Head movement and ellipsis licensing

Nicholas LaCara · University of Toronto 92nd Annual Meeting of the LSA · 5 January 2018

1 Introduction

- The standard approach to ellipsis proposes that ellipsis is licensed by heads. Ellipsis-licensing heads, however, may undergo head movement.
- I show in this talk that ellipsis licensing behaves as though the licensing heads never move from their base positions.
  - They cannot license the ellipsis of their complements in the positions to which they move.
  - They can only license ellipsis of their complements in the position from which they move.
- I argue that this receives a straightforward explanation if head movement is not syntactic movement (Chomsky 2001; Harley 2004, 2013; LaCara 2016; Schoorlemmer and Temmerman 2012).
  - Specifically, I adopt the Conflation approach of Harley (2004) and Hale and Keyser (2002) and show that it predicts the correct distribution of ellipsis sites when licensing heads have undergone movement.
  - Syntactic head movement does not straightforwardly explain the facts.
- This is at odds with recent conclusions about the interaction of head movement and ellipsis parallelism (Gribanova 2017; Hartman 2011; Messick and Thoms 2016).
  - I present evidence that head movement does not behave with regard to parallelism the way Messick and Thoms (2016) claim it does.

Roadmap

§2 *Ellipsis licensing and the [E]-feature*:
A brief review of the standard analysis of ellipsis licensing.

§3 *Moved heads do not license ellipsis in their landing positions*:
Moving a licensing head does not change the target of ellipsis.

§4 *Licensing heads don't move*:
Adopting a non-movement approach to head movement explains the distribution of VPE sites.

§5 *Head movement and ellipsis parallelism*:
A brief excursis on ellipsis parallelism and head movement.

§6 *Conclusion*:

2 Ellipsis licensing and the [E]-feature

- The mainstream view of ellipsis is that it is triggered by functional head which licenses the ellipsis of its complement at PF.

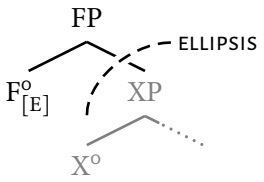
  – For English VPE, these heads are typically thought to be auxiliaries (T^o, Aux^o, or $Infl^o$ more generally).

Chao 1987; Johnson 2001; Lobeck 1995; Merchant 2001; Zagona 1988

- Since Merchant 2001, it has been assumed that the licensing conditions are not imposed by the functional head itself but by a feature [E] which is hosted by the head:

Nothing I say rides crucially on using the [E]-feature to license ellipsis. Heads could, in principle, license ellipsis on their own.

(1)



- The [E]-feature does two things, one at LF/Semantics and one at PF:

  i. It imposes the IDENTITY REQUIREMENT over material in its complement.
     – The material must be identical to some antecedent for ellipsis to be possible.
     – This holds at LF or in the Semantics.
  ii. If the identity requirement is met, it LICENSES ellipsis of the material in its complement.
     – It sends an instruction to PF that the material in its complement must not be pronounced.

- The distribution of [E]-features is lexically or categorically constrained.

  – In English, $[E]_{\text{sluice}}$ combines with $C^o_{wh_Q}$ to license TP ellipsis in sluicing, but it cannot combine with other question complementizers like *whether* and *if*.
  – $[E]_{\text{VPE}}$ combines with modals and auxiliaries in English, but not with main verbs.
  – In languages that lack general VPE but have modal complement ellipsis – for instance, Dutch (Aelbrecht 2010) and several Romance languages (Dagnac 2010) – the [E] feature combines only with base modals.

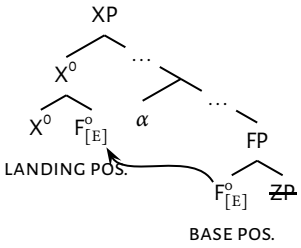
The [E] feature for different phenomena have slightly different semantics depending on the size of the constituent they elide.

- Crucially, the [E]-feature is an element that is optionally drawn from the lexicon, capturing in part the general optionality of ellipsis.

  – A speaker is not obligated to do ellipsis even when it is possible.
  – The presence of an auxiliary does not itself license ellipsis.
  – Rather, the optionality of ellipsis can be modeled as the optionality of drawing a separate element from the lexicon.

