Multiple Remnant Sluicing is Phase Constrained

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1. Phase Based Information Structure

Focus must be local independently of ellipsis: Association with *only* not island sensitive

Focus feature percolation via phase heads

1. They only [$_{vP}$ investigated the question [$_{CP}$ whether you [$_{VP}$ know the woman [$_{CP}$ who [$_{vPF}$ chaired[the Zoning Board]$_F$]]]]]

Focus XP LF movement to nearest phase edge edge

Focus movement crossover effects are phase bound: LF Focus movement is phase local

Focus feature percolation via phase heads

4. We only [$_{vPF}$ expect [**him**$_J$]$_F$] to be betrayed by the woman **he**$_J$ loves.

Focus covert movement

him does not raise over the coindexed pronoun (Kratzer 1997).
Bound variable reading possible. We expect nobody but John to have the property:'λve,t [ve,t is betrayed by the woman ve,t loves]'
Referential reading possible. We expect nobody but John to have the property:'λve,t[ve,t is betrayed by the woman John loves]'.

Focus feature percolation via phase heads

5. We only expect the woman **he**$_J$ loves to [$_{vPF}$ **PRO**$_J$ betray [**him**$_J$]$_F$]

Focus covert movement

him covertly raises over coindexed PRO at LF - Crossover effect:
Bound variable reading impossible. We expect nobody but John to have the property:'λve,t [the woman ve,t loves betrays ve,t]'.
Referential reading possible. We expect nobody but John to have the property:'λve,t [the woman John loves betrays ve,t]'.

Prompt: What should we expect in a situation where a man's lover is determining whether one of his subordinates may be in a position to divulge confidential information to outside sources about him or indeed all of the men in the hierarchy.

Focus feature percolation via phase heads

6. We only expect [the woman **he**$_J$ loves] to investigate the question of whether someone will [$_{vPF}$ betray [**him**$_J$]$_F$]

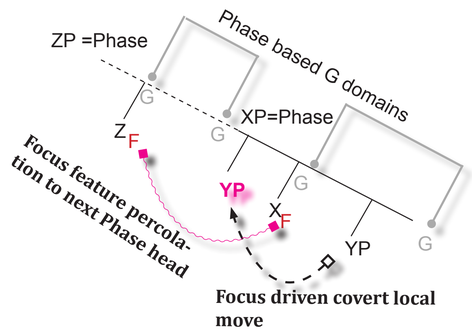
Focus covert movement

him covertly raises to local phase egde - no Crossover: **Both Bound and Referential readings possible.**

Focus prominence assigned phase by phase Kratzer & Selkirk (2007)
All focus:topmost XP in a Spell-out Domain receives focus pitch

2. dass ein Júnge [$_{vP}$ [$_{DP}$ eine Géige] [PP im Supermarkt] kaufe]
that a boy a violin in.the.DAT supermarket bought

3. dass ein Júnge [$_{vP}$ [$_{PP}$ im Súpermarkt] lebte]
that a boy in.a.DAT supermarket lived



Focus is licensed by a phase head.
- Non-ellipsis: projecting an FP is optional, movement covert/overt
- Focus feature percolation via Phase heads (AvoidFocus!), possibly responsible for pair list readings in examples like (7).
- Ellipsis: movement overt to FP and
  - Obligatory FP projection when {E}
  - No FP projection when F percolates from below (AvoidFocus!)

Givenness is Presuppositional (Sauerland 2005)
- Givenness G operator inserted anywhere within a phase, terminates at Phase head.
Kučerová (2012)
- Multiple Focus constructions
7. Q: Who is talking with who?

Givenness Domains

A: [$_{CPFG}$ [$_{TP}$ [$_{DP}$Mary [is$_G$ [$_{vPFG}$ talking[$_{PP}$ with$_G$ [$_{DP}$John]]

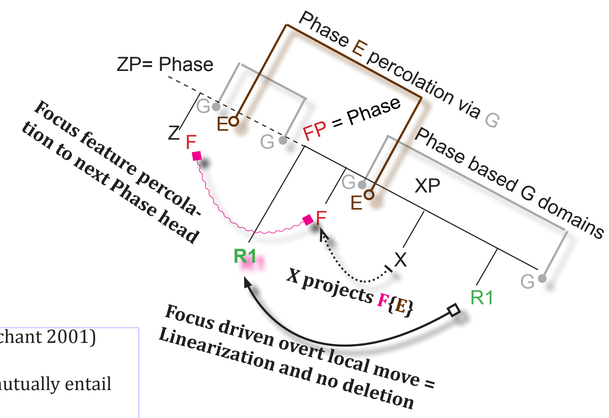
Focus covert movement

- Focus computed off Givenness: covert movement to nearest Focus licensing Phase head
- In the case of Ellipsis, always FP licenses remnants, in non ellipsis contexts not necessary.

