10) $[[_{VP} \langle OBJ \rangle V] CP] \dots$

Whether the object as such or its trace (= a copy to be deleted upon linearization) is included in the fronted VP should not have any relevance for the availability of pied-piping of the extraposed relative clause (cf. note 6).

Notice that the unacceptability of (9b) cannot be blamed on the configuration in (10) per se, since an object trace in VP does not prevent relative-clause extraposition in other contexts:

- (11) Jürgen hat das Buch heute morgen $[[_{VP} \langle \text{das Buch} \rangle$
 Jürgen.NOM has the book.ACC today morning
 gelesen], das er gestern gekauft hat]
 read that he.NOM yesterday bought has

An obvious explanation for this asymmetry is that what is topicalized in (9b) is not a VP, but a bare V (or verbalized root). On this view, the impossibility of (9b) follows straightforwardly: neither base position nor landing site of the extraposed clause are included in the fronted portion. By contrast, remnant-movement are ill-equipped to handle this contrast due to their fundamental assumption about the structural unity of all varieties of VP-fronting.¹⁰

The two arguments given above show quite clearly that VP-fronting of the kind in (1a) is really topicalization of the bare V, in line with conclusions reached by Holmberg (1999) (who shows that V-topicalization in Swedish, like standard head movement, licenses Object Shift) and Vicente (2009) (with regard to Spanish predicate clefts).¹¹ For German, then, we

conclude that VP-fronting of the type in (1a) is derived by internally merging V (or $\sqrt{R-v}$) in a left-peripheral position that feeds the resulting contrastive interpretation (cf. Frey 2005).¹²

Let us briefly compare the predictions of the account proposed here and a traditional remnant-movement account, as sketched in (2b). The most salient difference is that on the remnant-movement account, any VP-internal material that is stranded must have moved string-vacuously prior to VP-fronting. By contrast, if only V moves, stranded objects are simply left *in situ*. As Haider (1993), Fanselow (2002) and Hinterhölzl (2006) show at some length, stranded objects show no properties of moved XPs.

A general property of displacement is that it yields freezing effects: displaced categories are typically opaque for subextraction (Wexler and Culicover 1980; Corver 2006). To illustrate, consider the contrast in (13), based on scrambling of a direct object over an indirect object as illustrated in (12):

- (12) a. Volker hat einem Studenten ein Buch über
 Volker.NOM has a student.DAT a book.ACC about
 Chomsky geschenkt
 Chomsky given
 b. Volker hat ein Buch über Chomsky einem
 Volker.NOM has a book.ACC about Chomsky a
 Studenten geschenkt
 student.DAT given
- (13) a. Über wen_i hat Volker einem Studenten ein Buch
 about who has Volker.NOM a student.DAT a book.ACC
 t_i geschenkt?
 given
 b. *Über wen_i hat Volker ein Buch t_i einem
 about who has Volker.NOM a book.ACC a
 Studenten t_{DP} geschenkt?
 student.DAT given

Unlike overtly scrambled stranded categories, stranded categories that follow the VP-boundary—indicated by the temporal adverb/modal particle—are transparent:

- (14) a. Gelesen hat darüber_i der Kay vorhin ein Buch t_i
 read has about that the Kay.NOM earlier a book.ACC
 b. Kritisiert habe ich von den Studenten_i ja keinen t_i
 criticized have I.NOM of the students.ACC PRT no one

Likewise, extraction of an R-pronoun from a PP-object is possible when PP is stranded, but not when it has scrambled overtly (Fanselow 2002, 107):

- (15) a. Überzeugt haben die Linguisten da_i wohl ihre
 convinced have the linguists.NOM R PRT their
 Studenten nicht t_i mit
 students.ACC not with
- b. *Die Linguisten haben da_i wohl t_i mit ihre Studenten
 the linguists.NOM have R PRT with their students.ACC
 nicht t_{PP} überzeugt
 not convinced

Subextraction from stranded material ought to be impossible according to the remnant-movement approach, since stranding requires (overt or vacuous) movement. Notice that it is not clear how (or why) the Freezing Principle, whatever its deeper causes, could distinguish between string-vacuous movement and non-vacuous movement (not least because both are *structurally* non-vacuous). We are led to conclude that stranding of XP does not require movement of XP—as predicted by the analysis proposed here.¹³

The interpretation of stranded indefinites provides further evidence for the present account. It has been known since the seminal work of Lenerz (1977) that indefinites, which are ambiguous between an existential and a specific interpretation when *in situ*, are obligatorily interpreted as specific when scrambled:¹⁴

- (16) a. weil gestern alle Polizisten einen Dieb
 because yesterday all policemen.NOM a thief.ACC
 festgenommen haben
 arrested have
 ‘since yesterday every policeman arrested a thief’
 (einen Dieb: ✓specific/✓nonspecific)
- b. weil gestern einen Dieb alle Polizisten
 because yesterday a thief.ACC all policemen.NOM
 festgenommen haben
 arrested have
 ‘since yesterday every policeman arrested a thief’
 (einen Dieb: ✓specific/*nonspecific)

Indefinites stranded by VP-fronting do not lose the VP-internal reading, suggesting again that stranding leaves objects *in situ*:

- (17) a. Festgenommen haben heute alle Polizisten einen
 arrested have today all policemen.NOM a
 Dieb
 thief.ACC
 'Every policeman arrested a thief today'
 (*einen Dieb*: ✓ specific/✓ nonspecific)
- b. Einen Dieb festgenommen haben heute alle
 a thief.ACC arrested have today all
 Polizisten
 policemen.NOM
 'Every policeman arrested a thief today'
 (*einen Dieb*: ✓ specific/✓ nonspecific)

By contrast, when remnant-VP fronting is coupled with *overt* scrambling of the object, the nonspecific interpretation is lost, as expected:¹⁵

- (18) ?Festgenommen hat einen Dieb heute jeder Polizist
 arrested has a thief.ACC today every policeman.NOM
 'Every policeman arrested a thief today'
 (*einen Dieb*: ✓ specific/*nonspecific)

Notice that a remnant-movement account cannot make the relevant cut between string-vacuous scrambling as in (17) and overt scrambling as in (18): in either case, stranding presupposes movement.

