Two kinds of factors for ellipsis and copy spellout

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1. Introduction

Language, so the general wisdom goes, is sound with a meaning (or meaning with a sound). From this general conception, much more far-reaching conclusions are drawn:

- If forms map onto meanings, the mapping must be 'seamless' and 'hi-fi', i.e. should map intermediate structures without discontinuities, losses of information, or mismatches, i.e.:

- changes in form reflect changes in meaning, and

- changes in meaning are reflected in concomitant changes in form, and

- syntax is the system that maps the sound and meaning structures onto each other – with no glitches, please.

These assumptions, I think we can agree, are linguistic *pipe dreams*. Ambiguities and re-dundancies have long been recognized as language properties. In my talk, I would also like to point out that various types of discontinuities and redundancies characterize the system of 'grammar' that maps forms onto functions (which, for the record, it still does):

- Section 2 discusses scrambling data in German. It argues against a view explicitly es-poused, e.g., in cartographic analyses which claim that syntax contains a multitude of information structure (IS) features that map forms (prosodic and word order effects) onto functions (discourse-level, information-structuring 'meanings').

- As an alternative to the cartographic framework, I will propose an analysis that:
  - delegates formal and function operations to several different grammar components,
  - thereby minimizing 'core syntax' to truly *structural* phenomena,
  - which means, first and foremost, that IS is denied any direct access to core syntax.
  - IS, I claim influences German word order only indirectly: through influence on prosody,
  - but syntactic and semantic restrictions on word order (partially redundantly) impact word order, too (and to a larger extent than prosody, in fact).

- Section 3 discusses another phenomenon, this time comparing German and English: Sluicing has been 'syntacticized' by Merchant (and many subsequent works), in that el-lipsis fragments are argued to be derived by syntactic movement operations.

  However, in joint work with Dennis Ott, we show that:

  - syntactic accounts run into fatal difficulties with extra-propositional elements,
  - prosodic facts (stress) do not (!) define fragments in German, either, so that
  - IS terms such as 'focus' do not portray possible fragments in German correctly, but
  - 'recoverability from the background' turns out to be relevant property of elided material.

- This shows that discontinuities in the architecture do not seem to cause the form-function mapping to "break up" completely (so language functionality is, thankfully preserved).

- Section 4 does not really conclude.

2. Scrambling in German: PF and LF make syntactic cartography superfluous

Many authors argue that word order in the German *Mittelfeld* (and/or in other Germanic languages) is controlled by information structure (cf., e.g., Lenerz 1977, Höhle 1982, Adger 1993, Meinunger 2000, Molnarfi 2002, Frey 2004):

1. $[_{CP}$ XP V_{+fin} $[_{TP}$ ... $DPs_{-Foc/+Top}$... $[$ (particles) $[_{vP}$ ... $DPs_{\pm Foc, -Top}$...$]]$ $(V_{-fin})]]$
   left bracket   left middle field   right middle field   right bracket

   E.g.: What did Peter do with the children today?

Heute hat	Peter den Kindern	wohl	SCHNAPS	gegeben
today has	*Peter to-the children*	*MP*	*booze_F*	*given_F*

   'Today, Peter probably gave booze to the children'.

- *Foci* are placed towards the end of a sentence (cannot *scramble* to the left middle field)
- *Topics*, on the other hand, scramble (maybe obligatorily, i.e. cannot remain *in-situ* in *v*P)

I would like to suggest that representations of this kind:

- are empirically inadequate (the distribution of foci/given elements is more complex), and
- should be replaced by an *interface-driven architecture* that uses semantic and prosodic factors instead (cf. Struckmeier 2014b for details).

In the following, I will:

- present (very shortly) what the information structural proposals predict, and demonstrate that the predictions are not borne out (sections 2.1 + 2.2);
- demonstrate that factors are at work which are not information structural (section 2.3);
- propose a generative architecture that can handle the facts (2.4), and
- tout the (manifold, great!) advantages of the 'subtractive' approach taken here (2.5).

2.1. Word order factor *stress placement* – not (information structural) *focus*?

Focussed arguments allegedly cannot scramble to the left middle field (e.g., Lenerz 1977):

2. Q: Who did you see?   (*focusses direct object*)
   A: Ich habe wohl [einen Mann]_Foc gesehen.   (*focus ok in-situ*)
         I   have particle a   man   seen
         "I have probably seen a man"

   A':   #Ich habe [einen Mann]_Foc wohl gesehen.   (*scrambling of focus odd*)

Note, now, that only <u>one</u> non-*Given* (*F-marked*, cf. Büring 2006, Schwarzschild 1999) ele-ment receives main stress (marked by CAPitals) in a German sentence. Thus, discourse status (non-*Given*) and prosodic marking (main stress) of *focus* can be *dissociated*. Can *f-marked (discourse-special)* but *un*stressed (*prosodically* non-special) elements scramble?