Phase Bound Givenness
- Givenness licensed locally Wagner (2006), Kučerová (2012)
Givenness licensed within DP phase:
Mary's uncle, who produces **high-end convertibles**, is coming to her wedding.
I wonder what he brought as a present.

8. a. He brought [a CHEAP convertible]
#b. He brought [a RED convertible]
c. He brought [a red CONVERTIBLE]

- Givenness/Focus within DP: 'Red' is not valid alternative to 'high-end' and cannot be focused.
- Givenness/Focus cannot be evaluated within CP then 'brought' should be focused.



Ellipsis Identity (Merchant 2001)
- {E} feature licenses ellipsis
- Antecedent and Anaphor mutually entail modulo focus.

2. Phase Based Ellipsis

Prosodic ellipsis (PE) needs to be phase based
- PE Bruening (2015) cannot be licensed by evacuation movement (Sailor & Thoms 2013)

11 a. I disproved theories held by Wittgenstein last year and ((φ ~~I disproved theories held by~~ (ΦEinstein))(φthis year))
*b. Einstein$_1$, I disproved theories held by t$_1$ this year.

- Full relatives have more prosodic structure and 'the guy' is prominent (red) and cannot be deleted.

*12. I taught the guy that knows Icelandic how to dance and (φ ~~I taught~~ (Φ~~the guy~~)) (φ~~that knows~~ (ΦFaroese)(φ how to sing))

- Bruening (2015): Ellipsis targets a syntactic/prosodic unit XP and deletes all but the head of XP, where the head of XP is the most prominent syntactic/prosodic sub-constituent of XP. The most prominent syntactic sub-constituent of XP is in Spec-X if X projects a specifier, otherwise it is X.
- Above needs to be modified. PE needs to be phase based. Most prominent prosodic/syntactic unit must move to nearest phase edge Spec-F. Multiple remnants must be in the same Phase. Then it accounts for full relative clause below, where both remnants need to be in the same Phase. Compare (13) with (11).

Focus/linearization rightward movement

13. I disproved theories that were held by Wittgenstein last year and [$_{CPGE}$ ~~I~~ [$_{vPGE}$ ~~disproved~~ [$_{DPGE}$ ~~theories~~ [$_{CPGE}$ ~~that were~~ [$_{FP}$ [$_{DP}$ Einstein]$_1$ [$_{DP}$ this year]$_1$ [F$_{FGE}$][$_{vP}$ ~~held by~~ t$_1$ t$_2$]]]]]

Focus overt movement

- impossible below since R2: [how to sing] is a complement of 'teach' - cannot rightward move into vP phase headed by Focus that contains R1: [Faroese]

Focus/linearization rightward movement blocked

*14. I taught the guy that knows Icelandic how to dance and [$_{CPGE}$ ~~I~~ [$_{vPGE}$ ~~taught~~ [$_{DPGE}$ ~~the guy~~ [$_{CPGE}$ ~~that~~ [$_{FP}$ [$_{DP}$ Faroese]$_1$ [F$_{FGE}$] [$_{vP}$ ~~knows~~ t$_1$]]]] [$_{CP}$ how to sing]

Focus overt movement

Ellipsis feature propagates via G operator Szczegielniak (2016)
- MaxElide! (Takahashi & Fox 2005) reduced to phase based {E} feature propagation via G

E propoagation via G **- obligatory deletion of G-marked constituents**

*9. John read something but I do not know [$_{FP}$what$_1$ [F$_{FGE}$] [$_{CP}$ [$_{TP}$ ~~he did~~$_G$ [$_{vP}$ t$_1$ [$_{vPFGE}$] ~~read t$_1$~~]] $_G$]

Focus overt movement

E feature percolation via G **= MaxElide!**

Givenness Domains

10. John read something but I do not know [$_{CPFGE}$] [$_{TP}$ ~~he did~~ $_G$[$_{FP}$ what$_1$ [F$_{FGE}$] [$_{vP}$ ~~read t$_1$~~]]$_G$]

Focus feature percolation= Avoid Focus!

