Derivational ellipsis and Vehicle Change

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1 Introduction

The literature on ellipsis constructions can be broadly divided into two camps: (i) those that assume full syntactic structure in the ellipsis site (e.g. Ross 1969; Merchant 2001), and (ii) those who assume no internal syntax of the ellipsis site and that it is instead reconstructed at LF (e.g. Fiengo & May 1994; Chung et al. 1995). Since Merchant (2001), it is now widely assumed that ellipsis sites contain fully-fledged syntactic structure that is not pronounced (also see Merchant to appear for an overview). While Merchant (2001) suggested that this deletion process is rather late, i.e. at PF, there is the alternative possibility that ellipsis takes place in the syntactic derivation (e.g. Aelbrecht 2011; Baltin 2012). A clear prediction of the latter approach is that, all else being equal, two processes should interact if they are in the same module, i.e. we expect to find potential feeding/bleeding relations between ellipsis and other syntactic processes (Sailor 2018*a*,*b*). This diagnostic of course depends on very much on there being a consensus about the module of grammar that a particular operation belongs to. As a case in point, consider the much-discussed interaction of T-to-C movement in sluicing (Lasnik 1999, 2014; Merchant 2001; Baltin 2010). While sluicing is often conceived of as ellipsis as the complement of a C head (i.e. TP), it seems to block T-to-C movement. For example, in typical wh-questions which the fragment in (1B) is derived from, it is assumed that the auxiliary moves from T to C. However, the auxiliary cannot surface overtly in a fragment answer.

(1) A: Someone has arrived
B: Who (*has)?

If we think that head movement is syntactic, then we can derive the inability of T-to-C movement out of ellipsis sites as the result of a bleeding interaction between the two processes. Thus, this kind of rule interaction provides a strong argument for these processes being in the same module.[1]

[1] The obvious alternative approach is to maintain that ellipsis a PF operation and instead locate the operations that it interacts with in the PF module, e.g. head movement (see Chomsky 1995; Merchant 2001; Boeckx & Stjepanović 2001).

In this paper, we propose a new argument for a derivational approach in which ellipsis is triggered in the syntax proper.It is based on the much-discussed phenomenon of 'vehicle change', in which bound R-expressions inside ellipsis sites do not give rise to the expected Principle C violations (2).

(2) Mary loves John_i, and he_i thinks that Sally does [$_{VP}$ ⟨love him_i / *John_i⟩] too.
(Fiengo & May 1994:220)

If we think that there is otherwise good evidence for VP ellipsis sites containing silent internal structure (e.g. Hankamer & Sag 1976; Johnson 2001; van Craenenbroeck 2017), then the absence of Principle C is surprising. While the relatively widely-accepted view of vehicle change is that it involves a stipulated equivalence between R-expressions and pronouns inside ellipsis sites (Fiengo & May 1994), we present an alternative analysis based on a derivational view of ellipsis. The core intuition will be that we do not find Principle C violations with R-expressions inside ellipsis sites because the relevant R-expression is no longer syntactically accessible at the point at which its potential binder is merged. We will show that this can not only derive the mono-/bi-clausal distinction that originally motivated Fiengo & May's (1994) 'replace-with-a-pronoun' analysis, as well as other examples which have been shown to be problematic for it.

2 Derivational ellipsis

Since Merchant (2001), it is now widely assumed that ellipsis sites contain fully-fledged syntactic structure that is unrealized at PF. This means that, all things being equal, a constituent that will later be elided will not have any special status syntactically. An alternative approach, which is often referred to as *derivational ellipsis*, contends that ellipsis is licensed in syntax proper. This makes the prediction that ellipsis constitutes should, in some cases, show different syntactic behaviour from their unelided counterparts. The main evidence for derivational ellipsis comes from cases in which it seems that a to-be-elided constituent is inaccessible for some syntactic processes such as movement or agreement. In what follows, we briefly recap three such arguments based on Ā-movement, head movement and φ-agreement.

Aelbrecht (2011, 2012) discusses what she calls *Modal Complement Ellipsis* (MCE) in Dutch. This construction involves ellipsis of a VoiceP constituent in the presence of a modal verb (3a). Although subjects can be freely extracted from MCE, objects cannot (3b,c).

(3) *No extraction from Modal Complement Ellipsis in Dutch* (Aelbrecht 2011:59,63):

a. Emiel wou Sarah wel een cadeautje geven, maar hij$_1$ mocht niet [$_{VoiceP}$ t_1
Emiel wanted Sarah PRT a present give but he was.allowed not
~~Sarah een cadeautje geven~~]
Sarah a present give
'Emiel wanted to give Sarah a present, but he wasn't allowed to.'

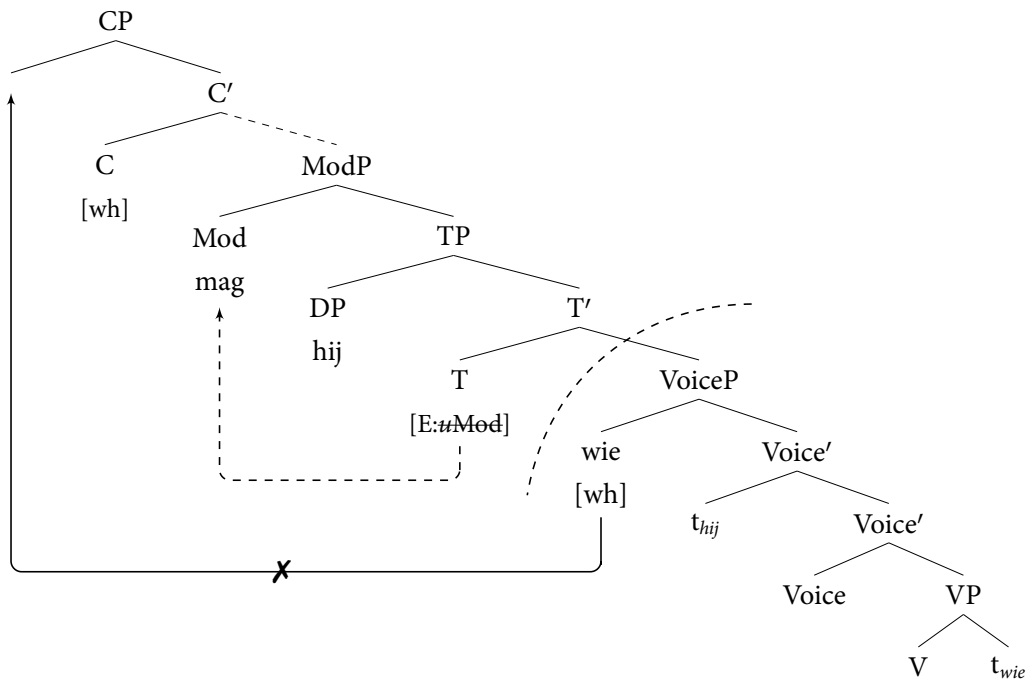
b.?*Ik weet niet wie Kaat WOU uitnodigen, maar ik weet wel wie$_2$ ze$_1$ MOEST
I know not who Kaat wanted invite but I know PRT who she must.PST

[$_{\text{VoiceP}}$ t_1 [$_{\text{VP}}$ t_2 ~~uitnodigen~~]]
invite
'I don't know who Kaat WANTED to invite, but I do know who she HAD to.'

c. *Ik weet niet aan wie Thomas die bloem wou geven, maar ik weet wel aan wie$_2$
I know not to who Thomas that flower wanted give but I know PRT to who
hij$_1$ MOEST [$_{\text{VoiceP}}$ t_1 [$_{\text{VP}}$ t_2 ~~die~~ ~~bloem~~ ~~geven~~]]
he must.PST that flower give
'I don't know to whom Thomas WANTED to give that flower, but I know to whom he HAD to.'

The core component of Aelbrecht's (2011) analysis of this asymmetry is that ellipsis takes place in the syntax as a form out Spell-Out. The basic idea is that the complement of the T head bearing the [E]-feature triggers Spell-Out of its complement once the higher head Mod(al) head is merged. VoiceP corresponds to the traditional *v*P in Chomsky (2000, 2001). Thus, wh-objects must move to the edge of the VoiceP phase. Since ellipsis is triggered by a higher head, moving objects are trapped inside the ellipsis site at the phase edge (4). Since subjects move to Spec-TP, they escape from the ellipsis site before it becomes inaccessible.

(4)



The important assumption in deriving the asymmetry about extraction from ellipsis sites is that it is only possible if the ellipsis licensing (also see Baltin 2012 on British *do*).

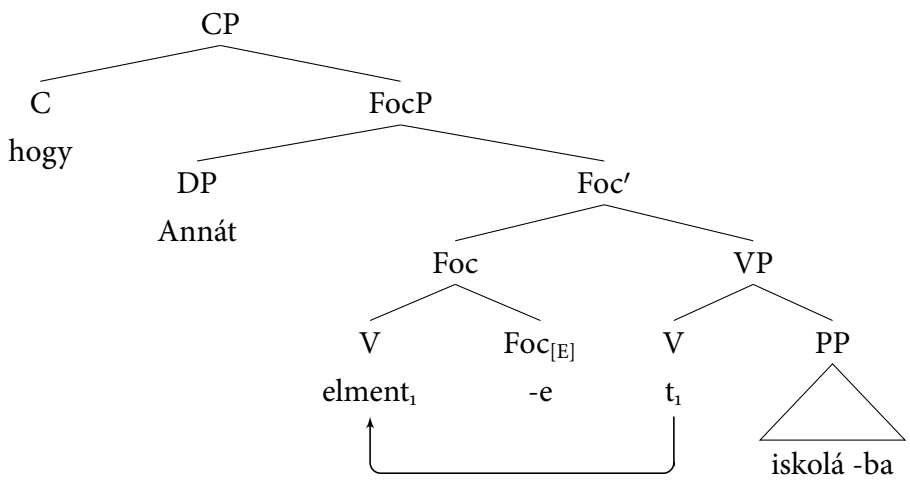
A similar argument comes from van Craenenbroeck & Lipták (2008). They show that there is a morpheme *-e*, which surfaces in (embedded) polar interrogatives (5).

(5) Kiváncsi vagyok, hogy János el-ment*(-e) iskolá-ba
curious be.1SG COMP Janos PV-went*(-Q) school-to
'I wonder if Janos left for school.'

They assume that it is situated in the head of a focus projection, FocP. In polar interrogatives such

as (5), the verb moves to this position in order to combine with it (6).

(6)



Furthermore, they show that Hungarian allows for a sluicing-like construction with a focused non-wh constituent (7a). Finally, this kind of ellipsis is possible in embedded polar environment such as (7b). Here, what we find is that the *-e* suffix that would normally surface on the verb is attached the phrasal remnant of ellipsis (7c).

