UNIVERSITY OF CALIFORNIA

Los Angeles

Size- and position-dependent opacity in Hungarian

A thesis submitted in partial satisfaction

of the requirements for the degree

Master of Arts in Linguistics

by

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2023

ABSTRACT OF THE THESIS

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Master of Arts in Linguistics

University of California, Los Angeles, 2023

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Selective opacity emerges when a syntactic constituent is transparent only to certain operations. The Williams Cycle (Williams, 2003) derives opacity from structural *size*: Larger clauses are opaque to more syntactic operations than smaller clauses. This thesis demonstrates that Hungarian exhibits Williams Cycle effects extensively. Additionally, the opacity of Hungarian embedded clauses depends on their final *position* in the matrix clause: Clauses ending up higher are opaque to more operations. I provide a unified analysis for size- and position-dependent opacity by introducing a new constraint on movement. According to this, movement steps must start and end in the same extended projection. Lacking clause-edge positions usable as escape hatches, Hungarian embedded clauses must re-merge with an equal-sized matrix projection and find a continuation in the matrix clause to become transparent. From this, size-dependent opacity follows because larger clauses re-merge later; and position-dependent opacity follows because re-merged embedded clauses cannot leave their adjunction-sites.

The thesis of János Egressy is approved.

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2023

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Acknowledgements

I would like to thank for the valuable discussions to Ákos Blaskovics, Éva Dékány, Marcel Den Dikken, Katalin É. Kiss, Veronika Hegedűs, Stefan Keine, Anikó Lipták, Anoop Mahajan, Hilda Koopman, Yael Sharvit, Tim Stowell, Anna Szabolcsi, Susi Wurmbrand, and my audiences at UCLA's Syntax Seminar in Winter and Spring 2023 and at the 16th International Conference on the Structure of Hungarian (2023). Special thanks to my supervisor Ethan Poole. Although I am native speaker of Hungarian, the grammaticality of critical sentences were double-checked in two informal surveys. The first one was conducted in Summer, 2022, the second one in Spring, 2023. The surveys had 15 and 35 native-speaker participants, respectively.

Section 1

Introduction

Syntactic opacity or syntactic islandhood was originally proposed in an absolute sense (Ross 1967): A constituent is either transparent to all syntactic operations or opaque to all of them. However, it turned out later that opacity can be *selective* (e.g. Williams 1974): A constituent may be opaque to certain syntactic operations but transparent to others. For instance, consider the sentence below, which can be assumed to be of the category CP:

(1) [$_{CP}$ John has eaten an apple]

This CP is not an absolute island because *wh*-extraction landing in matrix Spec,CP can leave it:

(2) Who$_1$ do you think [$_{CP}$ __$_1$ has eaten an apple]?

On the other hand, *subject raising* to matrix Spec,TP is impossible from this CP as in (3) (Chomsky 1973); this is also known as *hyperraising*.

(3) *John$_1$ seems [$_{CP}$ __$_1$ has eaten an apple]?

In contrast, subject raising is grammatical from TPs headed by infinitivals:

(4) *John$_1$ seems [$_{TP}$ __$_1$ to have eaten an apple]?

While formulating generalizations covering individual cases of selective opacity, one is trying identify the properties that distinguish opaque and transparent constituents. One of the generalizations that covers the ban on *hyperraising* from CPs is the Williams Cycle in (5) (Williams 1974, 2003). Assuming "αP dominates βP in some extended projection" means that an αP clause is larger than a βP clause, the Williams Cycle derives the degree to which a clause is opaque from its *size*: Structurally larger clauses are opaque to more syntactic operations than smaller ones.

(5) **Size-dependent opacity (Williams Cylce):** Movement to Spec,βP cannot proceed from Spec,αP or across αP, if αP dominates βP in some extended projection. (based on Williams 2003; Poole 2023)

If CP dominates TP in the extended projection (i.e. a CP is larger than a TP), subject raising in (3) from an embedded CP to the matrix Spec,TP is correctly predicted to be ungrammatical by the Williams Cycle in (5). On the other hand, since the domination- or size-criterion does not hold in (2) and (4), the Williams Cycle does rule out these sentences: *Wh*-movement landing in matrix Spec,CP is grammatical from CPs and subject raising landing in matrix Spec,TP grammatical from TPs.