As a final problem, notice that the set of categories that can be stranded by VP-fronting of the kind in (1a) and the set of categories that can undergo scrambling independently are not co-extensional. As observed by Fanselow (2002), (putative) remnant movement can strand categories which are unable to undergo scrambling in other contexts. Consider the following cases:

- (19) a. Geküsst hat Hilde niemanden
 kissed has Hilde.NOM nobody.ACC
- b. Geküsst hat sie bestimmt wen
 kissed has she.NOM certainly someone.ACC
- c. Angemalt hat sie ihr Haus rot
 painted has she.NOM her house.ACC red

An analysis of (19) in terms of remnant movement requires *niemanden*, *wen*, and *rot* to undergo string-vacuous scrambling out of VP, which is subsequently fronted. But overt (non-vacuous) scrambling is impossible for (*wh*-)indefinites and small-clause predicates:¹⁶

- (20) a. weil (*niemanden) Hilde (*niemanden) ja (✓niemanden) geküsst hat
 b. weil (*wen) sie (*wen) bestimmt (✓wen) geküsst hat
 c. weil (*rot) sie (*rot) ihr Haus (*rot) ja (✓rot) angemalt hat

Advocates of the remnant-movement approach might dismiss this last argument on the basis that too much emphasis is put on the descriptive label “scrambling”: string-vacuous evacuation movement need not necessarily mirror (restrictions on) overt middle-field scrambling.¹⁷ But notice that conceding the unrelatedness of overt scrambling and string-vacuous evacuation movement undermines the typological argument given in Webelhuth and den Besten 1987 and Müller 1998, which ties the existence of remnant-VP fronting to the availability of scrambling in a given language.¹⁸

More importantly, seen in conjunction with the previous two observations concerning subextraction and indefinites, an approach that maintains the notion of string-vacuous evacuation movement is forced to postulate a movement step without *any* detectable properties, which is moreover motivated only on the basis of stipulative phrase-structural assumptions—in particular, the stipulation that SPEC is an XP-position, and likewise Chomsky’s (1995) *Chain-uniformity Condition*—without any conceptual or empirical justification (see also note 11). Therefore, even if the argument based on cases like (19) takes the label “scrambling” too seriously, the empirical and conceptual considerations *in toto* strongly suggest the approach advocated here, while militating against the remnant-movement analysis.

I conclude that cases like (1a) are derived by A-bar head movement. On the formal implementation of this operation, set aside here, see the references cited in note 4.

3 Constituency and partial deletion

Let us now turn to cases of VP-fronting where more than the verb is topicalized, i.e. VP or parts of it. For now we will set aside topicalization of *v**P (including the subject), which will be discussed in section 4 below.

In the approach developed in Müller 1998, the surface form of the topicalized VP need not correspond to an actual constituent. This is so because VP-internal elements—objects, in particular—can scramble out of VP prior to fronting, which is then movement of the remnant VP. However, contrary to what is suggested by this analysis, there are asymmetries indicating that VP-fronting respects the internal constituency of VP.

Consider first the interaction of objects and adverbs. Manner adverbs are generated immediately below (non-integrated) objects.¹⁹ Witness now the fact that an object cannot be included in a fronted VP when at the same time a manner adverb is stranded; the reverse is possible, however:

- (21) a. ?*Einige Artikel gelesen hat Kay heute sorgfältig
 several articles.ACC read has Kay.NOM today carefully
 b. Sorgfältig gelesen hat Kay heute einige Artikel
 carefully read has Kay.NOM today several.ACC articles

The relative unacceptability of (21a) is not due to a general ban on stranding of manner adverbs; these *can* be stranded, as long as no higher material is pied-piped:

- (22) Gelesen hat Kay die Artikel sorgfältig
 read has Kay.NOM the.ACC articles carefully

These facts follow straightforwardly once we assume that topicalization naturally respects constituency: the fronted phrase in (21a) (*einige Artikel gelesen*) does not correspond to a constituent of the original VP.²⁰

Similar effects arise with higher adverbials which merge above the internal arguments, such as instrumental and temporal adverbials. As expected on constituency grounds, these adverbs cannot be pied-piped when at the same time the object is stranded:

- (23) a. Die Wohnungstür geöffnet hat er heute mit dem
 the door of flat.ACC opened has he.NOM today with the
 Schraubenzieher
 screwdriver
 b. ?*Mit dem Schraubenzieher geöffnet hat er heute die
 with the screwdriver opened has he.NOM today the
 Wohnungstür
 door of flat
- (24) a. Den Brief an Amina geschrieben hat Horst
 the letter.ACC to Amina written has Horst.NOM
 vor zwei Tagen
 two days ago
 b. ?*Vor zwei Tagen geschrieben hat Horst den Brief an
 two days ago written has Horst.NOM the letter.ACC to

Amina
Amina

As before, V-topicalization is unproblematic in these cases, showing that stranding of the object is possible in principle, i.e. as long as the higher adverbial is not pied-piped. Again, the facts show that constituency matters for VP-fronting: basically, the fronted VP must correspond to a base constituent.²¹ In other words, the VP abstractly represented in (25) allows for the fronting/stranding pattern in (26a), but not that in (26b):

(25) $[_{VP} \alpha [_{VP} \beta V]]$

(26) a. $\beta V \dots \alpha$
b. $??\alpha V \dots \beta$

Fanselow (2002) observes similar effects with double-object constructions.²² Consider first the following unproblematic instances of VP-fronting:

- (27) a. Den Preis gegönnt hat dem Volker wohl
the award.ACC not begrudged has the Volker.DAT PRT
jeder
everybody.NOM
'It seems like nobody begrudged Volker the award'
b. Dieser Prüfung unterzogen hat man das Auto noch
this check.DAT subjected has one.NOM the car.ACC so far
nie
never
'This car has never been subjected to this check so far'

The verb *gönnen* licenses DAT > ACC as base order, while *unterziehen* licenses ACC > DAT.²³ What this means is that in (27a) and (27b), what is fronted is the innermost subconstituent of the verbal phrase (VP, including the inner object and V, the root). It turns out that if we choose to front the verb and the outer argument to the exclusion of the inner one, the result is much less acceptable (assuming no narrow focus on the stranded object, see below):

- (28) a. ?*Dem Volker gegönnt hat den Preis wohl
the Volker.DAT not begrudged has the award.ACC PRT
jeder
everybody.NOM

- b. ?*Das Auto unterzogen hat man dieser Prüfung noch
 the car.ACC subjected has one.NOM this.DAT check so far
 nie
 never

It is not clear how a remnant-movement approach can handle this basic contrast: nothing prevents the innermost object to scramble out of the larger VP, hence there is no reason—unless further assumptions are added—why the cases in (28) should be any more marked than those in (27). The most natural explanation is that the element pronounced in topic position in (28a) and (28b) is a non-constituent (given what we know independently of the base orders of the verbs involved).

I think what the “*?” judgment of (28) (and, likewise, (21a), (23b), and (24b)) indicates is the strong information-structural markedness of these patterns. This is evidenced by the fact that counterparts of (28a) and (28b) with the “stranded” inner object bearing focal stress become fully acceptable:²⁴

- (29) a. Dem /VOLker gegönnt hat wohl jeder den
 the Volker.DAT not begrudged has PRT everybody.NOM the
 PREIS\, nicht aber das damit verbundene
 award.ACC not however the therewith associated
 GELD\
 money.ACC
- b. Das /AUto unterzogen hat man noch nie dieser
 the car.ACC subjected has one.NOM so far never this
 PRÜ\fung, wohl aber dem REI\fentest
 check.DAT other than the tire check.DAT

In other words, it appears that constituency can be overridden by fronting if and only iff the exceptionally stranded element has a “good reason” to appear in the low position, in particular: being focused. Clearly, however, we do not want to say that in these cases C actually attracts a non-constituent; but at the same time, we do not want to adopt a remnant-movement analysis, either, since then the relative markedness of (28) (and (21a), (23b), and (24b)) remains mysterious.