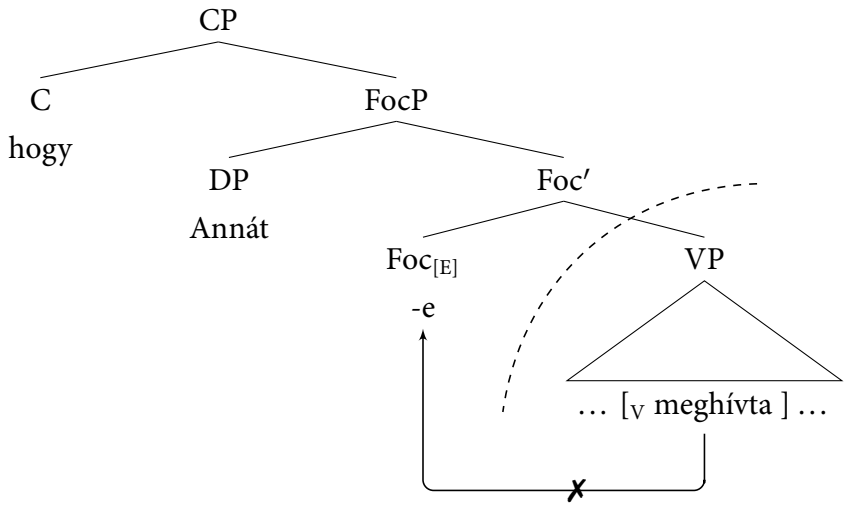
(7) *No head movement out of ellipsis in Hungarian* (van Craenenbroeck & Lipták 2008:140ff.):

a. János meghívott valakit és azt hiszem hogy BÉLÁT [$_{VP}$ △]
   Janos invited someone and that think.1SG COMP Bela
   'Janos invited someone and I think it was Bela whom he invited.'

b. János meghívott egy lányt, de nem tudom hogy ANNÁT*(-e) [$_{VP}$ △]
   Janos invited a girl but not know.1SG COMP Anna*(-Q)
   'Janos invited a girl, but I don't know if it was Anna.'

Their interpretation of these facts is that, normally, the verb would move to the Foc head in embedded yes-no questions. However, if that head also bears an ellipsis-triggering [E]-feature, then ellipsis is blocked (8). This follows if ellipsis is derivational and bleeds movement of the head out of the ellipsis site.

(8)



It has also been argued that ellipsis can bleed agreement dependencies. Johnson (2013, 2015) presents data from Hocąk, which show the impossibility of object agreement into an elided VP. In (9a), the verb *hojį* ('hit') in each conjunct bears an object agreement marker *hį-* (and is pronounced as the fused form *hųųjį*). In (9b), the VP has been elided and we see that object agreement is not possible.

(9) *VP ellipsis bleeds object agreement in Hocąk* (Johnson 2013, 2015):

a. Cecil-ga (nee) hį-hojį anąga Hunter-ga šge (nee) hį-hojį
Cecil-PROP (me) 1.OBJ-hit and Hunter-PROP also (me) 1.OBJ-hit
'Cecil hit me, and Hunter hit me too.'

b. Cecil-ga (nee) hį-hojį anąga Hunter-ga šge [$_{VP}$ △] ųų / *hį'-ųų
Cecil-PROP (me) 1.OBJ-hit and Hunter-PROP also do / *1.OBJ-DO
'Cecil hit me, and Hunter hit me too.'

Of course, this could follow if ellipsis in Hocąk were simply an empty category, i.e. a deep anaphor in the sense of Hankamer & Sag (1976). However, the data in (10) show that it is possible to extract a wh-object from the elided VP, which suggests that it does contain underlying syntactic structure.

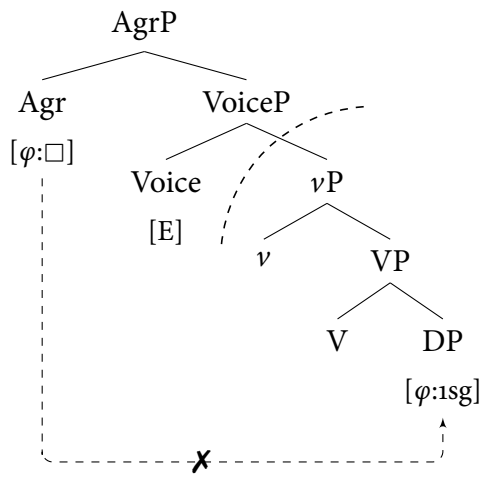
(10) *Extraction from VPE in Hocąk* (Johnson 2014:261,263):

a. Meredith-ga waagax-ra Ø-ruiį nųnįge wiiwagax-ra$_1$ hąąke [$_{VP}$ △] Ø-ųų-nį
Meredith-PROP paper-DEF 3.SG-buy but pencil-DEF NEG 3.SBJ-do-NEG
'Meredith bought the paper, but not the pencils.'

b. Bryan-ga Ø-ruwį jaagu$_1$ Meredith-ga [$_{VP}$ △] Ø-ųų-ra
Bryan-PROP 3.SBJ-buy what Meredith-PROP 3.SBJ-do-COMP
'Bryan bought what(ever) Meredith did.'

Instead, Johnson proposes that derivational VP ellipsis bleeds object agreement. We can appeal to a similar logic as with extraction, at the point at which object agreement takes place, the constituent containing the goal for object agreement has been elided (11).

(11)



Cases of ellipsis bleeding other syntactic operations allows for a compelling argument to be made that ellipsis, in some cases, is triggered in narrow syntax. In what follows, we will propose that a

similar argument can be made on the basis on vehicle change effects.

3 Vehicle Change

Fiengo & May (1994) pointed out that an R-expression in an ellipsis site that is c-commanded by a co-referent pronoun does not give rise to a Principle C violation (12).

(12) Mary loves John$_i$, and he$_i$ thinks that Sally does [$_{VP}$ ⟨love him$_i$ / *John$_i$⟩] too.
(Fiengo & May 1994:220)

This is a phenomenon referred that Fiengo & May (1994) dub *vehicle change* (Vanden Wyngaerd & Zwart 1991; Safir 1999, 2004*b*; Merchant 2001; Aoun & Nunes 2007; Hunter & Yoshida 2016). Vehicle change seems to be a very a general property ellipsis that is also found with sluicing (13a), comparative deletion (13b) and antecedent-contained deletion (13c).

(13) a. *Vehicle change with sluicing* Merchant (2001:24):
Alex$_i$ was arrested, but he$_i$ doesn't know why [$_{TP}$ ⟨he$_i$ / *Alex$_i$ was arrested⟩]
b. *Vehicle change with comparative deletion* (Lechner 2004:16):
Mary is prouder of John$_i$ than he$_i$ believes that I am [$_{VP}$ ⟨proud of him / *John$_i$⟩]
c. *Vehicle change with ACD* (Fiengo & May 1994:275):
Mary introduced John$_i$ to everyone he$_i$ wanted her to [$_{VP}$ ⟨introduce him / *John$_i$ to⟩]

This is somewhat surprising under the view that ellipsis sites must contain appropriately matching syntactic structure. (cf. Chung's (2006; 2013) *no new words* requirement; Merchant 2013*a*:460). On the other hand, we know that ellipsis must be afforded some degree of interpretational flexibility to deal with so-called 'sloppy readings' such as (14b) (Bouton 1970; Sag 1976; May 1985).

(14) a. John$_i$ loves his$_i$ mother and Mary$_j$ does [$_{VP}$ ⟨love his$_i$ mother⟩] too. (*strict*)
b. John$_i$ loves his$_i$ mother and Mary$_j$ does [$_{VP}$ ⟨love her$_j$ mother⟩] too. (*sloppy*)

3.1 'Replace-with-a-pronoun' (Fiengo & May 1994)

The question is how this flexibility can be constrained. Fiengo & May (1994) attribute the absence of a Principle C violation (14) to a process they call *vehicle change* (Vanden Wyngaerd & Zwart 1991; Brody 1995; Safir 1999, 2004*b*; Merchant 2001; Aoun & Nunes 2007; Hunter & Yoshida 2016). The essence of vehicle change is that an R-expression contained in an ellipsis site can be construed as a co-referent pronoun for the purposes of binding. In other words, the 'vehicle' for a particular anaphoric reference is flexible. Fiengo & May (1994) do not assume that there is underlying syntactic structure in the ellipsis site, but instead that its content must be 'reconstructed' at LF (e.g. Wasow 1972; Williams 1977; Kitagawa 1991; Chung et al. 1995). Thus, vehicle change means that reconstruction of an ellipsis site is insensitive to the feature [±pronoun], distinguishing pronouns and proper names (Fiengo & May 1994:221). On a PF deletion view of ellipsis, vehicle change can be implemented as a transformation on the ellipsis site that allows an R-expression in an ellipsis site to be replaced with a co-referent pronoun (see Safir 1999:614; Cecchetto & Percus 2006:93),

or one could simply stipulate an equivalence class between the two elements for the purposes of ellipsis identity, i.e. [−pronominal] = [+pronominal] (Merchant 2001:204). We can therefore broadly define vehicle change as in (15).

(15) *Vehicle Change* (Fiengo & May 1994:218):
In an ellipsis site, a nominal can take any syntactic form as long as its indexical structure is unchanged.
[−pronominal] → [+pronominal]
(e.g. $[_{DP}$ John $]_i$ → $[_{DP}$ he $]_i$)

For convenience, let us refer to Fiengo & May's (1994) approach as the 'replace-with-a-pronoun' analysis of vehicle change. The motivation for this comes from the contrast in (16). Recall from (12), repeated below as (16a), that vehicle change can apply across a finite clause boundary. However, if the co-referent elements are clause-mates, then the expected Principle C effect surfaces.

(16) *No vehicle change in mono-clausal contexts* (Fiengo & May 1994:220, 222):
a. Mary loves $John_i$, and he_i thinks that Sally does $[_{VP}$ ⟨love him_i / *$John_i$⟩] too.
b. *Mary hit $John_i$ and he_i did $[_{VP}$ ⟨hit *him_i / *$John_i$⟩] too.

This follows from Fiengo & May's (1994) theory since replacing an R-expression with a pronoun means that, while it will be free from Principle C, it is still subject to Principle B. As summarized in (17), Principle B says that pronouns must be free within their binding domain (for present purposes, the minimal TP).

(17) *Binding Principles* (Chomsky 1981; Büring 2005; Truswell 2014:216f.):
a. *Principle A*:
Reflexives are bound within a binding domain.
b. *Principle B*:
Pronouns are free within a binding domain.
c. *Principle C*:
Full NPs are globally free.

In (16a), the pronoun in the ellipsis site licensed by vehicle change violates neither Principle B or C. However, replacing *John*$_i$ with *him*$_i$ in (16b) leads to a Principle B violation. For this reason, both application and non-application of vehicle change resulting in some binding-theoretic violation.