Focus overt movement

Wh-remnant in Spec-FP not G-marked and NOT ELIDED

island

15 a. Oni zatrudnili lingwistę który podarował jakąś książkę jakiemuś profesorowi ale nie wiem którą książkę któremu profesorowi
They hired linguist who gave some book some professor but not know which book which professor
'??They hired a linguist who gave some book to some professor but I do not know which book to which professor.'

island

*16. Oni zatrudnili jakiegoś lingwistę który zna jakiś dialekt, ale nie wiem którego lingwistę który dialekt
They hired some linguist who knows some dialect but not know which linguist which dialect
'*They hired some linguist who knows some dialect but I do not know which linguist which dialect.'

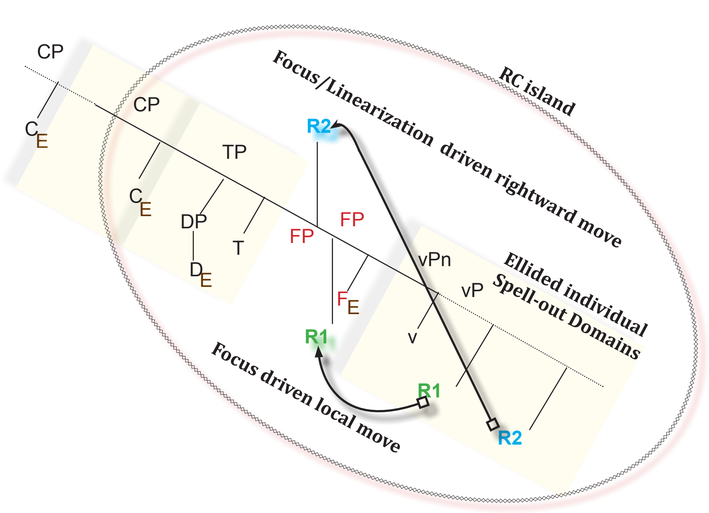
Phase Impenetrability Condition (PIC) (Chomsky 2001): The domain of a head X of a phase XP is not accessible to operations outside XP; only X and its edge are accessible to such operations.
- {E} feature subject to PIC (Müller 2011)
- Linearization subject to PIC
- Focus/Givenness marking subject to PIC

Ellipsis, Linearization, and Focus
- Focus is a Phase head licensing ellipsis (Bošković 2014)
- Focus triggers immediate Linearization (Fanselow & Lenertová 2011).
- Covert movement but trace pronounce of XP = prominence/linearization of XP in non ellipsis contexts
- overt movement XP to FP in ellipsis = prominence/linearization of XP and lack of PF deletion

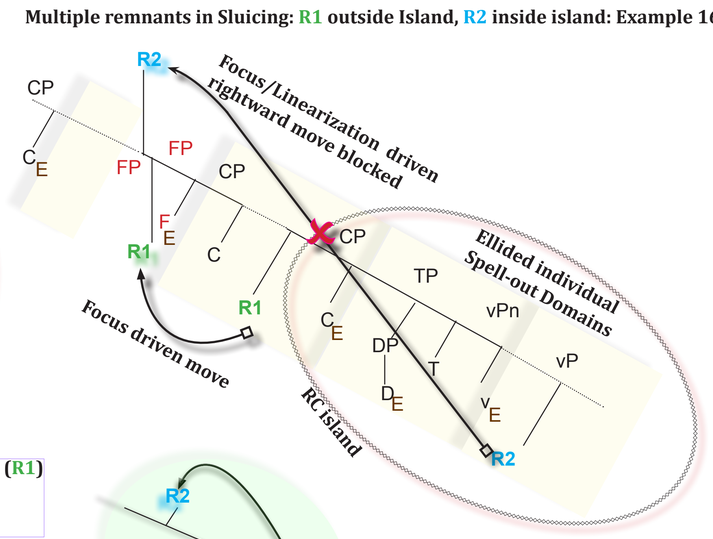
Immediate Linearization in Ellipsis - when multiple remnants in same phase α: [α R1 R2]
- R1 linearized as R1> F{E}
- R2 rightward moves to Spell-out Domain of R1 linearized as F{E}>R2 -> R1>R2

Linearization by Phase
- Linearization via LCA (Kayne 1994) is carried out phase-by-phase.
- Linearization triggers cyclic movement to avoid ordering paradoxes during Spell-out (Fox & Pesestky 2005)
-Linearization is subject to PIC
- PF null terminal nodes do not become linearized or participate in LCA computation: otherwise copies/traces would yield ordering paradoxes.