The solution, I think, is to analyze the marked cases as involving Distributed Deletion, in the sense of Fanselow and Ćavar (2002). What Fanselow and Ćavar propose is that DPs can be split by topicalization (in German) if there is a mismatch in information-structural requirements, namely when-

ever parts of the topicalized DP are focused at the same time. In this situation, phonological deletion can apply partially to each copy of the fronted DP, yielding a split DP that meets the dual information-structural requirement:

- (30) [Amerikanische Autos]_{TOP} hat er [drei GRÜne]_{FOC}
 american cars owns he three green
- a. er [_{DP} drei grüne amerikanische Autos] hat
 ⇒ DP-fronting (+ V2)
- b. [_{DP} drei grüne amerikanische Autos] hat er [_{DP} drei grüne amerikanische Autos]
 ⇒ Distributed Deletion
- c. [_{DP} ~~drei grüne~~ amerikanische Autos] hat er [_{DP} drei grüne ~~amerikanische Autos~~]

See their paper for further details and arguments in favor of this approach,²⁵ and Ott 2009a and Struckmeier and Ott 2009 for extensions.

Following this line of reasoning, I will assume that in cases like (29) the entire VP is fronted, but only partially pronounced in the derived position. The part of it that is marked for focus, i.e. the stranded element, is pronounced *in situ*.²⁶ The markedness of the exceptional-stranding cases follows, since Distributed Deletion is available only when motivated by topic-focus structure. The analyses of (29a) and (29b) are illustrated below:

- (31) a. [_{VP} dem Volker ~~den Preis~~ gegönnt]_{TOP} hat wohl jeder [_{VP} ~~dem Volker~~ ~~den Preis~~_{FOC} gegönnt]
- b. [_{VP} das Auto ~~dieser Prüfung~~ unterzogen]_{TOP} hat man noch nie [_{VP} ~~das Auto~~ ~~dieser Prüfung~~_{FOC} ~~unterzogen~~]

In the standard case, copies left behind by movement are deleted in the phonological component under asymmetric c-command (Nunes 2004). However, optional assignment of a FOC-feature to an object as in (29a) and (29b) yields the deletion patterns in (31), where the object is linearized in its base position. “Stranding” thus reduces to pronunciation of a lower copy, evading the need for movement—a most welcome result, as we saw in this and the previous sections.

Crucially, the non-standard deletion patterns in (31) are licensed if and only if focus on the “stranded” element (as opposed to the topicality of VP) leads to a split of VP, whence the contrast between (29) and (28). Recall that this analysis of split constituents is well-motivated independently for

DP-splits (Fanselow and Ćavar 2002; Ott 2009a).²⁷

We can test this prediction straightforwardly by considering categories which cannot bear focus accent, such as *wh*-indefinites. Given that these cannot be focused, we expect the following to hold in cases where one or both objects are *wh*-indefinites: the inner object can be pied-piped to the exclusion of the outer one, but the outer object cannot be pied-piped to the exclusion of the inner one. The latter case—which as we saw above is possible with focal stress on a stranded DP argument *qua* Distributed Deletion—cannot arise because focusing of the stranded argument is impossible, hence Distributed Deletion cannot apply. This prediction is indeed borne out, as shown by the contrast between (32b) and (32c) (the verb *schenken* licenses DAT > ACC base order):

- (32) a. Wem was geschenkt hat Sonja
 someone.DAT something.ACC given has Sonja.NOM
 bestimmt schon mal
 certainly at some point
- b. Was geschenkt hat Sonja bestimmt
 something.ACC given has Sonja.NOM certainly
 schon mal wem
 at some point someone.DAT
- c. *Wem geschenkt hat Sonja bestimmt
 someone.DAT given has Sonja.NOM certainly
 schon mal was
 at some point something

The deviance of (32c) supports the claim made above that while VP-fronting in principle respects VP-internal constituency (i.e., proper subconstituents of VP can be topicalized), Distributed Deletion can yield patterns that superficially violate this constraint, if and only if it is licensed in turn by topic-focus structure. Since the stranded element in (32c) cannot bear focal stress, (32c) cannot be derived.^{28,29}

Notice that Distributed Deletion can likewise give us a handle on some apparent exceptions to the claim established in section 2 above, namely that C can attract bare verbal heads. As noted by Frey and Tappe (1991), certain kinds of elements that stand in a very close semantic relation to the verb do not allow stranding:

- (33) a. Volker hat den Teller leer gegessen
 Volker.NOM has the plate.ACC empty eaten

- b. *Gegessen hat Volker den Teller leer
 eaten has Volker.NOM the plate.ACC empty

I assume that the result predicate *leer* is (abstractly) incorporated into the verb; intuitively, the main predicate of (33a) is *leer gegessen*, and apparently A-bar head movement as in (33b) cannot disrupt this cohesive unit. As also observed by van Hoof (2006, 439), however, cases like (33b) can be salvaged by focusing the stranded predicate (which, in this particular case, requires a slight lexical adjustment to allow for focus alternatives):

- (34) Ge/GESSen hat Volker den Teller nur HALB\ leer
 eaten has Volker.NOM the plate.ACC only half empty

The contrast between (33b) and (34) makes perfect sense from the point of view defended here. It cannot be captured in principle, however, by a remnant-movement account: either evacuation movement of result predicates is possible, or it is not; in either case, there should be no difference between (33b) and (34).

Let us now return to the primary focus of this section, i.e. VP-fronting of a non-constituent (in surface form). Further support for the Distributed Deletion analysis of these cases—that is, an analysis directly parallel to that established by Fanselow and Ćavar (2002) for split DPs—comes from left-dislocation. Topical DP parts cannot appear in left-dislocated position:

- (35) a. Amerikanische Autos hat er drei grüne
 American cars.ACC has he.NOM three green ones
 b. *Amerikanische Autos, die hat er drei grüne
 American cars.ACC them.ACC has he.NOM three green
 c. Amerikanische Autos, die hat er
 American cars.ACC them.ACC has he.NOM

The fact that Distributed Deletion cannot split up a left-dislocated DP might be taken to support a base-generation analysis of left-dislocation (assuming that Distributed Deletion is dependent on chains), but the source of this contrast is not crucial to the point at hand. Importantly, left-dislocation of proper VP constituents *is* possible, while left-dislocation of non-constituents is not:³⁰

- (36) a. Ein Buch geschenkt (das) hat er seiner Schwester
 a book.ACC given (it) has he.NOM his sister.DAT
 b. Seiner Schwester geschenkt hat er ein BUCH
 his sister.DAT given has he.NOM a book.ACC