The Williams Cycle has been demonstrated to hold for cross-clausal operations in English (Williams 1974, 2003), Italian (Abels 2012), German (Wurmbrand 2001; Müller 2014a,b), Hindi (Keine 2016, 2019, 2020), and Finnish (Poole 2023). In this paper, I show that the various types of long-movement in Hungarian also exhibit Williams Cycle effects. For instance, in (6), the focused constituent *csak a városon* 'only the city' can move to the matrix clause unless there is an intervening high sentential adverb like *szerencsére* 'fortunately'. This is an example of *size-dependent* opacity in (5) assuming the addition of the adverb changes the size of the embedded clause from βP to αP while focus movement lands in matrix Spec, βP.[1]

[1] In the bracket diagrams occurring above Hungarian examples, embedded clauses are highlighted in gray, dashed arrows refer to sub-extraction from embedded clauses, and simple arrows refer to all other types of movement. If αP is a projection in a matrix clause, αP′ is a projection in an embedded clause, and αP″ is a projection in a doubly-embedded clause. In first line of the glossing, the various syntactic positions (focus, particle, relative etc.) are marked with subscripts. These subscripts do not specify whether a constituent is an adjunct or specifier. The glossing follows the Leipzig Glossing rules. The abbreviations are the following: 1 = first person, 2 = second person, 3 = third person, ACC = accusative, COND = conditional,

(6) [$_{\beta P}$ × … [$_{VP}$ … [$_{\alpha P}$ sentential adverbs [$_{\beta P}$ … XP …]]]]

[$_{FOC}$ *(CSAK) A VÁROS-ON*]$_2$ *hall-ott-am*$_1$ ___$_1$, [*hogy (??*[$_{EVAL}$ *szerencsére*]*)*
only the city-SUP hear-PST-1SG.INDF that fortunately

[$_{PART}$ *keresztül*]$_3$ *fut-nak* ___$_2$ ___$_3$].
across run-3PL.INDF

'I heard that (*fortunately) they ran across ONLY THE CITY.'

In this paper, I demonstrate that *size* is not the only syntactic property that opacity depends on. In Hungarian, the *position* of clauses also matters: The set of movement types which are grammatical from within an embedded clause depend on the structural height of the clause in the matrix clause. While the default position of Hungarian embedded clauses is post-verbal as in (6), embedded clauses can be pre-posed as in (7). Focus movement clause is impossible from the pre-posed clause even if it was grammatical without this leftward movement.

(7) [… [*hogy* … XP] … [× [… [$_{VP}$ V ~~[*hogy* … XP]~~]]] ;

⟨* *hogy keresztül fut-ott-am* ___$_2$⟩$_1$ [$_{FOC}$ *CSAK A VÁROS-ON*]$_2$
that across run-PST-1SG.INDF only the city-SUP hear-PST-3SG.DEF

hall-ott-a ___$_1$, ⟨ *hogy keresztül fut-ott-am* ___$_2$⟩$_1$
that across run-PST-1SG.INDF

'She heard that I ran across ONLY THE CITY.'

However, pre-posed clauses are not absolute islands to movement. The sub-extraction of relative pronouns is grammatical from both pre-posed and non-pre-posed clauses:

DEF = definite, FOC = focus, IN = inessive, INDF = indefinite, INF = infinitve, INS = instrumental, PART = particle, PL = plural, POT = potential, PST = past, Q = quantifier, REL = relative, SG = singular, SUB = sublative, SUBJ = subjunctive, SUP = superessive, TOP = topic

(8) [✓ [… [*hogy* … XP] … [$_{VP}$ V ~~[*hogy* … XP]~~]]]

Ez az a város, [$_{REL}$ *amelyik-en*]$_2$ ⟨ *hogy keresztül fut-ott-am*
this that the city which-SUP that across

__$_2$⟩$_1$ [$_{FOC}$ *CSAK MARI*] *hall-ot-a* __$_1$, ⟨ *hogy keresztül*
run-PST-1SG.INDF only Mari hear-PST-3SG.DEF that across

fut-ott-am __$_2$⟩$_1$
run-PST-1SG.INDF

'This is the city, which only Mari heard that I ran across.'

