Sluicing and gapping: deletion or selective spell-out?

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Abstract: This article compares two alternatives to the standard movement-and-deletion approach to clausal ellipsis, which postulates deletion of TP after the remnants of ellipsis are (sometimes exceptionally) A′-moved into the left periphery of the clause. One alternative is the *in-situ* approach, which denies the involvement of movement in the derivation of clausal ellipsis; it claims that clausal ellipsis can apply to *any* run-of-the-mill syntactic structure and simply deletes the familiar/given information from the propositional domain of the clause. Another alternative is the selective spell-out approach; it denies the involvement of deletion and states that the remnants undergo regular A′-movement into the specifiers of specific semantically relevant functional projections (CP, FocusP, NegP, etc), which are subsequently selected for spell-out. This article argues that the selective spell-out approach is superior to the two deletion approaches.

1. Introduction

This article is a follow-up of Broekhuis (2018), which argues against the standard movement-and-deletion approach (MDA) to clausal ellipsis, that is, sluicing and gapping constructions (which we take to include various types of fragment clauses); cf. Van Craenenbroeck and Merchant (2013:718ff.). More or less simultaneously with Broekhuis (2018), Ott & Struckmeier (2018) proposed a second alternative to the MDA. The goal of this article is to compare the two alternatives to the MDA. We start with a brief introduction of the three competing approaches.

1.1 The movement-and-deletion approach (MDA)

The MDA claims that clausal ellipsis is derived by A′-movement of the remnants of ellipsis into some position in the left periphery of the clause and subsequent deletion of some lower extended projection of the verb which typically contains the functional projection expressing the tense features of the clause (henceforth: TP):

(1) $[_{CP} \dots XP*_i \dots [_{TP} \dots t_i \dots]]$, where XP* stands for one or more remnants

There are various well-known problems with this version of the MDA. First, the presumed A′-movement of the remnants is exceptional in the sense that at least in some cases it cannot occur in non-reduced clauses. This is clear from the fact that multiple remnants may occur in languages like Dutch and English, which normally do not allow more than one application of *wh*-movement in a single clause; see, e.g., Merchant (2001; 2004) for sluicing and Boone (2014) for gapping. This is illustrated in (2) for sluicing in Dutch: while multiple sluicing in (2a) is fully acceptable, the elided clause can only be replaced by the regular interrogative clause in (2b) if the direct object *wat* follows the indirect object *Marie*; which shows that *wh*-movement of *wat* into clause-initial position is normally not possible.

(2) a. Iedereen gaf   Marie een cadeau maar ik weet niet [wie wat].
         everyone gave Marie a present   but   I   know not   who what
     b. ... [wie <*wat> Marie <wat> gaf].
             who   what   Marie   gave
         '... but I do not know who gave what to Marie.'

Second, special provisos are needed to account for the fact that finite verbs (as well as complementizers) do not survive clausal ellipsis; this is especially problematic for verb-second languages like Dutch and German, as it is normally assumed that finite verbs occur in the head of CP in main clauses and are therefore expected to survive deletion of TP. Although such problems have been remedied by introducing special assumptions, an account of clausal ellipsis that can do without such special provisos is to be preferred. The following two sections introduce two alternative approaches that derive clausal ellipsis from run-of-the-mill clausal structures without appealing to exceptional movement of the sort postulated by the MDA.

1.2 *The Selective Spell-out Approach (SSA)*

Broekhuis (2018) argues on the basis of gapping that clausal ellipsis should be reanalyzed as selective spell-out of designated A′-specifier positions. This set of designated A′-specifiers not only includes SpecCP but also the specifiers of lower

semantically relevant projections pertaining to topichood, focushood and negation. On the assumption, independently motivated in Broekhuis and Corver (2016:§13.3), that the PP *op Peter* can be moved into SpecFocusP, the s̲elective s̲pell-out a̲pproach (SSA) correctly accounts for the grammaticality of gapping examples such as (3), without the need to postulate exceptional movement of the sort assumed in the MDA; see Broekhuis (2018) and section 3 below for more detailed discussion.

(3)   [[JAN is [AP erg boos op Marie]] en [ELS i̶s̶ [AP e̶r̶g̶ ̶b̶o̶o̶s̶ op PETER]]].
          Jan is   very angry with Marie and Els is   very angry with Peter
          'Jan is very angry with Marie and Els is angry with Peter.'

