

1 Ellipsis and phases

- The idea that ellipsis is linked somehow to phases or cyclic Spell Out goes back at least as far as Holmberg 1999, 2001 – so, as long as there have been phases.
- The relevant idea for the discussion today is that phases demarcate certain syntactic domains that are transferred to PF and LF.
 - This transfer is triggered by merging certain heads (the PHASE HEADS). The complements of these phase heads (*i.e.*, PHASE HEAD COMPLEMENTS, or PHC) are sent to Spell Out.
- It has been a mainstay of elliptical theory since the mid 80s and 90s that ellipsis is licensed by certain heads.
 - Licensing heads trigger the ellipsis of their complements.
 - In other words, they cause their complements to have no pronunciation at PF.
- Thus, mechanically, there is some similarity between ellipsis and Spell Out.
- There is also an apparent surface correlation: The domains typically thought to be phasal appear to have elliptical operations associated with them.
 - CP is thought to be a phase, and the complement of C^0 is implicated in sluicing and fragments (TP ellipsis).
 - vP is thought to be a phase, and though it is a bit harder to tell, VP could be the target of ellipsis.
 - If DP is a phase, then it is possible that NP ellipsis falls into this bin as well.
- So there are some compelling reasons to link the two phenomena.
- Today, I will focus on Bošković's (2014) discussion linking ellipsis and phases.
 - This is based in a more general view of variable phase sizes.
 - However, his discussion of extraction from ellipsis sites, while introduced as part of discussion of how different sized phases might behave, is an intriguing way of trying to account for why it is not possible to move material out of certain putative ellipsis sites.
- Before I cover his hypothesis, though, I want to discuss some of the other ways phases and ellipsis have been linked.

Merchant (2013) argues that VPE targets a constituent at least as big as vP .

See, however, Matushansky (2005) for some interesting problems with the view that DP is a phase.

2 Two views of phases

- Chomsky presents two different views of how to conceive of phasal Spell Out.
- The first view, introduced in Chomsky 2000, proposes that the phase head complement is spelled out as soon as the phase head merges:

(1) *(Strong) Phase Impenetrability Condition:*

Chomsky 2000:108

The Domain of phase head H° is not accessible to operations outside HP; only H° and its edge are accessible to such operations.

- This means that any material inside the complement of H° must move to SpecHP when H° merges if it is to continue moving.
- Material in the complement of HP will be inaccessible for further operations after H° merges, including movement.
- The second view of phases proposes that Spell Out does not occur until the next phase head merges.

(2) *(Weak) Phase Impenetrability Condition:*

Chomsky 2001:13

The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

- This means that material in the complement of H° may still move after H° merges, but once a higher phase head Z° merges, the complement of H° will be frozen.
- Thus, the choice between (1) and (2) has consequences for extraction possibilities out of phases.
- Essentially, only SpecHP and H° itself remain accessible after Spell Out; the difference here is one of timing.
- Either way, material in the complement of H° will be frozen after Spell Out.

2.1 Identifying ellipsis sites with Spell-Out domains

- There are approaches that take the weak PIC (1) as a given. For instance, this is the view assumed in Rouveret 2012.
- Rouveret assumes that ellipsis sites are PHCs. The material sent to Spell Out has the option of either being parsed as normal, or being left unpronounced.
- This predicts that extraction out of ellipsis sites will only be possible if material can move to Spec ν P (or ν° if you're doing verb-stranding).
- If material fails to make it to the phase edge when ν° merges, it will not be able to be extracted from the ellipsis site.

See also Gengel 2007.

It also predicts that extraction from ellipsis sites will be identical to extraction from phases.

2.2 The weak PIC and full phase ellipsis

- If we adopt the weak PIC (2), however, we gain some flexibility.
- Once we adopt the view that Spell Out is triggered by merging a higher phase head, we have slightly more flexibility with regard to what movements are possible.
- We are also not required to assume that PHCs are the target of ellipsis; rather, we can assume that the full phase is the target of ellipsis.
- The Strong PIC does not let us do this straightforwardly
 - Assuming that v^o is the phase head, and the full vP spelled out when v^o merged, there would be no way for that vP to merge with any new material from the numeration.
 - Under the weak PIC, Spell Out does not occur until C^o merges, however, so vP can participate in other syntactic operations before undergoing ellipsis.

See Holmberg 2001.

