On hyper-configurations

LING 252 · Ethan Poole · 10 March 2022

1 Introduction

- According to *Embedding as Delayed Substitution* (EDS), embedding obeys the following condition:

  (1) **XP-in-XP Condition**
  An XP can only be embedded in a structure that is also built up to an XP.

- The main motivation for EDS is that it derives the *Williams Cycle* (WC) in an operation-general way, thus applying to movement, agreement, and case alike:[1]

  (2) **Williams Cycle**
  Within the current XP, a syntactic operation may not target an element across YP, where Y is higher than X in the functional sequence.
  [formulation from Poole to appearb]

[1] Williams (1974, 2003, 2013); van Riemsdijk and Williams (1981)

✳ ***Catalogue of hyper-configurations***

(3) a. **Hyper-raising to subject**[2]
$[_{TP}\ DP \ldots [_{FINITE} \ldots \underline{\quad} \ldots]\,]$

b. **Hyper-raising to object**[3]
$[_{vP} \ldots DP \ldots [_{FINITE} \ldots \underline{\quad} \ldots]\,]$

c. **Hyper-agreement**[4]
$[_{TP}\ T \ldots [_{FINITE}\ DP \ldots]\,]$

d. **Hyper-case**[5]
$[_{vP}\ v \ldots [_{FINITE}\ DP \ldots]\,]$

[2] Alexiadou and Anagnostopoulou (2002); Nunes (2008); Carstens (2011); Diercks (2012); Carstens and Diercks (2013); Halpert (2015, 2019)

[3] Zyman (2017); Fong (2019)

[4] Bruening (2001); Polinsky and Potsdam (2001); Branigan and MacKenzie (2002); Deal (2017)

[5] Baker and Vinokurova (2010); Zyman (2017); Fong (2019)

⇒ Hyper-configurations are problematic for the WC because they involve a dependency between X^0 or [Spec, XP] and some element YP across a CP boundary, where C > X in *fseq*. According to the WC, such dependencies should be impossible.

- While I am not convinced that every purported instance of a hyper-configuration is in fact a hyper-configuration, let us assume that at least *some* of them are genuine.

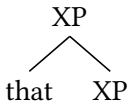
- ***Possible approaches***
  1. C does not project
  2. C is part of the matrix clause
  3. Small-clause predication
  4. Underspecification

2 C does not project

∗ ***The idea***
In hyper-configurations, the finite clause is not a CP. If there is a complementizer, it is an edge marker that does not project:[6]

[6] Biberauer et al. (2014) propose something similar for the FOFC-violating clause-final complementizers in VO langauges.

(4)



- This idea is very similar in spirit to Carstens and Diercks's (2013) analysis of hyper-raising in Digo, Lubukusu, and Lusaamia (all Bantu languages). On their analysis, some complementizers project defective, non-phasal CPs.

⇒ If the finite clause is as TP, *v*P, or smaller, the hyper-configuration does not violate the WC.

- ***Disadvantage***
  - How do we independently determine whether a complementizer projects or not?
  - One hypothesis, not necessarily a good one: If the complementizer is restricted to a particular clause type, then it projects.
  - Thus, English *that* and *for* would count as complementizers, but Hindi *ki* would not, since it can occur with finite and nonfinite clauses (same for Icelandic *að*).[7]

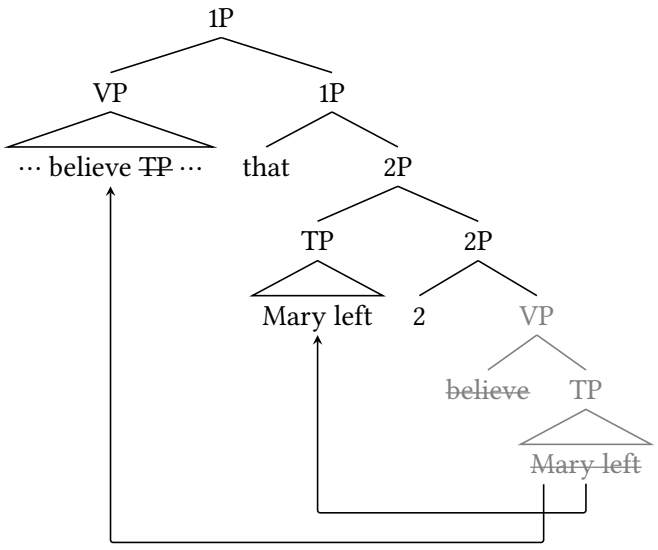
[7] Manetta (2006, 2011)

3 C is part of the matrix clause

∗ ***The idea***
(At least some) CPs are derived constituents: the complementizer is actually merged in the matrix clause and triggers movement of the clause:[8]

[8] Angelopoulos (2019)

(5)



⇒ On such an approach, complementizers are not indicative of a clause's *fseq*-size. Thus, if the finite clause is as TP, *v*P, or smaller, the hyper-configuration does not violate the WC.

