V3 OR NOT V3?
AN INVESTIGATION OF GERMAN FOCUS PARTICLES

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ABSTRACT

We propose a comprehensive account of both the distribution and interpretation of German focus particles such as *nur, auch* and *sogar* ('only', 'also', 'even'). We argue that they always adjoin to non-arguments (in recent terms this means that they can adjoin to VPs, IPs, APs and root CPs, but never to argument DPs or argument CPs), and that they do not undergo LF raising. Presenting a range of mostly new data and observations, we show how this theory accounts for a variety of puzzling distributional facts with adverbial and ad-adjectival PRTs, their specific interpretations, and their behavior w.r.t. scoping, in particular reconstruction.

0. Introduction

It is commonly assumed that English so-called focus particles such as *even*, *only* and *also*, henceforth PRTs, can attach to DPs as well as VPs. In other words, they can figure in both attributive and adverbial function (we use capitals to indicate main stress and []$_F$ brackets to indicate focus):

(1) a.   I read only [a NOVEL]$_F$
     b.   I only read [a NOVEL]$_F$

A number of authors, among them von Stechow 1991 and Bayer 1990, 1996, assume that similar assumptions can be maintained for other Germanic languages, in particular German. The only author explicitly departing from this is, to our knowledge, Jacobs (1983, 1986), who assumes that the German focus particles *nur*, 'only', *auch*, 'also', and *sogar*, 'even', are exclusively adverbial.

The aim of this paper is to provide various sets of previously unnoticed data strongly supporting Jacobs' position. The structure of the paper is as follows: In section 1 we will

present an adaptation of Jacobs (1983, 1996) which accounts for the distribution of adverbial PRTs in German. In section 2 we propose -- again following Jacobs -- that there are in fact only adverbial PRTs in German. This assumption, which we show to be semantically unproblematic, explains a number of distributional facts, in particular the absence of 'PRT DP' sequences inside of DPs and PPs. A surprising consequence of this move, however, is that all sentence initial occurrences of 'PRT DP' must be analyzed as verb third sentences with the PRT attached to the root node rather than the DP in SpecC. In section 3 we will discard a non-argument for DP-attached PRT, showing that alleged cases of LF raising of PRT+DP in German can and in fact should be reanalyzed without LF movement. Consequently, we show in section 4 that attested cases of LF movement, namely scope and binding reconstruction of DPs provide more evidence against DP adjoined PRT: While the DP undergoes reconstruction, the PRT retains wide scope.

Section 5 introduces data parallel to those presented in section 4, showing that sentence initial 'PRT CP' sequences do not form a constituent either. This leads to a reformulation of the earlier prohibition against adjunction to DP in terms of a prohibition against adjunction to arguments in general. It is shown that this reformulation derives a number of additional facts not considered in the previous sections, among them adjunct--argument asymmetries and in particular the well-known but ill-understood fact that 'PRT CP' sequences are systematically absent from the German 'Nachfeld' (i.e. the position occupied by extraposed elements). Finally section 6 broadens the database to account for PRT inside of DPs, more precisely PRTs adjoined to AP.

1. A Theory of Adverbial Focus Particles in German

The purpose of this section is to give an account of the distribution of adverbial PRTs in German. In later sections we will use this account when asking how much additional machinery is needed.

1.1. Adopting Jacobs' (1983, 1986) Theory
We define adverbial PRTs as PRTs immediately dominated by a node within the clausal projection line, or, using the words of Grimshaw (1991), by a node which is an extended verbal projection (henceforth EVP), as is the case in (2.a), where PRT is attached to VP. Non-adverbial (=attributive) PRT is illustrated in (2.b), where *only* is attached to DP, hence immediately dominated by the higher DP segment, which is not a EVP.

(2)   a.   We only saw JOHN$_F$.
        b.   We saw only JOHN$_F$.

One major fact to account for is that in German, focus particles require strict adjacency to F:

(3)   a.   Gestern   hat Rufus sogar [dem   MÄDCHEN]$_F$ Blumen geschenkt.
                yesterday has Rufus even the-DAT GIRL   flowers   given
        b. *   Gestern hat sogar Rufus [dem MÄDCHEN]$_F$ Blumen geschenkt.
        c.   Gestern hat sogar RUFUS$_F$ dem Mädchen Blumen geschenkt.
                'Yesterday, Rufus even gave flowers to the girl.'

In (3.a) the indirect object (IO) *dem Mädchen*, 'the girl' is narrow focus. Accordingly, the PRT must adjoin adjacent to it. Adjoining it at a distance, as in (3.b), where the subject

intervenes between PRT and F, results in inacceptability (this is in marked contrast to English, where an adverbial PRT can be associated with any non-adjacent focus, cf. e.g. the translation in (3)). As (3.c) shows, adjunction of PRT to the left of the subject is in general permitted, provided that the subject is focus.

Contrasting pairs analogous to (3.a)/(3.b) can easily be constructed for various syntactic environments in German. The adjacency effect is well-known and documented in the literature on German focus particles.

Interestingly, adjacency is required only within the limits of adverbial PRT. To illustrate what is meant by this, consider (4):

(4)   ...weil   Kim nur/sogar/auch [die Freunde von MARGRETS$_F$ Freunden] besuchte.
       because K.   only/even/also the friends of MARGRET's friends   visited

The structure of the DP object is given in (5).

(5)   [$_{DP1}$ the [$_{NP1}$ friends$_{N1}$ [$_{PP}$ of [$_{DP2}$ [$_{DP3}$ MARGRET$_{N3}$]$_F$'s [$_{NP2}$ friends$_{N2}$]]]]]

The focus on DP3 is narrow (it cannot project from the specifier of DP2). Yet, the particle in (4) is adjoined to DP1, hence not adjacent to the focus. The crucial difference between cases like the unacceptable (3.b), and (4), which is fine, is that even though there are positions closer to the focus in the latter -- e.g. adjoined to DP3 or DP2 or PP -- these positions are not dominated by an EVP. The correct generalization seems to be that adjunction of PRT 'at a distance' is prohibited if there is any closer adjunction site *within the EVP*.

We therefore adopt the definitions in (6) and (7), quite literally following the proposals in Jacobs 1983 (cf. also König 1991).

(6)   PRT must precede and c-command the focus[1]

(7)   The Later the Better Principle (LATE)
       PRT cannot attach to a node α in an extended projection (EP) if it could adjoin to some β in the same EP where it would be later (= further to the right) and still meet (6).

LATE in (7) basically says: Within a given extended projection, attach PRT as late as possible; while we restrict our attention to verbal EPs for now, we will argue in section 6 below that LATE also applies within adjectival EPs.

It follows that (3.b) violates LATE in (7), because there is an attachment position for the PRT -- the one seen in (3.a) -- which is dominated by an EVP and later, while c-commanding and preceding the focus. In (4) on the other hand, any position which is later either follows the focus or is not dominated by an EVP (such as those within DP1); therefore (7) is not violated here.

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[1] Unless we assume an independently motivated ban against right adjunction of PRT, precedence must be required on top of c-command to exclude cases like (ii) alongside (i).
       (i)   ...weil   Hans nur LESEN will
                ...because Hans only read$_F$ wants
       (ii)*...weil Hans [[LESEN] nur] will

Appendix: The LATE principle in (7) is phrased in intuitive terms to facilitate discussion. Moreover it is a genuinely transderivational constraint, since it compares two possible but mutually exclusive derivations. For the sake of concreteness we hereby provide the reader with a formal definition of LATE which is precise and not transderivational:

(8)   a.   For any node α marked F, let the set of f-nodes of α consist of all nodes β s.t.

                i) β dominates α or is identical to α
                ii) β is a maximal projection
                iii) β is an EP (extended projection) of some γ
                iv) there is no node β' in the EP of γ s.t. β dominates β' and β' meets (i) and
                     (ii)
        b.   PRT must left-adjoin to an f-node of its focus.

1.2. Adjunction Sites

Before closing this section we want to point out an additional condition, rendered in (9).

(9)   PRT adjoins to maximal projections only.

(9) follows from standard X-bar theory or any of its reductionist cousins, if we assume that PRTs are maximal projections themselves. This seems justifiable at least in the case of *nur*, 'only', and *auch*, 'also', which can occur in SpecC, i.e. the 'Vorfeld' position of verb second sentences (we do not have an explanation for why *sogar*, 'even', is blocked in this position).[2]

(10)   a.   Auch [war ich sehr MÜDE]$_F$.
                also   was I   very tired
                'Also, I was very tired.'
        b.   Nur [WEISS das keiner]$_F$.
                only   knows   that nobody
                'It's just that nobody knows about it.'

Empirically, (9) is justified by a number of facts. In the realm of adverbial focus it blocks adjunction of PRT to V, V', C, and C', which we will now demonstrate to be desirable (in addition it should block adjunction to I and I', which, however, is not easy to see in German).
        *V/C/C'-adjunction: Though we find PRT directly preceding the verb in verb final clauses, no such preverbal PRT is possible in verb second clauses.

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[2] An alternative position, favored by two reviewers, would regard *auch* and *nur* as conjunction-like elements which just happen to be homophonous to the focus particles, in which case no conclusions about the phrasal status of the latter could be drawn and (9) must be stipulated. Note, though, that the meanings in (10) can quite plausibly be paraphrased as 'it was also the case that...' and 'the only thing is that...'; it doesn't seem clear *a priori* that these uses cannot be reduced to the focus particles; we leave further investigation of this matter for future reseach.

(11)   a.   ...weil   Peter Maria nur KÜSSTE.
                   ...because Peter Maria only kissed$_F$
        b. *   Peter nur KÜSSTE Maria.[3]
                Peter only kissed$_F$ Maria

Every conceivable structure for (11.b) will be excluded by (9): First, the PRT cannot attach to V^0, which is a head, and consequently ride piggy-back to the verb second position. Second, by the same token, PRT cannot attach to the V2 head position C^0 directly, being joined by V later. Finally, attachment to C', which would also yield (11.b), will be excluded by (9), too, because C' is not a maximal projection.