2.3 Why not both?

- Bošković (2014) proposes, in fact, that both PHCs and full phases can be targets for elliptical operations.
- This is couched more generally in Bošković idea that phases do not come in a single size, but rather that a phase can be defined as the highest projection in the extended projection of a lexical category.

In other words, being a phase head is not an inherent property of heads of specific categories; rather, it is determined in part by syntactic context.

3 Bošković: Extraction from phases

- This is not directly relevant to extraction from ellipsis sites, but it is important to see how the variable phase size analysis works here.
- The inability to extract from nominals without a DP layer (e.g., Japanese) is important to the claim that nominal arguments in these languages are phases.

3.1 Serbo-Croatian nominals are NPs

- Bošković begins from the assumption that languages like Serbo-Croatian lack a DP layer in their nominal arguments. There is a long history of this view.
- One piece of evidence he presents comes from possessives.
 - The claim is that possessors in this language are adjectival (unlike in the DP model in English) and treated as
 - In English (3), the pronoun and the name can be conindexed, but not in Serbo-Croatian (4).
 - Given that the possessive is an NP adjunct and that Serbo-Croatian lacks DP, the possessor c-commands out of the NP, which results in Condition B and C violations.

I don't understand why being an adjunct allows for the ability to c-command out of NP.

- (3) a. His_i father considers John_i highly intelligent. This isn't grammatical, right?
 b. John_i's father considers him_i highly intelligent.
- (4) a. [NP Kusturicin_i [NP najnoviji film]] ga_i je zaista razočarao.
 Kusturica's latest movie him is really disappointed
 'Kusturica's latest movie really disappointed him_i'
 b. [NP Njegovi_i [NP najnoviji film]] je zaista razočarao Kusturicu_i.
 his latest movie is really disappointed Kusturica
 'His_i's latest movie really disappointed Kusturica_i'

- Additionally, demonstratives are treated as adjuncts in this language; they do not affect the binding possibilities:

I assume this is to show that they are not determiners.

- (5) *_{[NP Ovaj [NP Kusturicin_i [NP najnoviji [NP film]]]]} ga_i je zaista
 this Kusturica's latest movie him is really
 razočarao.
 disappointed
 'This latest movie of Kusturica_i really disappointed him_i'


3.2 Complement of N⁰ cannot be extracted

- Now, assuming that nominal arguments are phases, movement out of in Serbo-Croatian NP must proceed through SpecNP, since the PIC demands movement through the phase edge.
- Comp-to-Spec movement is generally not allowed, as it violates anti-locality (Abels 2003).
- Consequently, complements to N⁰ should not be movable.
- This seems to be true: Some nouns take genitive complements, but these are basically immobile:

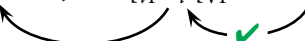
The English translation of this is pretty bad, but that's because English does not typically permit extraction out of definite DPs. Does definiteness play a role here?

- (6) *?Ovog studenta_i sam prona'la [NP sliku t_i].
 this.GEN student.GEN am found picture.ACC
 'Of this student I found the picture.'
- (7) Prona'la sam sliku ovog studenta.
 found am picture.ACC this.GEN student.GEN

- This gets explained if NP is a phase in this language: Movement from CompN⁰ to SpecNP should be blocked.

- (8) [this student ... [NP t_i [N' picture t_i]]]


- Extraction from, say, VP is possible, of course, because vP exists.

- (9) Ovog studenta, ja [vP t_i [VP učim t_i]]
 This student, I [vP t_i [VP teach t_i]]


3.3 PP extraction in English (and Serbo-Croatian)

- However, in English, it is possible to move material out of NPs, specifically PP complements of N^0 .

If you are willing to adopt this super stilted register.

(10) Of which city_{*i*} did you witness the destruction t_i ?

- This follows if DP is a phase in English and not NP. Under Bošković's proposal, this is the result of DP being the highest projection in the extended projection of NP.

Presumable, PP can escape through SpecDP.

(11) [CP Of which city ... [DP t_i the [NP destruction t_i]]]

- What is interesting here is that once you add the right sort of material to a Serbo-Croatian nominal, it becomes possible to extract out of that nominal.
- For instance, DPs with numbers and certain quantifiers permit extraction:

Compare with (6).

(12) Ovog studenta_{*i*} sam pronašla deset slika t_i .
 this.GEN student.GEN am found ten pictures.GEN
 'Of this student I found ten pictures.'

- This follows if the numeral introduces an additional layer above NP (call it QP), the head of which becomes the new phase head.

