Sluicing and gapping: ellipsis or selective spell-out?

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This paper follows Ott & Struckmeier (2018), which we will refer to as O&S, in arguing against the standard movement-and-deletion approach (MDA) to clausal ellipsis, that is, ellipsis in sluicing and gapping constructions (which we take to include various types of fragment clauses); cf. Van Craenenbroeck and Merchant (2013:718ff.). 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): $[_{CP} ... XP*_i ... [_{TP} \dots t_i \dots]]$. 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 it does not occur in non-reduced clauses; see, e.g., Merchant (2001; 2004) for sluicing and Boone (2014) for gapping. 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. Although such problems have been remedied by introducing special assumptions, we agree with O&S that an account of clausal ellipsis that can do without such special provisos is to be preferred.

O&S argue that the MDA should be replaced by an *in-situ* approach (ISA): clausal ellipsis applies to run-of-the-mill syntactic structures 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 O&S is the DiP *denn*, found in questions; the examples in (1) are taken from Bayer (2017).

(1) a. Wer hat *denn* Zwiebeln gekauft?
         who has PRT   onions   bought
         'Who bought onions, I wonder?'

     b. Hast   du   *denn* Zwiebeln gekauft?
         Have you PRT   onions   bought
         'Did you happen to buy onions?'

The central observation is that the DiPs under discussion cannot be *wh*-moved into sentence-initial position. This is not easy to show for *denn* in (1) because this particle occurs in interrogative clauses only, but it can easily be shown for the DiPs *wohl* and *ja* in (2) taken from O&S's article; note in passing that (2b) with *wohl* is acceptable if it is interpreted as an adverbial phrase with the approximate meaning 'obviously'.

(2) a. Peter hat *wohl/ja*   ein paar Leute   eingeladen.
         Peter has PRT/PRT a couple people invited
         '(Probably/As you know), Peter invited a couple of people.'

     b. *Wohl/ja*   hat Peter ein paar Leute   eingeladen.
         PRT/PRT   has Peter a few people   invited

The crucial argument given in favor of the ISA is that, despite their immobility, DiPs survive clausal ellipsis; O&S illustrate this for the particle *denn* in the fragment question (3b), which may follow the contention in (3a). The acceptability of (3b) follows from the assumption 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.

(3) a. A. Peter invited a couple of people.
     b. B. Wen <u>*denn*</u>? 'Who?'

The fact illustrated in (2) that DiPs are immobile was one of the reasons for Bayer (1996; 2012; 2018) to assume that they are functional heads. Given that heads do not undergo A/A′-movement, O&S conclude that the MDA to clausal ellipsis should be rejected and be replaced by the ISA. Section 1 will show that there are reasons for not adopting the ISA, but we will propose an alternative for it in sections 2 to 4.

1 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 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 (corresponding to, e.g., VP). The Dutch examples in (4) show that while direct objects can be remnants of clausal ellipsis, PPs embedded in a direct object cannot.

(4) 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 (4) is precisely the opposite of what the ISA would lead one to expect: the gapped clause in (4a) should be unacceptable as it provides known information (namely that Els bought a *house*), while the gapped clause in (4b) 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 (4b) follows immediately under the MDA as a result of the island-sensitivity of A′-movement; cf. Van Craenenbroeck & Merchant (2013:721) and references cited there.

A third objection is that the ISA is not able to account for another robust generalization pertaining to gapping, namely that finite verbs cannot survive ellipsis: gapping must elide the finite verb, as in (5a). The unacceptability of (5b) 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.

(5)   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 guided 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 express given next to new information, and why finite verbs must be elided in gapping constructions, i.e., cannot survive clausal ellipsis when they express new information.

2   The Selective Spell-out Approach

One objection to the ISA not discussed in section 1 is that it does not account for the fact that gapping requires not only that the elided material be given, 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 line as Haegeman's (1995:179) argument in favor of Neg-movement in Dutch. Although example (6a) shows that the adjective *boos* 'angry' normally precedes its PP-complement, example (6b) 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 (6c) shows that the same holds for contrastively focused phrases.

