

I. Lack of ellipsis structure, There are constructions where there is no possible wh-expression, cleft continuation (Nykiel 2013, Sato 2011, Park 2007, Lasnik 2013).

1. Byłaś ubrana w coś czerwonego tamtej nocy,
were dressed in something.ACC red.ACC that night
ale nie pamiętam (w) co.
but not remember (in) what.ACC

'You were dressed in something red that night, but I don't remember what'

2. Saya ingat Ali berdansa dengan seseorang, tapi saya
I remember Ali dance with someone but I
tidak tahu (dengan) siapa.
NEG know (with) who

'I remember Ali danced with someone, but I don't know (with) whom.'

3. a. John-i mwuenka-lul sass
John-Nom something-Acc bought
'John bought something'
b. Mwuess-ul?
what-Acc
'What?'

4. a. I know that in each instance one of the girls got
something from one of the boys.
?b. But which from which? (Bolinger 1978)

And yet sluicing in (3,4) and the distribution of P-omission in (1,2) is not entirely random. For one, d-linked, 'heavier' wh-expressions are more likely to allow P-omission (Szczegielniak 2008, Nykiel 2013)

5. ??a. Jan rozmawiał z kimś ale nie wiem kim
Jan talked with someone but not know who
b. Jan rozmawiał z pewnym profesorem, ale nie wiem którym
Jan talked with some professor but not know which

More or less successful attempts have been made to reduce P omission to clefts. But data in 1-2 remains problematic since there

are no cleft continuations, or wh-continuations for (1) or (2,3,4)

*1b. Byłaś ubrana w coś czerwonego tamtej nocy,
were dressed in something.ACC red.ACC that night
ale nie pamiętam co to w czerwonego byłaś ubrana
but not remember what.ACC it in red (ACC) were dressed
tamtej nocy
that night

'You were dressed in something red that night, but I don't remember what it was.'

*1c. Byłaś ubrana w coś czerwonego tamtej nocy,
were dressed in something.ACC red.ACC that night
ale nie pamiętam co byłaś ubrana w t czerwonego
but not remember what.ACC were dressed in red (ACC)
tamtej nocy
that night

'*You were dressed in something red that night, but I don't remember what were you dressed in red.'

II. Ellipsis licensing.

- Assume ellipsis is licensed by mutual entailment modulo Focus (Merchant 2001).
- It is contingent on Givenness marking (Schwarzschild 1999).
- Givenness is presupposed (Sauerland 2005) and not focus.
- Givenness is computed phase by phase.
- Ellipsis feature only on Phase Heads (Gengel 2008), can be inherited via Givenness marking.

PIC prevents a global E feature. By the time a E is introduced on Z the domain of H has become inaccessible.

PIC: Given structure [ZP Z [XP X [HP α [H YP]]]], with H and Z the heads of phases:

In 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.

6. Relationship between E feature and G-marking

The E feature is inherited phase by phase provided one of two conditions are met:

- (i) In root extending merger, H2 needs to inherit {E} from H1 if there is a G operator above H1,
- (ii) in non root extending merger if H2 is part of the domain of H1 it needs to inherit an {E} feature from H1.
- (iii) in late adjunction H2 must inherit an {E} feature from H1 if the domain of H2 is G marked

Derivation of typical sluice H2=CP phase, H1 = vP phase

7 a. Extension of the root, merger of C=H2 with vP (v=H1) to form a CP, spread of Ellipsis feature because of G in domain of C, case of sluicing as in

I saw a man but I do not know $[_{H2P} \text{who}_2 \text{ } [_{H2} \mathbf{E} \mathbf{Q}]] \text{ } [_{TP} \mathbf{I}_1 \mathbf{G} \text{ } [[\text{ } [_{H1P} \text{ } [_{H1} \mathbf{E}]] \text{ } t_1 \text{ saw } t_2] \mathbf{G}]]$

7 b. Extension of the root merger C=H2 with vP (v=H1) to form CP, no spreading of ellipsis feature because there is no G in domain of C, but G in domain of v, case of vP ellipsis