The difference between focus movement and relative movement is that while the former would land lower than the pre-posed clause, the latter lands higher. More generally, we can state the following:

(9) **Position-dependent opacity:** Extraction from embedded clauses must land higher in the matrix clause than the final position of the embedded clause.

This generalization basically says that the movement of a clause cannot be remnant movement that makes it similar to the Generalized Proper Binding Condition (Fiengo 1977; Lasnik and Saito 1994) that says that traces must be bound at every stage of the derivation.

In order to provide a unified account for (5) and (9), I propose a new theory for long movement according to which movement can only proceed within extended projections. In other words, no movement operation can start in one extended projection and land in another. For example, no movement can leave a TP if it is directly selected by the matrix verb, but TPs can be crossed if there is an additional CP layer on top of them (cf. Bošković 2014).

Although other languages can move constituents via the highest specifiers of extended projections, which are also parts of the next highest extended projection, I claim that long movement in Hungarian cannot proceed in a successive cyclic manner. Instead, I argue that the independently observed clausal pre-position and extraposition in Hungarian can be analyzed as operations that make possible the crossing of embedded-clause boundaries, which would be otherwise barriers for cross-clausal movement. More specifically, if an embedded clause merges with a matrix projection that is of the same size as itself, the matrix projections dominating this landing site are considered to be the extensions of the embedded clause's extended projection. Hence, these matrix projections can be reached from the embedded clause without the violation of the constraint on movement across extended projections. In example (10), since βP is the maximal projection of the embedded clause in its VP-internal position, no XP can be sub-extracted from it. However, if the embedded βP re-merges with the matrix βP, the matrix αP dominating the landing site of the clause counts as a continuation for the embedded clause's extended projection. That is, upon its re-merger with the matrix βP, βP ceases to be a maximal projection and a barrier for the movement of XP to Spec,αP.

(10) $[_{\alpha P}$ ✓ $[_{\beta P}[_{\beta P'}$ … XP] $[_{\beta P}$ … $[_{VP}$ V $[_{\beta P'}$ ~~… XP~~]]]]

The size- and position-dependent opacity of clauses follow from the properties of their pre-position or extraposition. Firstly, since the embedded clause's extended projection can only find a continuation if it merges with a matrix projection of its own size, larger embedded clauses can leave the VP later. In addition, even after their re-merger with the matrix clause, larger embedded clauses are dominated by fewer matrix positions. Since sub-extraction is only possible after the embedded clause leaves the matrix VP, larger clauses will be opaque to operations initiated from matrix projections below the landing site of the clause. This is how size-dependent opacity follows from the account.

Secondly, since the embedded clause and the matrix clause projection with which the embedded clause re-merges are of the same type, their merger is symmetric and they project together. In example (10), above the embedded and the matrix βPs, we find a mother βP, a new maximal projection, that is, the embedded clause ceases to be a maximal projection. Hence, under the assumption that non-maximal projections cannot move, embedded clauses are immobile after they re-merger with a matrix projection of their size. This derives position-dependent opacity as the re-merger of embedded clauses makes them transparent at the cost of their immobility.

The discussion proceeds as follows: In Section 2, I demonstrate that the various movement types in Hungarian exhibit Williams Cycle effects. Section 3 introduces the data on the basis of which I claim that Hungarian also has position-dependent opacity. In Section 4, I propose an account that relies on the movement of clauses (briefly described above). In Section 5, I discuss some alternative accounts in the literature and I indicate their limitations. The paper is concluded by Section 6.

