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Clausal ellipsis: deletion or selective spell-out?

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Clausal ellipsis: 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.

Keywords: Clausal ellipsis, A'-movement, deletion, spell-out, discourse particles

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 fragment questions and fragment answers).¹ More or less simultaneously with Broekhuis (2018), Ott & Struckmeier (2018) proposed a second alternative to the MDA. The main goal of this article is to discuss a number of problems with the later approach. 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), as in (1):

(1) [CP ... XP*_i ... [TP ~~VP~~]], where XP* stands for one or more remnants

The advantage of the analysis in (1) is that ellipsis can be seen as an operation that affects a single, continuous phrase (TP) but there are also various well-known problems with this analysis. 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*-

¹ Our claim that gapping is a case of clausal ellipsis is controversial; see, e.g., Johnson (2009/2017) for an analysis according to which gapping constructions do not involve conjunction of clauses but of VPs.

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 sluiced 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.² Adding the finite verb *heeft* to the second conjunct in (3) leads to a completely unacceptable result.

- (3) a. [[Jan heeft het boek gelezen] en [Marie het artikel]].
 Jan has the book read and Marie the article
 ‘Jan has read the book and Marie the article.’
 b. [[Wat heeft Jan gelezen] en [wat Marie]].
 what has Jan read and what Marie
 ‘What has Jan read and what Marie?’

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-complement *op Peter* of the adjective *boos* ‘angry’ can be A'-moved into SpecFocusP, the selective spell-out approach (SSA) correctly accounts for the

² Zwart (1993/1997) argued that (neutral) subject-initial clauses are TPs. For this reason we also provide an example with *wh*-movement of an object. It should be noted, however, that there is good reason to assume that the subject in the second conjunct of (3a) is located in the specifier of CP anyway given that it is contrastively focused.

grammaticality of gapping examples such as (4), without the need to postulate exceptional movement of the sort assumed in the MDA; note that (4) just indicates the pronunciation, and not the A'-movements involved in the derivation of gapping.³

- (4) [[JAN is [_{AP} erg boos op Marie]] en [ELS is [_{AP} erg boos 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 clause, 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 (5). On the assumption that the PP *op wie* occupies SpecCP, the MDA and SSA both predict the grammaticality of the sluice in (5a). In order to account for the acceptability of sluiced multiple question in (5b), the MDA has to assume that the PP *op wie* is exceptionally moved into a position superior to TP before deletion of TP takes place. The SSA 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.

- (5) Iedereen is [_{AP} erg boos op iemand]] maar ik weet niet ...
 Everyone is very angry with someone but I know not
 a. [Op WIE ~~iedereen erg boos is~~].
 with whom everyone very angry is
 'Everyone is very angry with someone but I don't know with whom.'
 b. [WIE ~~erg boos~~ op WIE is].⁴
 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)

³ For our present purposes, it suffices to say that the target positions of the A'-movements involved are located externally to the lexical projection of the verb; see example (11) below for Neg and Focus-movement. Note further that we do not claim that the adjective must be deleted: it can survive gapping when it is part of the focused phrase, as in examples such as in [[JAN is [_{AP} erg BOOS op Marie]] en [ELS is [_{AP} erg TROTS op Peter]]] 'Jan is very angry with Marie and Els very proud of Peter'. This shows that the AP is able to move into SpecFocusP as a whole provided that the adjective is also focused. That this is possible need not surprise us given that, under the right information-structural condition, the AP can also be *wh*-moved as a whole: cf. *Op MARIE ben ik niet boos* versus *BOOS op Marie ben ik niet*.

⁴ One reviewer suggests that the multiple sluice may also be derived from ... [*WIE erg boos is op WIE*], in which the second *wh*-phrase *op wie* is in postverbal position. We agree: this order may be derived by moving *op wie* into SpecFocP, followed by leftward movement of the remnant of the VP across the focus position; VP-movement of this type has been proposed by, e.g., Barbiers (1995), Den Dikken (1995), and Kayne (1998) in order to account for extraposition of PPs and clauses. See also fn. 5.