- c. *Seiner Schwester geschenkt, das hat er ein BUCH
his sister.DAT given that has he.NOM a book.ACC
- (37)
- a. Einer Prüfung unterzogen (das) hat er das Auto
a check.DAT subjected (it) has he.NOM the car.ACC
 - b. Das Auto unterzogen hat er einer Prüfung
the car.ACC subjected has he.NOM a check.DAT
 - c. *Das Auto unterzogen, das hat er einer Prüfung
the car.ACC subjected that has he.NOM a check.DAT

Müller (1996, 1998) stipulates a constraint on remnant movement to rule out cases like (36c) and (37c) (see also Grewendorf 2003; Abels 2008).³¹ However, the parallelism between these contrasts and that in (35) casts doubt on this explanation (setting aside its dubious explanatory force), since DP splits like (35a) do not involve remnant movement. Hence, they are not governed by Müller’s constraint (see note 31). The alternative, suggested by the facts I believe, is to assume that the same constraint rules out both (35b) and (36c)/(37c): a left-dislocated constituent cannot be the result of Distributed Deletion (perhaps because it is base-generated “as is” in the left periphery); therefore, it must be a proper (continuous) constituent.

Notice that Müller’s constraint rules out left-dislocation of a bare predicate, which, in his analysis, likewise involves remnant movement. It turns out that this prediction is not accurate:³²

- (38) Schenken, das würde Peter seiner Schwester das Buch
give that would Peter.NOM his sister.DAT the book.ACC
zwar nicht, aber verkaufen vielleicht
actually not, however sell perhaps

The remnant-movement account predicts (38) to be on a par with (36c), contrary to fact. The contrast between the two cases follows directly from the analysis proposed here, since (38)—unlike (36c)—does not involve Distributed Deletion; a bare head can be left-dislocated (by either movement or base-generation, depending on the theory) just like it can be topicalized, exactly as argued in section 2 above.

Having established Distributed Deletion as an empirically and theoretically superior analysis of partial-VP fronting, let me now turn to a final piece of evidence against the remnant-movement alternative. Recall from section 2 that elements stranded by V-topicalization show no detectable signs of movement, contrary to what remnant-movement theories lead us to expect. In a similar vein, pronominal-variable binding allows us to de-

tect presence or absence of movement of a stranded object over a second object that is pied-piped by VP-fronting. Consider first the fact that a quantified dative object can locally bind a pronoun inside a (structurally lower) accusative object, but not vice versa:

- (39) a. weil der Lehrer jedem Schüler_i sein_i
 because the teacher.NOM every student.DAT his
 Zeugnis übergeben hat
 certificate.ACC handed over has
- b. *weil der Tierarzt seinem_i Besitzer jeden Hund_i
 because the vet.NOM his owner.DAT every dog.ACC
 übergeben hat
 handed over has

Consider now a case where VP is fronted, based on (39b). If the accusative object is stranded, the remnant-movement theory must assume that it has moved out of VP; that is, it must at least have moved to a position higher than the indirect object before VP is fronted. From this position it should be able to bind the pronoun inside the (lower copy of the) indirect object:

- (40) [_{VP} seinem Besitzer ⟨jeden Hund⟩ übergeben] ... [_{VP} jeden Hund
 ⟨[_{VP} seinem Besitzer ⟨jeden Hund⟩ übergeben⟩]]

But the strong deviance of the actual datum indicates that no binding relation can be established, contrary to what (40) suggests:

- (41) *Seinem_i Besitzer übergeben hat der Tierarzt jeden Hund_i
 his owner.DAT handed over has the vet.NOM every dog.ACC

We conclude that (40) is not the correct analysis for (41), and in fact not a derivational option at all. According to the remnant movement theory, (41) is necessarily derived as in (40), however the impossibility of a bound-variable reading of the pronoun provides direct evidence against this analysis. The assumption that evacuation movement feeds VP-fronting falsely predicts that (41) and similar cases should be fully acceptable, unless *ad hoc* stipulations are added to prevent this outcome. Notice that the fact that (41)—unlike the cases discussed above—does *not* improve with focal stress on the stranded object is directly predicted by the analysis developed here, since the structure does not support the required binding relation.

We conclude that fronting of “bigger” parts of VP than just V always targets proper constituents of VP (or VP as a whole).³³ There is no

need for remnant-movement (or for the variable-base-generation view articulated in Fanselow 2002); rather, we can account for apparent exceptions by means of the independently motivated mechanism of partial pronunciation of VP in derived and base position (Distributed Deletion). In fact, as we saw, this solution not only renders alternatives obsolete, but is empirically more accurate as well.³⁴

4 *v**P-topicalization

Having discussed bare-V topicalization and VP-subpart fronting, let us now turn to the remaining case of VP-fronting, illustrated in (1d) above and (42) below. As first discussed by Haider (1990, 97), the subject can be included in a fronted VP under certain conditions:

- (42)
- a. Eine Frau ihren Mann verprügelt hat hier
 a woman.NOM her husband.ACC beaten up has here
 bisher noch nie
 so far never
 - b. Ein Außenseiter das Derby gewonnen hat hier noch
 an outsider.NOM the derby.ACC won has here so far
 nie
 never
 - c. Jemand ein Haus gekauft hat hier noch nie
 someone.NOM a house.ACC bought has here so far never
 - d. Kinder gespielt haben hier damals jeden Tag
 children.NOM played have here back then every day

Notice that all verbs in the above examples are unergative, i.e. have true external arguments. Following Chomsky (1995), Kratzer (1996) and others, I assume that the external argument is introduced by a “transitivizing” light verb *v**, hence that the topicalized phrases in (42a)–(42d) are *v**Ps.³⁵

Haider (1990) discusses three major constraints on *v**P-fronting: the *v**P-internal subject must be indefinite/non-referential; there can be at most one internal argument, and it must be stranded in the left middle field (following the finite verb in V2 position); and *v*P-fronting must not “leave behind” an empty middle field. Let me briefly comment on each of these restrictions in turn.

The ban on definite subjects presumably follows from the preference for definite subjects to raise to TP (cf. Wurmbrand 2004). This definiteness effect is brought out most clearly in transitive expletive constructions,

where only indefinite subjects can remain low:

- (43) a. Es hat hier letztens eine Frau ihren
 there has here the other day a woman.NOM her
 Mann verprügelt
 husband.ACC beaten up
- b. *Es hat hier letztens die Frau ihren
 there has here the other day the woman.NOM her
 Mann verprügelt
 husband.ACC beaten up

Consequently, v^* P-fronting based on (43b) yields a deviant output (compare to (42a)):

- (44) *Die Frau ihren Mann verprügelt hat hier noch
 the woman.NOM her husband.ACC beaten up has here so far
 nie
 never

Assuming, then, that definite/referential subject DPs raise to the TP edge, we can account for the deviance of (44).

