Parasitic ellipsis and higher-order structures

Johannes Schneider

1. Introduction

In this article I demonstrate that parasitic ellipsis, originally described by Fitzgibbons (2014) as an otherwise illicit ellipsis of the complement of prepositions that becomes grammatical in the context of gapping in Russian, is a more widespread phenomenon that appears in other languages (English, German) and across other categories as well.

Fitzgibbons (2014) shows that in general prepositions in Russian do not allow ellipsis of their complements (1a); this illicit ellipsis after prepositions, however, becomes acceptable if the PP is a remnant of gapping (1b):

(1) a. *Koška ukrala kolbasu s   Mašinoj pomošč'ju, a   sobaka ukrala kolbasu BEZ.
         cat   stole sausage with Masha's help,   but dog   stole sausage without
         'The cat stole the sausage with Masha's help, but the dog stole the sausage without.'
     b. ?Koška ukrala kolbasu s   Mašinoj pomošč'ju, a   sobaka BEZ.
         cat   stole sausage with Masha's help,   but dog   without.
         'The cat stole the sausage with Masha's help, but the dog without.'   (*her 4a/d*)

Since ellipsis after prepositions is ungrammatical on its own, its availability can be said to be *parasitic on* the presence of a higher contrastive ellipsis like gapping.

This article is structured as follows: in Section 2 I show that parasitic ellipsis in PP-remnants is also available in English and German. I then show that parasitic ellipsis is also not restricted to a specific category; it can also occur after C, A, N and possibly V if those are the heads of gapping remnants. I close this section with an empirical generalization about the contexts in which parasitic ellipsis can occur. In Section 3 I compare parasitic ellipsis and parasitic gaps and show that they exhibit a number of parallels. I argue that parasitism is a genuine notion of grammar in its own right and differs from more well-known process interactions such as feeding. I discuss that approaches that view parasitism as two *separate but dependent* operations face a number of difficulties. In Section 4 I provide an analysis of parasitic ellipsis as a *single but higher-order* operation within Minimalist Grammars (Stabler 1997). I close by discussing how this approach ameliorates some of the issues discussed in the previous section.

2. Data

To investigate whether one ellipsis is parasitic on another one needs to test the following: first, is the parasitic ellipsis in spe ungrammatical in the absence of another, licensing ellipsis (or, if not ungrammatical, does the sentence lack certain readings)? Second, does the formerly ungrammatical ellipsis become acceptable in the presence of another ellipsis (or does the sentence gain previously absent readings)? If so, this provides evidence for the parasitic nature of the ellipsis. As in its sister construction parasitic gaps, parasitic ellipsis sentences are often somewhat marginal and there is some variation with respect to how universally speakers allows parasitic ellipsis after every item of a certain category. A few speakers already allow the 'parasitic' ellipsis independently, sometimes contrary to claims in the literature; most of those speakers report that even though the unlicensed 'parasitic' ellipsis is marginally acceptable, the licensed version improves acceptability. The emerging trend even for those speakers is therefore the following: *if* licensed and unlicensed parasitic ellipsis differ in acceptability, the difference in rating is

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* Johannes Schneider, Universität Leipzig, `johannes.schneider@uni-leipzig.de`

always in favour of the parasitic ellipsis in the presence of another ellipsis. More generally, however, for every category there are speakers who rate the unlicensed ellipsis as ungrammatical and the licensed one as significantly improved.

Throughout this section, I want to demonstrate that the following empirical generalization about parasitic ellipsis holds:

> **Parasitic ellipsis generalization (PEG)**
> For every possible remnant of gapping (contrastive ellipses), the complement of its head can optionally be deleted if the head is contrastively focussed and its complement given.

2.1. Prepositions and adverbials

The English and German equivalent of (1) exhibit the same acceptability differential, although some speakers report the unlicensed a)-variant to be marginally possible. It is, however, possible, to construct much more clear-cut cases.

(2) a. *Nina drank wine AFTER the lecture, but Indrek drank wine DURING.
    b. ?Nina drank wine AFTER the lecture, but Indrek DURING.

(3) a. *Maria erledigte   die Aufgabe WEGEN   der versprochenen Belohnung, aber Peter
        Maria completed the task   because.of the promised   reward   but Peter
        erledigte   die Aufgabe TROTZ.
        completed the task   despite
    b. ?Maria erledigte   die Aufgabe WEGEN   der versprochenen Belohnung, aber Peter TROTZ.
        Maria completed the task   because.of the promised   reward   but Peter despite
        'Maria completed the task because of the promised reward but Peter despite.'