But how is (11.a) to be analyzed, then? We propose that PRT is attached to VP here, with the DO *Maria* scrambled out of VP. If this analysis is correct, we predict that elements which cannot scramble should be allowed (in fact forced) to intervene between a PRT and a focused V. The minimal pairs in (12.a) through (12.c) show that this prediction is borne out for directional PPs, AP arguments and resultatives, all of which are independently known to disallow scrambling.

(12)   a.   ...weil   man den Wagen nur   in die Garage   FAHREN darf.
        a'. *   ...weil   man den Wagen   in die Garage nur   FAHREN darf.[4]
                ...because one the car (only) into the garage (*only) drive$_F$ may
                'because you may only DRIVE the car into the garage.'
        b.   ...weil sie sich nur   traurig   FÜHLT/nur ungeschickt   ANSTELLT.
        b' *   ...weil sie sich   traurig nur FÜHLT/   ungeschickt nur ANSTELLT.
                ...bec. she self (only) sad (*only) feels$_F$ (only) clumsy (*only) acts$_F$
                'because she only FEELS sad/She only ACTS up clumsy.'
        c.   ...weil ich sie sogar in den Schlaf   SINGEN würde.
        c' *   ...weil ich sie   in den Schlaf sogar SINGEN würde.
                ...bec. I   her (even) into the sleep (*even) sing$_F$ would
                'because I'd even SING her to sleep.'

Likewise, PRT cannot intervene within verb clusters, owing to the fact that neither Vs nor VPs can scramble.

(13)   a.   Siglinde wird sogar kommen   MÜSSEN.
        b. *   Siglinde wird   kommen sogar MÜSSEN.
                Siglinde will (even) come   (*even) must$_F$
                'Siglinde will even HAVE to come.'

Finally, infinitival complements to the raising verb *scheinen*, 'seem', cannot undergo

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[3] The grammatical structure for that sentence would be (i), in which PRT is adjacent to the V-trace.
    (i)   Peter KÜSSTE$_F$ Maria nur t_V.
           Peter kissed$_F$ Maria only
As Jacobs (1983) shows in quite some detail, adjacency to the trace of the focused element is sufficient in the case of topicalization/wh-movement, head-movement and extraposition. We will ignore these complications here, although the amendments are straightforward.

[4] Some speakers allow scrambling in these cases if the scrambled constituents are contrastive topics.

scrambling either (in fact, they resist any kind of movement).[5] As expected, PRT in this case cannot intervene in between the infinitive and the main verb, as shown in (14.b); instead the PRT precedes the infinitival ((14.c)). This contrasts with control verbs like *versprechen*, 'promise', in (14.a), whose complements are known to be moveable.

(14)   a.   ...weil   Peter zu kommen nur VERSPRACH.
         b. *   ...weil   Peter zu kommen nur SCHIEN.
                 ...because Peter to come   only promised$_F$/*seemed$_F$
         c.   ...weil   Peter nur zu kommen SCHIEN.
                 ...because Peter only to come   seemed$_F$
                 'Peter only SEEMED/PROMISED to come.'

In sum, it seems well motivated to analyze PRT+V sequences as derived by VP-emptying as required by the proposed principle against adjunction to non-maximal categories.

2. On Attributive PRTs

2.1. Distributional Facts
At the beginning of the last section we introduced the distinction between adverbial PRTs (such as illustrated by VP-attached PRTs) and attributive PRTs, as in the English example (2.b) (*We saw only JOHN*). Also, in the last section we encountered a fact that was problematic for the assumption that attributive PRT exists in German, namely the ill-formedness of DP internal PRT, as illustrated in (15).

(15)   ...weil Gwen *sogar* die Freunde (*sogar) von (*sogar) HANS' Freunden besuchte.
       ...bec. Gwen even   the friends (*even) of (*even) Hans' friends   visited
       'Gwen visited even the friends of HANS' friends.'

As the paradigm in (15) shows, the only position for PRT is preceding the object DP as a whole. Any DP-internal position, e.g. attached to PP or embedded DP, is unavailable.

    We suggest that this should be captured -- following Jacobs 1983 -- by assuming that there simply are no attributive PRTs in German. Let us therefore adopt proposition (16) (we will replace (16) by a more general principle in section 5 below).

(16)   PRT can only attach to elements of the verbal extended projection.

This straightforwardly rules out the ungrammatical cases in (15), as the reader may verify herself. In fact, Jacobs 1983 gives a number of PRT-constructions besides (15) which are correctly ruled out by (16), some of which we repeat here:

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[5] This is illustrated by the contrast between (i) (control) and (ii) (raising):
      (i)   ...weil   [zu kommen]$_1$ niemand t_1 versucht hat.
                 ...because to come   nobody   tried   has
      (ii)*   ...weil   [zu kommen]$_1$ niemand t_1 schien.
                 ...because to come   nobody   seemed

(17) a. * [PP P PRT DP]
   * mit nur Hans, *gegen sogar den Präsidenten
   with only Hans, against even the president
   b. * [NP N PRT DP]
   * der Bruder nur des Grafen,
   the brother only the-GEN count-GEN,
   * die Proklamation sogar der Unabhängigkeit
   the proclamation even the-GEN independence

It should be stressed that on top of constituent-internal PRTs as in (17), (16) prohibits adjunction of PRTs to DPs across the board. We thus claim that any sequence 'PRT DP' must be analyzed as PRT [XP DP ...], where XP is some element of the EVP.

In the next subsection, we will show that this is possible, and that such an analysis does not raise any semantic problems. To facilitate discussion, we will adopt the following notational conventions: We will use 'PRT XP' to refer theory-neutrally to constructions in which PRT immediately precedes XP. To indicate that PRT is adjoined to XP itself, we write PRT+XP.

2.2. Reanalyzing 'PRT DP'

The argument to be established here is very simple: For every attested occurrence of a sequence 'PRT DP' in German, there exists a syntactic analysis in which PRT is not in fact attached to DP, but to the XP immediately dominating DP (i.e. VP or IP, given that XP must be a maximal EVP). Using the above notation, our claim is that any instance of 'PRT DP' in German must be analyzed as an instance of PRT+[XP DP ...], rather than PRT+DP. Moreover, in all those cases the PRT+[XP DP ...] analysis turns out to be semantically equivalent to the PRT+DP one.

The syntactic claim should easily be verified. Given that German is verb final, the following options arise:

(18) PRT Obj. sequence could be analyzed as
   a.   [VP [DP PRT [DP...]] V]   or
   b.   [VP PRT [VP DP V]]
(19) PRT Subj. sequence could be analyzed as
   a.   [IP [DP PRT [DP...]] [I'...]]   or
   b.   [IP PRT [IP DP [I'...]]]
(20) PRT V sequence could be analyzed as
   a.   [VP DP [V0 PRT V^0]]   or
   b.   [VP DP$_1$ [VP PRT [VP t_1 V^0]]]

All other things being equal, the (a)/(b) pairs in (18) through (20) would all present cases of (spurious) ambiguity. According to (16), only the (b) structures are well-formed.

Turning now to the semantics we will give a rough outline of the formal argument in the appendix to this subsection (a more detailed demonstration can be found in Büring & Hartmann 1995). An arguably easier way to see that the structural ambiguity between PRT+DP and PRT+[DP ...] does not lead to a semantic ambiguity is to look at a language in which the (a)/(b) pairs from (18) through (20) above are not string-identical. If the two sentences corresponding to, say (18a/b) receive the same interpretation, the ambiguity is spurious, if they don't, it's not. A case at hand is English. Consider (21): In (21.a) PRT is

attached to DP (=(18.a)), in (21) it is attached to the immediately dominating VP (=(18.b)).

(21) a.   She kissed only KURT's brother.
     b.   She only kissed KURT's brother.

Speakers agree that both sentences are equivalent in meaning, showing the ambiguity to be in fact spurious. What the appendix will show is that the synonymy in (21) is just one instance of a more general pattern which can be summarized as the following rule of thumb: If PRT is attached to a constituent α which acts as a functor in the semantic composition (i.e. which takes the meaning of its sister as an argument, which is the case for DPs), the logical scope of PRT equals α plus α's c-command domain; if PRT attaches to a semantic argument, the logical scope of PRT equals its c-command domain. Therefore, PRT+XP... and PRT+[$_{YP}$ XP...] will yield the same logical scope for PRT, provided XP is a semantic functor. As we will see in later sections, predicted ambiguities arise whenever XP is neither a semantic functor nor a syntactic argument.

Appendix
The framework we adopt for our analysis is the theory of alternative semantics as developed in Rooth 1985 and 1992. Let us briefly present the basic idea of this theory: focus on a constituent Y is indicated via a focus feature F. Phonetically, this feature is realized as a pitch accent on the main stress-bearing syllable of Y. Semantically, each node X receives two different translations, its *ordinary semantic value*, $[\![X]\!]$, and its *focus semantic value*, $[\![X]\!]^f$. The focus value of any node X, $[\![X]\!]^f$, consists of a set of alternatives to its ordinary semantic value $[\![X]\!]$. This set is derived by substitution of the meaning of the focused constituent by (contextually plausible) alternatives.

     For example, if X is a VP containing a focused DP, as in *[$_{VP}$ dance with [LUISE]$_F$]*, $[\![VP]\!]^f$ is the set of alternatives {$[\![$dance with Marlene$]\!]$, $[\![$dance with the wolf$]\!]$, $[\![$dance with the vampire$]\!]$,...}. If X consists of just the focus, e.g. *DANCED$_F$*, $[\![X]\!]^f$ will be the set of all alternatives to $[\![X]\!]$, i.e. the (possibly contextually restricted) set of things in the domain of X.

     Particles like *only* are focus sensitive quantificational elements which can be interpreted *in situ*. Adapting Roothian semantics, we let $[\![only]\!]$ take an element of an arbitrary type as its argument, as long as this type ends in <t>. A general rule is sketched in (22) (unlike Rooth 1985 we interpret directly without intermediate translation procedure intensional logic; we will give predicate calculus paraphrases below for perspicuity, though).