Section 2

Williams Cycle in Hungarian: Size-dependent opacity

This section introduces the Hungarian data on the basis of which I claim that Hungarian exhibits Williams Cycle effects. Section 2.1 focuses the Hungarian left-periphery and the various movement types landing there. In Section 2.2., I discuss how constituents in the left-periphery intervene in long movement producing Williams Cycle-like patterns. Section 2.3 introduces the various clause-types (subjunctive vs. tensed). In Section 2.4, the size-related opacity patterns shown in Section 2.2. are extended to clause types. Finally, Section 2.5 demonstrates that with the right assumptions in place, the Hungarian size-related opacity falls under a cross-linguistically established generalization, the Williams Cycle (Williams 2003, 1974).

2.1 Background on the overt Hungarian left-periphery and long-movement

This subsection discusses the clausal spine of Hungarian as well as the (cross-clausal) movement types landing along this spine. The discussion starts with the lowest projection and proceeds upwards on the clausal spine.

In Hungarian, the verb can be preceded by various verbal modifiers (e.g. Horvath 1981; É. Kiss 2006). For instance, the particle *keresztül* 'across' can move to this pre-verbal position in (11). The particle *keresztül* is base-generated as a postposition in a post-verbal and VP-internal PP, where it assigns superessive case to its complement. In Dékány and Hegedűs's (2015) analysis particle movement is treated as phrase movement rather than head movement: After the *keresztül*'s complement has moved to some *p*P specifier, the PP-remnant containing only *keresztül* can move independently.

In this paper, this pre-verbal (but still relatively low) landing site for particles will be referred to as Spec,PartP such that Part>V in the *f*(unctional) *seq*(eunce). [2]

(11) $[_{\text{PartP}}$ ✓ $[_{\text{VP}}[_{\text{PP}} \ldots$ XP $\ldots$]]]

[*PART* *Keresztül*]$_1$ *fut-ott-am* [*PP* *a* *város-on* __$_1$]
across run-PST-1SG.INDF the city-SUP
'I ran across the city.'

Verb particles like *keresztül* 'across' can move cross-clausally and land in the matrix Spec,PartP thereby preceding the matrix verb as in (12) (Farkas and Sadock 1989). This is also known as *particle climbing*.

(12) $[_{\text{PartP}}$ ✓ $\ldots[_{\text{CP}} \ldots [_{\text{VP}}[_{\text{PP}} \ldots$ XP $\ldots$]]]]

[*PART* *Keresztül*]$_1$ *akar-t-am,* [*hogy* *fus-s-anak* *a* *város-on* __$_1$]
across want-PST-1SG.INDF that run-SUBJ-3PL.INDF the city-SUP
'I wanted them to run across the city.'

Foci and *wh*-constituents both have to move to a position preceding the particle. In the literature, these have been assumed to land in the same position, which is generally referred to as Spec,FocP (e.g. Horvath 1981; É. Kiss 1987; Brody 1990). Focus movement is exemplified in (13). Whenever the focused constituent lands in Spec,FocP, the verb

[2] The motivation and landing site of particle movement is an open question in the Hungarian literature. The position of the particle has been identified as Spec,AspP (e.g. É. Kiss 2002) and Spec,PredP (e.g. Csirmaz 2004). Although pre-verbal modifiers have been claimed to influence telicity and aspect as well as other semantic properties (É. Kiss 2006), it is not clear whether there is a unified way to describe the properties of all pre-verb particles (Komlósy 1992). According to Komlósy (1992) and Szendrői (2003), at least for a subset of verbs, the movement happens if the verb cannot bear phonetically neutral sentential stress.

moves to the Foc head and therefore precedes the particle.[3] This paper will mostly use the extraction of the superessive argument *a városon* 'the city-SUP' from the complement position of *keresztül fut* 'run across'. This choice is methodologically motivated: *keresztül* 'across' idiosyncratically assigns the superessive case to *a városon*, which in isolation would have the near-nonsense literal meaning 'on the city'. In this way, whenever we get the 'across the city' interpretation, we have a good reason to believe that *a városon* is neither the matrix clause adjunct nor a proleptic argument (cf. den Dikken 2018) but originates in the VP-internal PP headed by *keresztül* 'across' (Katalin É. Kiss, p. c.).[4]