2.2. Complementizers

Most English speakers strongly reject ellipsis after *whether* (for such a claim see e.g. Lobeck 1995: 46), yet find the corresponding sentence with gapping surprisingly acceptable:

(4) a. *Mary knows WHEN she will come, Peter doesn't even know WHETHER.
    b. ?Mary knows WHEN she will come, Peter not even WHETHER.

Similar data can be found in German:

(5) a. *Darko ist glücklich, OBWOHL er gefeuert wurde, und Morten ist glücklich, WEIL.
        Darko is happy   although he fired   was   and Morten is happy   because
    b. ?Darko ist glücklich, OBWOHL er gefeuert wurde, und Morten WEIL.
        Darko is happy   although he fired   was   and Morten because
        'Darko is happy although he was fired, and Morten because.'

2.3. predicative adjectives

I claim that parasitic ellipsis can also be detected after predicative adjectives, but with a twist: it is generally the case that a 'missing string' after an adjective does not result in ungrammaticality; instead, the sentence lacks certain readings and can only be understood generically. If such a sentence contains gapping, it suddenly gains readings (that are unrelated to the possibilities of gapping). I take this as evidence that the complement of the adjective is not simply absent because it has not been selected, but that it is present but deleted.

(6) #Claire was HAPPY with her son, and Mary was UPSET.
    ≈ *Mary was generally upset about something.*

The above sentence means that Mary was generally upset about something; via pragmatic inference that something is most likely the same contextually salient event, i.e. whatever Claire's son did. This is in

line with previous literature; Lobeck (1995: 48) already claimed that "ellipted complements of the lexical heads V, P and A are ungrammatical in English". This changes, however, in the presence of gapping:

(7)   Claire was HAPPY with her son, and Mary UPSET.
       = *Mary was upset about Claire's son/Mary's son.*

The above sentence means that Mary was upset either about her own son, or Claire's son, i.e. this sentence gains a strict and sloppy reading, a hallmark of ellipsis. Most speakers report a strong preference for the sloppy reading which for them is unavailable in (6)[1]. I take this to mean that the complement of *upset* is present but deleted and recovered in (7), in contrast to (6).
       The same goes for German:

(8)   a. #Marie ist BEEINDRUCKT von ihrem Vorbild, aber Johanna ist ENTTÄUSCHT.
          Marie is impressed   by her   idol   but Johanna is disappointed
       b. Marie ist BEEINDRUCKT von ihrem Vorbild, aber Johanna ENTTÄUSCHT.
          Marie is impressed   by her   idol   but Johanna disappointed

The English version of this sentence works exactly the same. Note also that gender mismatch is possible, another hallmark of ellipsis. (9b) can mean that Mary is proud of her own students:

(9)   a. #Peter is AFRAID of his students, and Mary is PROUD.
       b. Peter is AFRAID of his students, and Mary PROUD.

2.4. Nominals

       Parasitic ellipsis in nominals can be detected by the same means:

(10)   a. #Peter possesses a PICTURE of his grandparents, and Mary possesses a PAINTING.
       b. Peter possesses a PICTURE of his grandparents, and Mary a PAINTING.
(11)   a. #Peter besitzt   ein BILD   von seinen Großeltern, und Marie besitzt   ein GEMÄLDE.
          Peter possesses a picture of his   grandparents and Marie possesses a   painting
       b. Peter besitzt ein BILD von seinen Großeltern, und Marie ein GEMÄLDE.

In the a)-variants, Mary possesses a generic painting which via pragmatic reasoning probably depicts a contextually salient object such as Peter's grandparents. In the b)-versions, however, the strongly preferred reading is that Mary possesses a picture of her own grandparents (though a strict reading is also possible).
       Different nouns yield similar results (also in their German translations):

(12)   a. #Mary read an ARTICLE about her favourite research topic, and Peter read a BOOK.
       b. Mary read an ARTICLE about her favourite research topic, and Peter a BOOK.

2.5. Verbs

       As a last category I want to discuss verbs. Verbs as single head remnants have already been discussed in the context of *why*-stripping in Yoshida et al. (2014) (but not in the context of a parasitic analysis). As gapping remnants, verbal heads appear to be quite degraded for many English speakers:

(13)   ?*Peter should LEND his car, but Mary SELL.