As it turns out, unstressed, but f-marked arguments can scramble without any difficulty:

3. Q: What did you give to who? *(focusses both objects)*

   A' ? Ich habe [dem Mann]$_F$ [das GELD]$_F$ wohl gegeben
       I   have to-the man   the   money   part given
       "I have probably given the money to the man" *(scrambling stressed DP$_F$ odd)*

   A": Ich habe dem Mann$_F$ wohl das GELD$_F$ gegeben *(unstressed DP$_F$ scrambles ok!)*

Thus, it is *not discourse-new* elements that refuse to scramble: Rather, scrambling should not needlessly move elements *bearing main stress* away from right edge.[1]

2. 2. Better main stress placement to replace topicalization movements?

Topics allegedly scramble in German. Many proposals of this kind fail to define precisely what they consider as *topics*. Laudable exceptions are, a.o., Meinunger 2000 and Frey 2004 (*familiarity/ aboutness* definitions). Topics can *seem* to scramble obligatorily, e.g. in:

4.   {I will tell you something about Fritz:} *(Fritz = topic)*

   ... # Morgen wird wohl eine reiche Dame den Fritz heiraten. *(Fritz odd in-situ?*
        tomorrow will part a   rich   lady   the Fritz marry   Example and judge-
        "Tomorrow, a rich lady will marry Fritz." *ment by Frey 2004)*

If placement of *den Fritz* seems odd[2] – it is for reasons of stress placement, I claim:

• The direct object *den Fritz* cannot receive its regular default stress (since it is *Given*), but
• *reiche Dame/ heiraten* cannot receive stress either, since they are not contrastive foci!
• Therefore, *no* stress placement is really acceptable – which is why the structure is odd.
• Test: Alternative foci (!) resolve problem and allow topics (!) to remain *un*scrambled:

5.   {You know that Fritz could never find a woman who would even only go out with
        him. But let me tell you something new about Fritz now:}
   ... Morgen wird wohl eine reiche Dame den Fritz [HEIraten]$_F$. *(Topic now ok in-situ)*

6.   {Fritz only ever married women who were penniless crooks.
         But let me tell you something new about Fritz now:}
   ... Morgen wird wohl eine [reiche DAme]$_F$ den Fritz heiraten. *(Topic now ok in-situ)*

It seems that prosodic considerations (stress placement in particular) have a considerable influence on word order – which information structural generalizations fail to capture fully.[3]

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[1] Note that the violation is rather mild. Corpus examples for structures of this type exist, and subject ratings for these structures are quite high – probably not what we expect from a syntactic violation! Note also that even stressed, f-marked elements *can* move if required by scope transparency!

[2] Note that many speakers accept the example quite readily – even *if* scrambling is *preferred* in this case. 'Ungrammaticality' or 'inacceptably harsh deviance', etc. are clearly <u>not at issue</u> here.

[3] Similar effects can be demonstrated to hold in languages like Dutch ('pull-type' scrambling) and the Scandinavian languages (object shift). See Struckmeier 2014b for overviews of these related phenomena.

2.2.2. Contrasted elements do not scramble obligatorily either

Contrasted elements (*CEs*) can be marked by a rising intonation contour (*indicated by /SLASH*). However, CEs do *not* have a fixed topological position in German:

7. Der /MANN hat gestern ja NICHT geraucht. *CE in the prefield,...*
    the man   has yesterday part not smoked
    "The man didn't smoke."

8. Gestern hat der /MANN ja NICHT geraucht. *left middle field,...*

9. Gestern hat ja nicht der /MANN geraucht (...sondern die FRAU). *right middle field,...*

10. Ich habe nicht gesagt, dass Du /RAUCHST (... sondern TRINKST) *and post field, too*
    I   have not said   that you smoke,   ... but   drink
    "I didn't say you smoke, but that you drink."

True generalization, however: prosodic rise contour (on CEs) must *linearly precede* a fall contour on some focus exponent: *Bridge contour* has to *ramp /UP*, then *level*, then *FALL.*

2.3. Phonological word order factors
The following sub-sections point out that many word order effects that are allegedly information structural can be captured by purely prosodic means.