John arrived and $[[[_{H2P} \text{ } [_{H2}]] \text{ } [_{TP} \text{ } \text{Mary did } [[[_{H1P} \text{ } [_{H1} \mathbf{E}]] \text{ arrived } t] \mathbf{G}]]] \text{ too}$

7.c. Non Extension of the root, merger of DP (D=H2) with vP (v=H1), spread of Ellipsis feature because of G in domain of v, case of vP ellipsis with one argument

John photographed Mary and $[[[_{H3P} \text{ } [_{H3}]] \text{ } [_{TP} \text{ } \text{Roger did } [[[_{H1P} \text{ } [_{H1} \mathbf{E}]] \text{ } t \text{ photograph } [_{H2P} \text{ } [_{H2} \mathbf{E}]] \text{ } \text{Mary}] \mathbf{G}]]] \text{ too}$

7d. Late Adjunction of PP (P=H3) with CP (C=H2) (v=H1). P inherits an E feature from C since domain of X is G-marked, case of sluicing with an adjunct

I saw a man at a bar but I do not know $[_{H2P} \text{ } \text{who}_2 \text{ } [_{H2} \mathbf{E} \mathbf{Q}]] \text{ } [_{TP} \text{ } \mathbf{I}_1 \mathbf{G} \text{ } [[\text{ } [_{H1P} \text{ } [_{H1} \mathbf{E}]] \text{ } t_1 \text{ saw } t_2] \text{ } [_{H3P} \mathbf{E} \text{ at the bar } \mathbf{G}]] \mathbf{G}]]$

7e. Late Adjunction of XP with CP (C=H2). X does not inherit an E feature from C since domain of X is not G-marked, case of Sprouting

I saw a man but I do not know $[_{H2P} \text{ } [_{H3P} \text{ } \text{where}]_3 \text{ } [_{H2} \mathbf{E} \mathbf{Q}]] \text{ } [_{TP} \text{ } \mathbf{I}_1 \mathbf{G} \text{ } [[\text{ } [_{H1P} \text{ } [_{H1} \mathbf{E}]] \text{ } t_1 \text{ saw } t_2] \mathbf{G}]] \text{ } t_3$

Predicts correctly MaxElide! (Takahashi & Fox 2005). A root Phase head must inherit an E feature via G.

*9. I had said I saw a man at the bar but I do not know who I had

III. Phase by Phase Givenness and Focus

Givenness is computed locally. Wagner (2006) via sisterhood, Kučerová (2012) via syntactic G-insertion terminating at <s,t>.

10. Givenness marking

- G operator inserted in overt syntax
- G terminates at a Phase Head.

Captures data from Slavic Givenness driven movement (phase constrained)

11. Q Who saw Adam?
A Maria powiedziała że $[\text{Adama zobaczył } \mathbf{G}] \text{ Jan } \mathbf{F}$
Mary said that Adam (acc) saw Jan (nom)

G-operator insertion above post verbal subject. G terminates at C

G-operator insertion at the beginning of the DP has the semantic effect \exists type shifting (Schwarzschild 1999).

12. $\exists x$ (green apple (x)) entails $\exists x$ (apple (x))

Forces: DP [Green apple] to be a proposition, which we will define as a phase.

Focus is computed on Givenness by adding a focus variable. We then have existential binding of the the Focus variable

13. $\exists x (\text{green}_F \text{ apple } (x)) \rightarrow \exists Y \exists x (Y \text{ apple } (x))$
Such a structure guarantees mutual entailment of elided DP's modulo the focus variable, in this case the adjective.

14. Jan zjadł czerwone jabłko bo nie kupił zielonego
Jan ate red apple because not buy red
'Jan ate a red apple because he did not buy a red one'

15. Focus marking of LI forces Focus feature checking by closest Phase Head possible via covert or overt movement

German Selkirk & Kratzer (2007) in focus neutral contexts topmost XP receives focus on a phase-by-phase basis

16. dass ein Jünge [FP [DP **eine Géige**]₁ [vP t₁ [PP im
that a boy a violin in.the.DAT
Supermarkt] kaufe]
supermarket bought

Focus movement does not trigger islands, movement too local. But not local enough to triggers Crossover (Kratzer 1999).