Parasitic ellipsis after verbs is easier to establish for German. In contrast to English, German does not have universally available ellipsis after auxiliaries, yet a parasitic version is acceptable:

(14)   a. *Peter wird einen Kredit aufnehmen KÖNNEN, aber Marie wird MÜSSEN.
          Peter will a   loan take.out   can   but Marie will must
          '*Peter will be able to take out a loan, but Marie will have to.*'
       b. ?Peter wird einen Kredit aufnehmen KÖNNEN, aber Marie MÜSSEN.

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[1] I use # throughout to mark the absence of strict/sloppy readings.

(15) a. *Doreen hat ihr Segelboot VERKAUFT, aber Barbara hat VERSCHENKT.
    Doreen has her sailing.boat sold   but   Barbara has given.away
  b. ?Doreen hat ihr Segelboot VERKAUFT, aber Barbara VERSCHENKT.
    Doreen has her sailing.boat sold   but   Barbara given.away
    '*Doreen has sold her sailing boat but Barbara has given it away.*'

2.6. The parasitic ellipsis generalization

The generalization that emerges from the data appears to be the one proposed at the beginning of this section: if a phrase is a remnant of gapping, then one can optionally perform parasitic ellipsis of the complement of the head of that phrase. There is of course some speaker variation. There are also some external factors influencing the availability of parasitic ellipsis, such as phonological and semantic considerations: for an item to be the head involved in parasitic ellipsis, it needs to be able to express contrastive focus overtly. This does not work e.g. for prepositions consisting only of a consonant, as noted for Russian already in Fitzgibbons (2014). The head also needs to have enough semantic content to be the contrastive alternative to another item of the same category; examples of this sort are not always equally easy to construct, especially for functional elements. But the overall picture that emerges from the data above is the one described in the *PEG*.

A couple of words about the various claims in the generalization. First, there is the claim about the locality condition of parasitic ellipsis. As stated, it is a very local head-complement relation between the head of a remnant and its complement. Any further intervening material leads to ungrammaticality:

(16) *Peter is CONTENT with his son, but Paul DISAPPOINTED with.

(17) *Peter ist TRAURIG über das Ergebnis, aber Katarina FROH über.
    Peter is sad   about the result   but Katarina happy about.
    '*Peter is sad about the result but Katarina happy about.*'

Structures with an intended more deeply embedded parasitic ellipsis lack strict/sloppy readings:

(18) #Mary was HAPPY with a picture of her son, and Susan DISAPPOINTED with a picture.

The attentive reader might have noticed a potential exception to the generalization that parasitic ellipsis occurs after the head of a remnant, namely nominal gapping remnants: parasitic ellipsis occurs after the nominal, not after the determiner. Under the DP-hypothesis, nominals are the only exception to this generalization, under the NP-hypothesis, however, the generalization is total. Therefore, the theoretical debate about the structure of the nominal domain is relevant for parasitic ellipsis. Conversely, parasitic ellipsis might provide circumstantial evidence for the NP-hypothesis. In this context, it is interesting to note that D is the only major category after which parasitic ellipsis cannot occur:

(19) a. *Mary likes SOME professors, but Peter likes EVERY.
  b. *Mary likes SOME professors, but Peter EVERY.

This is unexpected under the view of D as the head of the nominal domain, but expected when D is viewed as a specifier. Addressing the issue of the structure of the nominal domain, however, is far beyond the scope of this article and I therefore leave it to further research.

There is also the claim regarding the type of ellipsis that can license parasitic ellipsis. The focus of this article is parasitic ellipsis in gapping. The closely related stripping also seems to be able to license parasitic ellipsis and the resulting constructions are often even more acceptable than their gapping counterparts:

(20) Peter steht AN der Wanne, nicht IN.
    Peter stands at the bathtub not   in.
    '*Peter is standing at the bathtub, not in.*'

As mentioned above, this was already described for APs and VPs by Yoshida et al. (2014: 363):

(21) a. John should LEND his car, not SELL.
  b. Veterans are honoured AFTER death, not BEFORE.

I therefore tentatively claim that parasitic ellipsis appears at least in gapping and stripping. A more careful exploration of the types of ellipsis that license parasitic ellipsis, and especially the ones that do *not* license it, are also left for further research.

2.7. Against alternative approaches

Before closing this section, I want to argue against approaches to parasitic ellipsis that do not view it as a genuine phenomenon in its own right but as an interplay of independently available processes.

One such approach might be to claim that actually only a single head survives, not a full phrase with additional deletion. If the means for survival of the head are (exceptional) movement, such a movement would violate locality restrictions on head movement. This is particularly pronounced in the case of C-remnants: a single C-head would need to cross a clause-boundary via a long movement to a position above the ellipsis site in the higher clause. An overt counterpart to this type of head movement is also missing. Even more problematically, it is possible for material above the head of a remnant to survive, such as adjuncts and specifiers, excluding a head movement analysis for all cases:

(22)   Peter is quite SAD about his grade, and Mary quite HAPPY.