Multiple remnants in Sluicing: R1 and R2 inside relative clause island: Example 15



Multiple remnants in Sluicing: R1 outside Island, R2 inside island: Example 16



Island Alleviation Asymmetry **cannot** be attributed to:

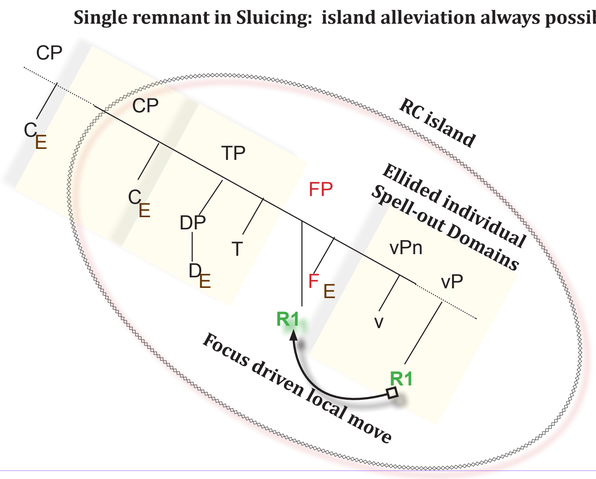
- Clefts (Craenenbroeck 2010)

- Trace deletion, cyclicity suspension (Fox & Lasnik 2003)

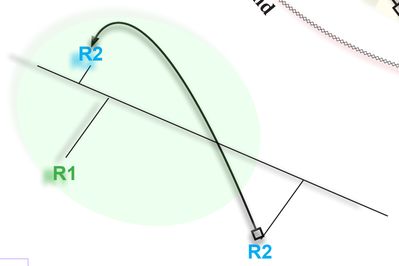
- Movement of the indefinite Correlates (Griffiths & Lipták 2015)

These theories predict no difference between (15) and (16)

Single remnant in Sluicing: island alleviation always possible



Second Remnant (R2) rightward moves to Spell-out Domain of First Remnant (R1)
- Movement cannot cross an Island
- Rightward Movement cannot strand a PP (Lasnik 2013)



Island Alleviation Asymmetry in Relative Clause Islands or Complex DP Islands, as well as in P-stranding islands shows us that island alleviation cannot be due to the division into PF and & LF islands Merchant (2001)

Lack of P-omission on R2 **cannot** be attributted to Clefts (Szczegielniak 2008) alleviating P-stranding since English allows P-stranding and yet behaves like Polish, which does not allow P-strading

17. Jan podszedł do jakiegoś artysty na pewnym koncercie ale nie wiem **(do)** którego artysty ***(na)** którym koncercie
Jan approached to some artist on certain concert but not know (to) which artist (on) which concert
'Jan approached some artist at some concert but I do not know which artist at which concert'

18. John read about some linguist at some airport but I do not know **(about)** which linguist ***(at)** which airport

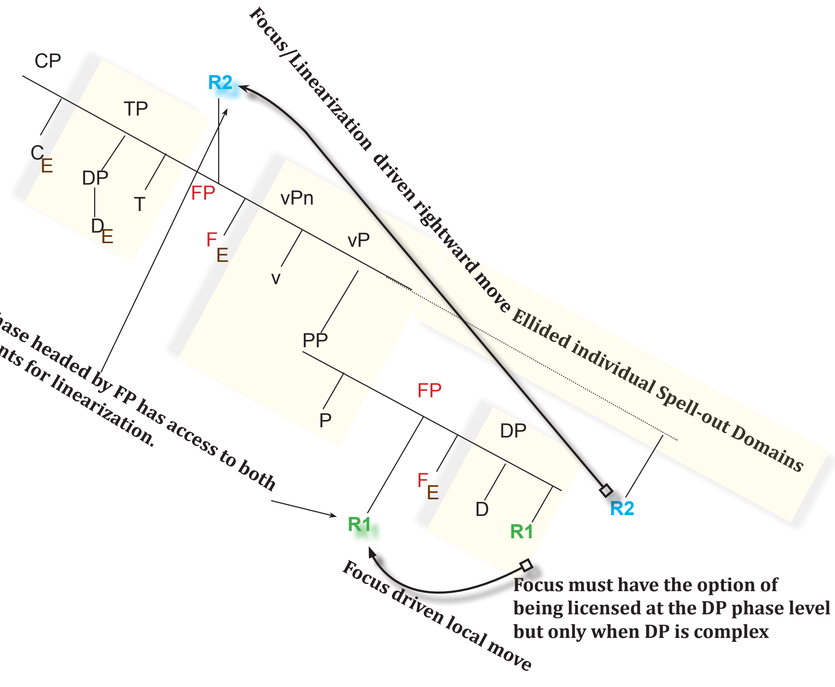
P-omission **cannot** be always attributted to Clefts (Szczegielniak 2008). Nykiel (2013) shows structures with P-omission and no possible cleft (19b) or wh-movement (19c) derivation
Indication -> R1 does not have to move out of PP in (19a)