Further evidence for the 'replace-with-a-pronoun' analysis comes from possessors. Assuming that the binding domain is the minimal TP or DP (e.g. Truswell 2014:218), vehicle change should be able to apply to an R-expression with a clausemate antecedent as long as the R-expression is contained within a DP. As (18) shows, this is a correct prediction. For example, *his*$_i$ in (18) is free in its binding domain (DP) and therefore does not violate Principle B.

(18) *Vehicle change in DPs* (Fiengo & May 1994:277; Drummond & Shimoyama 2014:95):

a. I like John's$_i$ friends more than he$_i$ does [$_{VP}$ ⟨like [$_{DP}$ his$_i$ / *John's$_i$ friends] ⟩]

b. Mary introduced [$_{DP}$ John's$_i$ mother] to everyone that he$_i$ did [$_{VP}$ ⟨introduce [$_{DP}$ his$_i$ / *John's$_i$ mother] to⟩]

This appears to be another point in favour of the 'replace-with-a-pronoun' approach to vehicle change. However, we will see that there are also a number of problems associated with it.

3.2 Some challenges for 'replace-with-a-pronoun'

Fiengo & May (1994:221,fn.24) claim that 'vehicle change is operative in both sentential and nominal domains'.[2] We saw that this accounts for (18), however it is not always the case. Aoun & Nunes (2007:529) point out that the data in (19) pose a problem for Fiengo & May (1994). As (19a) shows, this DP does not create a new binding domain, leading to a Principle B violation. If vehicle change involves pronoun replacement (in some relevant sense), then we expect this Principle B violation to persist under ellipsis. However, the co-reference in (19b) is acceptable.

(19) a. *John/he$_i$ never tells stories about him$_i$

b. Mary always tells stories about John$_i$, but he$_i$ never does [$_{VP}$ ⟨tell stories about *him$_i$ / *John$_i$⟩]

This asymmetry is puzzling under Fiengo & May's (1994) approach, since we do not expect obviation of Principle B effects in ellipsis sites. We could rule this out if we allowed vehicle change to also turn a pronoun into a reflexive in (20a). However, such a step is clearly not desirable as it would undermine the account of the lack of vehicle change with clausemates, since a reflexive such as *himself* could also rescue (20)

(20) *Mary hit John and he$_i$ did [$_{VP}$ ⟨hit *him$_i$ / *John$_i$/ ✓himself$_i$⟩] too.

As Safir (2004*a*:152) points out, this is therefore clearly something we do not want from an empirical perspective. However, it is important to note that nothing beyond stipulation rules this out.

There are further empirical problems with the 'replace-with-a-pronoun' view of vehicle change. Drummond & Shimoyama (2014) show that there is a clear asymmetry between the applicability of vehicle change across a TP vs. CP boundary. This can be seen with a for-infinitive as in (21). While this is a context in which we do find Principle B violations (21a), these are absent in vehicle change contexts(21b). The acceptability of (21b) is therefore problematic for pronoun replacement view of vehicle change.

[2] Fiengo & May (1994:221,fn.24) argue that vehicle change can apply inside a PP complement in (i).

(i) I saw that [$_{DP}$ picture of Bill$_i$] and he$_i$ did [$_{VP}$ ⟨see [$_{DP}$ that picture of him$_i$ / *Bill$_i$]⟩] too.

However, anaphors inside *picture*-NPs are known to be 'exempt' anaphors, which do not fall under the scope of Binding Theory (e.g. Fiengo & Higginbotham 1981; Pollard & Sag 1992; Reinhart & Reuland 1993; Charnavel & Zlogar 2016).

(21) *Vehicle change across CP boundary* (Drummond & Shimoyama 2014:103):

a. *John/he$_i$ wants [$_{CP}$ for him$_i$ to win]

b. I want [$_{CP}$ for John$_i$ to win] just as much as he$_i$ does [$_{VP}$ ⟨want [$_{CP}$ for *him$_i$ / *John$_i$ to win]⟩]

Cases such as these contrast with genuine cases of ECM, which we assume to involve TP-embedding. These contexts show clear Principle B sensitivity (22a,c) that is also found with elided R-expressions that should give rise to vehicle change (22b,d).

(22) *No vehicle change across TP boundary* (Drummond & Shimoyama 2014:103):

a. *He $_i$ believes [$_{TP}$ him$_i$ to be intelligent]

b. *I believe [$_{TP}$ John$_i$ to be intelligent] just as much as he$_i$ does [$_{VP}$ ⟨believe [$_{TP}$ *him$_i$ / *John$_i$ to be intelligent]⟩]

c. *He$_i$ caught [$_{TP}$ him$_i$ lying]

d. *I caught [$_{TP}$ John$_i$ lying] more often than he$_i$ did [$_{VP}$ ⟨catch [$_{TP}$ *him$_i$ / *John$_i$ lying]⟩]

The following section will show that these data support an account of vehicle change as the result of derivational ellipsis.

In sum, while the 'replace-with-a-pronoun' analysis of vehicle change accounts for the original mono-/bi-clausal context that motivates it, it struggles when faced with a broader set of data. Furthermore, there is a sense in which vehicle change is not really an explanation of the phenomena, but rather a (Giannakidou & Merchant 1998:245; Merchant 2001:204f.; 2005), the problem being why we sometimes do not find the kind of Principle C effects that we would expect if ellipsis sites contained fully articulated structure. In what follows, we argue that the derivational view of ellipsis licensing can shed light on the core of the vehicle change phenomenon.

3.3 A derivational alternative

Recall that a derivational approach to ellipsis assumes that ellipsis applies during the derivation and, as a result, renders the ellipsis site opaque for certain syntactic processes. The essence of vehicle change is that a bound R-expression inside an elided constituent does not behave as it were bound. Vehicle change does not really explain why elided R-expressions should count as equivalent to pronouns, but not reflexives, for example. Instead, we can simply say that there is no Principle C effect inside ellipsis sites because the offending R-expression is no longer visible to higher binders. We assume that ellipsis of a constituent X is triggered by a licensing feature on the complement of X. For now, we will use the standard [E]-feature as the trigger for ellipsis (Merchant 2001, 2004; van Craenenbroeck & Lipták 2013). Following Aelbrecht (2011) and others mentioned in section 2, we assume that ellipsis happens in the syntax proper. VP ellipsis, for example, is assumed to be licensed by Voice, which is distinct from *v* (see Merchant 2013*b* for evidence from voice mismatches). For the sentence in (23), the arguments are first merged in *v*P (23a). Subsequently, the Voice head bearing the [E]-feature is merged (23b). The subject, and any

other constituents that must vacate the *v*P are moved out (23c). In the following step, the [E]-feature triggers ellipsis of its complement, thereby rendering its internal structure inaccessible (23d). We will represent the elided constituent as '△' to indicate this (see section 4.1 for more discussion). Finally, the remainder of the structure is built (23e).

(23) Bill loves Mary and John does too.

a. [$_{vP}$ John [$_{v'}$ *v* [$_{VP}$ loves Mary]]]
b. [$_{VoiceP}$ Voice$_{[E]}$ [$_{vP}$ John [$_{v'}$ *v* [$_{VP}$ loves Mary]]]]
c. [$_{VoiceP}$ John$_1$ [$_{Voice'}$ Voice$_{[E]}$ [$_{vP}$ t$_1$ [$_{v'}$ *v* [$_{VP}$ loves Mary]]]]]
d. [$_{VoiceP}$ John [$_{Voice'}$ [$_{vP}$ △]]]
e. [$_{TP}$ John [$_{T'}$ does [$_{VoiceP}$ t$_1$ [$_{Voice'}$ [$_{vP}$ △]]] too]]

Alongside a derivational approach to ellipsis, we also assume a derivational approach to binding, based on Agree (see Reuland 2001, 2011; Fischer 2006; Hicks 2009; Kratzer 2009; Rooryck & Vanden Wyngaerd 2011). Although derivational approaches to anaphora have focused mainly on Principles A and B (Hicks 2009; Reuland 2011), we can implement Principle B in a similar way. To this end, we propose the constraint in (24) that we assume to hold throughout the derivation.

(24) *Derivational Principle C*:
At no point of the derivation can an R-expression be c-commanded by a co-referent pronoun.

This captures the nature of Principle C as an 'everywhere condition', as argued for by Lebeaux (2009) (also see Epstein et al. 1998). Some of the evidence for this comes from sentences such as (25), which show that a surface Principle C violation cannot be circumvented by reconstructing to a position below the R-expression. Even though there is ample evidence that such reconstruction is possible (e.g. Fox 1999).

(25) a. *He$_i$ seems to John$_i$ ___ to be expected ___ to win
b. *He$_i$ seems to John's$_i$ mother ___ to be expected ___ to win (Lebeaux 2009:23)

This upshot of this is that there can be no stage of the derivation in which a pronoun c-commands a co-referent R-expression. In other words, the following representation would be illicit and result in a crash in the derivation:

(26) [pro$_i$ … [… R-exp$_i$ …] …]

Vehicle change effects will result from a derivation in which the representation in (26) is never actually generated.

3.3.1 The mono-clausal/bi-clausal distinction

Let us first consider the basic locality distinction that originally motivated Fiengo & May's (1994) analysis of vehicle change effects in terms of pronoun replacement. Recall from (16), repeated as (27), that Principle C effects inside ellipsis are obviated in bi-clausal (27a), but not mono-clausal

contexts (27b).

(27) *No vehicle change in mono-clausal contexts* (Fiengo & May 1994:220, 222):

a. Mary loves John_i, and he_i thinks that Sally does [$_{VP}$ ⟨love him_i / *John_i⟩] too.

b. *Mary hit John_i and he_i did [$_{VP}$ ⟨hit *him_i / *John_i⟩] too.

This now follows under the assumptions sketched above. In bi-clausal contexts, the R-expression that could trigger a Principle C effect is no longer present in the structure when its higher binder is merged. To see this, consider the step-by-step derivation of (27a) below. First, the embedded *v*P is created (28a). At this point, Principle C is respected since *John*$_i$ is not c-commanded by a co-referent pronoun. Once VoiceP has been created, the *v*P constituent containing *John*$_i$ is elided and no longer accessible (28c). The derivation continues until the matrix *v*P is built (28d). At this point, *he*$_i$ is merged into the structure, however the R-expression *John*$_i$ which could potentially trigger a Principle C effect is no longer accessible.