The SSA is also unlike the MDA in that it does not need additional postulates to account for the fact that the finite verb cannot be realized in the gapped clauses, as this follows automatically from the fact that it occupies the head position C and is therefore not in a designated A′-specifier.

Now consider the sluicing constructions in (4). On the assumption that the PP *op wie* occupies SpecCP, the MDA and SSA both predict the grammaticality of the sluice in (4a). In order to account for the acceptability of sluiced multiple question in (4b), the MDA need to assume that the PP *op wie* is exceptionally moved into a position superior to TP before deletion of TP takes place. The MDA does not need to postulate such exceptional movement but can assume that the PP has been moved into the specifier of a FocusP internal to the TP.

(4)   Iedereen is [AP erg boos op iemand]]   maar ik weet niet ...
          Everyone is   very angry with someone but I know not
    a. [Op WIE   i̶e̶d̶e̶r̶e̶e̶n̶ ̶ ̶e̶r̶g̶ ̶b̶o̶o̶s̶ ̶ ̶ ̶i̶s̶].
          with whom everyone very angry is
          'Everyone is very angry with someone but I don't know with whom.'
    b. [WIE e̶r̶g̶ ̶b̶o̶o̶s̶   op WIE   i̶s̶].
          who very angry with whom is
          'Everyone is very angry with someone but I don't know who with whom.'

The above has shown that the SSA provides a unified account for sluicing and gapping in Dutch without the need of stipulating exceptional movement of the sort postulated by the MDA. On the assumption (still to be substantiated in future work)

that the SSA is able to account in an equally elegant way for clausal ellipsis in other languages, this approach is clearly superior to the MDA.

1.3 *The* In-Situ *Approach (ISA)*

Ott & Struckmeier (2018) propose an alternative for the MDA that solves the problem with exceptional movement by denying the involvement of movement in the derivation of sluicing (they do not discuss gapping). They argue that the MDA should be replaced by an _in-situ_ approach (ISA): clausal ellipsis can apply to *any* run-of-the-mill syntactic structure and deletes the familiar/given information from the propositional domain of the clause.

The empirical motivation for the ISA is provided by a class of German discourse particles (DiPs); see Bayer & Obenauer (2011) and Bayer (2012; 2017; 2018) for a discussion of the semantic and syntactic behavior of such particles. One case discussed by Ott & Struckmeier (2018) is the DiP *denn*, found in questions; the examples in (5) are taken from Bayer (2017).

(5)   a.   Wer hat *denn* Zwiebeln gekauft?
           who has DiP   onions   bought
           'Who bought onions, I wonder?'
      b.   Hast   du   *denn* Zwiebeln gekauft?
           Have   you DiP   onions   bought
           'Did you happen to buy onions?'

The central observation is that the class of DiPs under discussion cannot be moved into sentence-initial position. This is not easy to show for *denn* in (5) because this particle occurs in interrogative clauses only, but it can easily be shown for the DiPs *wohl* and *ja* in (6), taken from Ott & Struckmeier's article.[1]

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[1] Example (6b) is acceptable with *wohl* if it is interpreted as an adverbial phrase with the approximate meaning 'obviously', but this is not relevant here.

(6) a. Peter hat *wohl/ja* ein paar Leute eingeladen.

       Peter has DiP/ DiP a couple people invited

       '(Probably/As you know), Peter has invited a couple of people.'

   b. **Wohl/ja* hat Peter ein paar Leute eingeladen.

       DiP/DiP has Peter a few people invited

The crucial argument given in favor of the ISA is that, despite their immobility, DiPs survive clausal ellipsis; Ott & Struckmeier illustrate this for the particle *denn* in the fragment question (7b), which may follow the statement in (7a). The acceptability of (7b) follows from the assumption given earlier that clausal ellipsis affects the given information from the propositional domain of the clause only; because DiPs do not contribute to the propositional content at all, they survive deletion.

(7) a. A. Peter invited a couple of people.

   b. B. Wen *denn*? 'Who?'