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; 2019) 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 (6) are taken from Bayer (2017).

- (6) 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 (6) because this particle occurs in interrogative clauses only, but it can easily be shown for the DiPs *wohl* and *ja* in (7), taken from Ott & Struckmeier’s article; note that example (7b) is acceptable with adverbial *wohl* ‘obviously’, but this is not relevant here.

- (7) 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 fragment question (8b), which may follow the statement in (8a). The acceptability of (8b) 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.

- (8) a. A. Peter invited a couple of people.
 b. B. Wen *denn*? ‘Who?’

The fact illustrated in (7) that DiPs are immobile was one of the reasons for Bayer (2012; 2018; 2019) 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

The discussion above has shown that both the SSA and the ISA are able to avoid the stipulation of exceptional A'-movement, although one should keep in mind that this comes with a certain cost: the SSA has to introduce the notion of selective spell-out, while the ISA has to assume that the ellipsis operation can apply to discontinuous strings.

	Exceptional A'-movement	Selective spell-out	deletion targets discontinuous strings
MDA	+	—	—
SSA	—	+	—
ISA	—		+

Table 1: Special stipulations made by the three approaches to clausal ellipsis

We will assume, however, that in view of the empirical advantages of the SSA discussed in Broekhuis (2018), the MDA should be rejected. 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 4. But, first, sections 2 and 3 will compare the two alternatives to the MDA in order to show that the SSA is superior to the ISA in various respects.

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 account in principle for the fact that languages may 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, or can at least be A'-moved independently in non-reduced clauses (cf. Neijt 1979). The

Dutch examples in (9), for instance, show that while direct objects can be remnants of clausal ellipsis, PPs embedded in a direct object cannot.

- (9) 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 (9) is precisely the opposite of what Ott & Struckmeier’s ISA approach would lead one to expect: the gapped clause in (9a) should be unacceptable as it provides known information (namely that the thing that Els bought is a house), while the gapped clause in (9b) 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 (9b) follows immediately under the MDA and the SSA as a result of the island-sensitivity of A’-movement; see Broekhuis & Corver (2019:§2.2, sub I) for a more extensive discussion.

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 (10). The unacceptability of (10b) 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.

- (10) 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 discourse-old information, and why finite verbs must be elided in gapping constructions, i.e., cannot survive clausal ellipsis when they express new information.

3 Why the Selective Spell-out Approach is superior?

The SSA resembles the MDA in that it requires A’-movement of the remnants, but it crucially differs from it in that it does not need *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 and FocusP; see (11b-c) for examples of the latter two movements.

- (11) 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.’

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.

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 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.⁵

Second, we can also easily account for the established restrictions on gapping remnants. That remnants of clausal ellipsis obey the Hankamer/Neijt restriction simply follows from the fact that overt A'-movement precedes selective spell-out; this accounts for the acceptability contrast between the two examples in (9) above. That finite verbs (and complementizers) do not occur as remnants, regardless of 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 (10) above.⁶ 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 or information-structural property associated with the

⁵ 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 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; see also fn.4. An empirical argument in favor of this proposal (due to Željko Bošković; p.c.) is that extraposed clauses and clausal remnants of clausal ellipsis both require the complementizer *that* to be overtly expressed, as would be expected when they are both moved into the specifier of a focus phrase before the application of leftward VP-movement. Languages with (apparent) sluicing but *wh*-in-situ should be taken to have some other form of A'-movement licensing ellipsis (cf. Bhattacharya and Simpson, 2012, who argue that Bangla and Hindi have A'-movement to a clause-internal position), or to have ellipsis of some other sort.