3 Moved heads do not license ellipsis in their landing position

- I present evidence that an auxiliary that undergoes head movement does not license ellipsis in the position to which it moves (the LANDING POSITION).
- If an auxiliary could license ellipsis of the complement in its landing site, this would predict the ellipsis of more material than is actually possible.
- Rather, the head can only license the ellipsis of the complement of the position *from which* it moves (its BASE POSITION).
- We can see this by looking for material in the position of α in (2), between the base position (F^o) and the landing position (X^o):



(2) $[X^o + F^o_{[E]} \overbrace{[_{YP} \ldots \alpha \ldots [_{FP} \ F^o_{[E]} \underbrace{[_{ZP} \ldots]}_{\text{Ellipsis}}]}^{\text{Ellipsis impossible}}]]$

- I present evidence from two related domains:
  i. Subject–auxiliary inversion (henceforth SAI)
  ii. Auxiliary movement past negation
- In both cases, an auxiliary that licenses ellipsis of its complement in its base position fails to license ellipsis of its complement in its landing position.
  - I control for two potential confounds: the Verbal Identity Requirement (Goldberg 2005; McCloskey 1991) and MaxElide effects (Merchant 2008).
  - I argue these cannot provide an account for the facts presented.

3.1 Subject–auxiliary inversion (Movement to C^0)

- The typical view of SAI is that an auxiliary in T^o moves to C^o, crossing over the subject in SpecTP. SAI is most prevalent in English root questions:

SAI occurs in other constructions as well. As far as I know, everything I say here carries over to these other cases.

(3) a. $[_{CP}$ Can $[_{TP}$ Sara ___ $[_{vP}$ touch her toes]]]?

b. $[_{CP}$ Is $[_{TP}$ Bill ___ $[_{vP}$ going to buy that puppy]]]?

c. $[_{CP}$ Has $[_{TP}$ Bill ___ $[_{vP}$ done his best]]]?

d. $[_{CP}$ Wouldn't $[_{TP}$ Bill ___ $[_{vP}$ take out the trash]]]?

- Auxiliaries are precisely the elements thought to carry the [E]-feature that licenses VPE, since they can elide their complements *in situ*,

(4) a. Can anybody touch their toes? – Sara can Δ!
b. I heard somebody is going to buy that puppy. – Yeah, Bill is Δ.
c. I know I've done my best, and Bill has Δ, too.
d. Sally took out the trash because Bill wouldn't Δ.

- If these elements could license ellipsis of their complements (TP) in C°, we would expect it to be possible to elide subjects if the subject of the antecedent matched.

The subjects must match to satisfy the identity requirement on ellipsis.

- This is not possible:

(5) A: Sara can touch her toes!
B: Really? Can *(she)?

(6) A: Is Bill going to buy that puppy?
B: I don't know. Is *(he)?

(7) Every time Bill says he has done his best, I have to ask myself: Has *(he)?

(8) A: Mary thought Bill wouldn't take out the trash.
B: Wouldn't *(he) if we asked him?

- There are two possible confounds that might interfere with VPE here: the Verbal Identity Requirement, and MaxElide.

3.1.1 *The Verbal Identity Requirement (VID)*

- The first confound comes from The Verbal Identity Requirement (VID), which could require that the auxiliary in the antecedent match the auxiliary in the elided clause.
- The VID is best-known from verb-stranding VPE, where a verb is moved out of a verb phrase that undergoes deletion, resulting in what appears to be a verb with no verb phrase.
- The VID requires that a verb (or perhaps any head) extracted from an ellipsis site match the verb in the antecedent (Goldberg 2005; McCloskey 1991).

Note that the verb need not have moved out of the antecedent, though this is possible.

(9) *Hebrew* (Goldberg 2005:160)

Q: (Ha'im) Miryam *hevi'a* et Dvora la-xanut?
Q Miryam brought ACC Dvora to.the-store
'Did Miryam bring Dvora to the store?'

A: Ken, hi hevi'a.
yes, she brought.
'Yes, she brought ~~[Dvora to the store]~~.'

A: *Ken, hi lakxa.
yes, she took
'Yes, she took ~~[Dvora to the store]~~.'

- The VID holds in many languages displaying verb-stranding VPE (*e.g.*, Hebrew), but it is weaker in some languages than others (*e.g.*, Russian).