2.3.1. Why scramble unstressed non-foci? To build nicer accent domains!

In many cases, information structural explanations assume that functional projections (like *FocP* or *TopP*) trigger scrambling. If scrambling was an obligatory syntactic movement operation, then the following contrasts should be comparable – but they are not:

11.   Q: Who did you give the money to?
    a) A: Ich habe das Geld dem KaSSIERer gegeben. *(Perfect)*
            I   have the money to-the waiter   given
            'I have given the money to the waiter'
    b) A':(?)Ich habe dem KaSSIERer das Geld gegeben. *(Slightly worse[4])*

12. a)   [Peter has not [~~Peter~~ given me the money]] *(Perfect)*
    b)   * [___ has not [Peter given me the money]] *(Slightly worse?)*

I have to agree with Fanselow:

   "The small size of the acceptability difference [in German scrambling] militates
   against the view that [the difference] is caused by the failure of carrying out an
   obligatory movement operation" (2006: 154).

Following Büring (2001), a.o., I propose that the difference may be *prosodic* in nature:

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[4] Some speakers have a clear preference for 11a over 11b, few speakers prefer 11b over 11a, and many speakers (including myself) don't see much of a difference between the two.

Scrambling direct object (*dO*), as in a), renders indirect object (*iO*) final in accent domain (*AD*) – Scrambling yields the "perfect AD" (Büring 2001: 91) in (a).
In (b), the presence of the dO in-situ leads to a "super-big AD" (ibid: 90) in (b):

13. a) ...   x   )iP   b)   (x   )iP
        (x)   (x   )AD   (x   )AD
         dO   iO$_F$ V   iO$_F$ dO V

Therefore, optional scrambling movements can be explained by prosody alone and a syntactic account is inadequate: (11a) quite literally only *sounds* a little better than (11b).

2.3.2. When CEs scramble obligatorily – to keep bridge contour intact

In some cases, CEs indeed seem to scramble obligatorily. This, however, can also be attributed to prosodic requirements. Recall that bridge contours (cf. Büring 1997, Krifka 1998) need to ramp /UP, then level, then FALL – no 'underway contours'! Therefore:

14. a)   ?Weil sie Bücher über Scrambling ja liest   *(cf. Meinunger 2000:*
                                                              DP$_{indef}$ scramble poorly)

    b)   Weil   sie [Bücher über /SCRAMBling]$_{CT}$ ja IMMer$_F$ liest   *(bridge makes*
           because she books   about scrambling   part always reads   scrambling ok)
           'because books about scrambling she ALways reads.'

Since the adverb *immer* precedes *Bücher about Scrambling* in its base position in the *v*P, the contrasted object needs to come to linearly precede the focussed adverb:

15.   ... /DP$_{CT ...}$ Adverb$_{F ...}$ [$_{vP}$ ... D̶P̶$_{CT}$ ...]

Note that the relation is linear, i.e. requires no 'c-command'. Note the structural relations in:

16. weil Peter [$_{DP}$ davon, [$_{CP}$ dass seine /MUTter kommt]] ja NICHTS$_F$ gesagt hat
     because Peter of-it   that his mother comes   part nothing said has
     'because Peter did /NOT mention that his MOTHer is coming' (...but said sth. else)

2.3.3. When CEs scramble *almost* obligatorily – to prevent local stress clashes
A purely prosodic explanation is substantiated because the *phonological weight* of CEs often predicts whether they remain in the right middle field – or come to precede particles:

17. {Stefanie is mad at her friends, Jan and Peter Brockmüller, and Susie Brackmeier: She has invited them to her party, but believes that nobody will come. But she is wrong...}

    a)   weil /JAN **doch** KOMMT\.   *(contrasted element scrambles)*
           since Jan part is-coming
           'since Jan will actually show up'

    b)   # weil **doch** /JAN KOMMT\.   *(odd: rise+fall contour together*
                                                  sound rather like narrow focus!)

    c)   weil **doch** Jan /BROCKmüller KOMMT\.   *(longer (!) object ok in-situ)*

2.4. Towards a grammatical architecture that can handle semantics and prosody

Information structural functional projections in the middle field are circular as explanatory devices and *empirically inadequate*. Prosody is behind many word order effects.[5] But note:

- German is a *scope-transparent* language (cf. Frey 1993, Bobaljik 2002, Bobaljik & Wurmbrand 2012, a.o.): Scope-taking elements move *overtly* to indicate scopal properties. Also, scrambling feeds binding effects (cf. Grewendorf 1988, Müller & Sternefeld 1994). If scrambling was *purely phonological*, there should not be any *semantic* effects.

- Post-syntactic re-ordering operation can never produce orders that *could not be derived syntactically* (cf. Keller 2000) – even if the best stress placement of all results:

18. Q: Who did you see?
    A: * Ich habe gesehen den MANN.   *(cf. P-movement, Zubizaretta 1998)*
           I   have seen   the man
           'I have seen the man.' (intended, but position following V *unavailable for DPs*)

It seems, then, that we have reached an impasse:

- Syntactic and semantic *restrictions* of scrambling suggest that it is syntactic, but...
- *triggers* for word order changes are often prosodic, but...
- prosody should not take control in core syntax (*no look-ahead*)! So what now?