(6) a. dat Jan [$_{AP}$ erg boos op Peter] is.

 that Jan   very angry at Peter is

 'that Jan is very angry with Peter.'

 b. dat Jan [$_{NegP}$ op niemand$_i$ Neg [$_{LD}$ [$_{AP}$ erg boos t_i] is]].

 that Jan   at nobody   very angry is

 'that Jan isn't very angry with anybody.'

 c. dat Jan [$_{FocP}$ op *PETER*$_i$ Foc [$_{LD}$ [$_{AP}$ erg boos t_i] is]].

 that Jan   at Peter   very angry   is

 'that Jan is very angry with Peter.'

Now consider example (7), which shows that PP-complements of adjectives can act as remnants of gapping despite the fact that it is not a major constituent in the sense of Hankamer. That Hankamer's major constituent restriction on gapping is too strict was already discovered 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-complement of adjectives is illustrated in (7b) by means of topicalization of the PP-complement *op Peter*.

(7) a. [[Jan is [$_{AP}$ erg boos op Marie]] en [ELS ~~is~~ [$_{AP}$ ~~erg boos~~ op PETER]]].

  Jan is   very angry at Marie and Els is very angry at Peter

 'Jan is very angry with Marie and Els is angry with Peter.'

 b. Op Peter$_i$ is Els [$_{AP}$ erg boos t_i].

 at Peter is Els   very angry

We propose to adapt Neijt's *wh*-movement correlation restriction in three ways. First, we will assume that the restriction should be rephrased in terms of the more general notion of A′-movement, which include Neg- and Focus/Topic-movement. Second, we take the next logical step by assuming that gapping remnants are actually A′-moved into the specifier position CP, NegP, FocusP, TopicP or whatever other functional projections with semantic/information-structural import there may be. Third, we will assume that so-called 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 (7a) is incorrect: the gapping remnants are A′-moved to respectively SpecCP and SpecFocP and subsequently undergo selective spell-out

indicated by boldface in structure (8). Observe that we have only indicated the details crucial for the present discussion and ignored, e.g., issues pertaining to verb movement.

(8) ... en [CP **ELS** [C is] [TP ... [FocP **op PETER**$_i$ Foc [LD [AP erg boos t_i] ...]].

Although we have not yet investigated in detail the question why it are precisely these A′-specifiers that are selectively spelled-out at PF, assuming this seems to fit in with the fact that such specifiers more generally 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.

The selective spell-out approach (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 an *ad hoc* [E]-feature and the corresponding exceptional movements, but can rely on *independently motivated* A′-movements into the A′-specifiers of functional projections like CP, NegP, FocusP, TopicP; see the examples in (6) and (7b). 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 1; we will show this in the remainder of this section.

First, we do 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 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.

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 (4) above.

Third, the fact that finite verbs do not occur as remnants regardless their status as new/given information follows from the fact that they heads and cannot occur in A′-

specifiers; this accounts for the acceptability contrast between the two examples in (5) above. We refer the reader to Broekhuis (2018) 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, information-structural or other 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).

3   More evidence for the Selective Spell-out Approach

Although gapping remnants normally have a correlate in the antecedent clause, example (9) 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).

(9)   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 (10) show that the focus particles *ook* 'also' is obligatorily located in the designated focus position: it can occupy this position together with its contrastively accented associate *op HEM* but it may also occupy this position alone, with its associate stranded in its base position. Crucially, what is impossible is having the particle in the base position of its associate; see Broekhuis & Corver (2016:§13.3.2) and Broekhuis (2018) for more detailed discussion.