(28) *Principle C neutralization in bi-clausal contexts:*

a. [$_{vP}$ Sally [$_{VP}$ love John_i]] (✓*Principle C*)

b. [$_{VoiceP}$ Sally_1 [$_{Voice'}$ $\text{Voice}_{[E]}$ [$_{vP}$ t_{DP} [$_{VP}$ love John_i]]]] (*Merge VoiceP*)

c. [$_{VoiceP}$ Sally [$_{Voice'}$ Voice [$_{vP}$ △]]] (*Delete vP*)

d. [$_{vP}$ he_i [$_{VP}$ thinks [$_{CP}$ that [$_{TP}$ Sally does [$_{VoiceP}$ t_{DP} [$_{Voice'}$ Voice [$_{vP}$ △]]]]]]] (✓*Principle C*)

Given the assumption of derivational ellipsis, the absence of a Principle C effect is not due to *John*$_i$ being replace with a co-referent pronoun, but rather because the R-expression is no longer present in the derivation when its potential binder is merged. Fiengo & May's (1994) analysis was motivated by the fact that a pronoun is still subject to Principle B, which rules out vehicle change among clausemate arguments. Under the derivational alternative presented here the absence of Principle C obviation in such contexts follows for a different reason. Since VP ellipsis is triggered by the Voice head, all of the arguments of the verb are introduced prior to ellipsis. At this early stage, the Principle C violating is incurred (29a). When VP ellipsis later removes the object (29c), it is too late since Principle C has already been violated.

(29) *No neutralization of Principle C in mono-clausal contexts:*

a. [$_{vP}$ he_i [$_{VP}$ hit John_i]] (**Principle C*)

b. [$_{VoiceP}$ he_i [$_{Voice'}$ $\text{Voice}_{[E]}$ [$_{vP}$ t_{DP} [$_{VP}$ hit John_i]]]] (*Merge VoiceP*)

c. [$_{VoiceP}$ he_i [$_{Voice'}$ $\text{Voice}_{[E]}$ [$_{vP}$ △]]] (*Delete vP*)

Thus, the mono-clausal/bi-clausal distinction that originally motivated vehicle change in terms of pronoun replacement follows as an effect of locality and derivational timing. When the R-expression and its binder are non-clausemates, then there is the opportunity for VP ellipsis to remove it from the derivation before its potential binder is merged.

This analysis extends to cases with vehicle change under sluicing such as (13a), since sluicing necessarily involves a clause boundary. Examples such as (30) also provide an argument that there is actually elided structure within the ellipsis site. The remnant of sluicing in (30) contains a secondary predicate *drunk*. Assuming that secondary predication is not possible across clause boundaries, then it applies at an early stage of the derivation before *Alex* has been elided (30a). After movement to Spec-CP (30b), the TP constituent is elided (30c). As with the above cases, the R-expression has already been elided at the point when the subject *he* is merged into matrix Spec-*v*P (30d).

(30) Alex_i wrote this paper drunk_i, but he_i wouldn't tell me [how drunk_i]$_1$

a. $[_{vP}\ \text{Alex}_i\ [_{v'}\ v\ [_{VP}\ \text{write paper}]\ [\text{how}\ [\text{PRO}_i\ \text{drunk}]]\ ]]]$ *(Secondary predication)*

b. $[_{CP}\ [\text{how}\ [\text{PRO}_i\ \text{drunk}]]\ C_{[E]}\ [_{TP}\ \text{Alex}_i\ [_{vP}\ [_{VP}\ \text{write paper}\ ]]]]$ *(wh-movement)*

c. $[_{CP}\ [\text{how}\ [\text{PRO}_i\ \text{drunk}]]\ C_{[E]}\ [_{TP}\ \triangle\ ]]$ *(Delete TP)*

d. $[_{vP}\ \text{he}_i\ v\text{+tell}\ [_{VP}\ \text{me}\ [_{V'}\ t_V\ [_{CP}\ [\text{how}\ [\text{PRO}_i\ \text{drunk}]]\ C_{[E]}\ [_{TP}\ \triangle\ ]]]]]$ *(✓Principle C)*

For this reason, no violation of Principle C arises. However, control into the the secondary predicate was already licensed at an earlier step of the derivation.

3.3.2 Successive-cyclic ellipsis

Now that we have accounted for the basic distinction that motivated Fiengo & May's (1994) approach to vehicle change, let us consider the cases that we identified as problematic. These involved possible vehicle change contexts in which Principle B violations are usually found, which is unpredicted on the 'replace-with-a-pronoun' view. To account for such cases, we make an additional assumption, namely that ellipsis is 'successive-cyclic'. This means that ellipsis of a larger constituent takes place is smaller chunks. Thus, if a phase head such as Voice bears an [E]-feature, then all phase heads c-commanded by Voice must also bear an [E]-feature. For example, if we have VP ellipsis of a verb taking a clausal complement, both the C and Voice heads c-commanded by the ellipsis trigger will also bear [E]-feature, as shown in (31).[3]

(31) $[_{VoiceP}\ \textbf{Voice}_{[E]}\ [_{vP}\ v\ [_{VP}\ V\ [_{CP}\ C_{[E]}\ [_{TP}\ [_{VoiceP}\ \text{Voice}_{[E]}\ [_{vP}\ v\ [_{VP}\ \ldots\ ]]]]]]]]$

To see how this works, consider the concrete example in (32). After the arguments of the verb are merged (32a), the embedded Voice head is merged (32b) and triggers ellipsis of vP_1 (32c). The derivation proceeds to the next phase head, C (32d) At this point, the entire TP is elided (32e). Structure-building continues to the next phase head, namely matrix Voice (32f). This head elides vP_2 (32g) and the derivation proceeds (32h).

[3] For now, we remain ambivalent about the exact implementation of this. Of course, this could be envisaged as a global constraint (Lakoff 1970), however this might prove undesirable for conceptual reasons (see Müller 2011; Graf 2013 for pertinent discussion). A potential local implementation could involve saying that an [E]-feature can be merged at the most embedded phase-head and then be passed up to each subsequent phase head via cyclic Agree. Somewhat counter-intuitively, the actual ellipsis triggering head, i.e. Voice in VPE or C in sluicing, would then have to bear the instruction to stop the percolation at the point. Failure to merge an appropriate would result in unrestricted percolation of [E] and thereby complete elision of the entire structure.

(32) John [$_{VP}$ thinks that Pete loves syntax] and Mary does [$_{VP}$ △] too.

a. [$_{vP_1}$ Pete [$_{VP}$ love syntax]] (*Merge vP_1*)
b. [$_{VoiceP}$ Voice$_{[E]}$ [$_{vP_1}$ Pete [$_{VP}$ love syntax]]] (*Merge VoiceP*)
c. [$_{VoiceP}$ Pete [$_{Voice'}$ Voice$_{[E]}$ [$_{vP_1}$ △]]] (*Delete vP_1*)
d. [$_{CP}$ that$_{[E]}$ [$_{TP}$ Pete [$_{VoiceP}$ t$_{DP}$ [$_{Voice'}$ [$_{vP_1}$ △]]]]] (*Merge CP*)
e. [$_{CP}$ that$_{[E]}$ [$_{TP}$ △]] (*Delete TP*)
f. [$_{VoiceP}$ Voice$_{[E]}$ [$_{vP_2}$ Mary [$_{VP}$ think [$_{CP}$ that$_{[E]}$ [$_{TP}$ △]]]] too] (*Merge VoiceP*)
g. [$_{VoiceP}$ Mary [$_{Voice'}$ Voice$_{[E]}$ [$_{vP_2}$ △]] too] (*Delete vP_2*)
h. [$_{TP}$ Mary [$_{T'}$ does [$_{VoiceP}$ t$_{DP}$ [$_{Voice'}$ Voice$_{[E]}$ [$_{vP_2}$ △]] too]]] (*Merge TP*)

Ultimately, this approach derives the same end the result for the data discussed above, however it involves deletion in multiple steps. This modified analysis can account for the asymmetry between vehicle change across CP and TP boundaries that we saw in (21), repeated below.

(33) *Vehicle change across CP boundary* (Drummond & Shimoyama 2014:103):

a. *John/he$_i$ wants [$_{CP}$ for him$_i$ to win]
b. I want [$_{CP}$ for John$_i$ to win] just as much as he$_i$ does [$_{VP}$ ⟨want [$_{CP}$ for *him$_i$ / *John$_i$ to win]⟩]

As outlined above, this would lead to [E]-features on both the embedded C and Voice heads (34).

(34) [$_{VoiceP}$ Voice$_{[E]}$ [$_{vP}$ he$_i$ [$_{VP}$ want [$_{CP}$ for$_{[E]}$ [$_{TP}$ John$_i$ to [$_{VoiceP}$ Voice$_{[E]}$ win]]]]]]

The obviation of Principle C follows from the crucial intermediate step in (35d) where the TP is elided. This means that *John* is no longer visible when the matrix subject is merged (35e).

(35) *No Principle C across CP boundaries*:

a. [$_{vP_1}$ John [$_{VP}$ win]]
b. [$_{VoiceP}$ John [$_{Voice'}$ Voice$_{[E]}$ [$_{vP_1}$ △]]] (*Delete vP*)
c. [$_{CP}$ for$_{[E]}$ [$_{TP}$ John$_i$ [$_{VoiceP}$ t$_{DP}$ [$_{Voice'}$ Voice$_{[E]}$ [$_{vP_1}$ △]]]]] (*Merge CP*)
d. [$_{CP}$ for$_{[E]}$ [$_{TP}$ △]] (*Delete TP*)
e. [$_{vP_2}$ he$_i$ [$_{VP}$ want [$_{CP}$ for$_{[E]}$ [$_{TP}$ △]]]] (✓*Principle C*)

It should be clear that the status of the embedded C head as an intermediate ellipsis licenser plays a crucial role in removing the R-expression before the matrix subject is introduced. Things are different, however, with TP embedding, as (22) showed (repeated below).

(36) *No vehicle change across TP boundary* (Drummond & Shimoyama 2014:103):

a. *He $_i$ believes [$_{TP}$ him$_i$ to be intelligent]
b. *I believe [$_{TP}$ John$_i$ to be intelligent] just as much as he$_i$ does [$_{VP}$ ⟨believe [$_{TP}$ *he$_i$ / *John$_i$ to be intelligent]⟩]

The crucial difference here is that there is no intermediate C phase head. This means that ellipsis will only apply in two steps, first the embedded Voice head will elided its complement and then

matrix Voice will (37).

(37) $[_{\text{VoiceP}}$ Voice$_{[E]}$ $[_{v\text{P}}$ he$_i$ $[_{\text{VP}}$ believe $[_{\text{TP}}$ John$_i$ to $[_{\text{VoiceP}}$ Voice$_{[E]}$ $[_{\text{VP}}$ be intelligent]]]]]]

The lower VoiceP is first merged (38a) and its complement $v\text{P}_1$ is elided (38b). Subsequently, the embedded TP is built (38b). Now, this VP is selected by the matrix verb and it external argument is merged. At this point, *John*$_i$ has not been elided, because there was no intermediate C head. For this reason, a Principle C violation is incurred at this point and the derivation is illicit (38d). Even if we continue, as steps (38e–f) show, Principle C has already been violated at an earlier stage. Due its nature as an *everywhere condition*, we correctly predict the absence of vehicle change effects in this context.