In Struckmeier (2014), I propose derivations that *subtract*, rather than *add* word orders:

- Since syntactical rules are respected by scrambling, syntax is responsible for generating *all* possible sequences – there are no 'phonological movements' for German scrambling.
- Semantic effects license movement (*effect on outcome*, Chomsky 1999), e.g., in:

19.   [QP$_i$ [Neg [$_{vP}$ DP QP$_i$ V] Aux]]]]   *(LF: QP scopes over negation)*

- German is *scope-transparent*, so low copies of EoO-moved phrases must not *spell out*:

20.   [QP$_i$ [Neg [$_{vP}$ DP Q̶P̶$_i$ V] Aux]]]]   *(PF: LF-scopes are reflected)*

- Following Biberauer / Richards[6] (2006), assume that vP (!) moves to SpecTP in German:

21. *Syntax:* Adv   Aux [$_{TP}$ [$_{vP}$ DP QP V] [QP   [Neg [$_{vP}$ DP QP V] Aux]]]]]
    PF: Adv   Aux [$_{TP}$ [$_{vP}$ DP Q̶P̶ V̶] [QP   [Neg [$_{vP}$ D̶P̶ Q̶P̶ V] A̶u̶x̶]]]]]

    E.g.: Dann   würden   die   alle Patienten nicht mehr   heilen
             then   would   they   all patients not anymore   heal
             'in that case, for all patients, they would not heal them' *(∀¬)*

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[5] Note also that IS does *not*, in turn, control prosodic or semantic scrambling triggers directly.

[6] Note that vP-TP movement can be derived from linearization principles, such as the *Final-over-Final* constraint, or by the assumption of special labelling requirements for vPs below particles (cf. Struckmeier, forthcoming). However, for brevity's sake, these purely syntax-internal questions are left out here.

What about the 'prosodically driven', i.e. *a*semantic reordering phenomena?

- Arguments inside *vP* embedded too deeply in vP to scope or bind out vP's new position.
- Thus, there are *no* (sic!) semantic *spellout* requirements for *their* position.
- PF can therefore match *spell-out* copies to its *own = prosodic* requirements!

22. weil [$_{vP}$ ~~nur Hoeneß~~ sich /SELBST$_{i,CE}$...] ja [$_{vP}$ nur HOEneß$_i$ ~~sich selbst~~ angezeigt] hat
     as   himself   part only Hoeneß   accused   has
     'because, as for accusing him/SELF, only HOEneß did that'   *(bindee precedes binder!)*

23. weil [$_{TP}$ [$_{vP}$ ein einzelner Arzt /ALLen Patienten...] ja [NICHT [$_{vP}$ ... helfen]] kann]
     since   a   single doctor all   patients   part not   help   can
     'because a single doctor will not be able to help all patients'   *(inverted scope ¬∀ ≠ !)*

- Prosodic spellout requirements explain *connection* between prosody and (salient[7]) *a*semantic interpretations: rises must *spellout* before fall contours:

24. [HOEneß$_F$ sich /SELBST$_{CE}$]...[HOEneß$_F$ ~~sich SELBST~~$_{CE}$ angezeigt] hat   *(*rise > fall)*
     [HOEneß$_F$ ~~sich /SELBST~~$_{CE}$]...[HOEneß$_F$ sich SELBST$_{CE}$ angezeigt] hat   *(*rise > fall)*
     [~~HOEneß~~$_F$ ~~sich /SELBST~~$_{CE}$]...[HOEneß$_F$ sich SELBST$_{CE}$ angezeigt] hat   *(*rise > fall)*
     [~~HOEneß~~$_F$ sich /SELBST$_{CE}$]...[HOEneß$_F$ ~~sich SELBST~~$_{CE}$ angezeigt] hat   *(ok)*

2.5. Advantages of a 'subtractive' approach to free word order phenomena

One reason that IS approaches to word order fail may be more fundamental than their technical implementation, or narrow focus (no pun intended) on IS scrambling triggers – but their general, 'additive' approach to word order variation:

- Since different word orders are associated with different discourse functions, all word orders must be 'triggered' by different IS properties ('forms reflect functions 1:1')
- Thus, for every syntactic word order, different syntactic trigger constellations must be found – and thus, for every word order, a different syntactic derivation is needed.
- In this way, derivation after derivation must be 'added', to cover all observed word orders.