A more reasonable approach might be to claim that the complement of the head of the remnant moves out of the phrase prior to deletion which leads to the appearance of more deletion than usual. This is possible in overt syntax at least for German via scrambling:

(23)   Peter besaß   [von seinen Eltern]$_1$ nur [Gemälde t_1].
        Peter possessed of   his   parents only paintings
        '*Peter had only painting of his parents.*'

Such an analysis, however, also faces a number of difficulties. The first is that there is no detectable interpretative effect of such putative scrambling in the German parasitic ellipsis sentences. The second is that English overt syntax lacks scrambling. One would therefore have to postulate exceptional *destructive* movement in addition to exceptional rescuing movement in some approaches (e.g. Merchant 2005) whose only syntactic justification would be to provide more material to delete. Furthermore, such movement can violate many restrictions that otherwise hold overtly. Parasitic ellipsis is possible after *during* (see (2b)); yet the following extraction is ungrammatical:

(24)   *Dinner, Nina drank wine during *t*.

German scrambling out of nominal phrases without an accompanying 'natural' predicate is quite degraded (for a discussion see Müller et al. 2022), yet parasitic ellipsis in the same context is fine:

(25)   ?*Über welchen Verwandten hat Peter das Buch *t* zerstört?
        about which   relative   has Peter the book   destroyed
        '*Which relative did Peter destroy the book about?*'

(26)   Peter zerstörte den ARTIKEL über seinen Großvater, und Paul das BUCH.
        Peter destroyed the article about his   grandfather and Paul the book

I take that to mean that in parasitic ellipsis there is genuine additional deletion of more material than would be deleted only by the initial gapping.

3. Parasitism

With an additional parasitic process at hand, it might be insightful to compare it to the prototypical construction of that type, parasitic gaps. Parasitic ellipsis and parasitic gaps share a number of properties. First, in both cases, one operation appears to be parasitic on another operation of the same type (gap creation process on gap creation process, ellipsis on ellipsis). Second, the parasitic process occurs in the domain defined for the host process: $\bar{A}$-movement needs to talk about a base and landing position for a moved item, and the span travelled by that item; the parasitic gap needs to be contained in a constituent

attached to that span (see e.g. Kayne 1983). Parasitic ellipsis occurs somewhere in a constituent whose base position is contained in the constituent marked for deletion by its host ellipsis. Third, descriptively speaking a parasitic process appears to refer to the presence of another *operation*, not the context it created (parasitic gaps are licensed by $\bar{A}$-movement, parasitic ellipsis occurs in the presence of another ellipsis). This is of course just a description arrived at by a first approximation and the only relevant question is to what extent this property persists in an actual theoretical implementation. This question, however, turns out to be relevant in the discussion of the previous proposal for parasitic ellipsis by Fitzgibbons (2014).

Fourth, if our pre-theoretical conception of parasitism is as two *separate, but dependent* operations, then one would expect that the parasitic operation underlies the same restrictions that grammar enforces for this type of operations (modulo the obvious dependency requirement). This is markedly not what one finds, in two different directions: one the one hand, parasitic processes enjoy much more freedom, they appear to be able to violate fundamental restrictions: a parasitic gap can correspond to its filler across an island, a fundamental barrier against movement. In parasitic ellipsis, an ellipsis appears to license further ellipsis across a focussed head, similarly a barrier for ellipsis; in the analysis I provide below, the ellipsis operation simply skips a focussed head. Additionally, the type of constituent an ellipsis elides usually establishes its identity (VP-ellipsis is distinct from sluicing); parasitic ellipsis does not seem to care at all either about the category of the skipped head or the category of the additionally elided constituent. On the other hand, parasitic processes also enjoy less freedom compared to their putative fellow operations in that they are subject to at first glance ad-hoc restrictions. Parasitic gaps are restricted to NPs which not all $\bar{A}$-movements are. Parasitic ellipsis apparently needs to be licensed by a contrastively focussed head, in strong contrast to e.g. sluicing or even more unexpectedly the ellipsis that licenses it, gapping. This head also needs to be able to express focus phonologically and be the member of a set of viable semantic alternatives.