The fact illustrated in (6) that DiPs are immobile was one of the reasons for Bayer (2012; 2018; in print) to assume that they are functional heads. Given that heads do not undergo A/A′-movement, Ott & Struckmeier conclude that the MDA to clausal ellipsis should be rejected and be replaced by the ISA.

1.4 *Organization of the remainder of the paper*

In sections 2 to 5, we will compare the two alternatives to the MDA to clausal ellipsis and argue that the SSA is superior to the ISA in various respects. However, before we can wholeheartedly embrace the SSA, we have to show that there are good reasons for not accepting Ott & Struckmeier's argument against the MDA, as this argument might also be used against the SSA; this will be the topic of Section 6.

2. **Why the *in-situ* approach fails**

The ISA to clausal ellipsis runs into a number of problems that become especially evident in gapping constructions. A first objection to the ISA (as well as to the MDA) is that it cannot easily account for the fact that languages differ in the number of remnants they allow. For instance, while it is often claimed that gapping constructions in English normally do not contain more than two remnants, gapping constructions in

Dutch/German can easily contain up to four or even five remnants; cf. Neijt (1979). This difference would be unexpected if the common ground fully determines which elements survive ellipsis.

A second objection is that the ISA breaks with the tradition in the gapping literature since Hankamer (1971/1979) that sets out to account for the basic observation that the remnants of gapping are prototypically major constituents, that is, parts of speech as well as certain smaller verbal projections (including, e.g., the complements of the verb and certain VP-adverbials). The Dutch examples in (8), for instance, show that while direct objects can be remnants of clausal ellipsis, PPs embedded in a direct object cannot.

(8) a. [[JAN kocht [het huis op het PLEIN]]   en [ELS ~~kocht~~ [het huis bij het PARK]]].
     b. *[[JAN kocht [het huis op het PLEIN]]   en [ELS ~~kocht~~ [~~het huis~~ bij het PARK]]].
          Jan bought the house on the square   and Els bought the house near the park
          'Jan bought the house on the square and Els the house near the park.'

In a context where the speaker and hearer know that Jan and Els have both bought a house, the grammaticality contrast in (8) is precisely the opposite of what the ISA approach by Ott & Struckmeier would lead one to expect: the gapped clause in (8a) should be unacceptable as it provides known information (namely that the thing that Els bought is a house), while the gapped clause in (8b) should be acceptable, as it only provides new information, namely that the house Els bought is located *near the park*. The unacceptability of examples such as (8b) follows immediately under the MDA as a result of the island-sensitivity of A′-movement.[2]

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[2] This objection to the ISA does not apply to the Q-based approach to sluicing proposed in Griffiths (2019). This approach does not appeal to movement within the sluice itself but derives the attested island effects by requiring that the meaning of a clausal ellipsis site be recoverable from a *syntactically derived* question that is part of the set of Questions Under Discussion (QUD). This pragmatic approach to recoverability provides a good account of the fact that sluicing seems to be insensitive to certain island effects without appealing to so-called island repair; see Griffiths (2019: §5) for references and discussion. Although we will maintain that clausal ellipsis depends on A′-movement, we will adopt the basic insight from Griffiths' proposal by assuming that the sluiced clause *itself* must be a QUD; see note 3.

A third objection is that the ISA cannot account for another robust generalization pertaining to clausal ellipsis, namely that finite verbs cannot survive ellipsis: this is illustrated for gapping in (9). The unacceptability of (9b) under the intended transitive reading is a problem for the ISA because the finite verb in the gapped clause is not part of the common ground, and is therefore predicted to survive ellipsis.

(9) a. [[JAN las   EEN BOEK] en [MARIE ~~las~~   EEN ARTIKEL]].
          Jan   read a book   and Marie   read an article
          'Jan read a book and Marie an article.'
     b. *[[JAN LAS   een boek] en [MARIE SCHREEF ~~een boek~~]].
          Jan   read a book   and Marie wrote   a book
          Intended reading: 'Jan read a book and Marie wrote a book.'

This subsection has shown that the ISA to clausal ellipsis is not able to account for some of the core observations that have informed the study of gapping so far: most importantly, it is unable to give a straightforward answer to the question as to why gapping remnants are prototypically major constituents, which may include new information, and why finite verbs must be elided in gapping constructions, i.e., cannot survive clausal ellipsis when they express new information.