'Subtractive' approaches, on the other hand, handle word order variation in a simpler way:

- Derivations 'subtract' conceivable-but-impossible word orders, *for syntactic reasons*.
- The mapping to the semantics 'rejects' certain structures *for semantic reasons* (and issues ordering statements for the acceptable ones in scope-transparent languages).
- Phonology further restricts the set, implementing prosodic well-formedness principles.
- However, the remaining set of word orders <u>does not have to be a singleton set</u>!
- Rather, non-singleton sets of sentences are predicted to have the same semantics (and acceptability) – explaining the apparent 'optionality' of scrambling in a principled way:

     Forms and functions do not 'match up' in a seamless, biunique, 1:1 fashion.
     There is no lossless, continuous mapping from one interface to the other.
     Discontinuities and mismatches are predicted (and arise, as we have seen).

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[7] Note that, contrary to common belief, rise-marked contrasted elements *can* also move for semantic effect in some cases, cf. Struckmeier 2014b for examples.

The subtractive approach makes a number of predictions that IS proposals cannot make:

- Syntax: The tendency of scrambling (and related phenomena in the West Germanic languages) to preserve base orders of arguments (Putnam 2007) in 'parallel' movements is explained by *no tampering*: vP-internal orders are preserved in the movement of vP:

25. Full DPs: [$_{TP}$ [$_{vP}$ DP$_{Nom}$ DP**$_{Dat}$** DP**$_{Acc}$** V v] (particles) [$_{vP}$ DP$_{Nom}$ DP**$_{Dat}$** DP**$_{Acc}$** V v] T]
     Pronouns: [$_{TP}$ [$_{vP}$ DP$_{Nom}$ DP**$_{Acc}$** DP**$_{Dat}$** V v] (particles) [$_{vP}$ DP$_{Nom}$ DP**$_{Acc}$** DP**$_{Dat}$** V v] T]

- Semantics: EoO-driven movement is explained (by the output relations of scope-taking and/or binding elements, see examples above).
- Syntax-Semantics Mapping: Semantically driven movements explains why and when base order are *not* preserved in German (see examples above).
- Syntax-Semantics Mismatches: Asemantic word order changes are caused by *prosodic spellout* decisions – which are blind to the wants and needs of semantics (see above).
- Syntax-Semantics: No A/A' target positions 'explain' semantic/ asemantic movements (by stipulation): scope and binding effects follow from structural *relations, not positions*.
- Syntax-PF mapping: Connection (matches *and* mismatches) between intonation and (salient[8]) interpretations also derived without much architectural complexity.
- IS - word order: IS effects on word order are re-captured as limited IS effects on prosody:

     - If an IS category can have prosodic effects, it can also affect word order (*foci*, *CEs*).
     - If an IS category cannot affect *prosody*, it can*not* affect word order (*topics*, *antifoci*).

- IS - prosody? Other factors influence prosody, too, and syntactic or semantic principles often overrule prosodic word order effects – explaining 'soft' (= indirect) influence of IS.
- Word order - IS: Elements that are included in vP, but arguably do not serve as topics/ antifoci/..., can appear in middle field, if indeed vP moves there – note *verb* position in:

26. left bracket...........................middle field...right bracket...
     weil [$_{vP}$ der Chef das Produkt er/KLÄRen$_V$] ja wieder mal NICHT [$_{vP}$ ...] wird.
     since   the boss the product explain   particle again once not   will
     'since as for explaining the product, the boss will not do that, once again'

- Typological differences between, e.g., German and English can be tied to lexical and spellout differences, respecting the *strong minimalist thesis*.[9]

2.6 Interim summary for scrambling phenomena

- Keeping IS (and parts of 'scrambling') out of syntax helps (!) explain pertinent facts, and
- extra-syntactic factors are re-integrated into discontinuous, subtractive architecture, and
- grammar-external factors (parsing, pragmatics,...) are fed non-singleton set of sentences to pick *their* preferences from – so neither 'syntax' nor 'the grammar' explain *everything*.

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[8] Remaining question, however: How can "German LF" instruct "German PF" about semantic transparency? Why can "English LF" not signal much about scopes, etc. to "English PF"?

[9] But connection of scrambling with existence of modal particles is skipped here. Ask me in the question period!