This, then, leads to the question what kind of process interaction, if any, parasitism is. If parasitism is viewed as two separate, but dependent processes, it should behave akin to other process interactions like feeding. Under such a view, parasitism would then be a subset of feeding: parasitism would be that type of feeding where a process A does not provide *additional* input for the application of process B (see e.g. Kenstowicz 1994), but where A provides the *only* input for the application of B. In other words, parasitism should be fully dependent feeding. I want to argue that parasitism is distinct from feeding and a notion of grammar in its own right. First, it is unexplained why the parasitic process as a putative separate operation behaves so differently from other operations of the same type, as discussed above (**#1: more and less equal**). Second, we only ever find **parasitism of likes** (**#2**)[2]. This is an unexplained conspiracy under a view where certain processes just so happen to *always* rely on and interact with a certain other type of process. Naively, with *n* operations one would expect n^2 possible parasitisms; however, only a small subset of those are ever found. Third, this leads to the related observation that parasitic processes appear with precision to be sensitive to the presence of a specific *operation*; a fully dependent process should be blind as to whether the context in which it can apply is base-generated or provided by another operation since it does not refer to processes (**#3: context vs. process**). A theory of parasitism should account for the de facto necessary dependency in parasitism, however without referring to operations since this might be too powerful a device in grammatical theory.

To see where these issues become relevant, let us turn to the original analysis for parasitic ellipsis by Fitzgibbons (2014). Following Pesetsky & Torrego (2007) she allows for a four-way distinction of types of features. Features can be (un)interpretable, and can be either valued or unvalued. In her analysis, all contrastively focussed heads can optionally carry an *interpretable* but unvalued ellipsis feature *iE[ ]*. This feature is then valued under c-command by the valued E-feature for gapping *E[+]*. Parasitic ellipsis then is in principle always possible "but its interpretation will not be accessible if the E-feature is not valued"; the resulting ungrammaticality is "due to a crash at the interface with semantics" (2014:175).

However, as far as I can see this has nothing to do with semantic interpretability. What interpretable E-features implement in this analysis is simply the concept 'two operations talked to each other' as well as 'apply operation'. None of this is an interpretable meaning for the semantics component of the grammar; nor can ellipsis be executed by semantics. Allowing such a use of features is potentially too powerful since here it is in fact possible to let operations sense each others' presence. A grammar seems undesirable in

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[2] For a discussion of agree parasitic on agree, as well as a similar observation, see Corver (2021).

which one can express 'Agree with element A, only if B is A-moved which is only possible after C was topicalized'. Even a restriction to like features does not yield desired results: an overt $\bar{A}$-movement of element A that is conditional on overt $\bar{A}$-movement of B is distinct from the parasitic gap construction.

Next to the more conceptual arguments against equating parasitism with process interaction like feeding, this, like the *parasitism of likes* generalization, is also an overgeneration argument against viewing parasitism as two separate processes whose dependency is ensured by a potentially too powerful mechanism.

Instead, I want to put forward the view that parasitism is a genuine notion of grammar in its own right, distinct from feeding, and that it is better viewed as the outcome of a *single but more powerful* operation. I present such a proposal in the next section where I also discuss how this ameliorates some of the issues discussed in this section.

4. Analysis

In what follows I use Minimalist Grammars (MGs, Stabler 1997), a syntax formalism from computational linguistics that formalises the core ideas of minimalist syntax. The main difference between MGs and standard minimalism are the representations that are viewed as central. MGs make use of *derivation trees* which record the steps that were taken during a derivation, but without executing them. As a result, one major difference is that moving items are notated in their base position while just indicating higher up that movement takes place. An MG derivation tree is on the left, the fully equivalent tree in more standard notation on the right. In the derivation tree, the subject *someone* is in its base position even though it moves to SpecTP which can be read off from the feature information on T (not shown here). For readability, I have added an arc to the landing site even though this is usually not part of the MG representation.[3]