(13) [this student ... [QP t_i ten [NP pictures t_i]]]

4 Bošković: Ellipsis

- Bošković goes on to argue that ellipsis is 'phase-governed', or 'constrained by phases'.
- The central claim is that only phases or PHCs can be elided.
- As discussed above, it has been claimed before that PHCs are targets for ellipsis.

– This is clearly demonstrated for sluicing and NPE.

(14) They arrested someone, but I don't know [CP who C ~~[TP they arrested]]].~~

(15) You like Jane's book and I like [DP Peter -s ~~[NP book]]].~~

- It looks as though ellipsis can delete full phases, though.
- For example, Japanese-style argument drop apparently admits sloppy readings.

- (16) a. Taroo-wa sannin-no sensei-o sonkeisiteiru.
 Taroo-TOP three-GEN teacher-ACC respects
 ‘Taro respects three teachers.’
 b. Hanako-mo Δ sonkeisiteiru.
 Hanako-also respects
 ‘Hanako respects (three teachers) too.’

- The issue here is that pronouns do not usually allow identity; if there were a null pronoun in the position of Δ , we would expect a reading where Hanako respects the three same teachers that Tarō does.
- Ellipsis does give rise to sloppy readings, however. Bošković further assumes that vVPE is unavailable in Japanese.
- This makes sense under Bošković’s approach: Arguments (NPs, CPs, and PPs) are phases, and so should be potential targets for ellipsis under this view.

But see Tomioka 2003.

4.1 Extraction from ellipsis sites

- Now, movement out of ellipsis sites must be possible, including A' -movement, as in sluicing, and A-movement as in possessor-stranding NPE.

(17) They arrested someone, but I don’t know [_{CP} who_i C [_{TP} they arrested t_i]].

(18) You like Faulkner’s novel and I like [_{DP} Joyce_i’s [_{NP} t_i novel]].

- Extraction out of Japanese argument ellipsis sites is not possible, however.
- First, to be clear, a CP argument can be dropped, with both sloppy and strict identity.

(19) Hanako-wa [_{CP} zibun-no teian-ga saiyoosareru to]
 Hanako-TOP self-GEN proposal-NOM accepted.be that]
 omotteiru ga, Taroo-wa __ omotte inai.
 think though Taro-TOP think not
 ‘Hanako_i thinks that her_i proposal will be accepted, but Taro_j does not think that her_i/his_j proposal will be accepted.’

- Scrambling out of a null CP is not possible:

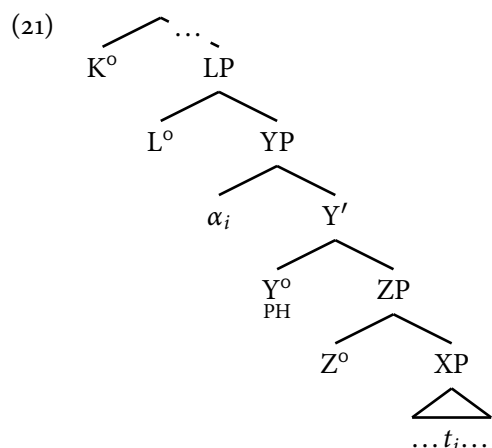
(20) *Hon-o_i Taroo-wa [_{CP} Hanako-ga t_i katta to] itta ga,
 book-ACC Taro-TOP Hanako-NOM bought that said though
 zassi-o_j Ziroo-wa __ itta.
 magazine-ACC Ziroo-TOP said
 ‘Taro said that Hanako bought a book, but Ziro said that she bought a magazine.’

Scrambling of this sort is possible, as shown in the first conjunct.

- Thus, Bošković argues, deletion of a full phase blocks extraction of material out of that phase.

4.2 Deducing the generalization

- The reason for this, according to Bošković (2014:45) is that ellipsis will also freeze the phase edge (*i.e.*, the specifier and head of the phrase projected by the phase head).
- Following Chomsky (2001)/(2), a phase head Y° is only activated when a higher phase head K° is merged into the structure.
- Following Holmberg (2001) and Aelbrecht (2010), ellipsis sites are marked as such in the narrow syntactic derivation.
- This freezes material for further syntactic derivation.
- When a higher phase head K° merges, ellipsis can take place in two ways:
 - i. Phase YP is marked for ellipsis, which means it is not assigned phonological realization and is closed off for syntactic computation.
 - ii. Or at this point, Y° triggers usual Spell-Out, transferring its complement, marked for ellipsis, to PF, which then fails to be phonologically realized.
- Schematized, it looks like this:



- As soon as K° merges, YP is activated for ellipsis marking.
- Either the whole YP is marked for ellipsis, or its complement ZP is.
- Only on the second of these options is α outside the ellipsis site and thus available for movement to KP.
- Therefore, if a full phase is marked for deletion, extraction will be impossible.