- ***Disadvantage***
  As with the previous alternative analysis, we would want an independent way to diagnose this more complicated derivation.

- ***Angelopoulos's (2019) arguments in brief***
  The complementizers that Angelopoulos investigates are *oti* and *pu* in Greek.

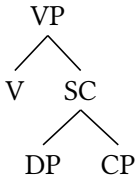
  1. Complementizer selection is dependent on the Aksionsart of the matrix predicate.
     ⇒ Assuming that Aksionsart is not a monolithic property of the predicate, the complementizer selects for verb-phrase structure, e.g. StativeP.
  2. In small clauses, *oti*- and *pu*-clauses have to surface "extrapose".
     ⇒ This is a byproduct of the remnant-movement derivation.
  3. *Oti*- and *pu*-clauses cannot correspond to external arguments.
     ⇒ The complementizer merges lower than the first-merge position of the external argument.

4 Small-clause predication

∗ ***The idea***
Hyper-configurations involve a small clause. The DP that appears to participate in matrix dependencies is in fact in the matrix clause:[9]

[9] Bruening (2001); Koopman and Sportiche (2014); Den Dikken (2017, 2018)

(6)



- Similar to and perhaps the same as: prolepsis, pseudo relative clauses, and linker structures.

- ***The role of licensing***

⇒ A potential property of the small-clause predication structure is that the small-clause subject position is not a *licensing position*. Thus, the DP must move elsewhere to get licensed.

– This is a feature of both Bruening (2001) and Koopman and Sportiche (2014).[10]

[10] Relatedly, Salzmann (2017) points out that in-situ prolepsis is dispreferred over ex-situ prolepsis.

- ***Bruening (2001)***
  Recall that Bruening proposes that LDA and raising-to-object in Passamaquoddy result from similar, but distinct structures. Crucially, with raising-to-object, the DP must move to get Case:

(7) a. **LDA: Raising to edge**
[… [$_{CP}$ DP_1 [… DP_1 …]]]

b. **Raising-to-object: Base-generated at edge, obligatory movement**
[DP_1 … [$_{CP}$ DP_1 [… pro_1 …]]]

- ***Koopman and Sportiche (2014)***
  - In French, long subject extraction occurs with the complementizer *qui*, while all other long extraction occurs with the ordinary complementizer *que*:

    (8) a. Tu crois **que** qui est venu
    you think that who is come
    'You think *who* came? (echo)'

    b. Qui tu crois **qui/*que** ___ est venu
    who you think that is come
    'Who do you think came?'

    c. Qui tu crois **que/*qui** Jean a vu ___
    who you believe that Jean has seen
    'Who do you believe that Jean has seen?'

  - They argue that French prohibits all long subject extraction.
  - They propose that what looks like long subject extraction is in fact a "pseudo relative clause", which for them is a small clause. The apparent long-extracted subject is in fact the subject of this small clause, and all of the movement is local.
  - On their analysis, the small-clause subject must move to get Case, which is why this construction only appears in the context of movement.[11]

[11] Perhaps related: *wager*-class verbs.

- ***Derived predicates***
  The predicate could be formed in a few ways:
  - $\overline{\text{A}}$-movement of a null operator:[12]

    (9) $[\ \text{Op}_1\ [\ \ldots\ \underline{\quad}_1\ \ldots\ ]\ ] \rightsquigarrow \lambda x\ [\ \ldots x \ldots\ ]$

  - A-movement of a null operator.
  - An obligatorily bound pronoun:

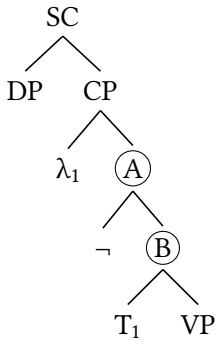
    (10) $[\ \text{Op}_1\ [\ \ldots\ \textit{pro}_1\ \ldots\ ]\ ] \rightsquigarrow \lambda x\ [\ \ldots x \ldots\ ]$

[12] This is essentially the semantics of a *tough*-construction (Keine and Poole 2017; Gluckman 2021).