(10) a.   dat   Jan ook op *HEM* boos is.
           that Jan also at him   angry is
           'that Jan is also angry with him.'
     b.   dat   Jan ook boos   op *HEM* is.
           that Jan also angry at him   is
     c. *dat Jan boos   ook op *HEM* is.
           that Jan angry also at him   is

Because the focus particle *ook* must be located in the designated focus position, the SSA correctly predicts that gapping examples such as (9a) with *ook* 'also' are also acceptable; since the particle occupies the A′-specifier of FocusP, it will be selectively spelled out despite the fact that it is not contrastive. We may even go one step further and assume that the SSA entails that elements that *must* occupy a designated A′-position must also survive gapping; they do not elide even if they have an identical correlate in the antecedent clause. That this is indeed what we find can be illustrated by the negative clauses in (11), adapted from Van der Heijden & Klein (1995:33): see also, e.g., Neijt (1979:66) and De Vries (1992:§3.9).

(11) 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

The SSA thus also solves the problem that the traditional view that gapping deletes material in the target clause under identity with material in the antecedent clause wrongly predicts elision of *niet* to be acceptable in (11b) on the intended interpretation.

4   The distribution of German discourse particles

O&S argue that German DiPs like *denn* and *wohl* are heads because they cannot escape the middle field of the clause by *wh*-movement. If so, the fact that DiPs may occur in fragment questions such as (3b), repeated here as (12b), is a potential problem for the SSA, according to which selective spell-out affects A′-specifiers only.

(12) a.   A. Peter invited a couple of people.
      b.   B. Wen *denn*? 'Who?'

The claim that DiPs must be analyzed as heads located in the main clause is based on the correct observation illustrated in (2) that they cannot occur in sentence-initial position. There is, however, a second type of data that is problematic for this claim,

namely, constructions in which the DiPs occupy the initial position together with the *wh*-phrase. Some examples taken from Bayer & Obenauer (2011) are given in (13).

(13) 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 wen *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 (13) 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 3, 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 (14).

(14) 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 (12b). O&S 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 are from the internet, and more can easily be found); there is no *a priori* reason for assuming that the questions in (13) have a different status than the fully acceptable declaratives in (14).

   The acceptability of the examples in (13) 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 (15) 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 spreading.

(15) 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.'

It is interesting to note that the DiPs discussed by O&S exhibit the same variation as the focus particles discussed by Barbiers. That they can be used 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 larger set of examples in Bayer (2018).

(16) 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 focus particle in the middle field as a stand alone 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 (16a) in (17).

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

The derivation of (16a) 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, and this voids O&S's empirical motivation for the ISA.

The crucial assumption shared by Barbiers and Bayer & Obenauer is that *denn* can be the head of a functional projection in the functional domain of the clause but also be part of a clausal constituent. The spell-out of the two types of particle is subject to language-specific constraints: some varieties prefer spell-out of $denn_1$, other varieties prefer spell-out of $denn_2$, while 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 $denn_1$.

(18) 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 (18) 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 because the overt realization of *dan* in (18a) is a head and can therefore not be spelled-out. This prediction is clearly wrong: the Dutch fragment clause in (19) is fully acceptable, just like its German counterpart in (3a).

(19) a.   A. Peter invited a couple of people.
    b.   B. Wie *dan*? 'Who?'

However, this problem of the SSA is only apparent if language-specific spell-out of particles in non-reduced clauses is a matter of preference: Dutch simply prefers spell-out of dan_2 (the head of the PrtP) over spell-out of dan_1 (the head of SPrtP). This would mean that if spell-out of dan_2 is impossible for some independent reason,

Dutch may take recourse to spell-out of *dan*$_1$ 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: *dan*$_2$ cannot be spelled out as part of the fragment clause because it is a head, for which reason the second best option of spelling out *dan*$_1$ is selected in order to satisfy recoverability, as in the fragment clause in (19b).

This brief excursion on the distribution of Dutch *dan* intends 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 do not allow fragment clauses with such particles either. This eliminates the main empirical argument in favor of the ISA to clausal ellipsis proposed by O&S. We therefore conclude that the SSA proposed in the article is superior to it on all counts.

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