(38) *Principle C across TP boundaries*:

a. $[_{\text{VoiceP}_1}$ John$_i$ $[_{\text{Voice}'}$ Voice$_{[E]}$ $[_{v\text{P}_1}$ t$_{\text{DP}}$ $[_{\text{VP}}$ be intelligent]]]] (*Merge VoiceP$_1$*)

b. $[_{\text{VoiceP}_1}$ John$_i$ $[_{\text{Voice}'}$ Voice$_{[E]}$ $[_{v\text{P}_1}$ △]]] (*Delete vP*)

c. $[_{\text{TP}}$ John$_i$ $[_{\text{T}'}$ to $[_{\text{VoiceP}_1}$ t$_{\text{DP}}$ $[_{\text{Voice}'}$ Voice$_{[E]}$ $[_{v\text{P}_1}$ △]]]]] (*Merge TP*)

d. $[_{v\text{P}_2}$ he$_i$ $[_{\text{VP}}$ believe $[_{\text{TP}}$ John$_i$ to $[_{\text{VoiceP}_1}$ $[_{v\text{P}_1}$ △]]]]] (✗*Principle C*)

e. $[_{\text{VoiceP}_2}$ he$_i$ $[_{\text{Voice}'}$ Voice$_{[E]}$ $[_{v\text{P}_2}$ t$_{\text{DP}}$ $[_{\text{VP}}$ believe $[_{\text{TP}}$ John$_i$ to … $[_{v\text{P}_1}$ △]]]]]] (*Merge VoiceP$_2$*)

f. $[_{\text{TP}}$ he$_i$ does $[_{\text{VoiceP}_2}$ t$_{\text{DP}}$ $[_{\text{Voice}'}$ Voice$_{[E]}$ $[_{v\text{P}_2}$ △]]]] (*Delete vP$_2$*)

Furthermore, recall that vehicle change effects were found in mono-clausal contexts in which the R-expression was contained inside a DP. Examples (18a) and (19) are repeated in (39).

(39) a. I like John's$_i$ friends more than he$_i$ does $[_{\text{VP}}$ ⟨like $[_{\text{DP}}$ his$_i$ / *John's$_i$ friends] ⟩]

b. Mary always tells stories about John$_i$, but he$_i$ never does $[_{\text{VP}}$ ⟨tell stories about *him$_i$ / *John$_i$⟩]

This also follows given certain assumptions about the DP. Bošković (2005) discusses the fact that possessors cannot undergo wh-extraction in English (40a), whereas other languages such as Serbo-Croatian permit this (40b) (cf. *Left-Branch Condition* Ross 1967; Corver 1990).

(40) *Left-Branch Extraction* (Bošković 2005:2):

a. *Whose$_1$ did you see $[_{\text{DP}}$ t$_1$ father] ?

b. Čijeg$_1$ si vidio $[_{\text{NP}}$ t$_1$ oca] ?
whose are seen father
'Whose father did you see?'

Bošković (2005) argues that this asymmetry in follows from the assumption that languages not permitting LBE have a DP phase boundary. This then requires successive-cyclic movement through its edge. Crucially, he also assumes that possessors are merged inside the complement of the phase head D. The Left-Branch Condition is now derived by the conspiracy of two independent constraints. The *Phase Impenetrability Condition (PIC)* (Chomsky 2000, 2001) states that movement is only possible from the phase edge. Thus, elements extracted from a phase must

pass through the edge of that phase, i.e. Spec-DP. Furthermore, Bošković (2005) assumes that there is a lower-bound on movement dependencies, namely that they are subject to *Anti-Locality* (Abels 2003; Grohmann 2003). In a nutshell, this means that movement from Spec-NP to Spec-DP counts as 'anti-local' and is therefore ruled out. The combination of these two factors make it impossible for a possessor to be extracted from DP since direct extraction violates the PIC (41a), whereas successive-cyclic movement violates Anti-Locality (41b). Thus, a language such as English does not allow Left-Branch Extraction such as (40a).

(41) a. [… [$_{DP}$ D [$_{NP}$ whose [$_{NP}$ book]]] …]

b. [whose … [$_{DP}$ D [$_{NP}$ t_1 [$_{NP}$ book]]] …] (*violates PIC!*)

c. [… [$_{DP}$ whose [$_{D'}$ D [$_{NP}$ t_1 [$_{NP}$ book]]]] …] (*violates Anti-Locality!*)

If we take Bošković's (2005) assumptions for granted, then ellipsis of a *v*P containing a DP will also require an [E]-feature on the phase head D (42).

(42) [$_{VoiceP}$ **Voice$_{[E]}$** [$_{vP}$ he$_i$ [$_{VP}$ like [$_{DP}$ D$_{[E]}$ [$_{NP}$ John's$_i$ [$_{NP}$ friends]]]]]]

The result of this is that ellipsis must apply in successive steps, as we saw above. First, the NP ellipsis will apply inside the DP, triggered by the [E]-feature on D (43b). Thus, even though *he*$_i$ is in the same clause as *John*$_i$, they do not co-occur in the same local representation. When the matrix subject is introduced, no Principle C violation arises (43c).

(43) *No Principle C inside nominals*:

a. [$_{DP}$ D$_{[E]}$ [$_{NP}$ John's$_i$ [$_{NP}$ friends]]] (*Merge DP*)

b. [$_{DP}$ D$_{[E]}$ [$_{NP}$ △]] (*Delete NP*)

c. [$_{vP}$ he$_i$ [$_{VP}$ like [$_{DP}$ D$_{[E]}$ [$_{NP}$ △]]]] (✓*Principle C*)

d. [$_{VoiceP}$ he$_i$ Voice$_{[E]}$ [$_{vP}$ t$_{DP}$ [$_{VP}$ like [$_{DP}$ D$_{[E]}$ [$_{NP}$ △]]]]] (*Merge vP*)

e. [$_{VoiceP}$ he$_i$ [$_{Voice'}$ Voice$_{[E]}$ [$_{vP}$ △]]] (*Delete vP*)

f. [$_{TP}$ he$_i$ does [$_{VoiceP}$ [$_{Voice'}$ t$_{DP}$ Voice$_{[E]}$ [$_{vP}$ △]]]] (*Merge TP*)

Thus, we have seen that all of the cases of vehicle change can be accounted for as a simple by-product of a derivational approach to ellipsis.[4] In the cases in which the effect of vehicle change is observed, there is good reason to believe that ellipsis has applied in a successive-cyclic manner to make the R-expression inaccessible before its binder is merged into the structure.

[4]The possessor can movement out of the DP phase in cases of NP ellipsis, however, (see e.g. Lobeck 1995).

(i) I read Mary's book, but I didn't read [$_{DP}$ John's$_1$ [$_{NP}$ ⟨t_1 book⟩]]

We suggest that this is an instance of repair-driven movement (either in syntax of PF) that is employed to avoid non-given material being elided, as has been proposed for multiple sluicing (Heck & Müller 2003), fragment answers (Weir 2014) and *why*-stripping (Yoshida et al. 2015).

3.3.3 Vehicle change and movement

The approach outlined above can also account for another fact involving vehicle change and its interaction with movement. Consider the following contrast from Hunter & Yoshida (2016:562). In B's response in (44), we see a configuration in which there is an R-expression in the ellipsis site and a co-referent pronoun is the remnant of stripping. Since this is grammatical, we seem to be dealing with a simple case of vehicle change inside the ellipsis site.

(44) A: Someone said that John$_i$ left
B: Yeah, but not [$_{DP}$ he$_i$/him$_i$] [$_{TP}$ ⟨t$_i$ said that John$_i$ left⟩]

This contrasts with (45) where the positions of the pronoun and R-expression are reversed. Here, the R-expression is contained in the remnant of ellipsis, and the co-referent pronoun is in the ellipsis site. The ungrammaticality of B's response shows that, somewhat surprisingly, we do not find vehicle change in this context.

(45) A: He$_i$ said that Mary left
B: *Yeah, but not [$_{CP}$ that John$_i$ left] [$_{TP}$ ⟨he$_i$ said that John$_i$ left⟩]

The puzzle that this contrast poses is why vehicle change cannot apply in (45). The structural difference is schematized in (46), where strikeout indicates a lower copy of movement.

(46) a. not [$_{DP}$ he$_i$] ⟨~~he$_i$~~ said that **he**$_i$ left⟩
b. *not [$_{CP}$ that John$_i$ left] ⟨he$_i$ said ~~that **he**$_i$ left~~⟩

The core intuition of Hunter & Yoshida (2016) is that vehicle change cannot apply to an R-expression that is contained inside a remnant of contrastive stripping. This captures the basic different between (46a) and (46b), where only in the latter case is the target of vehicle change *John* part of the remnant of ellipsis. The idea is that applying vehicle change to the copy of *John* in the ellipsis site would destroy the necessary identity with its higher movement copy.[5]

This fact also follows relatively straightforwardly under the present account. In the derivation of the grammatical (45), *John* is absent from the derivation before its binder is merged due to the assumption of successive-cyclic deletion outlined above. The important step is again when the embedded CP is merged, TP ellipsis applies and removes the R-expression (47d). When the matrix *v*P is merged (47e), no Principle C violation is incurred, as we saw above with *for to*-infinitives. Since we are now dealing with stripping and not VPE, the last step in (47f) involves TP ellipsis (see Merchant 2003; Wurmbrand 2017).

(47) a. [$_{vP_1}$ John [$_{VP}$ left]]
b. [$_{VoiceP}$ John [$_{Voice'}$ Voice$_{[E]}$ [$_{vP_1}$ △]]] (*Delete vP*)

[5]Hunter & Yoshida (2016) discuss some ways in which this might follow. For example, in an approach where movement is multidominance, there is only one instance of *John* in multiple positions. Thus, applying vehicle change in the ellipsis site would also necessarily affect the overt occurrence in the remnant of ellipsis. It is less clear that this follows under other approaches, in an LF copying approach (as discussed by Hunter & Yoshida 2016:566), it seems we could apply vehicle change after the ellipsis site has been copied. Indeed, this is a common analysis of sloppy identity in such approaches (e.g. Partee 1975; Williams 1977).

c. $[_{CP_1}$ that$_{[E]}$ $[_{TP_1}$ John$_i$ $[_{VoiceP}$ t_{DP} $[_{Voice'}$ Voice$_{[E]}$ $[_{vP_1}$ △]]]]] (*Merge CP*)

d. $[_{CP_1}$ that$_{[E]}$ $[_{TP_1}$ △]] (*Delete TP*)

e. $[_{vP_2}$ he$_i$ $[_{VP}$ said $[_{CP_1}$ that $[_{TP_1}$ △]]]] (✓*Principle C*)

f. $[_{XP}$ not $[_{CP_2}$ he/him$_i$ $[_{C'}$ C$_{[E]}$ $[_{TP_2}$ △]]]] (*Stripping*)

Importantly, things are different in the derivation of (46). Here, the CP has to survive ellipsis as the remnant. For this reason, there can be no [E]-features postulated inside the embedded CP for reasons of recoverability, i.e. the remnant must remain unelided. The crucial steps of the derivation are shown in (48). Due to the lack of an [E]-feature on the embedded C head (48b), the R-expression is still accessible at the point at which the matrix subject is merged.