15a.They only investigated the question whether you know the woman who chaired[the Zoning Board]F,

*b.They [only [the Zoning Board]F, [investigated the question whether you know the woman who chaired t.]]

Focus does trigger Crossover:

16.a.We only expect [him_i]F to be betrayed by the woman he_i loves.

Bound variable reading possible. We expect nobody but John to have the property:' $\lambda v_e, t$ [ve,t is betrayed by the woman ve,t loves]'.
Referential reading possible. We expect nobody but John to have the property:' $\lambda v_e, t$ [ve,t is betrayed by the woman John loves]'

b. We only expect the woman he_i loves to betray [him_i]F

Bound variable reading impossible. We expect nobody but John to have the property:' $\lambda v_e, t$ [the woman ve,t loves betrays ve,t]'.
Referential reading possible. We expect nobody but John to have the property:' $\lambda v_e, t$ [the woman John loves betrays ve,t]'

The above contrast can be accounted for if we assume that 'him' raises over 'he' at LF to 'only' When one pronoun crosses another a referential reading is impossible, as in (16b).

However, if we control for phase-hood, crossover effect diminish

17. 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.

We only expect [the woman he_i loves] to investigate [the question of whether someone will betray [him_i]F]

Both Bound and Referential readings possible. Local movement of the second focused pronoun to Spec-v of the verbal complex headed by 'betray'.

The movement is local enough to avoid crossover and island violation.

Note, Focus movement can be local within the DP

18.a. Dostaliśmy wiele komentarzy, ale pod **tylko** tym jednym
received many comments, but under only this one
newsem było ich więcej niż sto
news were them more than hundred

'We received many comments, but under only this one news item there were more than a hundred of them'

b. Dostaliśmy wiele komentarzy, ale **tylko** pod tym jednym
received many comments, but only under this one
newsem było ich więcej niż sto
news were them more than hundred

We received many comments, but only under this one news item there were more than a hundred of them'

The example in (a) suggests that the news item generated more than a hundred responses below the news item, other news items could have generated more comments but not under it, but say above it. We do not have this meaning in (b).

IV. E feature as PF inversion

In ellipsis focus movement always overt.

Most cases raises to highest Phase carrying E feature (AvoidFocus! Schwarzschild 1999). But not always.

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

'You were dressed in something red that night, but I don't remember (in) what.'

Focus movement to the edge of the within the nominal phase:

20. ale nie pamiętam [_{CP} byłaś ubrana
but not recall was dressed
[_{PP} w [_{HP} CO₁ [H] czerwonego t₁]]] tamtej nocy]
in what red that night

The crucial observation, this is discontinuous ellipsis The edge of the DP phase is not elided although it is embedded in a string that is elided. How come?

PF suppression

21. **E feature** inverts the pronunciation in a Phase at Spell-out.

- a. H with no E -> pronounce complement, suppress edge
- b. H with E -> spell out Spec-H, suppress complement.

Suppression of the edge is assumed to be part of Spell-Out, since only the phase complement is spelled out, possibly the head itself. XP's undergoing cyclic movement do not get pronounced.

They are however linearized (Fox & Pesetsky 2005) implying that they are visible to the interfaces.

V. Consequences:

5.1. complexity effect

Nykiel (2013) notes the the more complex the wh-remnant the more it can be without a P.

Focus within DP is contingent on Givenness marking within DP that is contingent on structure (sisterhood Wagner 2006).