(22)   If A is of type <α,t>, *only A* is of type <α,t>, too, and $[\![only\ A]\!]$ is the set of all B of type α such that B has the property $[\![A]\!]$ (i.e. B$\in[\![A]\!]$), and no other property that is an alternative to that (i.e. in $[\![A]\!]^f$).

By the semantics given in (22), *only* can attach to VPs and DPs alike, as illustrated in (23):

(23)   a.   *only DANCED$_F$* = the set of all individuals x who danced and have done no alternative thing to dancing:
            $\lambda x.$danced(x) & $\forall p\in$ ALT(danced)$:p(x)\rightarrow p=$danced

b.   *only BILL_F* = the set of all properties p that Bill has and no alternative to Bill has: $\lambda p.p(bill)$ & $\forall x \in ALT(bill):p(x) \rightarrow x=bill$[6]

To illustrate the equivalence between PRT+DP XP and PRT+[DP XP] we will look at the German case in (24), which could be analyzed as in (24.a) or as in (24.b).

(24)   ...weil   nur   FRITZ_F gekommen ist.
        ...because only Fritz   come   is
    a.   (because) [only Fritz_F] came
        [[Fritz_F]] = the set of all properties p which Fritz has: $\lambda p.p(fritz)$
        [[Fritz_F]]^f = the set of all sets P of properties p such that there is an alternative to Fritz who has precisely the properties p in P: $\lambda P.\exists x \in ALT(fritz)$ & $P=\lambda p.p(x)$
        [[only Fritz_F]] = the set of all properties p which Fritz has and noone else has: $\lambda p.p(fritz)$ & $\forall x \in ALT(fritz):p(x) \rightarrow x=fritz$
        [[came]] = the property of having come: $\lambda y.y$ came
        [[only Fritz_F came]] = the set of worlds in which the property of having come is one which Fritz and noone else has: $^\wedge[came(fritz)$ & $\forall x \in ALT(fritz):came(x) \rightarrow x=fritz]$
    b.   (because) only [Fritz_F came]
        [[Fritz_F came]] = the set of worlds in which Fritz came: $^\wedge came(fritz)$
        [[Fritz_F came]]^f = the set of sets q of worlds w, such that some alternative to Fritz came in w: $\lambda q.\exists x \in ALT(fritz)$ & $q=^\wedge came(x)$
        [[only Fritz_F came]] = the set of worlds in which Fritz came and anyone else who came is identical to Fritz: $^\wedge[came(fritz)$ & $\forall x \in ALT(fritz):came(x) \rightarrow x=fritz]$

The interpretation of the pertinent phrases, together with a standard predicate logic rendering of them is given underneath the structures. It should be evident that the last line in (24.a) and the last line in (24.b) describe the same set.

2.3. The Verb Second Argument
Before closing this section we turn to a set of facts that the reader might have been eager to point out ever since we suggested that there might be no PRT+DP in German, namely examples like (25).

(25)   Nur die HARTEN_F kommen in   den Garten.
        only the hard   come   into the garden
        'Only the tough ones make it into the garden.'

In (25) *nur* precedes a sentence initial subject. The adverbial analysis we propose implies a fairly unusual assumption, namely that *nur* in this case is attached to CP, rather than to the topicalized DP. Schematically, it has to be assumed that (26.a) rather than (26.b) is the structure of (25).

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[6] Applying (22) literally to this case derives the set of all p such that p is a property Bill has, and if someone else has that property, that someone else's properties equal those that Bill has, which by Leibniz' law means that someone else *is* Bill: $\lambda q.[\lambda p.p(bill)](q)$ & $\forall r \in ALT(\lambda p.p(bill)):r(q) \rightarrow r=\lambda p.p(bill)$. We will gloss over these details. Furthermore we ignore intensionality where possible.

(26)　　a.　　　PRT+[$_{CP}$ DP C ...]
　　　　　b.　　　[$_{CP}$ PRT+DP C ...]

What is so extraordinary about this claim is that thereby, (25) (and in fact almost every sentence that begins with a PRT) is analyzed as a verb-third (V3) sentence. This flies in the face of practically every analysis of verb second-languages like German, for which it is usually held that any kind of adjunction to CP must be strictly ruled out in order to guarantee the strict verb second characteristic.

　　　　There are three kinds of reservations one might have against our analysis in (26.a). First, it doesn't seem to express the semantic fact that PRT is associated with the DP in SpecC. As we have just demonstrated in the preceding subsection, this objection is irrelevant: Given that PRT associates with the focus of the sentence, PRT+[DP...] will receive the same interpretation as PRT+DP. The second objection is: If PRT adjoins to CP, what prevents it from associating with a focus just anywhere within the CP, rather than in SpecC; that is, what excludes a sentence like (27), in which the focus sits within IP and SpecC is occupied by a non-focused element?

(27)*　Nur　es　　kommen die HARTEN$_F$ in　den Garten.
　　　　only　EXPL come　　the hard　　　into the　garden

The answer is that this is assured by LATE: The latest position for PRT to adjoin to within the EVP is not CP, but IP, which yields the grammatical sentence *Es kommen nur die HARTEN in den Garten*. Generally, LATE will allow PRT to adjoin to CP only if the focus is outside of IP.[7]

　　　　The third kind of reservation is that allowing PRTs to adjoin to CP means to stipulate an exception to the rule which otherwise seems to hold across the board in verb second languages like German, namely: No adjunction to CP. We concede that this observation is true, and we do not know why it is exactly this class of elements that adjoin to CP.[8] What we will show in section 5 below, however, is that any alternative account must assume PRTs adjoined to CP as well; the third reservation thus applies equally to all theories of PRT placement in German we are aware of.

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[7] As two reviewers point out, this also predicts association of a CP-adjoined PRT with a focused verb in C^0 as in (i) and (ii) to be possible, contrary to fact. In this case PRT must adjoin adjacent to the verb's base position rather than its derived position, as in (iii) and (iv).

(i) *	Sogar sie　KÜSSTEN sich.			(iii)	Sie　KÜSSTEN sich　sogar.
	even　they kissed　　REFL				*they kissed　　REFL even*
(ii)*	Sogar　KÜSSTEN　sie　sich?			(iv)	KÜSSTEN sie　sich　sogar?
	even　kissed　　　they　REFL				*kissed　　they REFL even*

'They even kissed.' / 'Did they even kiss?'

It seems that with head movement, unlike with phrasal movement, only the foot of the chain is visible to LATE. Like w.r.t. the interaction of PRT placement and movement in general, we leave a detailed investigation of this matter for further investigation (cf. also note 3). Note though that (ii) will not be blocked by a prohibition against adjunction to CP (PRT could be in SpecC here), and that (iii) and (iv) would not follow from an alternative theory which simply claims that PRT adjoins to the constituent containing the focus.

[8] A further systematic exemption to the verb second property in root clauses is pointed out by McCloskey 1998 for German and Swedish, namely that interrogative sentences allow for CP adjoined adverbial sentences.

(i)	Wenn wir nach Hause kommen, was　sollen wir kochen? (G)
	when　we　to　home　come　　what shall　we　cook
(ii)	In en stad　som　Fremont vem skulle inte vara utträkad? (Sw)
	in a　　town like　Fremont who would not be　bored

(exx. from McCloskey 1998:7)

On the other hand, there is ample empirical evidence that favors (26.a) over (26.b). While the bulk of arguments in favor of V3 structures is drawn from interpretation data and will be discussed in the following sections, there are also some distributional arguments. These take the following general form: i) 'PRT XP' can occur in sentence initial position; ii) 'PRT XP' cannot occur in the base position of XP; iii) therefore, 'PRT XP' should be analyzed as PRT+[CP XP...] rather than [CP PRT+XP...]. While this argument is hard to make for XP+DP (because only DPs which are dominated by the EVP can be moved to SpecC in German to begin with), it can be made for CP, AP and PP. Let us illustrate the latter case here. Consider (28) (from Bayer (1996:145)) and (29):

(28)   a.   Nur [PP vom   GRAFEN]$_1$ habe ich [DP jeden Sohn t_1] bewundert.
                only   of-the   count   have I   every son   admired

         b. *   Ich habe [DP jeden Sohn nur   vom   GRAFEN] bewundert.
                I   have   every son   only of-the   count   admired

(29)   a.   Sogar [PP gegen   die REGIERUNG]$_1$ hat sie [DP eine Proklamation t_1]
                even   against the government   has she   a   proclamation
                unterzeichnet.
                signed

         b. *   [DP Eine Proklamation sogar gegen   die REGIERUNG]$_1$ hat sie t_1
                a   proclamation even   against the government   has she
                unterzeichnet.
                signed

Adhering strictly to verb second, (28.a) and (29.a) are 'source-less' topicalizations: The topicalized PP is extracted from the DP internal position marked by the trace. However, in the base position, 'PRT PP' is ungrammatical, as witnessed by the (b)-examples. Our analysis offers an explanation for this contrast: While the ungrammatical (b) sentences would require attachment of PRT to PP, a non-EVP, the (a) sentences display adjunction to CP. On the alternative strict verb second analysis, the (a) sentences, too, would have to have the constituent PRT+PP; it would thus remain unclear what blocks the *in situ* counterparts in (b).

Summing up this section, we have shown that a general ban on attributive PRTs in German accounts for a number of otherwise unexplained distributional facts, in particular the absence of PRT in DPs and PPs. Furthermore we demonstrated that adverbial attachment *next* to the focus is semantically equivalent to attributive attachement *to* the focus. Hence there also is no semantic reason to assume a phrase structural correlation to narrow focus. A surprising consequence of the proposal is the recognition of V3 structures in otherwise strict verb second languages.

3. The (Absence of) Ambiguity Argument

Turning to interpretive facts next, we argued above that the interpretation of adverbial PRT and attributive PRT is the same. This of course only holds under strict surface interpretation. We will now turn to an argument involving quantifier raising. It will turn out that while English provides a case for QR of PRT+DP (and thereby *a fortiori* for PRT+DP), German does not. The conclusion to be drawn from that is either that (i) German has no QR (in which case we are dealing with a non-argument in favor of PRT+DP), or that (ii) German

has QR for DPs, but not for PRT+DPs (in which case we are dealing with a counter-argument against PRT+DP, given that PRT+DP raising would follow directly from the attributive analysis).