- The VID is not a property of verb-stranding VPE itself, but falls out from the interaction between head movement and the identity condition on ellipsis.
- Any head extracted out of any ellipsis site would, in principle, be subject to the VID assuming that the language under discussion exhibits the VID.
- If auxiliaries can license ellipsis in their landing position after undergoing head movement, they would be being extracted from the ellipsis site they license, and thus could be subject to the VID if the VID holds of English.
- English does not generally have verb-stranding VPE, so it is not clear whether English is subject to the VID.
- I use matching auxiliaries in (5)–(8) to be sure that the ungrammaticality of these examples cannot be attributed to the Verbal Identity Requirement.

See Gribanova 2017 for evidence of the VID in clausal ellipsis.

Potsdam (1997) reports that English dialects of the British Isles that permit movement of the main verb *have* to T^0 exhibit what appears to be the VID.

3.1.2 *MaxElide*

- The second potential confound comes from MaxElide: We cannot use *wh*-questions to test if auxiliaries can license ellipsis in their landing positions.
- MaxElide requires that clausal ellipsis (*i.e.*, sluicing) be used instead of VPE in *wh*-questions.

  (10) Mary was kissing somebody, but I don't know who (*she was).

- But sluicing does not permit any material to be pronounced in C^o.
- Although root *wh*-questions also require SAI in English, *wh*-elements in SpecCP induce MaxElide effects, requiring sluicing.
- Sluicing independently block pronouncing an auxiliary in C^o.
- This leads to ungrammaticality in exactly the the cases we care about here.

  (11) Mary scammed somebody. The question is: Who (*has)?

- I therefore avoid *wh*-questions entirely in (5)–(8). This ensures that any ungrammaticality cannot be attributed to an auxiliary being pronounced in C^o.

Gribanova 2017; Hartman 2011; Merchant 2008; Messick and Thoms 2016; Schuyler 2001; Takahashi and Fox 2005

Merchant's 2001 Sluicing-COMP Generalization

In (11), we cannot tell whether the example is bad because of the sluicing comp generalization or because auxes cannot license ellipsis of TP.

3.1.3 *The identity requirement*

- Additionally, the identity requirement on ellipsis nominally requires all of the the material in the elided TP to match the material in the antecedent TP.
- Consequently, despite the fact this might be somewhat unnatural, the subject of each of the questions above has the same referent as the subject in the antecedent clause – a different subject in SpecTP would block ellipsis of TP.

3.1.4 SAI: *Summary*

- Auxiliaries moved to C^{o} do not license the ellipsis of TP, even though they can license their complements in their base positions.
- This cannot be reduced to the VID, MaxElide, or the identity requirement on ellipsis.

3.2 Movement to T^{0}

- The same effect seen above can be observed in in auxiliary movement past negation.
- The typical view is that auxiliaries like *have* and *be* originate in a position below negation, and the highest auxiliary moves to T^{o}.

I assume, following, *e.g.*, Pollock (1989), that *not* is not a head in the clausal spine and that this is why it does not undergo head movement.

(12) a. [$_{TP}$ They should [$_{\Sigma P}$ not [$_{AuxP}$ *have* [$_{vP}$ kissed that pig]]]].
b. [$_{TP}$ They have+T^{o} [$_{\Sigma P}$ not [$_{AuxP}$ ___ [$_{vP}$ kissed that pig]]]].

- These lower auxiliaries appear to be able to license the ellipsis of their complements *in situ*:

(13) They kissed that pig, but they should not have ___.

- Assuming the [E]-feature sits on the auxiliary *have*, one might therefore expect the auxiliary to carry the [E]-feature with it when it moves.
- Even when this movement occurs only *v*P is a valid target for ellipsis, not ΣP.
- Despite the fact that ΣP is the complement of T^{o}, negation cannot be understood as part of the elided material even when it is included in the antecedent clause:

(14) They said they had [$_{\Sigma P}$ not [$_{vP}$ kissed that pig]], and they have ___.
___ = [$_{vP}$ kissed that pig]
___ ≠ [$_{\Sigma P}$ not kissed that pig]

(15) We heard Bill was [$_{\Sigma P}$ not [$_{vP}$ taking out the garbage]], and he is ___.
___ = [$_{vP}$ taking out the garbage]
___ ≠ [$_{\Sigma P}$ not taking out the garbage]

- As above, the auxiliary that undergoes movement is identical in the antecedent clause and the ellipsis clause, controlling for the Verbal Identity Requirement.