(13) $[_{\text{FocP}}$ ✓ Foc+V$[_{\text{PartP}}[_{\text{VP}}$ V … XP …]]]

[*FOC* *(CSAK) A VÁROS-ON*]$_2$ *fut-ott-am*$_1$ [*PART* *keresztül*]$_3$ __$_1$ __$_2$ __$_3$
only the city-SUP run-PST-1SG.INDF across
'I have ran across ONLY THE CITY '

Hungarian *wh*-movement lands in the same Spec,FocP position and triggers the same verb-particle inversion (Horvath 1986):

(14) $[_{\text{FocP}}$ ✓ Foc+V$[_{\text{PartP}}[_{\text{VP}}$ V … *wh*-XP …]]]

[*FOC* *melyik város-on*]$_2$ *fut-ott-ál*$_1$ [*FOC* *keresztül*]$_3$ __$_1$ __$_2$ __$_3$*?*
which city-SUP run-PST-2SG.INDF across
'Which city did you run across?'

[3] That the particle itself moved is indicated by the telic reading of the example which is available only upon particle-movement as it is indicated by the *in*-adverb in (13) (Hegedűs 2020). The movement of the particle is also visible in long-movement cases like (15), in which the verb particle does not get inverted with the verb in the embedded clause.

[4] Similar to postopositions like *keresztül*, Hungarian case suffixes have been analysed as P heads (e.g. Marácz 1989). Therefore, one may think that extraction of the superessive PP out of the *keresztül*-PP violates the A-over-A constraint. However, Dékány and Hegedűs (2015) have more recently analyzed Hungarian case-assigning Ps like *keresztül* according to the cartographic approach (e.g. Svenonius 2007). Following the intuition of their analysis, I assume that the superessive case suffix lexicalizes the semantically empty and structurally low K head while *keresztül*-like Ps lexicalize the higher, semantically interpretable P heads like AxPrt, Place, and Path. In short, the A-over-A principle does not occur as we are dealing with different category labels. Thanks to Marcel Den Dikken for pointing out this problem.

Focus-movement and *wh*-movement can cross clause boundaries and land in the matrix Spec,FocP:

(15) [$_{\text{FocP}}$ ✓ … [$_{\text{CP}}$ … [$_{\text{VP}}$[$_{\text{PP}}$ … *wh*-XP …]]]]

[$_{FOC}$ *Melyik* *város-on*]$_2$ *akar-t-ad*$_1$ __$_1$, [*hogy* [$_{PART}$ *keresztül*]$_3$
which city-SUP want-PST-2SG.INDF that across

fus-s-anak __$_2$ __$_3$]*?*
run-SUBJ-3PL.INDF

'Which city did you want them to run across?.'

In this paper, focus and *wh*-movement are treated as instances of the same operation. Whatever is stated for one also applies to the other.

The next highest position is the position of sentential adverbs like *szerencsére* 'fortunately' and *következésképpen* 'consequently', which always precede foci in the left-periphery as in (16) (Horvath 1981; É. Kiss 1987; Egedi 2021). The ordering of these adverbs with respect to each other will not be central to this paper. For the sake of simplicity, I will call the position of sentential adverbs Spec,EvalP.

(16) ⟨$_{EVAL}$ *Következésképpen/ szerencsére*⟩ [$_{FOC}$ *CSAK PETI-VEL*]$_1$ ⟨$_{EVAL}$ **következésképpen/*
consequently/ fortunately only Peti-INS consequently/

**szerencsére*⟩ *fut-ott-am*$_2$ __$_1$ [$_{PART}$ *keresztül*]$_3$ __$_2$ *a* *város-on* __$_3$
fortunately run-PST-1SG.INDF across the city-SUP

'Consequently/Fortunately, I ran across the city ONLY WITH PETI .'