3. Common ground versus contrast

One objection to the ISA not discussed in section 2 is that it does not account for the fact that gapping requires not only that the elided material be given information, but also that the remnants be contrasted with their correlates in the antecedent clause. The observation that the remnants are contrastively accented is important, as it shows that the information available in the common ground does not fully determine whether gapping is possible. This observation is also important because Broekhuis & Corver (2016:§13.3) have shown for Dutch that contrastive phrases are normally A′-moved into the specifier of CP or of a focus/topicP in the middle field of the clause. The argument in favor of this movement goes along the same lines as Haegeman's (1995:179) argument in favor of Neg-movement in Dutch. Although example (10a) shows that the adjective *boos* 'angry' normally precedes its PP-complement, example (10b) shows that PP-complements containing a negative phrase expressing sentence negation is A′-moved across the adjective into the specifier of NegP in order for

negation to take scope over the proposition expressed by the clause. Example (10c) shows that the same holds for contrastively focused phrases.

(10) a. dat Jan [AP erg boos   op Peter]   is.
          that Jan   very angry with Peter is
          'that Jan is very angry with Peter.'

     b. dat Jan [NegP op niemand_i Neg [VP ... [AP erg boos t_i]   is]].
          that Jan   with nobody   very angry is
          'that Jan isn't very angry with anybody.'

     c. dat Jan [FocP op *PETER*_i Foc [VP ... [AP erg boos t_i] is]].
          that Jan   with Peter   very angry is
          'that Jan is very angry with Peter.'

Now consider example (11a), which shows that PP-complements of adjectives can act as remnants of gapping despite the fact that they are not major constituents in the sense of Hankamer (1971/1979). That Hankamer's major constituent restriction on gapping is too strict was already noted by Neijt (1979), who proposed the *wh*-movement correlation restriction: remnants of gapping must be able to undergo *wh*-movement in non-reduced clauses. That this condition is satisfied for PP-complements of adjectives is illustrated in (11b) by means of topicalization of *op Peter*.

(11) a. [[Jan is [AP erg boos   op Marie]] en [ELS is̶ [AP e̶r̶g̶ ̶b̶o̶o̶s̶   op PETER]]].
           Jan is   very angry with Marie and Els is   very angry with Peter
          'Jan is very angry with Marie and Els with Peter.'

     b. Op Peter_i   is Els [AP erg boos t_i].
          with Peter is Els   very angry

Broekhuis (2018) proposed to adapt Neijt's *wh*-movement correlation restriction in three ways; see also Broekhuis & Corver (2019). First, the restriction should be rephrased in terms of the more general notion of A′-movement, which includes Neg- and Focus/Topic-movement. Second, Broekhuis takes the next logical step by assuming that gapping remnants are actually A′-moved into the specifier positions of CP, NegP, FocusP, TopicP, or whatever other functional projections with semantic/information-structural import there may be. Third, he suggests that clausal ellipsis is not ellipsis at all but selective spell-out of the A′-specifiers of the functional

projections mentioned above. This means that the structure of the gapped clause in (11a) is incorrect: the gapping remnants are A′-moved to respectively SpecCP and SpecFocusP and subsequently undergo selective spell-out indicated by boldface in structure (12). Observe that we have only indicated the details crucial for the present discussion and ignored, e.g., issues pertaining to verb movement.

(12) ... en [$_{CP}$ **ELS**$_i$ [$_C$ is] [$_{TP}$ t_i ... [$_{FocP}$ **op PETER**$_i$ Foc [$_{VP}$ ... [$_{AP}$ erg boos t_i] ...]].

Although we have not yet investigated in detail the question why it is precisely these A′-specifiers that are selectively spelled-out at PF, this assumption seems to fit in with the fact that more generally such specifiers have special phonological properties such as contrastive accent. This suggests to us that selective spell-out can ultimately be derived from the recoverability condition on deletion of phonological information.[3]

4.   Why the Selective Spell-out Approach is superior

The SSA resembles the MDA in that it can easily account for the fact that clausal ellipsis may impose special restrictions on the remnants in that they must have a *wh-*, *neg-* or contrastive focus/topic feature. It crucially differs from the MDA, however, in that it does not require the postulation of *ad hoc* features for triggering (exceptional) movement of the remnants out of TP, but can rely on *independently motivated* A′-movements into the A′-specifiers of functional projections like CP, NegP, FocusP, and TopicP; see the examples in (10) and (11b). In this respect the SSA resembles the ISA, but it is superior to it in that it does not have the deficits discussed in section 2; we will show this in the remainder of this section.