(27)
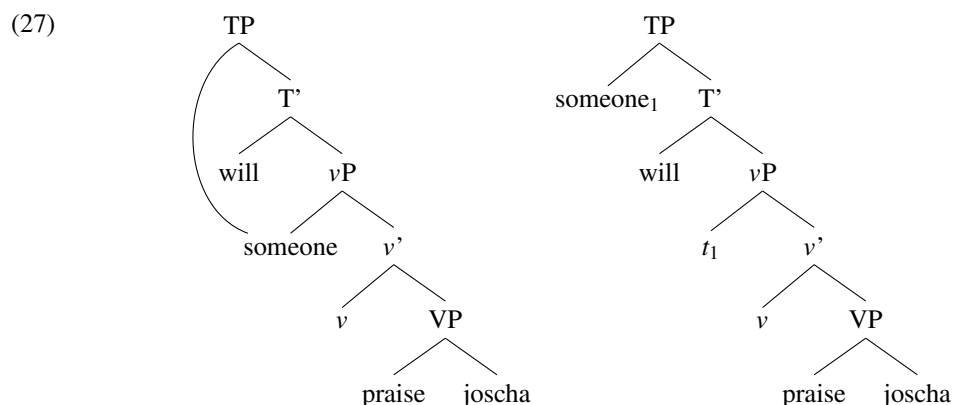
My analysis makes use of an approach to ellipsis (Kobele 2015) that is couched within Minimalist Grammars. In Kobele (2015), ellipsis is a pro-form that is anaphoric to a (part of a) derivation tree of the same syntactic type. In a sentence with VP-ellipsis as in (28), there is an ellipsis pro-form of type VP present ($\mathbf{e_{VP}}$). This pro-form is anaphoric to a derivation tree of type VP which the preceding sentence provides (marked in bold).[4]

(28)   Someone will [$_{VP}$ **praise Joscha**]. Anton will $\mathbf{e_{VP}}$

(29)

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[3] This is purely for expository purposes and does not constitute a commitment to a multidominance account of movement.
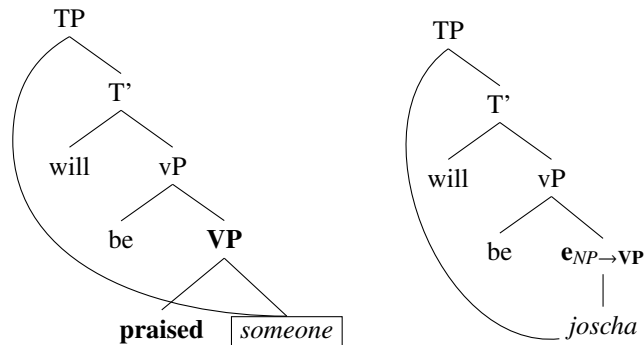
[4] All trees are simplified for expository purposes.

TP
T'
will *v*P
someone *v*'
v **VP**
praise joscha

TP
T'
will *v*P
Anton *v*'
v **e_VP**
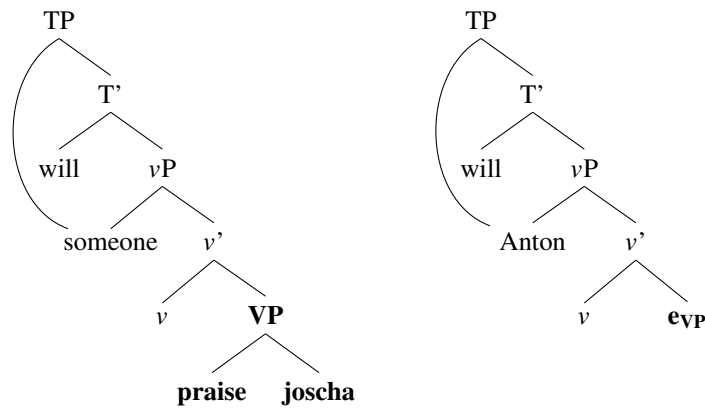
This pro-form $\mathbf{e_{VP}}$ that is anaphoric to a full constituent I call **1st-order ellipsis operation**. These constitute the simple cases. It is also possible that a phrase that is base-generated inside the ellipsis site survives because it moves to a higher position. This is the case in e.g. passive VP-ellipsis.

(30)   *Someone* will be [**praised** *t*]. *Joscha* will be $\mathbf{e}_{NP\rightarrow\mathbf{VP}}$

(31)

TP
T'
will vP
be **VP**
praised *someone*

TP
T'
will vP
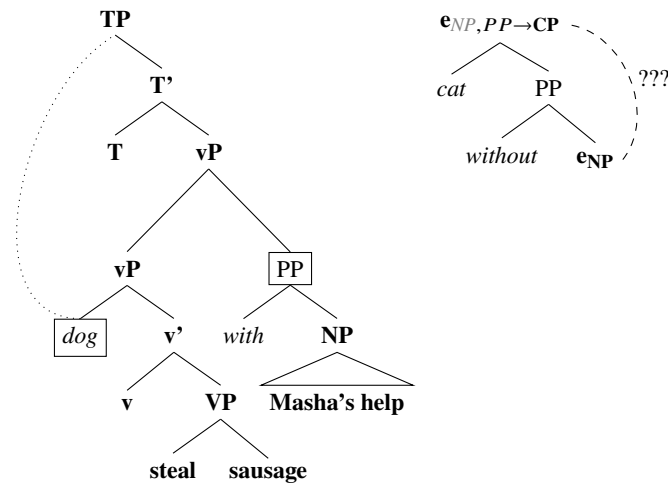be $\mathbf{e}_{NP\rightarrow\mathbf{VP}}$
joscha