3.1. The Taglicht/von Stechow Argument: Is it [only Rock'n Roll] (or just like it)?

Taglicht (1984) notes that a focus particle followed by a focused DP gives rise to ambiguities of scope. Consider our example (30) (= Büring & Hartmann 1995, ex. (1)).

(30)   They were advised to play only Rock'n Roll.
     a.   They were advised not to play anything but Rock'n Roll.
     b.   Rock'n Roll is the only music they were advised to play.

This sentence has at least two readings which can be paraphrased as in (30.a) and (30.b). The readings differ with respect to the uttered advice. In the first one the advice is like this: Don't play anything but Rock'n Roll! Don't play Reggae, don't play Hip Hop, don't play Mozart, etc. In the second reading, Rock'n Roll is the only kind of music they were advised to play. So the advice goes: Play Rock'n Roll! There are no other advices. You can play other music if you like, but Rock'n Roll you have to play. We will refer to these readings as narrow scope ((30.a)) and wide scope ((30.b)) reading of *only DP*, respectively.

     To derive the narrow scope reading of (30), *only DP* either remains in situ or adjoins to the embedded IP. The latter option -- which is more perspicuous -- is illustrated in the LF in (31).

(31)   a.   they were advised [[only Rock'n Roll]$_1$ PRO to play t_1]
     b.   they were advised to make Rock'n Roll the only music with the property: λx.they play x

Adjunction to the matrix IP gives us the wide scope reading, as illustrated in (32).

(32)   a.   [only Rock'n Roll]$_1$ they were advised [PRO to play t_1]
     b.   Rock'n Roll is the only music with the property: λx.they were advised to play x

On the face of it, a similar situation obtains in German. As von Stechow (1991) notes, a sentence like (33) is equally ambiguous between a narrow and a wide scope interpretation.

(33)   (weil)   ich nur Gerda geküßt zu haben bereue
     (because) I   only Gerda kissed to have   regret
     a.   I regret to have kissed nobody but Gerda.
     b.   Gerda is the only person that I regret to have kissed.

Again, we paraphrase the two readings. In (33.a) the speaker's regret has the implication that she should have kissed other people. In (33.b) he did kiss other people, but Gerda is the only person he didn't enjoy kissing for some reason. All the other persons were fun to kiss. So it appears as if LF raising of PRT+DP to the matrix IP must be an option after all.

     In addition, von Stechow 1991 observes that if the embedded sentence is extraposed, the reading corresponding to the wide scope interpretation (33.b) is no longer available.

(34) (weil)   ich es t_{CP} bereue [$_{CP}$ nur Gerda geküßt zu haben]
      (because) I   it   regret   only Gerda kissed to have
      a.   I regret to have kissed nobody but Gerda. (I should have kissed other women.)
      b. *   Gerda is the only person that I regret to have kissed. (The other ones were fun to kiss.)

Von Stechow suggests the following explanation for the German data: i) the ambiguity of (33) exists for the same reason as that in the English (30): PRT+DP may QR to different positions, resulting in different scopes; ii) if extraposition has taken place, the embedded infinitival clause becomes an island for movement out of it. Therefore, QR of PRT+DP can only target the embedded IP, resulting in the narrow scope reading only. Note that this argument crucially builds on the idea that PRT+DP forms a constituent.

3.2. The in situ analysis
In contradistinction to von Stechow's analysis, we want to claim that the two readings in (33), as well as the absence of the wide scope reading for (34) follow directly from surface interpretation of adverbial PRT. Our central claim is that the ambiguity in (33) is due to different adjunction sites of *only* at s-structure. Due to the OV nature of German, the sequence 'PRT CP V' is syntactically ambiguous; two possibilities are illustrated in (35).[9]

(35) a.   I only+[$_{VP}$ [$_{CP}$ PRO GERDA kissed to have] regret]
      b.   I [$_{VP}$ [$_{CP}$ PRO only+[$_{VP}$ GERDA kissed to have]] regret]

To derive scope ambiguities with *only* we make use of these different structures. If *only* is attached to the embedded VP, as in (35.b), we get the narrow scope reading: 'I regret that the only person...'. Adjunction to the matrix VP, as in (35.a), accounts for the wide scope interpretation. In the latter case, the particle c-commands the matrix verb, yielding 'I only regret that...'.

We will now demonstrate this, using Rooth's *in situ* theory of focus interpretation outlined in the previous section. Before doing so we want to address an issue the reader might have wondered about, namely: Is the wide scope structure proposed in (35.a) compatible with the LATE principle in the first place? For convenience, we repeat the particle theory as it stands below.

(36) The Particle Theory (non-final version)
      a.   PRT must precede and c-command the focus.
      b.   The Later the Better Principle (LATE):
             PRT cannot attach to a node α in an extended projection EP if it could adjoin to some β in the same EP where it would be later (= further to the right) and still meet (36.a).
      c.   PRT adjoins to maximal EVPs only.

Now, in (35.a), PRT precedes whatever empty elements reside within the embedded clause (PRO, C^0), while in (35.b), PRT follows them. Therefore, PRT in (35.b) is Later than PRT in (35.a), so by the principle 'Attach PRT as late as possible', only the latter should be possible (we might say that we expect it to block the former). Note however, that the LATE
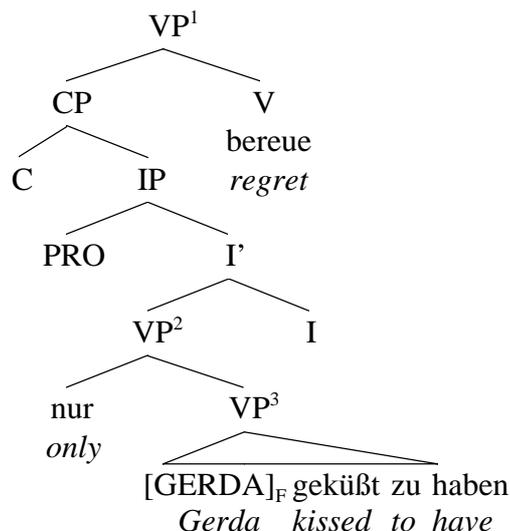
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[9] A third option is to adjoin PRT to the embedded CP. For reasons to become clear later, we will not discuss this option here.

principle only regards positions *within the same EVP*. In (35.a), PRT is attached to an element of the matrix EVP (that of *regret*), while in (35.b) it is attached to one of the embedded EVP (that of *kiss*). Within their respective EVPs, both positions are the Latest ones to precede the focus, which is all the LATE principle requires.

As we will see later, this is a very general and, we believe, fundamental property of PRT placement in German. Put in terms of the more concise rendering of the LATE principle in (8) above, there isn't just one PRT position for a given Focus (there called the f-node), but a set of them. This set will contain as many licit attachment positions as there are distinct EVPs in the clause.[10]

Going back to our examples then, let's first look at the narrow scope reading. *Bereuen* 'to regret' is a control verb which takes an infinitive CP complement. According to (35), the focusing particle is adjoined to the VP of the embedded clause:

(37)

$$
\begin{array}{c}
\text{VP}^1 \\
\diagup \quad \diagdown \\
\text{CP} \qquad \text{V} \\
\qquad\qquad \text{bereue} \\
\text{C} \quad \text{IP} \qquad \textit{regret} \\
\qquad \text{PRO} \quad \text{I'} \\
\qquad\qquad \text{VP}^2 \quad \text{I} \\
\qquad\qquad \text{nur} \quad \text{VP}^3 \\
\qquad\qquad \textit{only} \\
\qquad\qquad [\text{GERDA}]_F \text{ geküßt zu haben} \\
\qquad\qquad\quad \textit{Gerda} \quad \textit{kissed} \quad \textit{to have}
\end{array}
$$

The meaning of VP_1 can be derived step by step:

(38) ⟦VP^3⟧ =   the property of having kissed Gerda ($\rightarrow$ ordinary value)

⟦VP^3⟧^{f} =   the set of properties p, where p=to have kissed some alternative to Gerda ($\rightarrow$ focus value)

⟦VP^2⟧ =   the property of having kissed (Gerda and) no alternative to Gerda

⟦VP^1⟧ =   the property of regretting that one kissed (Gerda and) no alternative to Gerda

The denotation we worked out corresponds exactly to the narrow scope interpretation in (33.a) (*I regret to only have kissed GERDA*).

To get the wide scope reading, nothing but the attachment site of *only* changes: it is adjoined higher in the tree, namely to the matrix VP.

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[10] An alternative that comes to mind is that phonetically null elements do not count in terms of Lateness. However, as we will see below, PRT can be attached within the matrix clause even if the focus is separated from it by overt material, provided that material belongs to the embedded clause.

(39)

```
                        VP¹
                   ╱         ╲
                nur            VP²
               only        ╱        ╲
                         CP           V
                    ╱────┴────╲       │
              [GERDA]_F geküßt zu haben   bereue
               Gerda    kissed  to  have   regret
```

Again, the meaning of (39) can be derived strictly compositionally.

(40) $\llbracket VP^2 \rrbracket$ = the property of regretting that one kissed Gerda

$\llbracket VP^2 \rrbracket^f$ = the set of properties p, such that p=to regret to have kissed some alternative to Gerda

$\llbracket VP^1 \rrbracket$ = the property (of regretting that one kissed Gerda and) of not regretting to have kissed any alternative to Gerda

Note that neither (37) nor (39) require the focusing particle or the focused DP to move in order to take the relevant scope position. Notice again that both sentences are string identical. The difference between them lies in the scope of the particle, not in the focus.

We now return to the examples with extraposition. Remember that these sentences lack the wide scope reading. How can the *in situ* theory account for this fact? Above we claimed that in order to get the wide scope reading in (39) or (33.b), the focusing particle *only* has to c-command the matrix verb at s-structure. This certainly cannot be the case in (41). *Only* is adjoined to the VP of the embedded extraposed clause. Hence, it cannot take scope over the matrix verb. The missing wide scope reading thus follows without any further assumptions.