22. simplex wh<AP modified wh<d-linked wh

- 23. ??a Jan zatańczył z kimś ale nie wiem kim
Jan danced with someone but not know who
- b. Jan zatańczył z kimś wysokim ale nie wiem kim
Jan danced with someone tall but not know who
- c. Jan zatańczył z pewną dziewczyną ale nie wiem która
Jan danced with some girl but not know which

Correlates with focus inside DP not possible with simplex elements

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

5.2 Preposition weight effect

The more phonetically heavy P the more likely it is to be dropped (Philippova 2014)

25. a. Jan zatańczył przed kimś nie wiem kim
Jan danced before someone not know who
'Jan danced in front of someone but not know who'
b. Jan zatańczył wokół kogoś ale nie wiem kogo
Jan danced around someone but not know who

Correlates with ability to place focus below P

26. ??a Jan zatańczył z tylko tą jedną dziewczyną
Jan danced with only this one girl
b. Jan zatańczył przed tylko tą jedną dziewczyną
Jan danced in-front-of only this one girl
c. Jan zatańczył wokół tylko tej jednej dziewczyny
Jan danced around only this one girl

5.3 In situ wh-languages

In situ -wh languages can have sluicing since wh-raises to Spec-H for focus (Korean from Park 2007, Farsi from Toosarvandani 2008)

27. a. John-i mwuenka-lul sass
John-Nom something-Acc bought
'John bought something'
b. Mwuess-ul?
what-Acc
'What?'

28. rāmin ye chiz-i xarid. hads bezan chi.
Ramin one thing-ind bought.3sg guess hit.2sg what
'Ramin bought something. Guess what.'

Focus Movement can be local or long distance. When local it leads to island alleviation (Farsi from Toosarvandani 2008):

29. unā mixān [ye nafar-i-ro ke yeki az zabānāye
they want.3pl one person-ind-obj that one from language.pl
urupāyi-ro balad bāshe] estaqdām konand vali yād-am
European-obj knowledgeable be.3sg hiring do3.pl but memorymy
nist kodum zabān
neg.is which language
'They want to hire someone who knows one of the European languages, but I don't know which language.'

VI Multiple sluicing - linearization meets multiple focus

Multiple wh-remnant sluicing differs in crucial respects to single remnant sluicing

6.2 Only top P can be omitted

30. a. Jan podszedł do jakiegoś artysty na pewnym koncercie
Jan approach to some artist on certain concert
ale nie wiem (do) którego artysty *(na) którym koncercie
but not know (to) which artist (on) which concert
'Jan approached some artist at some concert but not know which artist at which concert'
b. John read about some linguist at some airport but I do not know
(about) which linguist *(at) which airport

Lasnik (2013) argues second remnant right adjoined

- 31 *a. A linguist spoke about yesterday a paper on sluicing.
b. A linguist criticized yesterday a paper on sluicing.

6.2 Island alleviation is phase sensitive

32. a. Oni zatrudnili lingwistę który podarował jakąś książkę
They hired linguist who gave some book
jakiemuś profesorowi, ale nie wiem
some professor but not know
~~oni zatrudnili lingwistę {który~~
they hired linguist who
~~podarował [którą książkę] [któremu profesorowi]}~~
gave 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.'

*b. Oni zatrudnili jakiegoś lingwistę który zna jakiś dialekt, ale nie
They hired some linguist who knows some dialect but not
~~wiem oni zatrudnili [którego lingwistę] {który zna [który dialekt]}~~
know they hired which linguist who knows which dialect
'*They hired some linguist who knows some dialect but I do not
know which linguist which dialect.'

*33. Oni zatrudnili jakiegoś lingwistę który zna jakiś dialekt bo
They hired some linguist who knows some dialect because
ciągle czyta jakąś książkę o nim ale nie wiem [jaki dialekt]1
constantly reads some book about it but not know which dialect
[jaką książkę]2 {który zna t1} {bo ciągle czyta t2 o nim}
which book which knows because always reads about it
'*They hired some linguist who knows some dialect since he
always reads some book about it but I do not know which dialect
which book.'

We can see that Island alleviation is possible if both remnants are
in the same phase (30a), but out if they are in different phases
(30b) and out if they are in different islands (31).