(48) a. $[_{CP_1}$ that $[_{TP_1}$ John$_i$ $[_{VoiceP}$ Voice $[_{vP}$ t_{DP} left]]]] (*Merge CP*)

b. $[_{vP_2}$ he$_i$ $[_{VP}$ said $[_{CP_1}$ that $[_{TP_1}$ John$_i$ $[_{VoiceP}$ Voice $[_{vP}$ t_{DP} left]]]]]] (✗*Principle C*)

c. $[_{XP}$ not $[_{CP_2}$ $[_{CP_1}$ that John$_i$ left] $[_{C'}$ C$_{[E]}$ $[_{TP_2}$ △]]]] (*Stripping*)

This interaction between movement and vehicle change also follows under this approach, since successive-cyclic ellipsis cannot apply within a constituent that will be moved outside of the ellipsis site. This could be because it is focus-marked, for example. Thus, it is not necessary to posit an additional restriction on vehicle change in movement contexts, as Hunter & Yoshida (2016). If vehicle change follows as the result of derivational ellipsis, then these facts can be incorporated into the existing theory rather straightforwardly.

It has also been argued that vehicle change applies in movement chains (e.g. Safir 1999; Sauerland 1998, 2003; Salzmann 2006, 2017). There examples such as (49) in which there is no Principle C violation under reconstruction of the head of the relative clause.

(49) Mary told everyone $[_{DP}$ some stories about John$_i$ $[_{CP}$ which he$_i$ found embarrassing]]

It has been argued that this can be made to follow under the matching analysis of relative clauses where the head is external to the relative clause, but there is an identical operator inside it, which is elided under identity (50).

(50) $[_{DP}$ $[_{NP}$ stories about John$_i$] $[_{CP}$ which ~~stories about him~~$_i$ he$_i$ found embarrassing ~~which stories about him~~$_i$]]

If vehicle change is a general property of ellipsis, then the absence of Principle C in (49) would be explained. The issue of whether we expect Principle B effects is somewhat more contentious. While many speakers find *picture*-NPs opaque for Principle B, we saw that complements to the noun *story* (19a) still give rise to Principle B violations. Thus, we might expect examples such as (49) to be ungrammatical for this reason, as with Fiengo & May's (1994) simple mono-clausal examples. For this reason, Sauerland (2003) assumes that vehicle change turns the base position of the A′-chain in the relative clause into an anaphoric-*one* pronoun, however this is a rather unconventional view of vehicle change. Furthermore, this analysis requires that vehicle change in the higher copy of the moved phrase also implies vehicle change in the lower copy. For this reason,

we remain agnostic about whether such examples require vehicle change, or some other mechanism such as Late Merger (e.g. Lebeaux 1988, 1991; Nissenbaum 2000; Stepanov 2001; Takahashi & Hulsey 2009).

3.4 Positive polarity items

We have seen the core insight of the presently advocated view of vehicle change is that absence of Principle C effects inside ellipsis sites receives an explanation in terms of derivational timing. In other words, the offending item is no longer accessible when its binder is merged. We can arguably find the same effect with other items that have such an 'anti-licensing' requirement. The way we have viewed Principle C is that there can be point in the derivation at which an R-expression is c-commanded by a co-referent pronoun (26). We can also find a similar effect with polarity items under ellipsis. It is well-known, for example, that we find polarity alternations under ellipsis (51) (Sag 1976; Merchant 2013*b*; Crnič 2015).

(51) *NPIs under ellipsis* (Sag 1976:157f.):
John didn't see anyone but Mary did [$_{VP}$ ⟨see *anyone / someone⟩]

The current approach can be extended rather straightforwardly to positive polarity items (PPIs), in particular. Positive polarity items such as *somewhat* and *rather* are said to be 'anti-licensed' in the scope of negation (52) (e.g. Ladusaw 1980; Giannakidou 1998).

(52) a. I was(*n't) *somewhat* disappointed about the decision to fire Pete.
b. I (*don't) find Lucy's new boyfriend *rather* annoying.

Assuming that (anti-)licensing is syntactic (e.g. Progovac 1994; Giannakidou 2000; Zeijlstra 2004), we can state the conditions on PPI-license such that a PPI cannot be c-commanded by a negative phrase at any stage of the derivation. This is then entirely analogous to the derivational approach to Principle C proposed earlier. What we find that a PPI can occur in an ellipsis that is c-commanded by negation (53).

(53) *PPIs under ellipsis*:
a. John was *somewhat* disappointed about the decision to fire Pete, but I wasn't [$_{VP}$ ⟨**somewhat* disappointed about the decision to fire Pete⟩]
b. I find Lucy's new boyfriend *rather* annoying, but she clearly doesn't [$_{VP}$ ⟨find him **rather* annoying⟩]

It was suggested (albeit somewhat tentatively) by Fiengo & May (1994:220) that these cases could also fall under the scope of vehicle change. However, it is not entirely clear what some of the alternations should be (*anyone~someone*, *rather~?*). This would require quite a powerful theory of vehicle change, which seems undesirable (see e.g. Johnson 2001:468f.). In a derivational account, what we require is that the configuration in (54) never arises, in which a negative expression c-commands an item specified for positive polarity.

(54) [$\text{NEG}_{[\text{NEG}]}$ [… $\text{PPI}_{[\text{POS}]}$ …] …]

Given the assumptions we had previously, we can derive (53b) as follows. First the VoiceP is created (55a), at which point the PPI is present in the structure, but negation is not. Subsequently, the *v*P is elided (55b). When the NegP is merged (55c), the PPI is no longer in the structure and the expected anti-licensing effect is obviated.

(55) *No anti-licensing of PPIs*:

a. $[_{\text{VoiceP}}$ she $[_{\text{Voice}'}$ $\text{Voice}_{[\text{E}]}$ $[_{v\text{P}}$ t_{DP} $[_{\text{VP}}$ find him $\text{rather}_{\text{POS}}$ annoying]]]] (*Merge VoiceP*)

b. $[_{\text{VoiceP}}$ she $[_{\text{Voice}'}$ $\text{Voice}_{[\text{E}]}$ $[_{v\text{P}}$ △]]] (*Delete vP*)

c. $[_{\text{NegP}}$ $\text{-nt}_{[\text{NEG}]}$ $[_{\text{VoiceP}}$ she $[_{\text{Voice}'}$ $\text{Voice}_{[\text{E}]}$ $[_{v\text{P}}$ △]]]] (✓*PPI-Licensing*)

Thus, the absence of anti-licensing effects with PPIs can also be explained in a derivational approach.

4 The nature of derivational ellipsis

4.1 Spell-Out vs. Structure Removal

So far, we have presented evidence in favour of an approach to ellipsis in which an ellipsis site is rendered inaccessible to syntactic computation at a given point in the derivation. In this sense, ellipsis is 'syntactic', but how exactly is this implemented? The prevailing view seems to be that derivational ellipsis is a form of Spell-Out (e.g. Gallego 2009; Aelbrecht 2011, 2016; Gengel 2013; Rouveret 2012; Bošković 2014; Harwood 2015). This poses the question of whether ellipsis as Spell-Out is the same as phasal Spell-Out. It seems that this is not the case. For one, it is clear that the domains affected by ellipsis do not necessarily always align with putative phase complements (for discussion, see Aelbrecht 2016). In fact, it is crucial for Aelbrecht's (2011) analysis discussed in section 2 that they do not. Furthermore, the two kinds of Spell-Out must differ in terms of their interface properties. The ellipsis variant of Spell-Out must come with an instruction either not to parse it at PF (Merchant 2001:60) or to not apply Vocabulary Insertion (e.g. Bartos 2000; Kornfeld & Saab 2004; Nunes & Zocca 2009; Aelbrecht 2011:101,fn.20). Additionally, there may well be differences in terms of whether or not the spelled-out material is still accessible for computation. There do seem to be cases in which the internal structure of an ellipsis site is accessible to agreement, for example (see section 4.2 for discussion).

An alternative view to treating ellipsis a kind of Spell-Out is to envisage it as a kind of genuine syntactic deletion. This of course requires a theory in which syntactic objects can be eliminated from the structure during the derivation. Such an operation has recently been proposed by Müller (2017), who calls it *Structure Removal* (also see Pesetsky 2016 for the related idea of *Exfoliation*, as well as theoretical antecedents in *Tree Pruning*; Ross 1967 and *S̄-Deletion*; Chomsky 1981). The main motivation for Structure Removal is that it allows for the reconciliation of evidence for conflicting syntactic representations, for example, conflicting evidence for mono- vs. bi-clausality in restructuring phenomena (Müller 2016*a*), for constituency vs. non-constituency

of multiple prefields in German (Müller 2018) and for presence vs. absence of external argument in passives (Müller 2016*b*).

For the present purposes, the logic of the argument for conflicting evidence can be illustrated on the basis of passives. It is known that the implicit agent in a passive can participate in what we may think are syntactic dependencies such control (56) and secondary predication (57) (see Alexiadou & Schäfer 2013 for discussion of further evidence).

(56) *External argument in passives licenses control* (Manzini 1983; Baker et al. 1989):

a. They$_i$ sank the ship [PRO$_i$ to collect the insurance]

b. The ship was DP$_i$ sunk [PRO$_i$ to collect the insurance]

(57) *External argument in passives licenses secondary predication* (Sternefeld 1995):

a. Hans$_i$ hat das Handout [PRO$_i$ übermüdet] erfasst
Hans has the handout tired written
'Hans wrote the handout (while) tired.'

b. Das Handout wurde [PRO$_i$ übermüdet] erfasst
the handout was tired written
'The handout was written (while) tired.'