3. Sluicing in German and English: Discourse recoverability, not syntax/prosody

Two competing views on the phenomenon of ellipsis: A) ellipsis is an extra-syntactic operation versus B) Syntax is directly involved and generates ellipsis fragments:

• According to Chomsky and Lasnik 1993, deletion is phonological reduction, optionally silencing material that is deaccented. Ellipsis fragments are thus "formed within the phonological component, not by operations of the narrow syntax." (p. 565):

27. Q: Who did Mary talk to yesterday?
    A: She talked to J O H N $_F$ yesterday. → ~~She talked to J O H N~~$_F$ ~~yesterday~~
        (cf. Rooth 1992, Tancredi 1992, Fox 1999, Vanden Wyngaerd and Zwart 1999)

• According to Merchant 2001, 2004 et al, however, the deletion site Δ is the sister of an ellipsis-licensing syntactic head bearing an E(llipsis)-feature. Remnants move out of Δ in narrow syntax and deletion of the vacated Δ applies at PF:

28. Q: Who did Mary talk to yesterday?
    A': [CP J O H N $_F$ C$_E$ [$_{TP\Delta}$ ~~she talked to t yesterday~~]]

    Where remnants do *not* move out of Δ for independent reasons, they are extracted by obligatory focus movement, which applies exceptionally in elliptical contexts (cf. Heck and Müller 2003, Nakao 2009, Ortega-Santos et al. 2014, Weir 2014, Boone 2014).

Central predictions of the syntactic Move-and-Delete Approach (henceforth, *MDA*):

I.   Extraction from Δ is subject to locality constraints.

II. Both remnants and Δ are single syntactic constituents.

III. Remnants can contain only syntactically movable categories.

IV. Remnants are focused.

However, it can be demonstrated, all of these predictions are extremely problematic:

• High sentential adverb (*HSA*) phrases and modal particles (*MP*s) in German can survive ellipsis, i.e. be included in ellipsis fragments. However, these elements cannot (MPs) or need not be focussed (HSAs), contra IV.

• MPs are not movable categories, contra III.

• The observable fragments thus cannot be equated with single constituents, contra II.

• Locality constraints are therefore (in at least some cases) not really at issue, contra I.

3.2 Modal particles in German and their syntactic properties

Modal particles in German are either analyzed as special kinds of 'high' adverbs (cf., e.g., Zimmermann 2011), or else as a separate class of elements, related to category C (Struckmeier 2014a). The following properties are empirically undisputed:

• MPs and HSAs alike convey information related to speaker attitude/commitment but do not affect the propositional content directly; they are *extra-propositional* elements:

29. a)   Peter hat vermutlich ein paar Leute eingeladen.
          Peter has presumably a couple people invited
          'Presumably Peter invited a couple of people.'

    b)   Peter hat ja ein paar Leute eingeladen.
          Peter has MP a couple people invited
       ≈ 'As you know, Peter invited a couple of people.'

    c)   Peter hat wohl ein paar Leute eingeladen.
          Peter has MP a couple people invited
       ≈ 'Presumably Peter invited a couple of people.'

• MPs are unaccented and cannot be focussed (Thurmair 1989, Struckmeier 2014a): There are simply no questions (let alone dedicated wh-words) that would target an MP:

30. a)   Q: How/ how likely/ in which manner has Peter invited some people?
          A: #Peter hat wohl ein paar Leute eingeladen.   *(not a coherent answer)*
          A': *Peter hat W O H L ein paar Leute eingeladen.   *(stressed MP impossible)*

• MPs are highly dependant on syntactic context (sentence types) and discourse context (speaker knowledge/ assumed hearer knowledge at certain points in discourse).

3.3 Modal particles and High Sentential Adverbs survive Ellipsis

As the following data show, HSAs and MPs are very problematic for the MDA:

• MPs and HSAs occur as <u>unaccented</u> and <u>unfocussed</u> secondary remnants in clausal ellipsis, linearly following or preceding the primary XP remnant without a prosodic break[10]:

31. A: Peter invited a couple of people.
    B: Und W E N wohl / vermutlich?
        and who MP/ presumably
        'And who did he presumably invite?'

32. Q: Who did Peter invite?
    A: Seine F R E U N D E wohl / vermutlich.
        his   friends   MP/ presumably
        'He presumably invited his friends.'
    A': Wohl / vermutlich seine F R E U N D E.

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[10] Thus, it is extremely improbable that answers in these examples contain afterthoughts or self-repair loops.

- Remnants are not single fronted constituents (cf. van Craenenbroeck 2005):

33.   *[WEN vermutlich] hat er eingeladen?   *compare (31)*
         who   presumably has he invited

34.   *[Seine FREUNDE vermutlich] hat er eingeladen.   *compare A in (32)*
          his   friends   presumably has he invited

        * [Vermutlich seine FREUNDE] hat er eingeladen.   *compare A' in (32)*

- Stranded MPs/HSAs can be intertwined with foci. Thus, there is no way that the unaccented elements could be focussed but unstressed, given the prosodic rules of German:

35. A: Peter invited all kinds of people.
    B: Ja, seine FREUNDE ja anscheinend AUCH alle.
            yes, his friends MP apparently   also all
            'He apparently invited all his FRIENDS, TOO.'
    B':   WELCHE Leute denn wohl vermutlich NICHT?
            which   people MP   MP presumably not
            'WHICH people did he NOT invite?'