   First, we expect that languages may differ in the number of gapping remnants they allow because it is an established fact that languages may differ with respect to the types of overt A′-movement they allow; the fact that English allows a smaller number

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[3] One viable option would be to adopt some version of the Q-based approach to clausal ellipsis proposed in Griffiths (2019); for sluices we can follow the suggestion in note 2 above that sluiced clauses must be part of the set of QUDs, while for gapping we can state that the material left unpronounced should be recoverable from the set of QUDs triggered by the use of contrastive accents.

of gapping remnants than Dutch can therefore be related to the fact that English has a more rigid word order (less A′-movement types) than Dutch.[4]

Second, we can also easily account for the established restrictions on gapping remnants. That the remnants of clausal ellipsis obey the Hankamer/Neijt restriction discussed earlier simply follows from the fact that overt A′-movement precedes selective spell-out; this accounts for the acceptability contrast between the two examples in (8) above.

Third, the fact that finite verbs (and complementizers) do not occur as remnants, regardless their status as new/given information, follows from the fact that they are heads and cannot occur in A′-specifiers; this accounts for the acceptability contrast between the two examples in (9) above. We refer the reader to Broekhuis (2018) and Broekhuis and Corver (2019) for more discussion.

Finally, the SSA differs from the MDA and the ISA in that it inherently imposes specific restrictions on the remnants of apparent clausal ellipsis, in the sense that they must have a semantic or information-structural property associated with the *independently motivated* functional heads in the language; remnants in Dutch, for instance, are prototypically *wh*-phrases, contrastive topics/foci or negative phrases, that is, phrases that can be shown to occupy a specific SpecFP in the functional domain of the clause; see Broekhuis & Corver (2016:§13.3 for detailed discussion).

5.   More evidence for the Selective Spell-out Approach

Although gapping remnants normally have a correlate in the antecedent clause, example (13) shows that focus particles such as *ook* 'also' are an exception to this general rule because they can occur in the gapped clause without there being a(n overt) correlate in the antecedent clause; cf. Van der Heijden & Klein (1995:33).

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[4] From this point of view, it may seem surprising that English does allow gapping with two remnants as English seems to resist focus movement. This potential objection can be countered by claiming that English does have focus movement but that the word order effect of it is undone by subsequent leftward VP-movement across the focus position; cf. Den Dikken (1995) and Kayne (1998).

(13) a. [[JAN houdt van MARIE] en [MARIE ~~houdt~~ <u>ook</u> van JAN]].
       Jan loves of Marie   but Marie loves also of Jan
       'Jan loves Marie and Marie loves Jan too.'

The examples in (14) show that the focus particle *ook* 'also' is located in the designated focus position with its contrastively accented associate *op* HEM; it is impossible for this particle to occur in the base position of its associate; see Broekhuis & Corver (2016:§13.3.2) and Broekhuis (2018) for more detailed discussion.

(14) a. dat Jan ook op HEM   boos is.
       that Jan also with him angry is
       'that Jan is also angry with him.'
    b. *dat Jan boos ook op HEM   is.
       that Jan angry also withat him is

Because the focus particle *ook* is located in the designated focus position together with its associate and the complete A′-specifier of FocusP will be selectively spelled out, the SSA correctly predicts that gapping examples such as (13a) with *ook* 'also' are also acceptable despite the fact that the particle is not contrastive. We may even go one step further and assume that the SSA entails that all elements occupying a designated A′-position must survive gapping; they do not elide even if they have an identical correlate in the antecedent clause. This is indeed what we find in the case of negative clauses such as (15), adapted from Van der Heijden & Klein (1995:33): see also, e.g., Neijt (1979:66) and De Vries (1992:§3.9).