The second condition stated by Haider is actually empirically inadequate and will therefore be dismissed. Haider seems to assume³⁶ that objects must be stranded by v^* P-fronting, and moreover must scramble to the left edge of the middle field. His examples are of the following kind:

- (45) Ein Außenseiter gewonnen hat das Derby noch nie
 an outsider.NOM won has the derby.ACC so far never

Unlike Haider, I—as well as the speakers I consulted—fail to see a difference in acceptability between (45), where the object is stranded, and (42b), where it is pied-piped.³⁷ I will therefore assume, *pace* Haider, that stranding of objects by v^* P-fronting is *not* obligatory.

I also disagree with Haider's assessment that v^* P-fronting is restricted to intransitive and transitive predicates, i.e. that there can be at most one object present. The following examples of fronted ditransitive v^* Ps (or v^* Ps containing a "free dative", as in (46c)) are quite acceptable, if a bit cumbersome:

- (46) a. Jemand seinem Zellennachbarn ein Buch
 someone.NOM his cell mate.DAT a book.ACC
 geschenkt hat in diesem Gefängnis noch nie
 given has in this prison so far never
- b. Ein Schüler seine Füße auf den Tisch legen würde
 a student.NOM his feet.ACC on the table put would
 bei diesem strengen Lehrer nie
 with this draconic teacher never
- c. Ein Kind seiner Mutter einen Kuchen gebacken
 a child.NOM his mother.DAT a cake.ACC baked
 hat hier bisher nur selten
 has here so far only rarely

Recall from section 3 that a surface-non-constituent at the CP edge indicates Distributed Deletion, which in turn is licensed by topic-focus structure. The same can be observed with v^* P-fronting. When the stranded object bears focus, it can be pronounced *in situ*:³⁸

- (47) Ein Außenseiter gewonnen hat noch nie das DERby,
 an outsider.NOM won has so far never the derby.ACC
 wohl aber das SPITZenspiel
 unlike the season's top game.ACC

The fronted elements in (45) and (47) are not surface constituents, but they must be in the underlying structure. Therefore, like in the cases discussed in section 3, Distributed Deletion must be involved: unless it is realized in the fronted v^* P (as in (42b)), the “stranded” object is either a focus or a “scrambled focus” (contrastive clause-internal topic; cf. Frey 2004):³⁹

- (48) a. [_{CP} [_{v^* P} ein Außenseiter [_{VP} ~~das Derby~~ gewonnen] hat [_{TP} das DERby noch nie $\langle v^*$ P \rangle]]] (= (45))
- b. [_{CP} [_{v^* P} ein Außenseiter [_{VP} ~~das Derby~~ gewonnen] hat [_{TP} noch nie [_{v^* P} ~~ein Außenseiter~~] [_{VP} das DERby \langle gewonnen \rangle]]] (= (47))

All of these facts follow readily from the assumption that v^* P can be attracted by C, with the additional option of pronouncing focally marked material in low positions. Notice that as before, stranding of an element that is contained in the fronted constituent requires focal stress on that element, while this is not the case when the stranded element is not included in the fronted constituent:

- (49) a. ??Ein Einbrecher die Wohnungstür geöffnet hat hier bisher
a burglar.NOM the door of flat.ACC opened has here so far
noch nie mit dem Schraubenzieher
never with the screwdriver
- b. Ein Einbrecher die Wohnungstür geöffnet hat hier bisher
a burglar.NOM the door of flat.ACC opened has here so far
noch nie mit dem SCHRAUBenzieher, wohl aber mit
never with the screwdriver in contrast to with
einem BRECHeisen
a crowbar
- c. Mit dem Schraubenzieher die Wohnungstür geöffnet hat
with the screwdriver the door of flat.ACC opened has
hier bisher noch nie ein Einbrecher
here so far never a burglar.NOM

Let us now turn to the third constraint on *v**P-fronting Haider proposes. Notice that all cases in (42) involve adverbial material following the finite verb in C. The surprising fact is that this adjunct material is actually obligatory when *v**P is fronted:

- (50) a. *Eine Frau ihren Mann verprügelt hat
a woman.NOM her husband.ACC beaten up has
- b. *Ein Außenseiter das Derby gewonnen hat
an outsider.NOM the derby.ACC won has
- c. *Jemand ein Haus gekauft hat
someone.NOM a house.ACC bought has
- d. *Kinder gespielt haben
children.NOM played have

The same holds for VP-fronting with unaccusative/passive verbs, i.e. the constraint is not specific to *v**P-fronting:

- (51) a. Eine Hymne gesungen wurde in Köln noch nie
an anthem.NOM sung was in Cologne so far never
- b. *Eine Hymne gesungen wurde
an anthem.NOM sung was

Prima facie, the facts suggest that *some* lexical material must be realized in the middle field. Notice, however, that there is no general ban on an empty middle field *per se*:

- (52) Es wurde gesungen
 there was sung
 ‘There was singing going on’

As Haider (2006, 236) points out, what is banned is the *derivational* “emptying” of the middle field, i.e. an empty middle field as the result of movement. Based on Haider 1988, he suggests that string-vacuous topicalization, which restores the verb-final base order, ought to be ruled out. But it is not clear why this would be the case, given that “string-vacuous” movement is motivated in other domains (such as English ECM constructions); moreover, movement that restores verb-final order is allowed in other contexts, such as *wh*-movement as in (53b):

- (53) a. (Ich frage mich) wer singt
 (I wonder) who.NOM sings
 b. Wer singt?
 who.NOM sings

Fortunately, an explanation that is both more straightforward and more adequate is readily available: in (50) and (51b), the required bridge contour—more specifically, a fall in the middle field—cannot be placed.⁴⁰ The reason, then, behind the ban on derivational emptying of the middle field, follows from the information-structurally based phonetic requirement to realize the focus accent (fall)—a requirement which cannot be met, trivially, when there is no lexical material present to act as a bearer of the focal accent. Notice that this reasoning rules out fronting of TP to the CP edge in just the same way: if the entire TP surfaces in the prefield, there is nothing left in the middle field to bear focus accent.⁴¹

Overall, then, *v**P-fronting is much less mysterious than indicated by the scarcity of references to the phenomenon in the relevant literature. Fronting of the entire (extended) verbal projection, i.e. *v**P, is but one further option C has, in addition to attracting subconstituents thereof (down to the verbal head, as discussed in section 2). We have seen that *v**P-fronting behaves exactly like the other cases of phrasal VP-fronting discussed in section 3: standardly it leads to the realization of the entire fronted phrase in the derived position, while there is an additional option of realizing focal parts of it in lower positions (Distributed Deletion).