We need not control for MaxElide here because sluicing is not a valid alternative in these examples.

- It is not possible to elide negation when it is in the complement position of a licensing head:
  - A moved auxiliary cannot license the ellipsis of ΣP when it moves to T^{o}, even when there is an identical ΣP containing negation that could serve as an antecedent.

Modal auxiliaries do not license ellipsis of negation, either, though they are commonly assumed to originate above ΣP in T^{0}. The evidence here is compatible with the view that modal auxiliaries actually originate lower in the structure and move to T^{0} (Harwood 2013:35–36, Roberts (1998:115)).

- This closely mirrors what we saw with SAI above, with negation playing the same role as subjects above.
  - An auxiliary that licenses ellipsis in its base position does not license the deletion of its complement in its surface position.

4 The licensing head does not move

- The fact that subjects must survive ellipsis in root questions and the fact that negation cannot be interpreted in a VPE site shows that moved auxiliaries cannot license ellipsis in their landing positions.
- Nonetheless, auxiliaries license ellipsis in their base positions *at a distance* even after they have moved.
- That is, even when an auxiliary moves away from *v*P, ellipsis of *v*P may still occur:

(16) a. Sara can touch her toes. Can you __ Δ?

b. Sally has chased a llama, but I have not __ Δ.

- Combined with the observations in the previous section, it appears that ellipsis licensing behaves as though the auxiliaries do not move:

(17) *Ellipsis of base complement*::

a. $[_{CP}\ \text{Aux}^{o}\text{+C}^{o}\ [_{TP}\ \text{SUBJ}\ \ldots\ \text{Aux}^{o}_{[E]}\ \sout{[_{vP}\ \ldots]}]]$

b. $[_{TP}\ \text{Aux}^{o}\text{+T}^{o}\ [_{\Sigma P}\ \text{not}\ \ldots\ \text{Aux}^{o}_{[E]}\ \sout{[_{vP}\ \ldots]}]]$

(18) *No ellipsis of landing complement*::

a. $*[_{CP}\ \text{Aux}^{o}_{[E]}\text{+C}^{o}\ \sout{[_{TP}\ \text{SUBJ}\ \ldots\ \text{Aux}^{o}_{[E]}\ [_{vP}\ \ldots]]}]$

b. $*[_{TP}\ \text{Aux}^{o}_{[E]}\text{+T}^{o}\ \sout{[_{\Sigma P}\ \text{not}\ \ldots\ \text{Aux}^{o}_{[E]}\ [_{vP}\ \ldots]]}]$

- The observation that ellipsis behaves as though the licensing head has not moved is puzzling if the head actually undergoes movement.
  - The standard view is that a licensing head licenses the ellipsis of its complement.
  - Ellipsis happens at PF, and identity is calculated at LF/Semantics, yet here we see that ellipsis is not occurring in licensing head's surface (*i.e.*, PF) position.
- Additionally, the licensing head must be able to license ellipsis of *v*P at a distance, since the licensing head is not adjacent to the elided *v*P at PF.

Lobeck (1995:151–154) accomplishes this in her Government-based, but there is no replacement in Merchant 2001. See also Akmajian and Wasow 1975 and Sag 1976:34–35 for earlier observations of this problem.

- Thus, ellipsis licensing behaves as though the licensing head remains *in situ* – as though it has not moved from its base position.
  - It cannot license the ellipsis of its complement in its landing position.
  - It must license ellipsis of its complement in its base position.
- This receives a straightforward explanation if head movement is not syntactic movement.

4.1 Head movement as Conflation

- Several recent approaches to head movement have suggested that what appears to be head movement is actually the result of sharing phonological matrices between heads.
  - Harley (2004, 2013), following Hale and Keyser (2002), proposes that syntactically adjacent heads are subject to the syntactic operation Conflation, which passes phonological features from the head of a phrase to the next immediately c-commanding head when the c-commanding head merges.
  - Platzack (2013) makes a similar proposal, where features may be shared between adjacent heads via Agree. Neither of these approaches relies on head-to-head movement.
- In both of these approaches, phonological features associated with individual heads can percolate up the tree (or down in Platzack's theory).
- The heads themselves remain *in situ* at all points of the syntactic derivation.
- I will adopt Conflation for concreteness, as I do in LaCara 2016, but other non-movement approaches to head movement may work equally as well.