- If movement of MPs/HSAs would underlie the fragments (which seems implausible), the ordering restrictions of MPs/HSAs with regard to negation (and other elements) would need to be stipulated to replicate the sentence-internal order:

36. a)   Peter hat die Lotterie ja nicht gewonnen.   MP < NEG
            Peter has the lottery MP not won.
            'Peter did not win the lottery (as you know).'
    b)   *Peter hat die Lotterie nicht ja gewonnen.   *NEG < MP

37.   Peter did indeed win the race, ...

    a)   ...aber die Lotterie doch nicht.   MP < NEG
            but   the lottery   MP not.
            'but not the lottery (contrary to what you think).'
    b)   ...*aber die Lotterie nicht doch.   *NEG < MP

- The distribution of MPs/HSAs in elliptical contexts differs from that of 'lower' adverbs and negation, which are illicit as unaccented remnants:

38. A: Peter invited some people.
    B: WEN *gestern / *widerwillig / *nach Berlin / *nicht?
            who yesterday/ reluctantly /to Berlin   /not
            'And who did he invite yesterday/reluctantly/...?' *(intended)*
    B':   Seine FREUNDE *gestern / *widerwillig / *nach Berlin / *nicht.
            his friends   yesterday /reluctantly   /to Berlin   /not
            'Yes, his friends, he invited yesterday/ reluctantly/...' *(intended)*
    B'':   Seine FREUNDE halt / doch nur/ wohl.
            his   friends   MP/ MP only/ MP
            'His friends, yes (as I concede/ only, contrary to what you think/probably).'

Therefore, secondary MP/HSA remnants militate against fundamental tenets of the MDA:

- Non-F-marked material (MPs, HSAs) survive deletion, contra IV.

- Immobile middle field elements (MPs) survive deletion, contra III.

- Thus, the fragment must contain multiple constituents, contra II.

- It is precisely, the *immoveability* (!) of MPs that explain the observable word order requirements in fragments, making *movement* restrictions the wrong tool here, contra I.

Of course, a sufficiently diluted version of the MDA could handle our facts, too:

- If remnant extraction had no properties of syntactic displacement, it could be taken to exceptionally displace MPs/SAs to the left periphery iff deletion applies (cf. Weir 2014). However, this is clearly *not* a syntactic account of the pre-deletion structures.

- Additional constraints would be needed to ensure that the resulting derived order matches the order in the non-elliptical case (see Boone 2014 for an approach). However, movements cause trouble that subsequently must be cleaned up with extra constraints – whereas in-situ PF deletion makes the right predictions to begin with.

- Conceptually, remnant extraction serves to distinguish remnants from material to-be-deleted – but note the movement is redundant, since remnants are *already* distinguished by discourse property: Recall that MDA stipulates movement of *foci*).

In our analysis (cf. Ott & Struckmeier in press), we therefore propose to abandon syntactic preconditions for ellipsis, and to concentrate on the discourse properties that define fragments (as a sub-part of the MDA, too).

3.4 An Alternative: Fragments are not 'Recoverable from the Common Ground'

Alternatives to *syntactic* fragment building could potentially involve:

V.   Prosody: in Merchant's examples at least, *stressed* material survives ellipsis.

VI.   Information Structure: Focussed material survives ellipsis, as often pointed out:

      "An extreme case of prosodic marking of [information structure] is ellipsis, where only the focused part of a sentence is pronounced, and the given part is just deleted." (Féry and Krifka 2008)

      "PF-deletion: a.   F-markers are upper bounds to PF-deletion.
                       b.   Maximize PF-deletion." (Reich 2007)

VII. A more general discourse notion, 'recoverability from the common ground' (*CG*).

We argue that VII is the right way to go:

- V is straightforwardly falsified by the unaccented MPs and HSAs we have already seen.
- VI, we point out, goes in the right direction – but it is unclear to us whether MPs can be straightforwardly assumed to be 'focussed' or 'F-marked', given their obligatory lack of stress and the fact that MPs cannot be, e.g., focussed by wh-question contexts.
- We therefore propose that deletion applied to material that is *recoverable from the background* (*BG*), i.e. all Given propositions (existentially closed, where necessary): In the PF-mapping, background material is deaccented and optionally deletes.
- Tighter restrictions apply in the case of deletion – naturally, due to the absence of any overt 'hints' (see Tancredi 1992, Merchant 2001, 2013, Weir 2014, a.o.):

- A: Who did Mary talk to yesterday?   *Adds to BG: ∃x.Mary talked to x yesterday*
  B: Mary talked to JOHN yesterday   *BG-recoverable material destressed in answer.*
      ~~Mary talked to~~ JOHN ~~yesterday~~   *... or optionally deletes entirely.*

- Defining fragments as *non-recoverable* elements defines a natural class containing:

    - constituents that *happen* not to be given (F-marked, cf. Schwarzschild 1999), and
    - constituents that *cannot* be given (MPs, HSAs[11]).