6.3 Linearization

34. Generalization: In multiple sluicing all the remnants must be
contained in the same minimal phase.

P-omission only on first remnant since the highest remnant can
stay within DP but second remnant needs to move into the same
minimal phase containing the first remnant and/or has to be an
adjunct and Late Merged as whole

35. {[HPmin [PP [wh DP t1]]]} [PP WH]

Why? Linearization. Phase heads linearize (Fox & Pesetsky 2005),
assume that in order to linearize two remnants both need to be in
the same Phase Complement.

6.4 Discontinuous ellipsis (Bruening 2015)

36. a. I disproved theories held by Wittgenstein this year and I
~~disproved theories held by~~ Einstein last year
*b. [Einstein]1 [last year]2 , I disproved theories held by t1 t2

I propose that the remnant 'Einstein' is moved to the top of the DP
phase, whereas the adjunct [last year] is adjoined to the vP phase.
This is not possible in cases like (Sailor and Thoms 2013)

*37. I taught the guy that knows Icelandic how to dance and [I
~~taught [the guy [that knows~~ Faroese]] [how to sing]]

In Polish we also have discontinuous ellipsis:

38. Jola może powiedzieć swej siostrze że Jan zjadł czerwone jabłko
Jola can say her sister that Jan ate red apple
a Basia ~~może powiedzieć swej siostrze że Jan zjadł~~ zielone jabłko
but Basia can say her sister that Jan ate green apple
'Jola can tell her sister that Jan ate a red apple, but Basia can say that Jan
ate a green one'

Here we have three remnants all sharing the minimal common phase the matrix vP/CP

VII Problems & Conclusions

7.1. Indonesian P-omission

Indonesian allows to omit both lower P (Sato 2011, pc), and both.

39. Saya sering sekali menyumbang barang-baran ke berbagai
I often very donate good-RED to various
masjid di segala penjuru Amerika Serikat jadi saya tidak
mosque in all corner America united so I NEG
ingat apa, (ke) masjid yang mana.
remember what to mosque which

I very often donate goods to various mosques in all corners of the United States, so I don't remember what, (to) which mosque.'

40. Esti bilang kamu bicara dengan seseorang tentang sesuatu yang
Esti say you talk with someone about something that
pentingdi sini, tapi saya tidak tahu (dengan) siapa (tentang) apa.
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.

This could be because in Indonesian the v-phase is defective (Aldridge 2008)

41. *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?"

Inner arguments can only extract in passive. In Indonesian first common minimal phase would be C which would contain both remnants. In English, it would have to be argued that the second remnant has to move.

42. John talked to someone about something but I do not know
(to) who *(about) what

Lasnik (2013) argues that multiple remnant sluicing in English involves Rightward movement of the second remnant. I suggest that this is the case and the second remnant adjoins to the minimal phase containing the first remnant.

7.2 Superiority

43 **Każdy chłopiec** zaprosił **jakaś dziewczynę** do tańca, ale
each boy invited some girl to dance but

nie wiem **który chłopiec którą dziewczynę/**

not know which boy which girl

* **którą dziewczynę który chłopiec**

which girl which boy

'Each boy invited some girl to dance but I do not know which boy invited which girl'

No related to scope as Grebenyova (2007) argues:

44 **Każdy chłopiec zatańczył z jakąś dziewczyną** $\exists x \forall y / \forall y \exists x$

Each boy danced with some girl

Phase based:

?45. Jan dał każdemu chłopcu **jakaś książkę** ale nie wiem **którą**
książkę **któremu** chłopcu

7.3 Remnant movement is non-superiority obeying

- H probes for F-marked constituents
- Wh-expressions foot the bill, [alt] denotation (Beck 2006)
- For in-situ wh- remnants Q has to be on C (Kotek 2014)
- Q on C subject to intervention effects by F

46. *[C Q.....[F....Wh...]

Wh moves to Spec-H to escape Focus

47. [CQ.... Wh[F....]

- IS movement to spec-H to avoid intervention effects
- Can we focus a wh?
- Sluices are not in Q& A relationship with their antecedents. Barros (2013)

Assuming F probing is on H, movement to Spec-H is sufficient. F-percolation does not re-introduce intervention.

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