(41)

```
                              IP
                       ╱              ╲
                    IP                  CP₁
                ╱      ╲          ╱──────┴──────╲
             ich        I'       nur [GERDA]_F geküßt zu haben
              I      ╱      ╲     only Gerda    kissed  to have
                   VP        I
                   t₁      bereue
                           regret
```

$\llbracket VP \rrbracket$ = $\llbracket VP^1 \rrbracket$ in (37): the property of regretting that one kissed (Gerda and) no alternative to Gerda

'I regret to only have kissed GERDA.'

To sum up this section, we have shown that there is an alternative to LF raising of *only DP* in German, namely the possibility of an *in situ* interpretation of the focusing particle. Exploiting the peculiarities of the German OV-structure, we accounted for the narrow and wide scope readings in (33.a) and (33.b) and also for the lack of the latter with extraposition without the assumption of LF movement. Therefore, data around 'Taglicht-sentences' do not

bear on the issue of whether or not PRT+DP occurs in German.[11]

Appendix

The heart of the analysis proposed here is that the scope ambiguities found with German focus particles depend on the particle's adjunction site. Given the German OV-structure, we showed that the ambiguity is in fact an s-structural one. Our theory doesn't say anything about English, although English exhibits a similar kind of ambiguity. A theory that bans *only+DP* in general, and hence a further alternative to LF-raising of *only DP* is proposed in Kayne 1998.[12] Kayne analyzes a variety of different instances of scope ambiguities as resulting from various steps of exclusively overt movement. The discussion includes ambiguities of focus particles of the type found in (30) and (33). The central claim is similar to our proposal for German: *only* is an exclusively adverbial particle, and the ambiguity arises from a different (merging) position of the focus particle rather than from QR. In the wide scope reading, PRT is merged with VP in the matrix sentence, in the narrow scope reading it is merged into the embedded clause. Hence there is no *only DP* constituent. The lack of the wide scope reading in the German example (34) follows from the fact that the particle cannot be analyzed as being part of the matrix clause, it necessarily belongs to the extraposed embedded clause. In all these respects Kayne's analysis converges with the one proposed in Büring & Hartmann (1995) and in the present paper.

The pertinent scope ambiguities in VO-languages like English cannot be read from the surface structure directly, which led to the assumption of LF-movement. Kayne's proposal extends to such cases without invoking covert movement. The derivation of the different readings instead involves an excessive amount of -- mostly vacuous -- movement operations. This is illustrated for the English example (30), repeated here.

(42)   They were advised to play only Rock'n Roll.

The following steps -- which we will refrain from trying to motivate -- are necessary to derive (42). In order to get the wide scope reading, *only* is merged into the matrix clause ((43.a)). PRT then attracts the focus constituent to its specifier ((43.b)). Subsequently, the focus particle, which is the carrier of a "word order feature", is raised to the respective head for feature checking ((43.c)). Finally, VP preposes ((43.d)).

(43)   a.   They were only [$_{VP}$ advised to play Rock'n Roll].
        b.   They were [Rock'n Roll]$_1$ only [$_{VP}$ advised to play t_1].
        c.   They were only$_2$ [Rock'n Roll]$_1$ t_2 [$_{VP}$ advised to play t_1].
        d.   They were [$_{VP}$ advised to play t_1]$_3$ only$_2$ [Rock'n Roll]$_1$ t_2 t_3.

The narrow scope interpretation is derived from adjoining PRT to the embedded VP. The derivation is given step by step in (44).

---

(44)   a.   They were advised to only [$_{VP}$ play Rock'n Roll].
           b.   They were advised to [Rock'n Roll]$_1$ only [$_{VP}$ play t_1]. (focus attraction)
           c.   They were advised to only$_2$ [Rock'n Roll]$_1$ t_2 [$_{VP}$ play t_1]. (PRT movement)
           d.   They were advised to [$_{VP}$ play t_1]$_3$ only$_2$ [Rock'n Roll]$_1$ t_2 t_3. (VP preposing)

"Focus attraction" and "particle movement" are also involved in Kayne's derivation of the German data, though mostly string vacuously. While we think that extending the general line of argument pursued here to English is tempting and may help shed some light on the parallels noted in Bayer 1996 and our note 17, we feel a certain concern about the loss in predictive force that the unrestricted nature of movement operations assumed in Kayne 1998 brings along with it (cf. Büring & Hartmann 1997). A more detailed comparison of the two approaches to the German data has to await a later occasion.

4. Reconstruction

So far, we have seen that banning PRT+DP combinations in German explains a number of distributional facts, in particular the absence of PRT within DPs and PPs; furthermore the correct interpretation for all the attested cases can be derived using adverbial PRT. We also showed that arguments favoring LF movement of PRT+DP do not stand closer scrutiny. In this section, we will show that PRT+DP cannot undergo reconstruction at LF, even where DP alone clearly can. We present a counterpart argument to that discussed in the preceding section. While there is no compelling evidence to assume QR in German, it has been observed that topicalized DPs show reconstruction effects. This is illustrated in (45): In (45.a) the indefinite object *einen Fehler*, 'one mistake', has been topicalized; yet on one reading of the sentence (in fact the predominant one), *einen Fehler* takes scope below the quantificational subject *jeder*, 'everyone'; so the sentence means 'Presumably everyone made some mistake'. This is standardly taken to show that the object can reconstruct to its base position, which is below the subject position, indicated by the trace in (45.a), an analysis which we adopt here. In (45.b), the pronoun *seine*, 'his', in the topicalized object DP is bound by the subject quantifier, yielding a reading according to which every man respects his own wife.

(45)   a.   Einen Fehler hat vermutlich jeder *t*   gemacht.
                 a-ACC mistake has presumably everyone-NOM made
                 'Presumably, everyone made a mistake.' (amb.)
           b.   Seine Frau respektiert jeder   Mann *t*.
                 his   wife respects   every-NOM man
                 'Every man respects his wife.' (amb.)

Let us now turn to cases with PRT in sentence initial position:

(46)   a.   Nur Maria liebt jeder.
                 only M.   loves everyone-NOM
                 'Only Mary is loved by everyone.'
                 NOT: 'Everyone loves only Mary.'
           a.'   Jeder liebt nur Maria.

    b.   Nur das Abstract hat jeder   gelesen.
              only the abstract has everyone-NOM read
              'Only the abstract was read by everyone.'
              NOT: 'Everyone read only the abstract.'
    b'   Jeder hat nur das Abstract gelesen.

Very clearly, these sentences do only have an interpretation in which the PRT has scope higher than the subject quantifier, witness the English glosses. (To express a reading according to which Mary is the only one loved at all, and noone read anything but the abstract, the primed sentences, with the subject overtly c-commanding the PRT must be used.)

        We take these data to show that the particle is in fact attached to CP rather than to the DP in SpecC. Accordingly, even if the DP is reconstructed to its base position analogously to the cases in (45), the particle remains adjoined to CP, where it inevitably gets wide scope. Note that a PRT+DP theory would straightfowardly predict the existence of the unattested readings, allowing a derivation as in (47.a).

(47)   a.   PRT+DP derivation, yielding the unattested reading
              SS: PRT+DP C^0 Subj. *t* V
              LF: ___ C^0 Subj. PRT+DP V
    b.   PRT+CP derivation, yielding the correct reading
              SS: PRT+[$_{CP}$ DP C^0 Subj. *t* V]
              LF: PRT+[$_{CP}$ ___ C^0 Subj. DP V]

The force of the argument becomes even stronger if we note that two alternative explanations are not viable. For one thing, it cannot be argued that PRTs for unknown reasons never undergo reconstruction. To see this it is easiest to look at the complex particle *auch nur*, lit. 'also only', which means the same as *even* in negative context. That is, *auch nur* is a negative polarity item (NPI), as illustrated in (48.a).

(48)   a.   Es fiel *niemandem* leicht, *auch nur* SPANISCH zu sprechen.
              it fell nobody   easy   even only Spanish   to speak
    b. *   Es fiel uns leicht, *auch nur* SPANISCH zu sprechen.
              it fell us easy   even only Spanish   to speak
    c.   Es fiel uns leicht, *nur* SPANISCH zu sprechen.
              it fell us easy   only Spanish   to speak

              'We/nobody found it easy to speak even/only Spanish.'

Now, as (49) below shows, *auch nur* can appear clause-initially with a topicalized infinitival clause -- (49.a) --, but not with a topicalized DP -- (49.b) (even though topicalization out of an infinitival object clause is otherwise unobjectionable -- (49.c)).

(49)   a.   [PRO auch nur Spanisch zu sprechen] fiel niemandem *t* leicht
                  even only Spanish to speak   fell nobody   easy
    b. *   auch nur [Spanisch] fiel niemandem *t* zu sprechen leicht
               even only Spanish fell nobody   to speak   easy

c. [Spanisch] fiel niemandem *t* zu sprechen leicht.
    Spanish   fell nobody   to speak   easy

    'Nobody found it easy to speak even Spanish.'

These data show that PRT like *auch nur* can undergo reconstruction, if they are part of the moved constituent, as in (49.a) with the entire clause topicalized. In (49.b) however, PRT cannot reconstruct, simply because it is not part of the moved constituent to begin with.[13]

For another thing it can even be shown that the topicalized constituent can undergo reconstruction while the clause initial PRT must stay behind. This is illustrated in (50) and (51). In (50) we find the sequence 'PRT Obj.-DP' in clause initial position. As noted before, a construal by which the PRT reconstructs under the subject position is not available here -- (50.a). Note, however, that the DP itself can be reconstructed, so that the pronoun can be bound by the subject quantifier, yielding LF (50.b). Such disjoint scope would be completely unexpected given a PRT+DP theory (let alone its obligatoriness).