Given this latter possibility, should we be led to assume that *all* phrasal VP-fronting is actually “hidden” *v**P-fronting (as in Huang 1993, on which see note 33), the subject being typically pronounced in a middle-field-internal position? I do not think so. First, notice that Distributed Deletion

cannot apply arbitrarily; it is licensed by “mismatches” caused by topic-focus structure (Fanselow and Ćavar 2002). But subjects do not need to bear focal stress in order to be realized outside in the middle field in cases of VP-fronting; this option is, of course, entirely unmarked. This is shown clearly by the fact that subjects which are unable to bear focal stress can remain *in situ* when VP is fronted (recall the discussion of (32) above):

- (54) Den /FISCH gegessen hat beSTIMMT\ wer
 the fish.ACC eaten has certainly someone.NOM

The *wh*-indefinite *wer* cannot bear focal stress, hence there is no Distributed Deletion involved. What is fronted is simply the VP-constituent contained in *v**P, stranding the subject. Given that Distributed Deletion is only available in specific circumstances, we conclude that C attracts the minimal constituent that is required for the intended interpretation (see note 2); no superfluous material is pied-piped—just as we would expect, given that C can probe arbitrarily deep into the structure below it.

5 Conclusion

We have seen that what was referred to as “VP-fronting” throughout this paper really comprises three operations:

1. Bare-V topicalization (A-bar head movement)
2. VP-subpart fronting (potentially coupled with Distributed Deletion)
3. *v**P-fronting, including the subject

We should not be misled by this descriptive tripartition, however: formally speaking, these “three mechanisms” are really varieties of a *single* underlying mechanism, namely Merge to the edge of CP. 1–3 quite simply represent the range of possibilities we expect when Internal Merge can apply freely to any XP within the range of the attracting head (C, in this case).⁴² VP-fronting is thus no obstacle to the simplest possible hypothesis about the nature of topicalization—i.e., the hypothesis that it applies freely, restrictions deriving from independent (and, in the best case, extragrammatical) factors.⁴³ The present paper supports this best-case scenario.

A side effect of the above discussion is that we can dispense with remnant movement in one of its prime domains—a welcome result given that remnant movement depends on classical trace theory, now abandoned along with other unmotivated historical ballast.⁴⁴

Notes

¹I will set aside exceptional cases involving double pronunciation:

- (55) Fisch gegessen hat Hilde immer nur Lachs
 fish.ACC eaten has Hilde.NOM always only salmon

See Ott and Nicolae 2010 for discussion of such “genus-species splits”.

²This descriptive manner of speaking is of course not meant to imply any teleological aspect of topicalization. Topicalization as a grammatical operation just applies freely (see below); the speaker selects whichever structure suits best her communicative intent.

³See Nunes 2004, 50ff. for relevant discussion. Nunes’s proposal does not work for the cases discussed below, since his algorithm crucially requires movement of the evacuated constituent; as we will see below, however, the German cases provide no evidence for—and, in fact, provide evidence *against*—evacuation movement prior to fronting. Some of the conceptual problems posed by remnant movement are addressed in Ott 2009b.

⁴On root-extending head movement, see Toyoshima 2000; Koenenman 2000; Fanselow 2003; Matushansky 2006, among others; also Roberts to appear for general discussion and references. See already Chomsky 1995, 317 for the claim that the distinction between XP-movement and X⁰-movement ought to be eliminated.

⁵Henceforth, I use angled brackets to indicate copies which will eventually be deleted phonetically. Notice that these markings are not assumed to be part of the derivation, but merely used for ease of exposition. Below I will also employ traditional trace notation, likewise as a shorthand with no theoretical import.

⁶The assumption that copies are full-fledged occurrences for interpretive purposes follows from the “copy theory of movement” (which is no more than a name for the assumption that Internal Merge does not tamper with structures already built) and requires a stipulation to be barred. All other things being equal, on this view there is no interpretive difference between a VP with object *in situ* and a VP from which the object has moved. However, all arguments given in this section pose equally grave problems for a more conservative theory of traces.

⁷Notice that more must be said about why a derivation of (3) along the lines of (6) is, apparently, unavailable: if (6) were available as an alternative derivation, (3) ought to be ambiguous between idiomatic and non-idiomatic readings, contrary to fact. The easiest way to rule out (6) altogether is to assume that idioms enter the derivation as coherent lexical units; setting aside some complications, this appears to be a necessary assumption anyway. It is then straightforwardly accounted for why V-topicalization cannot subextract from the lexical unit.

An alternative explanation is offered in Collins and Sabel 2007, where it is argued that the trace of an object extracted from a verb-object idiom is illicit at the LF interface (see note 34 for further details of the proposal). The acceptability of (3) on a literal reading is unexpected for this approach, however, since Collins and Sabel are silent on the formal differences between a DP that is part of a V-O idiom and a DP that is part of a transparent VP (they do not subscribe to the view alluded to above, according to which idiomatic VPs are lexical units).

⁸Nothing changes when the object is overtly scrambled, in which case it optionally pied-pipes the (non-extraposed) relative clause.

⁹Similar facts are discussed in a different context by Koster (2000), referring to Kaan 1992.

¹⁰ Chris Collins (p.c.) suggests that the facts just discussed might be explained by the account developed in Collins and Sabel 2007 (see note 34): since the trace left by movement feeding remnant movement must be pronominalizable, this might not be the case where the moved DP is modified by a relative clause. However, pronouns *can* be modified by relatives in German (albeit with certain qualifications, some of which are addressed in Struckmeier 2009), so it is far from clear that Collins and Sabel's LF-interface constraint rules out (9b).

¹¹ Notice that there is no formal reason to ban Internal Merge of terminals (heads) at the CP edge, unless by stipulation (cf., for instance, the formal system developed in Collins and Stabler 2009). This is especially so in a Merge-based grammar, where, strictly speaking, no stipulative notion of specifier exists (Noam Chomsky, p.c.).

¹² As Frey shows, bare-V topicalization is always pragmatically unacceptable in out-of-the-blue context.

¹³ The only way to exempt the relevant cases from the Freezing Principle is to give up on strict cyclicity of operations and assume that subextraction can precede evacuation movement of the phrase (but even then it remains mysterious why this kind of countercyclic derivation is not available in the standard freezing cases). This is, then, clearly not a desirable move.

¹⁴ This is a reformulation of Lenerz's observations in Diesing's (1992) terms. It is immaterial to the point at hand whether scrambling does not apply to existential indefinites (Lenerz) or whether the existential interpretation is lost outside of VP (Diesing). See also Lenerz 2002 for pertinent discussion and clarifications.

¹⁵ The example is slightly degraded due to the general markedness of scrambling an object over the subject.

¹⁶ See Haider 2006 for a survey of the relevant scrambling facts. Fanselow extends the argument to adverbs, but it has been shown by Frey and Pittner (1998) and others that German adverbs can scramble.

¹⁷ See Fanselow 2002 for the proposal to distinguish between the two on the basis of surface filters restricting scrambling. Note that the problem is most severe with *wh*-indefinites (as in (19b), (20b)), since these elements do not undergo *any* kind of reordering in German, i.e. their immobility is robust across movement types.