Since MGs make use of derivation trees where moving items are notated in their base position, something more needs to be said in this ellipsis approach. Since it is VP-ellipsis, one still wants a pro-form that is anaphoric to a VP; however, the elliptical sentence does provide the logical object itself (*joscha*, italics), it is not elided. Therefore, one wants the pro-form to be anaphoric to a VP *minus* the logical object. This is achieved via **2nd-order ellipsis operations**: $\mathbf{e}_{NP\rightarrow\mathbf{VP}}$. Here, the ellipsis operation is anaphoric to a constituent (VP, bold) minus a subconstituent (NP, in italics). Its antecedent is therefore a constituent with a 'hole' (the boxed part) $\lambda x.[_{VP}\textbf{ praised } x]$.
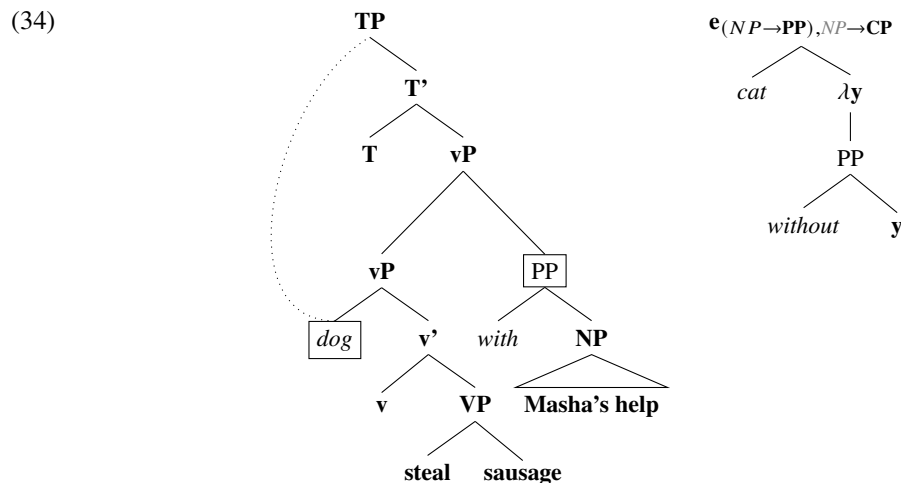
The original article restricts attention to ellipsis operations that are at most 2nd-order. I want to argue that lifting this restriction allows us to model parasitic ellipsis as a single operation. In fact, when endowed with a locality condition 3rd-order ellipsis operations *predict* a phenomenon that has exactly the profile of parasitic ellipsis. Let us turn to the classic parasitic ellipsis example:

(32)   The DOG stole the sausage WITH Masha's help, but the CAT WITHOUT.

(33)

$\mathbf{TP}$

$\mathbf{T'}$

$\mathbf{T}$ $\mathbf{vP}$

$\mathbf{vP}$ $\boxed{\text{PP}}$

$\boxed{dog}$ $\mathbf{v'}$ *with* $\mathbf{NP}$

$\mathbf{v}$ $\mathbf{VP}$ $\mathbf{Masha's\ help}$

$\mathbf{steal}$ $\mathbf{sausage}$

$\mathbf{e}_{NP,PP\to\mathbf{CP}}$

cat PP ???

without $\mathbf{e_{NP}}$

On the left is the structure of the first conjunct, where everything is bold that will serve as antecedent material for the elliptical sentence. This includes the whole CP[5], but minus the subject and the adverbial PP (boxed as 'holes' in the antecedent material). These two phrases are present in the elliptical sentence as the two contrastive remnants and therefore do not need to be provided by the antecedent sentence. However, parasitic ellipsis sentences have the additional quirk that in (at least) one remnant there is additional deletion. In this case, the complement of *without* is also missing and needs to be recovered from the antecedent sentence (which is why *Masha's help* is in bold type there). The question, then, is how to analyse the missing material. One option that is excluded is to say that there is an independent $\mathbf{e_{NP}}$. This ellipsis is ungrammatical on its own, as shown in (1b). If one proposes a separate operation, one needs to somehow model its dependence (dashed line) on the other ellipsis operation present, gapping. I argued in the last section that doing so faces a number of difficulties and potentially overgenerates if we let operations be sensitive to the presence of other operations, not just the contexts that they create. Instead, in the current framework it is possible to describe parasitic ellipsis as a *single but higher-order operation* through the use of **3rd-order ellipsis operations**. With the latter, it is possible to refer to the elided material as a single (but discontinuous) unit.