- ***Reconstruction effects***
  - Den Dikken (2017, 2018) argues that predication structures can lead to NPI licensing and idiomatic interpretations, because the subject becomes part of the predication. However, he does not spell out the details.
  - Here is a brief sketch to show that if the predicate is over GQs, we can derive reconstructed scope:[13]

[13] GQ traces: Cresti (1995); Rullmann (1995), though see Poole (2017, to appeara).

(11)



a. $[\![\mathrm{T}_1]\!]^g = g(1)$ $\langle et, t\rangle$

b. $[\![\textcircled{B}]\!]^g = [g(1)]([\![\mathrm{VP}]\!])$ t

c. $[\![\textcircled{A}]\!]^g = \neg[[g(1)]([\![\mathrm{VP}]\!])]$ t

d. $[\![\mathrm{CP}]\!]^g = \lambda\mathcal{Q}_{\langle et,t\rangle} \,.\, \neg[\mathcal{Q}([\![\mathrm{VP}]\!])]$ $\langle\langle et, t\rangle, t\rangle$

e. $[\![\mathrm{DP}]\!]^g = \lambda\mathrm{P}_{et} \,.\, \exists x[\mathrm{P}(x) \wedge [\![\mathrm{NP}]\!](x)]$ $\langle et, t\rangle$

f. $[\![\mathrm{SC}]\!]^g = [\![\mathrm{CP}]\!]\,([\![\mathrm{DP}]\!])$
$= [\lambda\mathcal{Q}_{\langle et,t\rangle} \,.\, \neg[\mathcal{Q}([\![\mathrm{VP}]\!])]](\lambda\mathrm{P}_{et} \,.\, \exists x[\mathrm{P}(x) \wedge [\![\mathrm{NP}]\!](x)])$
$= \neg[[\lambda\mathrm{P}_{et} \,.\, \exists x[\mathrm{P}(x) \wedge [\![\mathrm{NP}]\!](x)]]([\![\mathrm{VP}]\!])]$
$= \neg\exists x[[\![\mathrm{VP}]\!](x) \wedge [\![\mathrm{NP}]\!](x)]$ t

⇒ If we assume that reconstructed scope can lead to NPI licensing[14] and idiomatic interpretation, then a small-clause predication structure can derive the reconstruction-like effects observed in (some) hyper-configurations.

[14] Lahiri (2017)

5 Underspecification

✳ ***The idea***[15]

– Category labels decompose:

(12) a. C: +A, +B *–or–* A, B

b. T: –A, +B *–or–* C, B

c. *v*: +A, –B *–or–* A, D

d. V: –A, –B *–or–* C, D

– Substitution nodes can be underspecified:[16]

(13) a. $\mathbb{A}$ can be subbed with CP or *v*P

b. $\mathbb{B}$ can be subbed with CP or TP

c. $\mathbb{C}$ can be subbed with TP or VP

d. $\mathbb{D}$ can be subbed with *v*P or VP

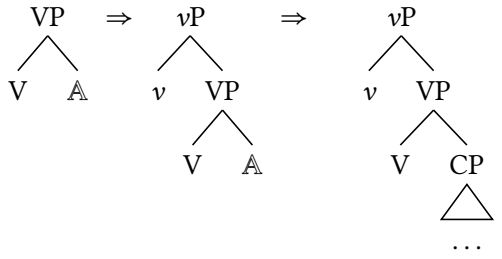
[15] This is a retooling of the underspecification analysis in Müller's (2014) buffer system.

[16] The notation that I've been using for substitution nodes ($\mathbb{XP}$) doesn't work well with + and –, so I've opted for the private feature decomposition.

• ***Deriving hyper-configurations***

– Consider hyperraising to subject. The verb selects for underspecified $\mathbb{A}$, so that CP can be embedded when the matrix clause has been built up to *v*P:

(14)



⇒ Since the CP has been embedded earlier than normal, material in CP (perhaps only its edge) is accessible to T for movement to [Spec, TP].

– The same kind of analysis can be extended to the other hyper-configurations without further ado.

- ***Additional upshot***
  We can model verbs that selects for either a finite or nonfinite clause (e.g. *seem*) as selecting for underspecified $\mathbb{B}$.

- ***Discussion***
  - This analysis is equivalent to Müller's (2014) analysis of the WC exceptions, except this also applies to case and agreement.
  - Unlike Keine's (2019) analysis of the WC exceptions, wherein probes can simply lack a horizon, this analysis is arguably more principled. That is, the same mechanism (i.e. delayed substitution) derives the WC *and its exceptions*.
  - While the LEC and the XP-in-XP Condition are mostly equivalent, this kind of underspecification analysis does not make sense under the LEC, where *fseq* serves as a strict derivational clock.

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