But this is surely what tying ellipsis to Spell-Out/the PIC is meant to do, right? Why further stipulate this? Point i. is why. Stating that the full phase can be targeted for ellipsis does not immediately mean that the full phase is sent to Spell Out.

4.3 Dutch modal complement ellipsis

- Dutch allows ellipsis of material after base (*i.e.*, non-epistemic) modals:

(22) Ik wou hem dat boek helemaal niet geven, maar ik moest Δ .
 I would him that book at.all not give, but I must
 'I didn't want to give him that book at all, but I had to.'

This is how it differs from the Rouveret analysis discussed above: Under Bošković's analysis, extraction from ellipsis sites can be more restricted than extraction from phases in general.

Aelbrecht 2010

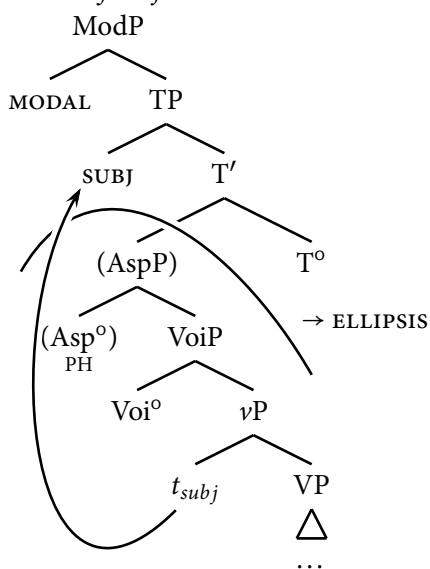
- It is possible to A-move subjects from inside the ellipsis site (including internal arguments), but *wh*-extraction from inside the elliptical domain is not possible.

(23) De rok kan al worden gewassen, maar [de bloes] moet nog
 The skirt can already become washed, but the blouse has.to still
 niet Δ.
 not
 ‘The skirt can be washed already, but the blouse doesn’t have to (be) yet.’

(24) *Ik weet niet wie Thomas moet uitnodigen, maar ik weet wel wie
 I know not who Thomas must invite but I know AFF who
 hij niet mag Δ.
 he not is.allowed
 ‘I don’t know who Thomas HAS to invite, but I do know who he isn’t
 ALLOWED to.’

- Bošković explains this as a case where full phase ellipsis blocks *wh*-movement out of an ellipsis site.
- This is predicted as long as the landing sight of the subject is below the position next phase head.

(25) *Sketch of subject movement in Dutch:*



The final position of the subject is a still higher position (since this is a V2 language).

- *Wh*-movement will not be possible since C° is too high.
 - Merging C° will cause the elided category (in this case AspP or VoiP, depending on what the highest projection is) to be marked for ellipsis before movement to SpecCP can occur.
 - If ellipsis only targeted the PHC (the complement of Asp°), *wh*-movement could presumably travel through SpecAspP to escape the ellipsis site.

As best as I can tell, this is a stipulation. There is no independent reason movement couldn't happen first, as far as I can tell.

5 Some final thoughts

- There is no real explanation here for why full phase ellipsis is used sometimes and why sometimes only phase head complements can be elided.
 - This isn't even a language-by-language split (and thus not parametric).
 - His discussion of auxiliary stranding in English in a later part of the paper makes it clear that both options can co-exist side-by-side in a language.
 - Basically, if extraction out of an ellipsis site is possible, then we have to conclude that the PHC is deleted and not a full phase, but there is no independent way to verify this.
- This takes a notable step away from the insight that phase-based ellipsis nominally sets out to capture.
 - The idea that ellipsis sites could just be PHCs is elegant and straightforward. It would be a fantastic link between two areas of study in syntactic theory.
 - While a whole phase could be an ellipsis site, this more material than is commonly taken to be sent to Spell Out.
 - Thus while we link two domains, we are still left with the question why ellipsis behaves differently from Spell Out.

Aelbrecht (2016:465, n. 11) makes a similar point.

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