(34)

$\mathbf{TP}$

$\mathbf{T'}$

$\mathbf{T}$ $\mathbf{vP}$

$\mathbf{vP}$ $\boxed{\text{PP}}$

$\boxed{dog}$ $\mathbf{v'}$ *with* $\mathbf{NP}$

$\mathbf{v}$ $\mathbf{VP}$ $\mathbf{Masha's\ help}$

$\mathbf{steal}$ $\mathbf{sausage}$

$\mathbf{e}_{(NP\to\mathbf{PP}),NP\to\mathbf{CP}}$

cat $\lambda\mathbf{y}$

PP

without $\mathbf{y}$

In what follows I ignore the subject remnant (*NP*) since it is only the additional deletion within the PP that makes the ellipsis 3rd-order. An ellipsis of type $\mathbf{e}_{(\mathbf{NP}\to PP)\to\mathbf{CP}}$ says the following: I stand in for a constituent of type CP, minus a PP that this sentence provides on its own. However, not the whole PP is provided and ellipsis 'continues' inside it, so the NP is therefore part of the ellipsis again. In other words,

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[5] For the current purposes it does not matter which projection it is that gapping elides.

we elide a constituent (1st-order) but exempt a subconstituent (2nd-order) - but not completely, instead we elide again a subconstituent of the latter (3rd-order). In a different notation, for $\mathbf{e}_{(NP\to VP)\to CP}$, the antecedent is $\lambda f.[_{\mathbf{CP}} \ldots [_{\mathbf{vP}} \mathbf{v}\, f(\mathbf{masha's\ help})]]$, i.e. a CP with a hole (f), but the hole itself is not atomic but contains structure. The structure that the elliptical sentence provides ($\lambda y.without\ y$) can compose with the recovered antecedent to result in the correct interpretation $[_{CP}\ldots[_{vP}\ldots[_{vP} without\ Masha's\ help]]]$[6].

The general type of parasitic ellipsis in this approach is therefore $\mathbf{e}_{(XP\to YP)\to ZP}$, namely remnants ($YP$) of ellipsis ($\mathbf{ZP}$) in which ellipsis continues ($\mathbf{XP}$)[7]. This general schema for parasitic ellipsis needs to be endowed with a simple locality condition: when going from 2nd- to 3rd-order types, the relation ($\mathbf{XP}\to YP$) needs to be a strict head-complement relation. At this point I also want to address overgeneration concerns. One might wonder whether it is potentially too powerful to be able to refer to 3rd-order structures. What constitutes possible 2nd-order gapping operations is constrained by a theory of possible gapping remnants. This is logically independent from the approach assumed here and can be implemented as in other ellipsis approaches. Given such a theory of gapping remnants, adding 3rd-order ellipsis operations adds some power, but not much, if equipped with the above locality condition. The *only* thing 3rd-order ellipsis can generate is an additional ellipsis of the complement of the head of an ellipsis remnant. As the *PEG* shows, this is exactly what needs to be generated.

To conclude, by going from 2nd- to 3rd-order ellipsis operations, one can model parasitic ellipsis as a single but discontinuous process. Such a *single process* approach to parasitism has a number of advantages. First, there is no process reference since there is only a single operation (#3). Second, the current account derives some of the unexpected properties of parasitic ellipsis (#1): a 3rd-order ellipsis necessarily crosses un-elided material; while it is independently necessary to state the locality condition which restricts this to a single head, a 3rd-order operation derives the blindness towards the category of the "triggering" head. While the type of constituent that an ellipsis deletes usually determines its identity (VP-ellipsis is distinct from sluicing), parasitic ellipsis does not care about the category of the intervening head since it effectively just constitutes a 'skipping rule', not an additional ellipsis in its own right. As a last point, the current approach also explains the parasitism of likes conspiracy (#2): when going from 2nd- to 3rd-order ellipsis nothing else but another ellipsis can result. An operation that appears to be parasitic on another operation is predicted in such an approach.

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[6] The fact that λ-expressions occur in the tree is simply a notational clutch to express the fact that there is just a single but discontinuous ellipsis which is difficult to show in a 2D-tree.

[7] Ignoring again remnants like *dog* that do not increase order but just arity of the operation.