3. Focus within DP: P-Omission

19 a. Byłaś ubrana w coś czerwonego tamtej nocy, ale nie pamiętam (w) co.
were dressed in something.ACC red.ACC that night but not remember (in) what.ACC
'You were dressed in something red that night, but I don't remember what'

*b. Byłaś ubrana w coś czerwonego tamtej nocy, ale nie pamiętam co to w czerwonego byłaś ubrana tamtej nocy
were dressed in something.ACC red.ACC that night but not remember what.ACC it in red (ACC) were dressed that night
'You were dressed in something red that night, but I don't remember what it was.'

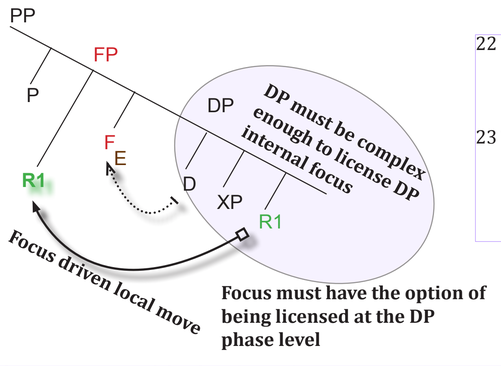
*c. Byłaś ubrana w coś czerwonego tamtej nocy, ale nie pamiętam co byłaś ubrana w t czerwonego tamtej nocy
were dressed in something.ACC red.ACC that night but not remember what.ACC were dressed in red (ACC) that night
'*You were dressed in something red that night, but I don't remember what you were dressed in red that night'



P-omission (Szczegielniak 2016)
- DP focused locally below P - there is no movement across PP.
- P-omission possible only when DP is complex (Nykiel 2013)
- DP complexity required to license focus via Givenness within DP

??20. Jan rozmawiał z kimś ale nie wiem kim
Jan talked with someone but not know who

21. Jan rozmawiał z pewnym profesorem, ale nie wiem którym
Jan talked with some professor but not know which



22 ??a. Jan zatańczył z tylko nią
Jan danced with only her
b. Jan zatańczył tylko z nią
Jan danced only with her

23 ??a. Jan zatańczył z tylko chłopcem
Jan danced with only boy
b. Jan zatańczył z tylko wysokim chłopcem
Jan danced with only tall boy

4. Defective Phases

24. Esti bilang kamu bicara dengan seseorang tentang sesuatu yang pentingdi sini, tapi saya tidak tahu (dengan) siapa (tentang) apa
Esti say you talk with someone about something that important in here but I NEG know (with) who (about) what
'Esti said that you were talking with someone about something important here, but I don't know who you were talking with about what.

25. *a. Apa yang Ali mem-beli?
what C Ali ACT-buy
"What did Ali buy?"
b. Apa yang di-beli (oleh) Ali?
what C PASS-buy by Ali
"What did Ali buy?"

In (24) Indonesian allows both R1 and R2 to omitt PP's (Saito 2011)
- vP is a weak phase (Aldridge 2008)
  - connot licese a Spec in Active (25)
- A weak vP cannot licesne a Focus head and Spec. there is no possible rightward movement
- Both DP's need to license respective FP's and DP focus possible for both R1 and R2

Languages with a non-defective vP cannot NOT license FP

5. Summary

- Phase heads carry Information Structure features (Givenness, Focus) = IS is computed on a phase-by-phase basis.
- Givenness is presuppositional; Focus is licensed via covert movement (non-ellipsis).
- Phase heads carry Ellipsis features = - Ellipsis is computed on a phase-by-phase basis via Givenness,
  - phase-by-phase Focus licenses remnants.
- Linearization is computed on phases (not Spell-out Domains).
- Focus triggers immediate linearization.
- A phase head carrying an Ellipsis feature projects an FP.
- Ellipsis requires overt R(emnant) movement to FP.
- Focus features percolate via phase heads limiting Focus (Schwarzschild (1999) AvoidFocus!).
- We need to investigate Focus feature percolation when there are two Focus Phrases as in P-omission with multiple remnants.