¹⁸ It must be noted that this argument has lost its initial plausibility in light of the discovery that various languages show fronting of partial VPs while not employing a productive scrambling rule; Landau (2007, 145f.) mentions Italian, Spanish, Brazilian Portuguese and Hebrew. This suggests that scrambling is not a necessary precondition for partial-VP fronting. Bayer (1993, 5) aptly characterizes the division of languages into scrambling and non-scrambling ones as "useful at first sight, but ultimately too crude".

¹⁹ The structural hierarchy of adverbs proposed in Frey and Pittner 1998 is presupposed here. Some of the examples that follow are taken from that paper.

²⁰ It could be argued that adverbs do not scramble, hence that remnant movement is impossible in (21a). However, as shown in section 2, elements that do not regularly scramble can still be stranded by "remnant-VP movement". Moreover, it has been shown by Frey and Pittner (1998) and others on a more general level that adverbs (in German) *do* scramble. At any rate, the cases discussed below are immune to these caveats.

²¹ In his discussion of VP-fronting in Hebrew, Landau (2007) establishes the generalization that if a topic constituent contains *any* argument of the verb, it must contain *all obligatory* arguments. What this means is that only those VPs can be fronted (in Hebrew) which can occur as independent VPs:

(56) *Condition on fronted VP portions* (Landau 2007, 134)

$[[V\ OBJ_1] \dots SUBJ \dots OBJ_2]$ is acceptable iff $[SUBJ \dots [VP\ V\ OBJ_1] \dots]$ is acceptable (i.e., if OBJ_2 may be dropped independently).

In light of the contrasts in (23) and (24), one might be inclined to conclude that a similar constraint is operative in German, since the bad cases involve stranding of an obligatory argument. Notice, however, that the contrast in (21) cannot be explained in the same way. Likewise, the examples discussed below (involving two obligatory arguments) do not conform to Landau's generalization; rather, what is at stake is hierarchical organization (see text below and note (57)). the fronted portion need not be an independently acceptable VP. I have no insights to offer on this intriguing point of variation between the two languages. What Landau proposes is that non-obligatory material is not actually stranded but rather *late-merged*, countercyclically after VP-fronting takes place. Clearly, then, there is no reason to assume a similar analysis for the cases discussed above and below.

²²Building on observations in Frey and Tappe 1991 and Haider 1993, Fanselow formulates the following constraint (cf. also van Hoof 2006):

- (57) Relative to an argument hierarchy $a \gg b \gg c$, a higher argument must not appear in the fronted VP unless the lower arguments do so, too.

As we saw above, the formulation is too narrow, since it applies to any VP-internal material, including non-arguments.

²³See Lenerz 1977 and Haider 1993, among others, on differential licensing of base orders.

²⁴/' indicates a rise (topic accent), '\ ' a fall (focus accent). On the "hat contour" typical for German (contrastive-)topic constructions, see Büring 1997, 1999, among others.

To exclude focus scrambling, the object appears "unscrambled" in the cases below. I will leave open here the question why the focus can apparently be pronounced to the left of adverbs as well. Such cases of semantically unmotivated scrambling are analyzed in Struckmeier and Ott 2009 as a side effect of v^*P moving to the edge of TP, a solution entirely compatible with the proposals in this paper. I will set aside these issues in the interest of space.

²⁵Van Riemsdijk (1989) analyzes cases like (30) as involving subextraction of the topicalized part from the focused DP. However, as Fanselow and Ćavar convincingly argue, this analysis cannot be maintained. Split topicalization can apply to DPs which are islands for subextraction (such as dative DPs); at the same time, there is an (island-sensitive) movement dependency between the two splits. This paradox is resolved by the Distributed Deletion analysis, according to which the *entire* DP moves while phonological deletion yields a surface form mimicking subextraction.

²⁶Fanselow and Ćavar assume that focal elements move into dedicated focus positions, but since there is no evidence for this kind of "focus movement" (in German), I drop this unnecessary assumption and assume that focal stress signals pronunciation *in situ* (cf. Struckmeier and Ott 2009).

²⁷Notice that, as observed by Haider (1990, 94), DP-splits can arise in conjunction with VP-fronting, showing that Distributed Deletion can apply to fronted VPs (as argued in the text above):

- (58) a. Briefe geschrieben hat sie mir bis jetzt erst drei traurige
 letters.ACC written has she.NOM me.DAT so far only three sad ones
 b. Bücher gelesen hat er solche bestimmt bisher keine
 books.ACC read has he.NOM such ones certainly so far none

²⁸Notice that the deviance of (32c) is entirely unexpected on a remnant-movement theory. Even setting aside the more basic problem, discussed in section 2 above, that stranding of immobile categories is mysterious, we notice that there is no general prohibition against stranding an accusative *wh*-indefinite object:

- (59) Geschenkt hat er bestimmt wem was
 given has he.NOM certainly someone.DAT something.ACC

When all arguments are stranded, no deviance arises (cf. Haider 1993, 281). A remnant-movement approach is forced to assume exceptional string-vacuous scrambling of both *wh*-objects, hence has to allow for evacuation movement of the accusative object, leaving (32c) unexplained. The amendments proposed in Collins and Sabel 2007 are of no help, since the trace left by the evacuated *wh*-indefinite is not prohibited by the LF-interface Constraint (see note 34).

²⁹The same argument can be made based on weak (unstressed) pronouns; here, too, only an argument that merges above the fronted part of VP can be stranded. The judgments are less sharp in this case, however, since the weak pronouns have stressed counterparts which are otherwise entirely homophonous; therefore, the case of *wh*-indefinites was chosen to support the argument made in the text.

³⁰Recall that the topicalization variants of (36c) and (37c) are fully acceptable only with proper intonation (focus on the stranded element).

³¹Müller's *Unambiguous Domination* constraint is formulated as follows:

- (60) *Unambiguous Domination* (Müller 1996, 376, fn. 13)
 In a structure ... [A... [B...]...]... , A and B may not undergo the same kind of movement.

Scrambling and left-dislocation count as “the same” in the relevant sense.

³²Datum based on Fanselow 1993, 13; see also Zwart 1993, 109 for a parallel Dutch example. Müller (1998, 221ff.) disagrees with these judgments.

³³Huang (1993) provides an argument that seems to refute this conclusion. According to Huang, fronted VPs are always *v**Ps, including (a trace of) the subject. The argument is that VP-fronting—unlike embedded topicalization of referential DPs—always seems to reconstruct. Huang then reduces the apparent “reconstruction” to an effect induced by the subject trace contained within the fronted VP. A thorough discussion of the relevant facts—which are not easy to reproduce in German, cf. Bayer 1993—is evidently beyond the scope of this paper. But we can safely dismiss Huang’s argument in light of evidence provided in Heycock 1995, where it is shown that reconstruction of fronted VPs is a subcase of the general requirement for non-referential/predicative A-bar moved material to reconstruct. Notice that on present assumptions—in particular, the copy theory of movement—reconstruction “comes for free”, hence need not be explained away in the first place.