(50) Nur ein Bild   von seiner FRAU besitzt   jeder Mann *t*.
      only a picture of his   wife   possesses every man
      a. * LF: ___ possesses every man$_i$ [only a picture of his$_i$ wife]
            'Every man only possesses a picture of his wife.'
      b.   LF: only ___ possesses every man$_i$ [a picture of his$_i$ wife]
            'The only person every man possesses a picture of is his wife.'[14]

The same point is illustrated in (51), where we topicalized a DP with a relative clause containing an NPI (witness the contrast between *nobody* and *somebody*). Again, the DP has to reconstruct in order for the NPI to get into the scope of the negative subject. Yet the only

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[13] In case the PRT is not an NPI, the same structural contrast manifests itself. Thus (i) is ambiguous between the two structures indicated in (a) and (b) below it. While only the (b) structure (with subsequent reconstruction of the infinitival CP) was permissible with an NPI PRT, both (a) and (b) are licit with *nur*, yielding two readings. Sentence (ii), however, is not ambiguous: PRT can only be attached to CP, not to DP. Again, assuming that PRT+DP is generally permitted incorrectly predicts one too many structure, i.e. an unattested reading for (ii) and a structure for (49.b) under which it would be grammatical.
(i)   Nur Spanisch zu sprechen fiel uns leicht.
      (a)   Nur [[PRO Spanisch zu sprechen] fiel uns leicht].
            It was only easy for us to speak Spanish.
      (b)   [[PRO Nur Spanisch zu sprechen] fiel uns leicht].
            It was easy for us to only speak Spanish.
(ii) Nur Spanisch fiel uns zu sprechen leicht.
      (a)   Nur [Spanisch fiel uns [PRO *t* zu sprechen] leicht].
            It was only easy for us to speak Spanish.
      (b) * [[Nur Spanisch] fiel uns [PRO *t* zu sprechen] leicht].
            NOT: It was easy for us to only speak Spanish.

[14] This example contains enough remarkable features to deserve a paper of its own, most of them, however, orthogonal to the issue at hand. *Seiner Frau*, 'his wife', is focus, and ⟦his wife⟧^{f} must range over (something equivalent to) skolem functions from individuals to individuals. In semi-technical parlance the sentence means
      (i)   the only individual-valued function f, such that every man x possesses a picture of f(x) is the wife-function
The non-attested PRT-reconstruction reading would be
      (ii) for every man x, the only individual-valued function f, such that x possesses a picture of f(x) is the wife-function
(i) but not (ii) is compatible with every man possessing more than one picture. See Jacobson 1994 and Sharvit 1997 for discussion of such functional readings, and Krifka 1992 for the technical machinery needed to make this work in a framework with free variables.

reading for the sentence is one where the PRT retains its wide scope.

(51)   Nur die Hoffnung, dass wir je   wieder gewinnen
           only the hope   *that we ever again win*
           hat niemand/*jemand t_{NP} behalten.
           *has nobody/*somebody   retained*
        a.   LF: only ___ has nobody retained [the hope that we'll *ever* win again]
                'The only thing nobody retained was the hope that we ever win again.'
        b. *   LF: ___ has nobody retained [only the hope that we'll *ever* win again]
                'Nobody retained only the hope that we ever win again.'

All of these cases follow straightforwardly from the assumption that PRT is adjoined to the matrix CP, and never to the topicalized DP. Therefore, the matter of DP reconstruction is completely independent of PRT's scope, the latter being restricted to its surface position.

5. CP complements

In this section, we will extend our database to CP complements in addition to DP complements. We will see that 'PRT CP' does not form a constituent any more than 'PRT DP' does. This will lead to a reconception of the reason why PRT+DP is excluded.

We start by observing that by the same tests applied to 'PRT DP' initial constructions in the last section, 'PRT CP' initial constructions need to be analyzed as involving attachment of PRT to the matrix clause. First, they only display a wide scope reading for the PRT:

(52)   [nur [$_{CP}$ dass MARIA Hans geküßt hat] wußten wir [$_{VP}$ t_{CP} t_v]]
         only   that Maria Hans kissed has knew   we
        a.   LF1: only [$_{CP}$ that Maria...] knew we t_{CP}
                'The only thing we knew is that MARIA kissed Hans.'
        b. *   LF2: ___ knew we [only that Maria...]
                NOT: 'We knew that only MARIA kissed Hans.'

The absence of (52.b) would follow if we assumed that the embedded CP cannot be the adjunction site for PRT to begin with.[15]
      The parallelism to the DP case extends to cases where the complement CP is forced to undergo reconstruction: PRT retains wide scope. This is demonstrated in (53), where the NPI needs to be licensed by the subject, and (54), where a pronoun in the complement clause is bound by the subject.

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[15] In fact, the scoping facts are hard to explain under the assumption that PRT is adjoined to the embedded CP -- unlike in the case of 'PRT DP'. Interpreting CP as a set of worlds, (52) would be predicted to mean the same as (i).
        (i)   We know that only MARIA kissed Hans.
To get the correct interpretation one would have to assume that sentences are obligatorily type-lifted to a semantic functor of e.g. type $<<st,et>,et>$ (for example $\lambda p \lambda x.p(^\wedge[kissed(hans)(mary)])(x)$). However, this interpretation also predicts obligatory semantic reconstruction of both CP and PRT, an unwanted result as we will demonstrate.

(53) Nur [dass wir je   wieder gewinnen]$_1$ wagt niemand zu t_1 hoffen.
      only that we ever again win   dares nobody to   hope
      a.   LF: only ___ dares nobody to hope [that we'll *ever* win again]
            'The only thing nobody dares to hope is that we ever win again.'
      b. * LF: ___ dares nobody to hope [only that we'll ever win again]
            'Nobody dares to only hope that we ever win again.'

(54) Nur [dass er$_i$ Marihuana raucht]$_1$ versucht jeder$_i$ zu t_1 verheimlichen.
      only that he Marihuana smokes   tries   everybody to   hide
      a.   LF: only ___ tries everbody$_i$ PRO to [that he$_i$ marihuana smokes] hide
            'The only thing that everybody tries to hide is that they smoke marihuana.'
      b. * LF: ___ tries everybody$_i$ PRO to [only that he$_i$ marihuana smokes] hide
            'Everybody tries to only hide that they smoke marihuana.'

We conclude that even though the complement CP can -- and sometimes must -- undergo reconstruction, the PRT cannot. Evidently, it cannot be attached to the embedded CP, just as it cannot be attached to a DP.

This, however, is not expected given what we said so far. After all, CP is an Extended Projection of V, to which attachment is allowed. What is more, the pertinent restriction cannot be expressed in terms of syntactic category at all. If we tried to block LFs such as (52.b), (53.b) and (54.b) by prohibiting adjunction to CP in general, we would lose along with them the LFs in (52.a), (53.a) and (54.a), where PRT is attached to the matrix CP, leaving *no* permitted structure for those sentences.

This apparent dilemma, however, leads us straight to a significant change in the theory. We propose that the prohibition observable here is in fact one against adjunction to arguments. This is formulated in the revised (55.c).

(55) The Particle Theory (final version)
      a.   PRT must precede and c-command the focus.
      b.   The Later the Better Principle (LATE):
            PRT cannot attach to a node α in an extended projection EP if it could adjoin to some β in the same EP where it would be later (= further to the right) and still meet (55.a).
      c.   PRT adjoins to maximal non-arguments only.

The prohibition of adjunction to arguments has first been proposed in Chomsky 1986 for adjunction in the process of movement. McCloskey 1998 presents a detailed study in which he shows that it should also hold of base generated adjunction.[16]

The crucial difference between attachment to matrix CPs and subordinate CPs then, is that only the latter are arguments. Therefore, attachment to the root CP is possible, whereas attachment to XPs in SpecC, including CPs in SpecC, is impossible if XP is an argument.[17]

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[16] As a reviewer points out, this generalization of the prohibition against adjunction to arguments implies that appositive modifiers to argument DPs must be analyzed to be DP-internal rather than DP-adjoined.

[17] English seems to obey the same prohibition against adjunction of PRT to argument clauses. Adjunction to DP-internal CPs is ungrammatical, as shown by (i) and (ii):
      (i) *   The fact only that JOHN came...

Evidently, reducing the PRT distribution to (55) yields a number of new predictions w.r.t. non-arguments. While DPs in German seem to be restricted to argument positions (but see below), CPs should show differences depending on whether they are arguments or adjuncts. Before we turn to these, however, we want to explore a number of further consequences following from the hypothesis that argument CPs cannot be adjoined to.

First note that while CPs following the finite verb in C^0 (occupying the so-called 'Mittelfeld') are often preceded by PRTs, these cases can be reanalyzed along exactly the same line as those of 'PRT DP' in section 2 above, including the remarks about the semantics made there. That is, in all those cases we can assume that PRT is attached to VP or IP. Second, however, just as with DPs it can be observed that unambiguous cases of PRT+CP are ungrammatical. Thus, [$_{DP}$ N PRT CP] is ungrammatical -- (56.a) -- as is [$_{AP}$ A PRT CP] -- (56.b) -- and [$_{PP}$ P PRT CP] (as pointed out by a reviewer) -- (56.c):

(56)   a. *   [$_{DP}$ die Behauptung [nur [$_{CP}$ dass Martha gekommen ist]]]
            the claim   only   that Martha come   is
         b. *   Ich bin [$_{AP}$ froh [nur [$_{CP}$ dass Martha gekommen ist]]].
            I   am   glad only   that Martha come   is
         c. *   Sie ging [$_{PP}$ ohne   [nur [$_{CP}$ dass ich wusste, warum]]]
            she left   without only   that I   knew   why

All these cases follow straightforwardly assuming that CP here is an argument of N, A, and P respectively.

Third, as already noted by Jacobs 1983, prohibiting PRTs adjoined to argument CPs provides the key to solving a notorious problem of German syntax, namely that 'PRT CP' sequences are systematically excluded in extraposed position.