⁶ One of the reviewers objects to this conclusion by saying that main verbs in the form of a participle *sometimes* are also impossible as ellipsis remnants despite the fact that they can be A'-moved, as in *Gekocht heeft Jan zijn huis* ‘Jan has bought his house’. If true, there might be various reasons for that, but the crucial difference with finite verbs is that there are constructions in which participles *can* occur as remnants, as in [*Jan heeft zijn huis gekocht*] *en* [*Piet heeft zijn huis gehuurd*] ‘Jan has bought his house and Piet rented it’, whereas this is categorically blocked for finite verbs.

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.

4 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 (8b), repeated here as (12b), would therefore be 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? '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 (7) 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 do occupy the initial position together with their associate *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 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 (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 German *nur*, which are likewise able to form a constituent with their associate focus phrase; this is shown by the fact that *heute nur* in (14) can occupy the sentence-initial position.

- (14) [Heute *nur*] ist das noch möglich.
 today only 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). 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 (2017; 2018; 2019). In short, there is no *a priori* reason for assuming that the questions in (13) have a different status than the fully acceptable declarative 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.

- (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 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 already been shown in (6) and (13), 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; 2019).

- (16) a. [Vor was *denn*] ist er *denn* geflüchtet?
 from what DENN is he DENN fled
 ‘what did he flee from? (I’m wondering)’
 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 (16a) in (17).

- (17) [CP ...C [... [PrtP ... *denn*₂ [... [VP/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, 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. The spell-out of the two occurrences of the particle is subject to language-specific constraints: some varieties prefer spell-out of *denn*₁, other varieties prefer spell-out of *denn*₂, 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 *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 (easily) allow *dan* to occur in fragment clauses: the overt realization of *dan* in (18a) is a head and can therefore not be spelled-out, and (18b) has a marginal status. This prediction is clearly wrong: the Dutch fragment clause in (19) is fully acceptable, just like its German counterpart in (8a)

- (19) a. A. Peter is voor iemand gevlucht.
 Peter is from someone fled
 b. B. Voor wie dan? 'Who?'

On the null-hypothesis that structure (17) is also available in Dutch, we have to conclude that the language-specific spell-out of particles in non-reduced clauses is a matter of preference: Dutch prefers spell-out of *dan*₂ (the head of the PrtP) over spell-out of *dan*₁ (the head of SPrtP). This opens the possibility 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, so 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* 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.

5 Appendix: Two issues related to the Dutch discourse particle *dan*

We conclude this article with a brief discussion of two issues raised by the reviewers of this article. One reviewer notes that *dan* behaves unexpectedly if pronounced with emphasis, as in *Wat wil je DAN?* ‘What else do you want?’, which was used in a *Nutella* commercial from the late 1980’s, in which a mother is talking to her child, who has just rejected all sorts of things to eat for breakfast; *wat dan* cannot be moved as a unit (**Wat DAN wil je?*) but is perfectly fine as a fragment clause (*Wat DAN?*). Apart from the question as to whether this case really contradicts what is said in the paragraph below (19) in section 4, it is clear that emphatic *dan* is not relevant in the present context, as Ott & Struckmeier (2018) follow Bayer in claiming that the DiPs under discussion cannot be accented.

The second reviewer provides the following discourse: A: *Vandaag komt Jan op bezoek*. B: *O ja, en wie morgen dan?* ‘Jan is coming today. O, and who tomorrow then?’, and claims that the elided clause is a problem for the SSA because the head *dan*₂ is overtly realized. This presupposes that *dan* is construed with the interrogative pronoun, but it is more likely that *dan* is actually construed with the adverbial phrase *morgen*: cf. A: *Ik kan vandaag niet komen*. B: *O, morgen dan?* ‘I cannot come today. O, tomorrow then?’.

One needs to realize that DiPs, which are functional heads in our analysis, are derived from XP-type constituents in processes of grammaticalization; cf. Hentschel (1986). Thus, it is very likely that in German/Dutch the DiP *denn/dan* coexists with the adverb *denn/dan*; only the DiP would project a SPrtP with the *wh*-phrase. It is clear that more research on examples of this sort is needed before they can be used in attempts at refuting the SSA.

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