In that paper, I argue for a non-movement approach to verb movement on completely independent grounds, unrelated to ellipsis.

- Under Conflation, morphologically complex elements are not formed by Move; the syntax underlying such elements is the same as if the heads had not moved.
  - a complex head with a PF surface form Z+Y+X must have an underlying syntax $[_{XP} \ldots X^{o} [_{YP} \ldots Y^{o} [_{ZP} \ldots Z^{o} \ldots]]]$.
- Apparent complexity is the result of sharing phonological features up the tree as syntactic structure is built.
  - Heads can come with a set of (morpho-)phonological features that can be shared with other heads.
  - I use the notation π_X to refer to the phonological features originating on a head X^{o}.
  - As Harley (2004) notes, we can think of these features as those which trigger lexical insertion in post-syntactic theories of morphology (*e.g.*, Vocabulary Insertion in Distributed Morphology); see also Platzack 2013.

Harley refers to such features as the *p-sig* of a head. I find this label a bit to cumbersome, and so I adopt Platzack's (2013) convention instead; see also LaCara 2016.

- The main assumptions underlying Conflation are laid out in (19).

(19) *Key assumptions for Hale and Keyser's (2002) Conflation*: Based on Harley 2004

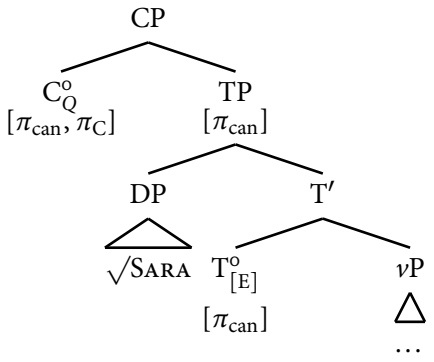
a. The label of any constituent has ALL the features of the head, including some representation of a phonological matrix π.

b. Conflation occurs when a constituent α is merged with a sister head β whose set of features is 'defective'. The features π_α are merged into π_β.

c. For Economy reasons, the conflated set of features is only pronounced once, in its uppermost position.

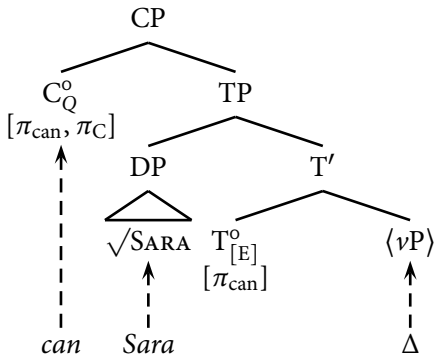
- As the tree is built via Merge, the features π are passed up the tree, on the assumption that the label of a phrase shares all of the features of the head.
- SAI occurs when the phonological features on C^o are defective.
  - The phonological features of T^o are conflated with those on C^o, and following (19c) they are not pronounced in T^o.
  - In the syntax, T^o remains *in situ*. When the [E]-feature is on T^o, as it is in (20), the [E]-feature will still be *in situ* when transfered to the interfaces.

(20) Can Sara touch her toes? *Output of narrow syntax*



- This allows us to explain why auxiliaries license VPE in their base positions but not TP ellipsis in C^o.
  - At PF, the [E] feature will still be adjacent to vP, as shown in (21), and thus it will still license the ellipsis of its complement even though the phonological features of its host are pronounced elsewhere in C^o.
  - Although the material associated with T^o (π_{can} above) is pronounced in C^o, the [E]-feature does not move since the [E]-feature is not part of the phonological matrix of T^o. Thus, clausal ellipsis is impossible.

(21) Can Sara ~~touch her toes~~? *At PF, after lexical insertion*



- Another important consequence of this is that the semantics of the [E]-feature will also be interpreted *in situ*.
  - As mentioned above, that the [E]-feature imposes the identity requirement on its complement at LF/Semantics, and must therefore combine with an element of a certain semantic type or syntactic category.
  - the fact that the material that is elided at PF is coextensive with the material over which the identity requirement holds at LF falls out automatically because the [E]-feature is in the same position at PF and at LF.
- This, as I discuss below, is hard to understand under some possible alternative approaches.