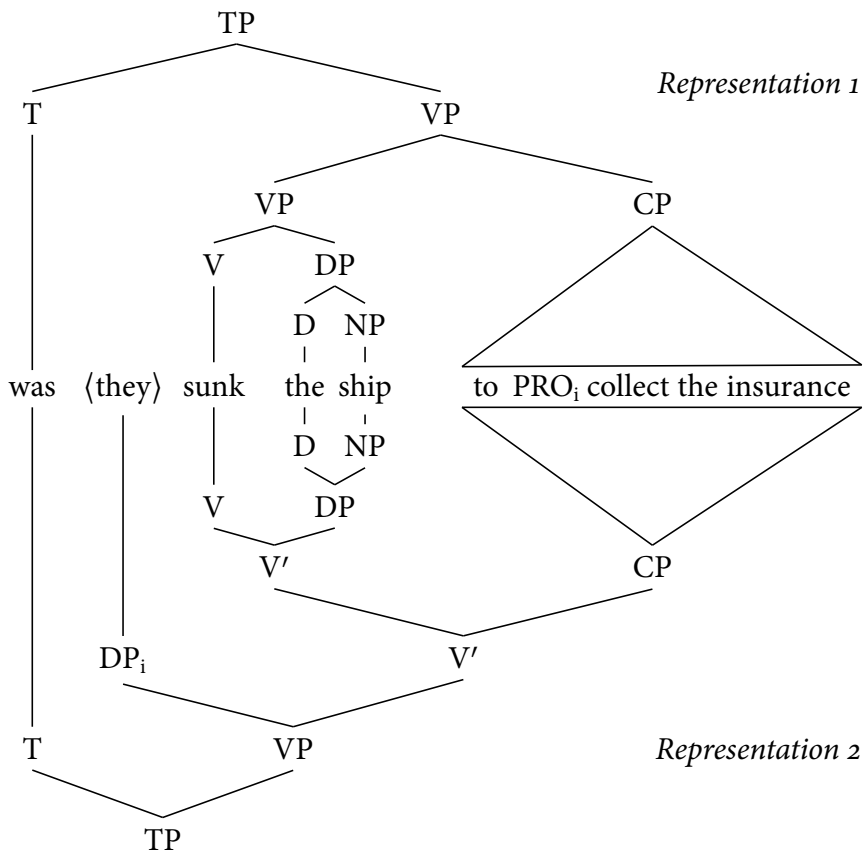
While evidence of this kind has been taken to speak in favour of a fully-projected external argument, a syntactically-present agent should trigger a Minimality violation for raising of the internal argument to the subject position (58) (see Collins 2005 for discussion).

(58) *No A-intervention for raising* (Collins 2005):
[$_{TP}$ The ship$_1$ was [$_{vP}$ ⟨DP⟩ [$_{VP}$ sunk t$_1$]]]

Thus, we have conflicting evidence for the external argument in a passive. For relations such as control and secondary predication, there must be a syntactically-present external argument, whereas for raising to the subject position, there cannot.

The traditional approach to conflicting representations of this kind is to assume that both syntactic structures are simultaneously present, i.e. *co-analysis* (Haegeman & van Riemsdijk 1986; Di Sciullo & Williams 1987; Saddock 1991; Pesetsky 1995). An application pf this kind of analysis to the passive would posit two parallel representations for an example such as (56b), one with a syntactically present external argument, and one without (59). For the purposes of raising, the first representation (Representation 1) must be accessed. Whereas control and similar processes would require Representation 2, where the agent is syntactically represented.

(59)



Nevertheless, it is unclear at a more general level how such structures are licensed or generated. Müller (2017) instead proposes a different approach to conflicting representations, namely that both representations are present, albeit sequentially rather than simultaneously. The technical details of the implementation are not of direct relevance (although Müller does crucially assume that Removal is feature-driven). The logic of the argument is that we first have Representation 2 with the external argument present. At this point in the derivation, downward relations such as control can be established (60).

(60) *Control*:
[$_{vP}$ they$_i$ [$_{VP}$ sink [$_{DP}$ the ship]] [PRO$_i$ to collect the insurance]]

At a later stage of the derivation, the external argument is removed from the structure. Now that the is no intervening DP, raising of the internal argument to Spec-TP is unproblematic in terms of Minimality (61).

(61) *No intervention after Remove*:
[$_{TP}$ the ship [$_{PassP}$ be [$_{vP}$ △ [$_{VP}$ sink t$_{DP}$] [PRO$_i$ to collect the insurance]]]]

The proposal of Structure Removal clearly offers a possible syntactic implementation of ellipsis that does not equate it to Spell-Out. Since a derivational notion of Structure Removal is motivated primarily by conflicting evidence for structural assignments, finding such evidence in the realm of ellipsis would constitute an argument in its favour. One potentially promising example of

conflicting evidence comes from what Elliott & Murphy (2018) dub *unconditional sluicing*. This refers to sluiced clauses embedded under what Rawlins (2013) calls 'unconditional' predicates such as *no(t) matter* (62).

(62) She won't talk to anyone – it doesn't matter who ⟨it is/#she won't talk to⟩!
(Merchant 2001:175,fn.8, Barros 2014:90)

The interpretation of the ellipsis site cannot be isomorphic and must therefore have an underlying cleft-source (Merchant 2001; van Craenenbroeck 2010; Nykiel 2012).[6]

We find a similar construction in other languages such as German. However, German is more informative than English because it also shows strict case-matching on the remnant of sluicing. In (63), the correlate of the sluice *jedem* bears dative case. Furthermore, the interpretation of (63) suggests that the ellipsis site involves a cleft rather than isomorphic structure, since an overt continuation of an isomorphic source leads to semantic incongruity.

(63) *Unconditional sluicing in German* (Elliott & Murphy 2018):
Er würde wirklich jed-em vertrauen, egal wem ⟨#er vertrauen würde⟩.
he would really everyone-DAT trust no.matter who.DAT he trust would
'He would really trust anyone, it doesn't matter who ⟨#he would trust/✓it is⟩!'

However, the postulation of a cleft in the ellipsis site is problematic, since the pivot of a cleft requires nominative case (64). Sluicing with a nominative remnant is not possible, however.

(64) *No sluicing of clefts under* egal (Elliott & Murphy 2018):
Er würde wirklich jed-em vertrauen, egal wer *(es ist)
he would really everyone-DAT trust no.matter who.NOM *(it is)
'He would really trust anyone, it doesn't matter who it is.'

Further evidence comes from P-stranding connectivity. Following Merchant (2001), it is well-established that German does not permit preposition stranding either under normal wh-movement, nor under sluicing (65a). We also find this same restriction with unconditional sluices. Again, this does not follow from an underlying cleft structure, but requires that there is isomorphic structure in the ellipsis site.

(65) *No P-Stranding with unconditional sluicing*:

a. Ich muss mit jemand-em reden, egal [$_{PP}$ *(mit) wem] [$_{TP}$ △] !
I must with someone-DAT talk no.matter with who
'I have to talk to someone, it doesn't matter who'

b. *Ich muss mit jemand-em reden, egal wem [$_{TP}$ △] !
I must with someone-DAT talk no.matter who
'I have to talk to someone, it doesn't matter who'

We are therefore faced with a case of conflicting representations. If we assume that case matching

[6] Also, notice that NPIs cannot act as correlates for remnants of sluicing (Barros 2014):

(i) *She won't talk to anyone, but I don't know who.

diagnoses that there is a case-assigner within the ellipsis site (Ross 1969; Merchant 2001), then we require an isomorphic ellipsis site containing the verb, i.e. R_1 in (66). However, for the purposes of interpretation (due yield a non-redundant meaning), we want to a posit a cleft in the ellipsis site, R_2 in (66).

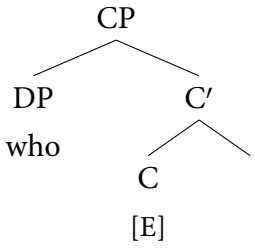
(66) egal wem_{DAT} …

R_1: ⟨er	$\text{vertrauen}_{\text{DAT}}$	würde⟩	R_2: ⟨es	ist_{NOM}⟩
he	trust	would	it	is

It is possible to assume that there is a cleft-structure all along, but that case matching is an additional surface-level condition imposed on sluicing (e.g. Barros 2014). However doing so undermines one of the most robust pieces of evidence we have for syntactic structure inside ellipsis sites, namely case-connectivity. Instead, we can resolve this conflict by adopting an approach to ellipsis in terms of Structure Removal.

This will mean that the structure of an ellipsis is genuine removed from the syntactic derivation, rather than just rendered opaque by Spell-Out. In the case of sluicing, this means that the TP-complement to $C_{[E]}$ will be removed from the structure as indicated by (67).

(67) John met someone, but I don't know…



Since the output of syntax will contain no syntactic structure in the ellipsis site, the elided TP must be 'reconstructed' for interpretation at LF by means of *LF Copying* or some equivalent mechanism (68) (see Partee 1975; Williams 1977; Kitagawa 1991; Fiengo & May 1994; Lobeck 1995; Chung et al. 1995; Kobele 2014; Sakamoto 2016).

(68) John ∃ $\underbrace{\lambda x[_{vP}\ \textit{John met}\ x]}$, but I don't know who [$_{TP}$]

LF Copying

An important way in which the present approach differs to standard LF Copying analyses is that there was syntactic structure in the ellipsis site at some point of the derivation. This is what will allow us to account for the conflicting structure assignments for the ellipsis site. The basic idea is that there is first isomorphic structure in the ellipsis site with the case-assigning verb (69a). The wh-remnant moves to Spec-CP as in a standard sluicing derivation (Ross 1969; Merchant 2001) (69b). Subsequently, the TP constituent is removed from the structure so that the C head now lacks a complement (69c). However, the assignment of dative case to the wh-remnant *wem* took place at a previous step when the verb before the verb was deleted. Thus, this is an instance of opacity (counter-bleeding; Kiparsky 1973).

(69) a. $[_{vP}\ v\ [_{VP}$ vertrauen$_{[DAT]}$ wem $]]$ *(Case assignment in syntax)*

b. $[_{CP}$ wem$_1$ $[_{C'}\ C_{[E]}\ [_{TP} \ldots\ [_{VP}$ vertrauen$_{[DAT]}$ t$_1$ $]]]]$ *(wh-movement)*

c. $[_{CP}$ wem$_1$ $[_{C'}\ C_{[E]}$ $]]$ *(Remove TP)*

d. *$[_{CP}$ wem$_1$ $[_{C'}\ C_{[E]}\ [_{TP}$ er $[_{vP}\ [_{VP}$ vertrauen t$_1$ $]$ würde $]]]]$ *(LF Copying blocked)*

e. $[_{CP}$ wem$_1$ $[_{C'}\ C_{[E]}\ [_{TP}$ es $[_{vP}\ [_{VP}$ ist t$_1$ $]]]]]$ *(Cleft repair)*

At LF, the ellipsis site must be reconstructed. We can assume that LF Copying is the default option, unless there is some other condition which blocks it. It seems that the uncondition predicate embedding the sluice blocks a a strictly isomorphic 'copied' LF representation for the ellipsis site (69d). As a result, we assume that a cleft-like structure can be posited by means of repair (70e). Thus, we now have a cleft structure in the ellipsis site, but a non-nominative matching case on the remnant of sluicing. This is only possible because we had a previous isomorphic representation, which was later lost.

In sum, there are essentially two ways of conceiving of derivational ellipsis: either as a form of Spell-Out, or as genuine syntactic deletion. This section illustrated the kind of argument from conflicting representations that can be used to motivate the latter.