- Destressing/ optional deletion of *recoverable* material derives possible ellipsis patterns:

39. A: Peter invited all kinds of people.   *∃x.Peter invited x*
    B: [seine KOLLEGEN]F ~~hat Peter~~ ja anscheinend AUCHF [alle t]F ~~eingeladen~~

        his   colleagues   has Peter MP apparently also   all   invited
        'Peter has apparently invited all his colleagues, too'

- Destressing/ optional deletion of *recoverable* material derives the fact that 'lower' adverbs (with truth-conditional effects) must be (licitly) F-marked to survive deletion, e.g.:

40. A: Who did Peter invite yesterday?   *∃x.Peter invited x yesterday*

    B: *Seine KOLLEGEN gestern.   *recoverable Adv should ellide*

    B': *Seine Kollegen GESTERN.   *Illicit stress on given adverb*
         his   colleagues yesterday   *does not 'rescue' it*

    B'' Seine Kol/LEGen GESTERN   *Contrastive (licit) stress allows*
        (... and his /FRIENDS YESTERDAY)   *adverb to surface*

- Unlike wh-remnants, non-wh remnants front *optionally*; consequently, MPs/HSAs are only strictly ordered with regard to wh-remnants (but not non-wh remnants, cf. 31/32 above):

41. A: Peter invited some people.   *∃x.Peter invited x yesterday*
    B: Und WEN ~~hat Peter~~ wohl ~~eingeladen~~?   *wh < MP/HSA*
        'And who, presumably?'
    B': *Und wohl WEN ~~hat Peter~~ ~~eingeladen~~?   **MP/HSA< wh*

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[11] Also parentheticals, set aside here.

- The ordering restrictions of MPs vis-a-vis negation fall out without further ado:

42.   Peter has indeed won the race...
    a)   aber die LOTTERIE ~~hat Peter~~ doch NICHT ~~gewonnen~~.
            but the lottery   has Peter MP not   won
            'but he did NOT win the lottery.'
    b)   *aber die LOTTERIE ~~hat Peter~~ NICHT ja ~~gewonnen~~.

- Secondary remnants in general need not be assumed to move, and exceptional movements under ellipsis can be eschewed (pace e.g. Merchant 2001, 2002, Lasnik 2013, Ortega-Santos et al. 2014).

- The problem of *Swiping* can be considered an artefact of the MDA approach:

43. Susan went to the cinema, but I don't know...

    a)   whoi ~~she went to the cinema~~ with ti.   *in-situ deletion predicts word order...*
    b)   *withj whoi [TPΔ ~~she went to the cinema~~ ti tj] *...moving fragments makes a mess!*

3.5 Interim summary for ellipsis phenomena

Again we find that a re-analysis of an allegedly syntactic phenomenon can be quite fruitful:

- Central predictions of the syntactic (MDA) approach to ellipsis are falsified.

- The alternative approach discussed here denies that ellipsis fragments are (redundantly) demarcated syntactically, but instead defines them by discourse recoverability alone.

- Therefore, ellipsis does not need to be informed by syntax, and we can stick with Chomsky and Lasnik's original 1993 hypothesis that "elliptical constructions [are] formed within the phonological component, not by operations of the narrow syntax."

4. No real conclusion: It's all horses for courses!

Language does indeed combine sound and meaning – and syntax as some (weird?) mapping between the two. However, syntax must not be the 'theory of everything linguistic':

- some responsibilites can be delegated to the PF mapping, especially when the arrangement of *forms* is concerned (as in German scrambling: where do arguments go?), but

- other responsibilites are better delegated to semantics and discourse ("meaning"), especially when linguistic meanings threaten to be lost (as in ellipsis phenomena), but

- yet other responsibilites may not be fixed in the overall 'competence grammar' at all, but by 3rd factors, possibly relating to parsing, pragmatics, communication in a noisy medium (as in both phenomena discussed today).

All in all, the system as a whole may be bit messy. But as we have seen, this does not preclude it from mapping forms (and absent forms) onto decipherable meanings in the end – with some glitches and mismatches thrown in for extra fun!

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