4.2 Some alternatives

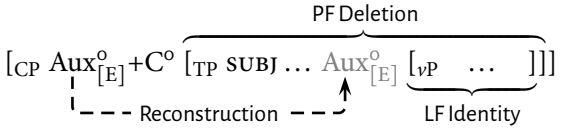
4.2.1 Reconstruction is not enough

- One might counter that the reason an auxiliary in C^{o} cannot license ellipsis of its complement is that the [E]-feature associated with VPE cannot elide TPs and so must reconstruct.
  - Assume head movement is syntactic, and suppose each [E]-feature is imbued with a semantics specific to the kind of element it is meant to elide.
  - If $[E]_{VPE}$ does not reconstruct into its base position, it would result in a type mismatch when it tries to compose with TP.
- Reconstruction of auxiliary verbs bearing the [E]-feature, however, could not explain the data in this paper, because it would lead to an unwanted LF–PF mismatch between the identity condition and what is elided.
  - Reconstruction only happens on the LF branch, but the [E]-feature would still be in its landing position on the PF branch.
  - The [E]-feature would still be on C^{o} at PF, so TP ellipsis should still occur as long as the identity conditions [E] imposes over *v*P are met at LF/Semantics.

Goldberg (2005) proposes that verbs obligatorily reconstruct into their base positions in order to explain the VID, but she mentions in passing that non-movement approaches to head movement would also have the same effect.

This is similar to the argument from Matushansky 2006 that we would not expect verb movement to show syntactic effects because the only place elements of type $\langle e, t \rangle$ can be interpreted is in their base position.

(22) *LF–PF mismatch under reconstruction of [E]*:



I assume reconstruction entails interpretting a lower copy.

- This does not rule out subject ellipsis in (5) –(8), but rather predicts that it should be possible.

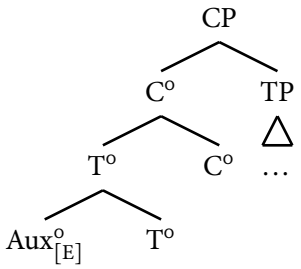
In fact, it predicts that TP ellipsis should be possible even if the subjects do not match, since subjects are outside of the domain of the identity requirement but within the domain of PF ellipsis

- Further, since reconstruction occurs only at LF, it is unclear how the [E]-feature licenses the ellipsis of *v*P at PF, since [E] would still not be adjacent to *v*P at PF. Licensing at a distance would still need to somehow occur.

4.2.2 [E] in complex heads

- A related concern is that if the [E]-feature undergoes movement to C°, it is too deeply embedded in a complex head to be able to license ellipsis of TP in its landing position.
  - Assume standard constraints on head movement: the Head Movement Constraint (Travis 1984), the ban on Excorporation (Baker 1988), and head adjunction.
  - Since TP is not the direct complement of [E] in this structure, as shown in (23), it might be argued to be too deeply embedded in C° to be able to license ellipsis, explaining (5) –(8).

(23)



This calls to mind one of the many difficulties about deriving head movement syntactically, specifically the well-known fact that a head does not c-command its trace on the standard head-adjunction hypothesis.

- This raises several difficult issues regarding how complex heads behave, and in particular how subparts of a complex head relate to the structure they are in.
- Regardless of how such issues are resolved, the problem above is subject to some of the same concerns in the last subsection; if [E] is in C° at PF, it is not adjacent to *v*P, and so there is no explanation of how *v*P could be elided at a distance.

4.3 Summary

- I argued that the inability of moved auxiliaries to license ellipsis of their complements in their landing position is due to the fact that the auxiliaries do not move in the narrow syntax.
- they remain *in situ*, allowing the [E]-feature to remain adjacent to the elided *v*P at PF and at LF.
- Reconstructing the auxiliary cannot explain how ellipsis is licensed at a distance.

5 Head movement and parallelism

- Several recent papers have argued that head movement to the left periphery plays a role in establishing variable–binder relationships that affect ellipsis parallelism.
  - Hartman (2011) argues that cases of T°-to-C° movement induces MaxElide effects, and argues that this is evidence head movement leaves traces.
  - Gribanova (2017) also argues that verb movement in Russian can also induce MaxElide effects.
  - Messick and Thoms (2016) argue that parallel T°-to-C° movement in the antecedent clause is necessary to allow VPE in ellipsis clauses if the ellipsis clause also contains T°-to-C° movement.