(15) a. [[Jan heeft Els niet gezien] en [Peter heeft Marie niet gezien]].
       Jan has Els not seen   and Peter has Marie not seen
       'Jan hasn't seen Els and Peter hasn't seen Marie.'
    b. [[JAN heeft ELS niet gezien] en [PETER ~~heeft~~ MARIE niet/*~~niet gezien~~]].
       Jan has Els not seen   and Peter has Marie not/not   seen

Because the negative adverb *niet* occupies SpecNegP, the occurrence of this adverb in the gapped clause must be selectively spelled out despite the fact that it has an overt correlate in the antecedent clause. The SSA thus solves the problem for the traditional view that gapping deletes material in the target clause under identity with material in

the antecedent clause, which wrongly predicts elision of *niet* to be acceptable in (15b) on the intended interpretation.

6.   The distribution of German discourse particles

Ott & Struckmeier (2018: section 2) argue that German DiPs like *denn* and *wohl* are heads because they cannot escape the middle field of the clause by movement (and for various other reasons not immediately relevant here). The fact that DiPs may occur in fragment questions such as (7b), repeated here as (16b), is therefore a potential problem for the SSA, according to which selective spell-out affects A′-specifiers only.

(16) a.   A. Peter invited a couple of people.

     b.   B. Wen *denn*? 'Oh, who then?'

The claim that DiPs must be analyzed as heads located in the main clause is based on the correct observation illustrated in (6) above that they cannot occur in sentence-initial position. There is, however, a second set of data that is problematic for this claim, namely constructions in which the DiPs occupy the initial position together with their associate *wh*-phrase. Some examples taken from Bayer & Obenauer (2011) are given in (17).

(17) a.   [Wer *denn*] soll   befehlen?
          who DENN should command

     b.   [Warum *bloß*] ist ein Rauschenberg so teuer?
          why BLOß   is   a Rauschenberg   so expensive

     c.   [Von wem *schon*] kann man das sagen?
          of who SCHON   can   one   that say

Given the general verb-second constraint in German main clauses, we must conclude from the examples in (17) that DiPs can form a constituent with the *wh*-phrase, as indicated by the bracketing. It thus seems that the DiPs are similar in this respect to focus particles such as Dutch *ook* discussed in section 5, which are likewise able to

form a constituent with their associate focus phrase. Another example with the Dutch/German focus particle *alleen*/*nur* showing the same thing is given in (18).[5]

(18) a. [Alleen vandaag] is dat nog mogelijk.
    b. [Heute nur]   ist das noch möglich.
       only today   is that still possible

The conclusion that DiPs can form a constituent with, and be pied piped by *wh*-movement of its associate provides a simple account for the acceptability of the fragment question in (16b). Ott & Struckmeier (2018) are aware of examples of this sort but dismiss them as irrelevant because these "combinations are not productive [...] and are downright ungrammatical in most cases" (fn.7). This dismissal does not do justice to the fact that these examples are frequently found in speech as well as writing; all examples given by Bayer & Obenauer (2011) are from the internet, and more can easily be found, as is amply illustrated by Bayer (in print). In short, there is no *a priori* reason for assuming that the questions in (17) have a different status than the fully acceptable declaratives in (18).

The acceptability of the examples in (17) should be taken seriously in light of the fact that there is massive variation in the distribution of particles in the various varieties of Dutch/German. The examples in (19) taken from Barbiers (2010; 2014) show that focus particles may occur together with their associate in a single phrase, may be used as a stand-alone in the middle field of the clause, and that it is even possible in some varieties of Dutch to combine both uses in a single clause. All examples seem to have the same meaning but differ in their geographical distribution.

(19) a. [Maar één student] ken ik —.
    b. —   Eén student ken ik maar.
    c. [Maar één student] ken ik maar.
       only one student know I only
       'I know only one student.'

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5 Here, we need to assume that the focus associate of the particle, *vandaag*/*heute*, has been raised to the particle's specifier in German but not in Dutch. That movement is possible is in agreement with the claim that the particle is a functional head. For details see Bayer and Trotzke (2015).

It is interesting to note that the DiPs discussed by Ott & Struckmeier exhibit the same variation as the focus particles discussed by Barbiers. That they can be separated from and combined with their associate has been shown earlier and that they can also be doubled is illustrated by the following two internet examples taken from a much larger set of attested examples in Bayer (2018; in print).