(57)   SpecC C^0 [$_{IP}$ V   ]

	SpecC	C^0	[$_{IP}$	V		
a.	*nur dass* sie kommt	habe	ich	gesagt		
b.	ich	habe	*nur dass* sie kommt	gesagt		
c. *	ich	habe		gesagt	*nur dass* sie kommt	
	I	*have*		*said*	*only that she comes*	

We argue that *nur* in (57.a) and (57.b) is attached to the matrix CP and VP, respectively, i.e. to an EVP of the matrix V. No such analysis is tenable for (57.c): If the particle adjoined to the extraposed CP it would violate (55.c) by adjoining to an argument. If it right-adjoined to

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(ii)*   The question only who LOVES her...
On the face of it, examples like (iii) show adjunction to a sentential object.
     (iii)   John said only that Peter LOVES Mary.
It may be argued, however, that (iii) should rather be analyzed as right-adjunction of *only* to VP as in (iv) (thanks to G.K. Pullum for pulling this and 68 similar examples from the 87/9 Wall Street Journal corpus for us), combined with CP extraposition.
     (iv)   Bank America is believed to have received more than 40 inquiries since it decided to sell the
                unit last November, although it chose to deal seriously with Mr. Schwab only.
This analysis gains some plausibility from the fact that the VP PRT CP pattern does not occur with complementizer-less CPs, which are known not to extrapose:
     (v)*   John said only Peter LOVES Mary.
Clearly, right-adjunction of PRT is not an option for German. Thus, (56.b) and (57.c) below cannot analyzed in the same way.

some matrix EVP, it would fail to c-command the focus. Therefore, (57.c) is automatically excluded, once we assume that adjunction to the argument CP is not an option.

Note that we have not only derived the puzzling distribution of 'PRT CP' sequences now. The latter findings also provide us with an unambiguous position to tell whether something is a constituent or not (given that the standard position, SpecC, fails to provide such a litmus test given our assumptions): A 'PRT XP' sequence in extraposed position can only be an instance of PRT adjoined to XP. We are now in a position to check a further prediction made by (55.c). The prediction is that only non-arguments can be preceded by a PRT if extraposed.

Unfortunately, DPs do not extrapose in German, but CPs do (we'll deal with PPs in section 6 below). We already saw in (57.c) that argument CPs do not allow PRT in extraposed position. However, just as predicted, adjunct CPs do allow PRT if extraposed, as shown in (58) ((58.d) is from Bayer (1996)).[18]

(58)   a.   Karl hat sein Fenster mit Styropor verklebt, nur damit er Ruhe hat.
            Karl has his window with styropore glued only so-as he peace has
            'K. has glued styropore to his windows only so as to have a bit of peace.'
       b.   Peter will ihm nicht die Hand geben, sogar nachdem er sich entschuldigt
            Peter wants him not the hand give even after he self apologized
            hat.
            hat
            'Peter won't shake his hand even after he apologized.'
       c.   Maria will kommen, auch wenn sie nicht eingeladen ist.
            Maria wants come even if she not invited is
            'Maria wants to come, even if she is not invited.'
       d.   ...weil Hans hereingekommen wäre, nur wenn alle geschlafen hätten.
            ...bec. Hans entered had only if all sleeped had
            '...because Hans would have entered only if everyone had been asleep.'

Summing up this section, we started out by showing that CP arguments behave just like DP arguments in that PRTs cannot occur with them inside DPs, APs, and PPs, and in that PRT preceding CPs cannot undergo reconstruction with them, even if the CP (which contains the focus) can be shown to do so.

We proposed to generalize over both cases by alluding to a general ban against adjunction to arguments as proposed by Chomsky 1986. In addition to deriving the so far stipulated prohibitions on more principled grounds, it turned out to derive the right distinction between argument CPs and adjunct CPs, and, perhaps most importantly, derive the general ban on 'PRT CP' sequences in extraposed position, as far as argument clauses are concerned.

As a last remark we want to point out that taking CP-complements into consideration also sheds a new light on the verb second issue. The issue, recall, is that adjunction of PRT to CP creates structures in which more than one constituent precedes the finite verb in C^0. A disadvantage of allowing this is that one can no longer guarantee the otherwise strict verb-second nature of German by stipulating a general ban against adjunction to CP; rather, the ban would be one against adjunction of some elements, but not others (in particular not

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[18] It is, however, impossible to adjoin PRT to relative clauses, be they extraposed or not. We do not have an explanation for that fact. It is interesting, however, that McCloskey 1998 finds that relative clauses in English, too, do not allow for adjunction.

particles), to CP. We believe that much of the skepticism against Jacobs' 1983 original proposal is fueled by considerations along these lines. Against this background consider (59):

(59)   Nur um welche Zeit wir gegangen sind verraten wir nicht.
       only at which time we left   are tell   we not
       'The only thing we don't tell is at what time we left.'

Here we have a verb second clause with initial PRT and an embedded *wh*-interrogative clause in the matrix SpecC. According to our proposal, PRT must be adjoined to the matrix CP, as in (60.a).

(60)   a.   PRT+$[_{CP}$ $[_{CP*}$ wh C^0 ...] C^0 ...]
       b. $[_{CP}$ PRT+$[_{CP*}$ wh C^0 ...] C^0 ...]

The only conceivable alternative analysis would have PRT adjoined to the embedded question in SpecC, as in (60.b). But in (60.b), too, PRT is adjoined to a CP (we deliberately chose an example in which the *wh*-phrase, being a PP, doubtlessly occupies SpecC). In other words, there is no analysis of sentences like (59) that does not invoke adjunction to CP; on either account, adjunction of PRTs must be allowed. The choice then is between allowing it to non-argument CPs only, as we propose, or to non-root clauses only, as an alternative proposal would presumably have it. It should be obvious that neither solution is *a priori* simpler than the other. In particular, both have to allow adjunction to CP for PRTs (and only them).

On our account, the only additional restriction is the independently needed prohibition against adjunction to arguments. The alternative line would have to invoke an explicit prohibition against adjunction of PRT to root CPs, which, as far as we can see, lacks independent motivation (and would furthermore be a curious instance of a restriction which regards root-clauses only; usually, embedded clauses are assumed to be the more restricted ones, a generalization first observed in Ross' 1973 aptly named *Penthouse Principle*).

In sum, then, the fact that it predicts verb-third main clauses for German cannot be held as a theoretical argument against the present analysis. Any analysis will have to allow for adjunction of PRTs to CP. None of them offers an explanation for why this option is restricted to PRTs. We submit that the present proposal is preferable because it makes the more accurate predictions w.r.t. various phenomena, and because it requires less additional stipulations on top of allowing PRT to adjoin to CP.

Appendix: Alternatives?

Let us briefly ask whether there is a way to reconcile the facts discussed in this section with an analysis which preserves the strict verb second property for root clauses by assuming PRT to be adjoined to the element in SpecC, call it XP. We believe that such a theory would have to account for two core facts: i) PRT always takes scope over the matrix verb, even though it doesn't c-command it; ii) PRT cannot undergo reconstruction even though XP can.

While i) could be handled by changing the semantic composition in the way sketched in note 15 above, it seems that the only way to meet ii) at the same time is to assume that the sentences have essentially the structure we assume them to have at s-structure, but only at LF. Such an analysis, let us call it the LF theory, is proposed in Bayer 1990, 1996. He assumes that the PRT starts out adjoined to the embedded CP in a sentence like (53), repeated below as (61). PRT then obligatorily LF-moves to a position from which it c-commands the verb (a.k.a. a position immediately dominated by an EVP), in which it is

interpreted. Bayer calls this position SpecPrtP, the specifier of a phrase called PrtP which sits within the IP system. By assumption, the movement is triggered by a requirement on the side of PRT to be in a Spec/Head relation with a PRT^0 at LF. It is this position PRT gets interpreted in, accounting for property (i).

Evidently, for the case of PRT+CP in sentence initial position, the movement of PRT must follow reconstruction of the PRT+CP complex to a position lower than SpecPRT. So it doesn't follow immediately that PRT cannot undergo reconstruction (property (ii)). Let us assume, however, that the landing site of PRT is higher than the subject, such that it essentially scopes as if it was adjoined to CP, even though it isn't. Then a sentence like (53), repeated here, would get the right interpretation.

(61)   Nur dass wir je   wieder gewinnen wagt niemand zu hoffen.
        only that we ever again win   dares nobody to hope
        LF: ___ dares *only* nobody [t_{only} that we'll *ever* win again] to hope
            'The only thing nobody dares to hope is that we ever win again.'

By the same token, however, we expect PRT to outscope the subject if the whole PRT+CP complex hasn't been moved in the first place. This however is wrong:

(62)   Hier wagt niemand nur dass wir je   wieder gewinnen zu hoffen.
        here dares nobody only that we ever again win   to hope
        a.   'Here, nobody dares to only hope that we'll ever win again.'
        b. *   'Here, the only thing nobody dares to hope is that we ever win again.'

Sentence (62) is not easy to understand, but the reading it turns out to have is (62.a). Under no circumstances can it be interpreted to mean the same as (61), i.e. (62.b).

A second problem is that it doesn't follow from the LF theory that PRT has to take widest scope if there are embedded SpecPrtP positions for it to move to. If PrtP is a regular part of the EVP we expect there to be two such positions in a sentence like (61), whose structure -- as the LF theory would have it -- we show in (63), where ___ marks the two available SpecPrtP positions.

(63)
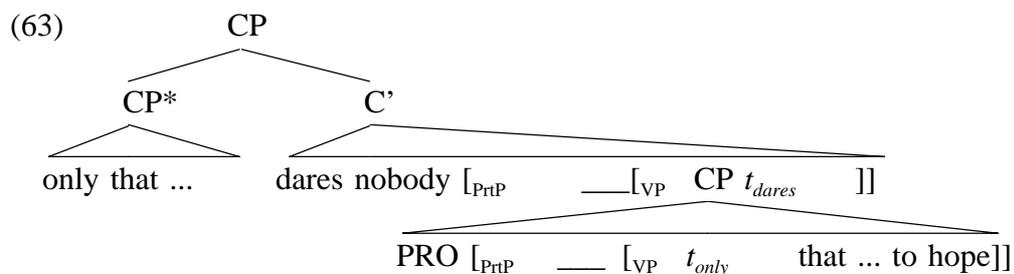
Only the higher SpecPrtP will provide the empirically correct scope position for PRT in (61), while the lower will again derive reading (62.a). Thus PRT must LF-move to that position either from its embedded base position (indicated by the trace in (63)) or perhaps, more locally, from an intermediate trace position in the embedded SpecC. Both these movements seem unusual from the standpoint of traditional bounding theory. But most of all, it remains completely unclear what would *force* this movement rather than the apparently straightforward derivation in which PRT ends up in the embedded SpecPrtP, yielding the unattested reading (62.a) for (61).