This work is mostly focused on understanding the conditions under which MaxElide, discussed above, must apply.

- If head movement leaves traces or introduces variable–binder relationships into the derivation, this is evidence that head movement is syntactic.
- Critically, these arguments rest on evidence from T°-to-C° movement, which I just argued provides evidence that head movement is not syntactic.
- Is there any way to resolve this?
- Today I focus on Messick and Thoms's proposal. I provide evidence that parallel head movement is not necessary for ellipsis parallelism to be satisfied.

5.1 Parallelism in Messick and Thoms

- Messick and Thoms note that object extraction with SAI in the ellipsis clause (EC) is only possible if SAI occurs in the antecedent clause (AC).

(24) a. Mary will kiss Bill. Who will JOHN *(kiss)? — No SAI in AC.
b. Mary will kiss Bill, but I don't know who JOHN will. — No SAI in AC/EC.
c. Who will Bill kiss, and who will JOHN? — SAI in AC+EC.

- They argue that this is a case of parallelism between the ellipsis clause and the antecedent clause.
- Following Griffiths and Lipták (2014), they adopt the following condition:

(25) *Scopal parallelism in ellipsis*:
Variables in the antecedent and elided clause must be bound from parallel positions.

Griffiths and Lipták 2014

- They argue that if head movement leaves variables – a product of syntactic movement – AC and EC in (24a) will not be parallel at LF, and ellipsis will not be licensed.

Parallelism domains are underlined below.

(26) a. $[_{CP}$ John λx $[_{C'}$ $\underline{[_{TP}$ Mary λz $[_{T'}$ will $[_{VP}$ z kiss $x]]]]]}$
b. $[_{CP}$ who $\underline{\lambda x$ $[_{C'}$ will λy $[_{TP}$ John λz $[_{T'}$ y $[_{VP}$ z kiss $x]]]]]}$

Here, the issue is the variable y in T′.

- Since the parallelism constraint holds over variables and their binders, this entails that head movement leaves variables (*i.e.*, traces).

5.2 Non-parallel head movement

- I don't have a novel approach to the case above, but I think there is reason to doubt that a lack of parallel head movement actually accounts for the inability to do VPE in (24a).
- If we look outside of T°-to-C° movement, there are acceptable cases where the antecedent clause lacks head movement but the ellipsis clause does not:

  (27) I don't know who Bill saw, but I know who he hasn't.

  (28) I asked Tom which wines Mary drinks, not which ones she hasn't.

  (29) ?She told me which books Beth read already, so I know which one she isn't.

- The problem with these examples is that the antecedent clause does not have any plausible form of head movement, but the ellipsis clause does.
- If head movement introduces variable–binder pairs, and these count for parallelism, then the antecedent and ellipsis clauses are not parallel:

  (30) a. $[_{CP}$ who $\underline{\lambda x\ [_{C'}\ [_{TP}$ Bill $\lambda z\ [_{T'}\ \ [_{VP}\ z$ saw $x]]]]]}$

  b. $[_{CP}$ who $\underline{\lambda x\ [_{C'}\ [_{TP}$ he $\ \lambda z\ [_{T'}$ has λy [not $[_{vP}\ y\ [_{VP}\ z$ saw $x]]]]]]]}$

  Here, the issue is the variable y in *v*P.

- But this is exactly what Messick and Thoms claim is wrong with (24a); the formulation of parallelism they present predicts these should also be ungrammatical.
- This suggests that head movement may not be responsible for the ungrammaticality of (24a). This undermines support for the idea that ellipsis parallelism provides evidence for syntactic head movement.

6 Conclusion

- In this paper I argued that evidence from ellipsis licensing shows that heads do not undergo syntactic movement.
  - Licensing heads do not license the ellipsis of their complements in their landing positions.
  - They do license ellipsis of their complements in their base positions.
- This receives a straightforward explanation on non-movement theories of head movement, such as Harley's (2004) conflation.
- I also provided evidence that Messick and Thoms's (2016) argument that head movement counts for ellipsis parallelism (and is therefore narrow syntactic movement) does not account for a full range of cases.
- I leave to future research the question of whether the facts here can be squared with MaxElide/Parallelism more broadly.

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