4.2 Licit dependencies into the ellipsis site

There is still an outstanding issue with a derivational approach to ellipsis, however. The account of vehicle change proposed in this paper, as well as Johnson's (2015) analysis of Hocąk, depends on the fact that an Agree dependency cannot reach into an ellipsis site. However, there are examples where it does seem that this is possible for other processes. The most well-known example involves φ-agreement. In English expletive constructions, for example, the associate of the expletive can be elided, but nevertheless still controls agreement on the copula (70).

(70) a. Some people there are no such rules, but there $\left\{\begin{matrix}\text{are}\\ \text{*is}\end{matrix}\right\}$ (Ross 1969:273)

b. I didn't think there would be a famous linguist at the party, but there $\left\{\begin{matrix}\text{was}\\ \text{*were}\end{matrix}\right\}$ (van Craenenbroeck 2010:136)

A plausible analysis of this is given in (71), where the T head probes into the ellipsis site.

(71) $[_{TP}$ there $[_{T'}\ [_{T}\ T_{[\varphi:PL]}$ be $]\ [_{VoiceP}$ Voice$_{[E]}\ [_{vP}\ \langle$no such rules$\rangle\ ]]]]$

This would be problematic, however, if the elided vP is rendered inaccessible before the higher T head can probe, as was assumed for the previously motivated analysis of vehicle change. It is possible, however, to maintain the vehicle change analysis in light of these facts, if we posit that φ-agreement is established by a different kind of Agree. In fact, this has already been proposed on independent grounds. Namely, a similar problem arises with φ-agreement and phase theory.

There are too main proposals for the *Phase Impenetrability Condition*, which determines how much structure is accessible at a given point (however see Richards 2011 for an alternative). The first version (PIC_1), given in (72a), means that the complement of a phase head it spelled-out as soon as the phase is created. The second version (PIC_2) in (72b) is slightly weaker and postpones Spell-Out of a phase complement until the next higher phase head is merged.

(72) a. *Phase Impenetrability Condition* (PIC_1) (Chomsky 2000:108):
In a phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.

b. *Phase Impenetrability Condition* (PIC_2) (Chomsky 2001:14):
Given the structure $[_{ZP}$ Z … $[_{HP}$ α $[_{H'}$ H YP]]], where H and Z are phase heads, the domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

If we consider the search space of T in an ordinary transitive construction, this means that under PIC_1 only the phase head *v* and its specifier are accessible to T (73a). Under PIC_2, the entire *v*P is accessible to T (73b), since the VP is only transferred once the next higher phase head (C) is merged.

(73) a. $[_{CP}$ C $[_{TP}$ T $\underbrace{[_{vP}$ DP $[_{v'}$ v$]}$ $[_{VP}$ V DP]]]]]
search space of T (PIC_1)

b. $[_{CP}$ C $[_{TP}$ T $\underbrace{[_{vP}$ DP $[_{v'}$ v$]$ $[_{VP}$ V DP$]}$]]]]]
search space of T (PIC_2)

Assuming that all *v*Ps constitute phases (Legate 2003; Boeckx & Grohmann 2007), Legate (2005) pointed out that the following data pose a problem. Namely, (74a) shows that a DP can raise across two *v*Ps. Furthermore, if an expletive is merged in Spec-TP, the DP *ten trains* remains in its base-position inside the VP, but still controls agreement on T (74b).

(74) *Long-distance agreement in expletive constructions* (Legate 2005:148):
a. $[_{TP}$ Ten trains $[_{vP}$ seem(*-s) $[_{TP}$ to have $[_{vP}$ arrived ___ into the station today]]]]
b. $[_{TP}$ There $[_{vP}$ seem(*-s) $[_{TP}$ to have $[_{vP}$ arrived ten trains into the station today]]]]

The problem is that there must be an Agree relation between T and the direct object of *arrive*, however the contents of the VP should be inaccessible to T under either version of the PIC. As (75) shows, under the stronger PIC_1, only the edge of the higher *v*P phase is accessible. If we adopt the weaker PIC_2, then the complement of v_1 is spelled-out as soon as the higher *v* is merged. Thus, there is no standard definition of the PIC which would allow for this kind of agreement (see Keine 2017 for a similar problem in Hindi).

(75) [$_{TP}$ There $T_{[\varphi:\square]}$ $\overbrace{[_{\nu P_2}\ \nu_2}^{\text{search space of T (PIC}_1\text{)}}$ seem [$_{TP}$ to have $\underbrace{[_{\nu P_1}\ \nu_1}_{\text{search space of T (PIC}_2\text{)}}$ [$_{VP}$ arrived ten trains] into the station]]]]

As a solution, Legate (2005) proposes that Agree must be cyclic, i.e. carried out between the phase heads. This is shown in (76), where the lowest *v* head agrees with its phase-local DP. When the next higher phase-head is merged, the VP is spelled-out. However, the higher *v* head agrees with the lower *v* head. These features are then later passed on to the T head.

(76) [$_{TP}$ $T_{[\varphi:\square]}$ [$_{\nu P}$ $\nu_{[\varphi:\square]}$ [$_{VP}$ V [$_{\nu P}$ $\nu_{[\varphi:\square]}$ [$_{VP}$ V $DP_{[\varphi:PL]}$]]]]]

This approach is necessitated by the widely-accepted conception of strong *v*P-phases. If *φ*-agreement differs from the establishment of anaphoric dependencies, with only the latter being determined by cyclic Agree, then the bleeding effect of ellipsis on certain dependencies can be maintained.

One could object to this that there seem to be cases of variable binding into ellipsis sites that are well-formed (77).

(77) $Every_i$ teacher thinks that his_i students work hard and $every_j$ professor does [$_{VP}$ ⟨think that his_j students work hard⟩] too

On the present account involving successive-cyclic deletion, the bound variable on the pronoun *his*$_j$ would no longer be present in the structure when the quantified DP is merged (78).

(78) a. [$_{CP}$ that$_{[E]}$ [$_{TP}$ his_j students [$_{VoiceP}$ Voice [$_{\nu P}$ △]]]]
b. [$_{CP}$ that$_{[E]}$ [$_{TP}$ △]] *(Remove TP)*
c. [$_{\nu P}$ $every_j$ professor [$_{VP}$ think [$_{CP}$ that$_{[E]}$ △]]] *(Binding impossible)*

We suggest that this problem can be solved by appealing to an insight by Grano & Lasnik (2018) that a bound pronoun inside a phase seems to void Spell-Out of that phase. They refer to this as the 'bound pronoun effect'. For example, both *tough*-movement and gapping appear to be clause-bound phenomena, as (79a) and (80a) show. However, if there is a bound pronoun within the embedded clause, strict clause-boundedness is lifted, as we see in (79b) and (80b).

(79) *Bound pronoun effect with long-distance* tough*-movement* (Grano & Lasnik 2018:466f.):
a. *This magazine is too lowbrow Op_1 for John to claim [$_{CP}$ that Bill reads t_1]
b. ?This magazine is too lowbrow Op_1 for $John_i$ to claim [$_{CP}$ that he_i reads t_1]

(80) *Bound pronoun effect in embedded gapping* (Grano & Lasnik 2018:466f.):
a. *Mary claims that Jill likes apples and Ann ⟨~~claims that Jill likes~~⟩ oranges
b. ?$Mary_i$ claims that she_i likes apples and Ann_j ⟨~~claims that she_j likes~~⟩ oranges

Grano & Lasnik's (2018) claim is that the bound pronoun has an unvalued feature, which 'void phasehood' in that it can delay Spell-Out. If we were to assume that this unvalued feature also has the same effect of voided intermediate steps of successive-cyclic ellipsis, we can allow for binding into ellipsis sites.

For concreteness' sake, we suggest that binding/co-reference is established by means of [INDEX]-features (cf. Hicks 2009). Pronouns and anaphors bear an unvalued [INDEX]-feature, which is valued under (upward or downwward) Agree with a relevant goal. For example, the reflexive anaphor in (81a). R-expressions, on the other hand, come with a pre-valued index feature. If this value is copied to a pronoun, Principle C will be violated (81b).

(81) a. [$_{vP}$ John$_{[\text{INDEX:}i]}$ [$_{VP}$ loves himself$_{[\text{INDEX:}\square]}$]]
b. *[$_{vP}$ he$_{[\text{INDEX:}\square]}$ [$_{VP}$ likes John$_{[\text{INDEX:}i]}$]]

In such a theory, if we specify an embedded C head as an intermediate licenser of successive-cyclic ellipsis, this will be voided if it would elide an unvalued pronoun (82b). Thus, this intermediate step of TP ellipsis will be blocked and keep the embedded structure across the finite clause boundary accessible (82c).

(82) a. [$_{CP}$ that$_{[E]}$ [$_{TP}$ his$_{[\text{INDEX:}\square]}$ students [$_{VoiceP}$ Voice [$_{vP}$ △]]]]
b. [$_{CP}$ that [$_{TP}$ his$_{[\text{INDEX:}\square]}$ students [$_{VoiceP}$ Voice [$_{vP}$ △]]]] *(Ellipsis of TP blocked)*
c. [$_{vP}$ every$_{[\text{INDEX:}i]}$ prof. [$_{VP}$ think [$_{CP}$ that [$_{TP}$ his$_{[\text{INDEX:}i]}$ students [$_{VoiceP}$ Voice [$_{vP}$ △]]]]]] *(Binding possible)*
d. [$_{VoiceP}$ every$_{[\text{INDEX:}i]}$ prof. [$_{Voice'}$ Voice$_{[E]}$ [$_{vP}$ △]]] *(Delete vP)*

It is important to note that this does not undermine the basic analysis of vehicle change developed above, since Spell-Out/ellipsis is only voided by an unvalued index-feature on an item. R-expressions inside ellipsis have, by assumption, valued features and will therefore be subject to intermediate steps of ellipsis.

5 Conclusion

In this paper, we have argued that vehicle change can be viewed as the result of a derivational approach to ellipsis. Assuming that ellipsis is triggered in the syntax proper, we predict that elided constituents should be inaccessible to further syntactic computation. While bleeding relations of this kind have already been discussed for movement and agreement, we argue that they can also be found with binding. Given a derivational approach to Principle C, vehicle changes simply follows from the fact that an R-expression is no longer accessible at the point at which its binder is merged. We have shown how this accounts for the basic mono-/bi-clausal asymmetry that originally motivated Fiengo & May's (1994) analysis. Furthermore, we saw that there are some problematic cases for pronoun equivalence view, e.g. structures that are transparent for Principle B, but still allow for vehicle change. We argued that if ellipsis applies in a successive-cyclic, phase-based fashion (as is assumed for movement), then we can also accommodate these problematic cases. Thus, we arrive at an account that offers a reason for why we find vehicle change effects. While the alternative 'replace-with-a-pronoun' view can derive much of the data, it does not really explain why elided R-expressions can count as equivalent to pronouns, but not reflexives, for example. This alternative conception of vehicle change adds to the growing body of arguments

in favour of a derivational view of ellipsis.

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