³⁴The analysis developed in Collins and Sabel 2007 could be seen as providing evidence for the existence of remnant movement in German VP-fronting constructions in that it derives the deviance of a class of cases from specific conditions on remnant-internal traces. However, I do not think that their account is convincing.

Building on Obenauer 1984 and Cinque 1990, Collins and Sabel propose that (locally) unbound traces in remnant-movement configurations and extractions from strong islands are licit whenever the trace left by movement can be interpreted as *pro*. Provided that the relevant φ -features are present, the mechanism of *pro*-Creation converts a phonetically

empty XP into *pro*, thereby excluding it from the scope of the LF-interface Constraint.

- (61) *The LF-interface constraint*
 Suppose XP moves to the left periphery, forming $XP \dots \langle XP \rangle$. Then $*\langle XP \rangle$ at the LF-interface unless $\langle XP \rangle$ is locally c-commanded by an antecedent.
- (62) *pro-Creation*
 $XP_i \rightarrow pro_i$ if XP is phonetically null, and $\varphi_{XP} = \varphi_{pro}$ (where φ_{XP} is not null).

Importantly, (62) does not apply to traces of measure phrases, predicates, idiom chunks, adverbial adjuncts and PPs—either because there are no φ -features on the maximal projection or because a pronoun is not allowed in the relevant position. Hence, fronted remnants containing such traces are ruled out by (61).

For reasons of space, I cannot include a thorough discussion of Collins and Sabel’s claims here. Let me merely note in all brevity that I do not think their reasoning is valid empirically. As an example, consider the examples in (63) and (64). (63a) and (64a) are from Collins and Sabel; their deviance is blamed on (61), since (62) cannot apply to the trace left by adverbial *rechtzeitig* and the “bare quantifier” *etwas*. However, as the b/c-examples (not discussed by Collins and Sabel) show, it is the overt scrambling of the adverb/indefinite quantifier that induces deviance, not the (putative) remnant movement:

- (63) a. *Den Müll weggeräumt hat rechtzeitig Kay
 the garbage.ACC removed has in time Kay.NOM
 b. Den Müll weggeräumt hat Kay rechtzeitig
 the garbage.ACC removed has Kay.NOM in time
 c. Weggeräumt hat Kay den Müll rechtzeitig
 removed has Kay.NOM the garbage.ACC in time
- (64) a. *Gekauft hat etwas Hilde
 bought has something.ACC Hilde.NOM
 b. Gekauft hat Hilde bestimmt etwas
 bought has Hilde.NOM certainly something.ACC

Scrambling acts as a confounding factor in several examples provided by Collins and Sabel as evidence for (61). Notice that scrambling (overt or string-vacuous) has to precede fronting in *all* cases in (63) and (64) if the remnant-movement analysis adopted by Collins and Sabel is valid; hence, the contrast in acceptability is entirely unexpected. The alternatives proposed here can dispense with these problematic stipulations: (63b) is analyzed as fronting of the VP-subpart that excludes the higher adjunct, while (63c) and (64b) are analyzed straightforwardly as A-bar head movement.

Cases cited by Collins and Sabel as evidence for their prediction that (61) bans unbound traces of (adjunct or argument) PPs can be easily “rescued” by removing the illicit overt-scrambling step and adjusting intonation (focus on the stranded element), indicating the application of Distributed Deletion (sketched in (67)). As before, the a-examples are from Collins and Sabel 2007, while the acceptable b-variants are not mentioned in that paper:

- (65) a. *Gestern gefahren ist nach München Jürgen
 yesterday driven is to Munich Jürgen.NOM
 b. Gestern gefahren ist Jürgen.NOM nach MÜNchen, nicht nach BerLIN
 yesterday driven is Jürgen.NOM to Munich not to Berlin

- (66) a. *Mit dem Instrument geblickt] hat in Aminos Mund der Doktor
with the instrument looked has into Amina's mouth the.NOM doctor
b. Mit dem Instrument geblickt hat der Doktor in Aminos MUND, nicht
with the instrument looked has the doctor into Amina's mouth, not
in ihr OHR
into her ear
- (67) a. [VP Gestern ~~nach München~~ gefahren]_{TOP} ist Jürgen [VP ~~gestern~~ nach Mün-
chen_{FOC} ~~gefahren~~]
b. [VP Mit dem Instrument ~~in Aminos Mund~~ geblickt]_{TOP} hat der Doktor [VP
~~mit dem Instrument~~ in Aminos Mund_{FOC} ~~geblickt~~]

Other cases explained by Collins and Sabel in terms of (61) involve fronted non-constituents which can arguably not be derived by Distributed Deletion (such as fronting of a phrase including the trace of *was* in *was-für* split). See also notes 7 and 10, and Ott 2009b for further discussion of Collins and Sabel's analysis.

³⁵The notational distinction between unaccusative/passive *v* and unergative/transitive *v** is borrowed from Chomsky 2001.

³⁶Haider (1990, 102) explicitly notes the putative fact "that a subject may appear in the topicalized projection only if the remaining object—if there is one—appears in front of the middle field". Presumably, then, his claim is that both stranding and, specifically, stranding at the left edge of the middle field are obligatory. However, his phrasing (and choice of examples) is compatible with the claim that only the latter is a requirement, to be met *if* the object is stranded. I will assume that Haider has the stronger claim in mind, noting that I might be misrepresenting.

³⁷Some speakers consider cases of both kinds somewhat marginal; however the contrasts relevant to the discussion below appear to be sufficiently sharp.

³⁸Haider (1990, 97) gives the opposite judgment (his (12b)), but does not seem to take focus/stress into consideration.

³⁹Notice that (45) requires a bridge contour, most naturally a rise on *Derby* and a fall on *nie*: *Ein Außenseiter gewonnen hat das /DERby noch NIE*.

⁴⁰No such intonational contour is required (or, in fact, possible) in (52).

⁴¹Notice, however, that more must be said, given the impossibility of TP-fronting coupled with distributed deletion that yields a focus "host" in the middle field. Presumably, TP-fronting is ruled out on more general grounds; see Abels 2003 and Wurmbrand 2004 for pertinent discussion.

⁴²Presupposing, of course, that TP-fronting can be ruled out on independent grounds; see note 41.

⁴³Cf. Chomsky (2008, 151):

Suppose that the edge feature of the phase head is indiscriminate: it can seek any goal in its domain, with restrictions [...] determined by other factors. [...] EF of a phase head PH can seek any [XP] in the phase and raise it to Spec-PH. There are no intervention effects [...].

⁴⁴Remnant movement, at least in its unrestricted form, has been shown on independent grounds to have unwelcome consequences, among which the prediction of typologically unattested word orders (Cinque 2005) and, more fundamentally, unattested dependencies (Abels 2008).

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