We do not think that it is impossible to device some mechanism to remedy this in a

Bayer-type LF theory. At this point we conclude that the theory as it stands does not derive property (ii), but more likely something like the opposite. On a more general level we believe that the LF theory, as presumably any approach along these lines, suffers from the fact that it will always have to ensure that alleged LF movements of PRTs never change the scope relations PRT is engaged in (a situation quite opposite to the ones that usually support arguments for LF movement). We think that the easiest way to derive surface scope is to assume surface interpretation. In the absence of any syntactic or semantic argument to the contrary we believe this simplicity to be an additional virtue of the theory advocated here.

6. Other Occurrences of PRT

In this section, we want to look briefly at PRTs occuring in APs, arguing that their behavior parallels that of the adverbial cases discussed so far. What we have kept unmentioned until now is that PRTs can in fact be found within non-verbal constituents, namely APs, as in (64).[19]

(64)   a.   eine nur an Musik interessierte Studentin
                    a   only in music interested   student-FEM
                    'a student interested only in music'
    b.   der sogar mit Karl verfeindete Förster
                    the even with K.   quarreling forest ranger
                    'the forest ranger who is quarreling even with Karl'
    c.   unser auch von Origami begeisterter   Hausmeister
                    our   also of Origami enthusiastic janitor
                    'our janitor who is enthusiastic also about Origami'

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[19] It should be noted that while some simple APs allow for adjunction of PRT as in (i) and (ii), others do not, as (iii), provided by a reviewer, shows:
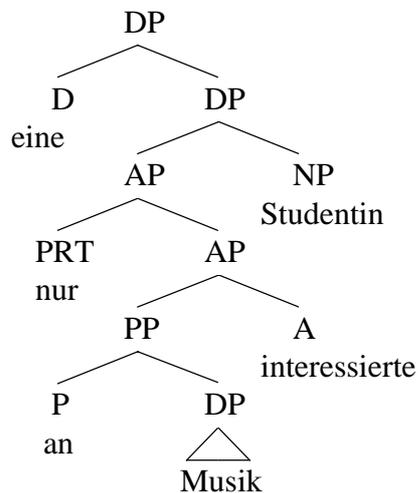   (i)   ein nur mittelmäßiger Student
              an only mediocre   student
    (ii)   eine nur unwesentliche Änderung
              an only inessential   change
    (iii)*   eine nur rote Tasche
              an only red bag
Interestingly, these restrictions are paralleled with VP-adjoined PRT:
    (iv)   Der Student ist nur mittelmäßig.
              the student is only mediocre
    (v)   Die Änderung ist nur unwesentlich.
              the change   is only inessential
    (iv)?* Die Tasche ist nur   rot.
              the bag   is only red
It thus seems that additional semantic restrictions on the scope of PRT are at work here, which we have to leave for further research.

(65)

```
                          DP
                  ┌───────┴───────┐
                  D               DP
                 eine      ┌──────┴──────┐
                          AP             NP
                     ┌────┴────┐      Studentin
                    PRT        AP
                    nur    ┌───┴───┐
                          PP       A
                      ┌───┴───┐  interessierte
                      P       DP
                      an      △
                            Musik
```

Clearly, PRT is part of the DP, as witnessed by the fact that it is 'sandwiched' in between the determiner and the head noun. As we will demonstrate in more detail below, it appears to be adjoined to the AP. This seems expected given the revision proposed in the last section, according to which PRTs cannot just attach to EVPs, but to any non-argument category; clearly AP does not receive a Θ-role, hence is not an argument.

Within the AP, PRT placement follows the same rules seen above, in particular the 'the later the better' principle (which then has to be generalized from extended verbal projections to extended projections in general):

(66) a.   dein mit Inbrunst nur an DICH denkender Wolfgang
           your with ardour   only at you$_F$ thinking   Wolfgang
     b. * dein nur mit Inbrust an DICH denkender Wolfgang
           your only with ardour   at you$_F$ thinking   Wolfgang
           'your Wolfgang, thinking ardously of you only'

With regard to PP arguments to A we can again make a case for the claim that PRT is not adjoined to PP, but AP, paralleling the one about CPs in the last section. First, we note that predicative APs allow for local extraposition of the PP argument to A:

(67) a.   Der Student muß an Kunst interessiert sein.
           the student must in art   interested be
     b.   Der Student muß [[*t* interessiert] *an Kunst*] sein.
           the student must   interested   in arts   be
     c.   [[*t* interessiert] *an Kunst*] sollte   er sein.
              interested   in arts   should he be

The PP *an Kunst*, 'in art', in (67.b) is right-adjoined to the AP. This can be seen more clearly in (67.c), where the entire AP has been topicalized, showing that the 'A PP' sequence is in fact a constituent.[20]

If we now look at predicative APs with preceding PRT, our prediction is that PRT

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[20] We don't want to go into the arguments why we assume PP--A to be the base generated order. Suffice it to say (i) that A--PP is the more restricted pattern, which is impossible in attributive APs; and (ii) that DP arguments to A can only occur pre-adverbially, which would make A and V completely parallel. See also Haegeman 1995 for further arguments in favor of that assumption.

will not be able to undergo extraposition together with the PP. This prediction is born out, as (68) shows.

(68)   a.   ...weil   der Student nur an Kunst interessiert ist
                ...because the student only in art   interested   is
         b.   Nur an Kunst interessiert sollte er sein.
                only in art   interested   should he be
        c. *   Interessiert nur an Kunst sollte er sein.
                interested   only in art   should he be

Given that 'PRT PP' in (68) cannot be a constituent under our analysis in the first place (PP being an argument to A), this again follows: There is no analysis for (68.c) under which *nur* is attached to a non-argument category.

      It should be noted that (68.b) is in fact ambiguous between the structures (69.a) and (69.b).

(69)   a. $[_{CP}$ $[_{AP}$ nur AP] C^0 ...]
         b.   nur $[_{CP}$ AP C^0 ...]

However, the ambiguity is semantically invisible, given that there are no other scope taking elements in the clause. We believe though that the ambiguity can be found in (70). (The readings can be facilitated by different intonations: single (nuclear) stress on *Eiern*, 'eggs', promotes the PRT+CP reading, while nuclear stress within the IP (say on *nicht*, with a secondary stress on *Eiern*) favors the PRT+AP reading.)

(70)   nur mit Eiern belegt schmeckt es nicht so gut.
       only with eggs topped tastes   it not   so good
       a.   nur+AP
              if there are only eggs on it it doesn't taste as good
       b.   nur+CP
              the only way it doesn't taste as good is with eggs on it

(71)   nur mit Eiern belegt ist es nicht
       only with eggs topped is it not
       a.   nur+AP
              it doesn't have only eggs on it
       b.   nur+CP
              the only thing missing are eggs on it

Take (71). As is well known, *nur* presupposes the truth of its complement. Hence a sentence of the structure not(only(P)) implies that P. This is the case in (71.a), where *nur* is reconstructed beneath the negation, yielding the presupposition that there are eggs on it. A sentence of the form only(not(P)) on the other hand will presuppose that not P. This case is the reading in (71.b), which presupposes that it has no eggs on it. Similar remarks apply to (70), which is more complicated in that it is a generic statement: On reading (70.b), PRT has scope over the matrix predicate, but on reading (70.a) is doesn't; different truth conditions result.

In sum, we have shown in this section that the class of categories PRT can attach to is not just verbal projections, but non-argument categories in general (or perhaps [+V] categories).

We further demonstrated that complements to APs behave in interesting ways parallel to CPs in that they cannot carry along the PRT when extraposed, suggesting that they do not form a constituent with them.

Let us add a speculative note to this section: Presumably the analysis of AP attached PRTs can be carried over to numeral expressions, which can be modified by PRT, too:

(72) a.   mit nur EINEM Wagen
              with only ONE   car
      b.   mit nur ZWÖLF Schlägen
              with only TWELVE hits
      c.   in   nur WENIGEN Sekunden
              within only FEW   seconds

On the face of it, all the cases in (72) display adjunction of PRT to argument DPs. Alternatively, however, PRT is attached to AP here as well, provided that we can plausibly analyze numerals and quantifiers such as *wenig*, 'few', as adjectives. As is well-known, these expressions can co-occur with demonstratives and definite determiners.

(73) a.   dieser/der eine Wagen
              this/the   one car
      b.   diese/die zwölf Schläge/wenigen Sekunden
              this/the   twelve hits/few   seconds

Furthermore they show the typical adjectival inflection, including the alternation between weak and strong inflection. Notably, PRT is excluded from cooccuring with elements like definite determiners and demonstratives, which are not adjective-like in any respect. (74.b) is there to show that this restriction is not semantic in nature; it means exactly what (74.a) would mean.

(74) a. *   mit nur diesem/jenem/dem Wagen
             with only this/that/the   car
      b.   nur mit diesem/jenem/dem Wagen

While these cases certainly deserve closer scrutiny, they seem to us to be at least compatible with the generalizations and claims put forward in this paper.

7. Summary

We have presented a theory of focus particle placement in German which accounts for the distributional patterns as well as the semantic properties of constructions involving such particles. The main features of the analysis are:
- German focus particles are maximal projections which can be adjoined to non-argument XPs.
- The placement of the particles w.r.t. the focus is governed by a principle that requires particles to be maximally close to the focus within a given extended projection.

- German focus particles are interpreted in situ. They do not undergo LF-raising or reconstruction on their own.

A number of hitherto unobserved data around reconstruction, NPI licensing and scoping have been presented and shown to support the analysis proposed.

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