(20) a. [Vor was *denn*] ist er *denn* geflüchtet?
         from what DENN is he DENN fled
         'what did he flee from, I wonder?'
     b. [Warum *nur*] seid ihr   *nur* sooo gehässig?
         why   NUR are you$_{pl}$ NUR so bitchy
         'Why on earth are you so bitchy?'

Barbiers analyzes the stand alone focus particle in the middle field as the head of a focusP, while the combination of the particle and the noun phrase is simply a phrase with the function of object. Bayer & Obenauer (2011) and Bayer (2017; 2018) also claim that DiPs head functional projections but they distinguish two types, one heading a functional projection PrtP in the functional domain of the clause and one taking a focal constituent as its complement which they call SPrtP ('small PrtP) but which simply functions as a clausal constituent. This is illustrated for (20a) in (21).

(21)   [$_{CP}$ ...C [... [$_{PrtP}$ ... denn$_2$ [... [$_{V/vP}$ ... [$_{SPrtP}$ ... denn$_1$ [vor was]] geflüchtet]]]]

The derivation of (20a) involves various movement steps triggered by unvalued features on the particle head: the PP *vor was* is moved into the specifier of SPrtP in order to check the unvalued features of *denn$_1$*, the SPrtP itself is moved into the specifier of PrtP in order to check unvalued features of *denn$_2$* and subsequently moved into the specifier of CP in order to allow checking of the unvalued Q-feature in C by the *wh*-phrase *vor was*. This shows that DiPs can easily end up in the specifier of CP (or any other functional projection) despite the fact that they are immobile themselves, which voids Ott & Struckmeier's empirical motivation for the ISA.

The crucial assumption shared by Barbiers and Bayer & Obenauer is that *denn* can not only be the head of a functional projection in the functional domain of the clause

but also be part of a clausal constituent.[6] The spell-out of the two occurrences of the particle is subject to language-specific constraints: some varieties prefer spell-out of *denn₁*, other varieties prefer spell-out of *denn₂*, while still other varieties allow the two types to co-occur. Standard Dutch, for instance, is more restricted than the German variety discussed by Bayer & Obenauer in that it does not easily allow overt realization of the particle corresponding to *denn₁*.

(22) a. Voor wie   is hij dan gevlucht?
    b. ?[Voor wie dan] is hij   gevlucht?
    c. *[Voor wie dan] is hij dan gevlucht?
        from who DENN is he DENN fled
        'Who did he flee from, I wonder?'

At first sight the pattern in (22) might be a problem for our SSA to clausal ellipsis in that it seems to predict that Standard Dutch differs from the German varieties discussed by Bayer & Obenauer in that it does not allow *dan* to occur in fragment clauses: the overt realization of *dan* in (22a) is a head and can therefore not be spelled-out. This prediction is clearly wrong: the Dutch fragment clause in (23) is fully acceptable, just like its German counterpart in (7a).

(23) a. A. Peter invited a couple of people.
    b. B. Wie _dan_? 'Who?'

However, this problem for the SSA is only apparent if a language-specific spell-out of particles in non-reduced clauses is a matter of preference: Dutch simply prefers spell-out of *dan₂* (the head of the PrtP) over spell-out of *dan₁* (the head of SPrtP). This would mean that if spell-out of *dan₂* is impossible for some independent reason, Dutch may take recourse to spell-out of *dan₁* in order to avoid a violation of recoverability (along lines familiar from optimality theory). This is exactly what happens in the case of clausal ellipsis: *dan₂* cannot be spelled out as part of the

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[6] Büring and Hartmann (2001) suggest that particles are adverbs (that is, XPs), which are adjoined to non-arguments; as the reader can verify himself, this would require unconventional analyses of those constructions in (17) to (20), in which the associate of the particle is a nominal or prepositional argument of the verb.

fragment clause because it is a head, so the second best option of spelling out *dan*$_1$ is selected in order to satisfy recoverability, as in the fragment clause in (23b).

This brief excursion on the distribution of Dutch *dan* is meant to show that there is no reason for assuming that varieties of Dutch and German that normally do not allow overt spell-out of the head of SprtPs would not allow fragment clauses with such particles either. This eliminates the main empirical argument in favor of the ISA to clausal ellipsis proposed by Ott & Struckmeier (2018). We therefore conclude that the SSA proposed in this article is superior to it on all counts.

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