The highest position in the clause is the position of relative pronouns, which precede all other left-periphery constituents (Horvath 1981). For instance, if we embed (16) in a relative clause, the relative pronoun must precede sentential adverbs:[5]

[5] It remains an open question whether there is a dedicated position for relative pronouns or they move to

(17) $[_{\text{RelP}}$ ✓ $[_{\text{EvalP}}[_{\text{FocP}}[_{\text{PartP}}$ $[_{\text{VP}}[_{\text{PP}}$ … XP …]]]]]

Ez *az* *a* *város,* ⟨$_{EVAL}$ **következésképpen/* **szerencsére*⟩ [$_{REL}$ *amelyik-en*] ⟨$_{EVAL}$
this that the city, consequently/ fortunately which-SUP
következésképpen/ *szerencsére*⟩ [$_{FOC}$ *CSAK* *PETI-VEL*]$_2$ *fut-ott-∅*$_3$ ___$_2$
consequently/ fortunately only Peti-INS run-PST-1SG.INDF
[$_{PART}$ *keresztül*]$_4$ ___$_3$ ___$_1$ ___$_4$
across

'This is the city, which consequently/fortunately I ran across ONLY WITH PETI.'

The movement of relative pronouns can also cross clause boundaries and land in a matrix Spec,RelP:

(18) $[_{\text{RelP}}$ ✓ … $[_{\text{CP}}$ … $[_{\text{VP}}[_{\text{PP}}$ … XP …]]]]

Ez *az* *a* *város,* [$_{REL}$ *amelyik-en*]$_1$ *az-t* *akar-t-ad,* [*hogy* [$_{PART}$
this is the city which-SUP it-ACC want-PST-2SG.INDF that
keresztül]$_3$ *fus-s-anak* ___$_1$ ___$_3$]
across run-SUBJ-3PL.INDF

'This is the city which you wanted them to run across.'

For most of this paper, I ignore quantifiers and topics, and I only return to their intervention effects in Section 5.1. The main motivation for this is that only constituents with invariant structural height can reliably indicate the structural size of clauses. Topics tend to be able to occur at various structural heights cross-linguistically e.g. see Rizzi 1997 for Italian. In Hungarian, topics and positive existential qunatifiers can occur before or after high sentential adverbs, or post-verbally (É. Kiss 2002; Egedi 2021):

an independently motivated high Spec,ForceP as in (Rizzi 1997). All what matters is that this position is higher than any other left-periphery positions.

(19) ⟨[$_{TOP}$ *A diák-ok-at*]/ [$_{Q}$ *sok diák-ot*]⟩ [$_{EVAL}$ *valószínűleg*] ⟨[$_{TOP}$ *a*
the student-PL-ACC many student-PL probably the
diákokat]/ [$_{Q}$ *sok diákot*]⟩ *el kell utasít-an-unk* ⟨[$_{TOP}$ *a*
student-PL-ACC many student-PL away need reject-INF-1PL the
diákokat]/ [$_{Q}$ *sok diákot*]⟩
student-PL-ACC many student-PL
'{The students/Many students}, we will have to reject probably.'

Furthermore, while foci, quantifiers as well as topics can occur in finite clauses as (20), only qunatifiers and topics can occur in radically truncated clauses lacking external arguments and accusative case marking as (21) (Halm 2021):

(20) *{*[$_{TOP}$ *A kocsmá-ban*]/ [$_{Q}$ *mindenhol*]/ [$_{FOC}$ *CSAK A KOCSMÁ-BAN*]*}*
the pub-IN everywhere only the pub-IN
hangosít-juk fel a TV-t
add.volume-1PL up the TV-ACC.
'{ In the pub/ everywhere/ ONLY IN THE PUB}, we turn up the volume on the TV.'

(21) [{ topics/quantifiers/*foci} [$_{VP}$ [. . .]]]

{[$_{TOP}$ *Kocsmá-ban*]/ [$_{Q}$ *mindenhol*]/ *[$_{FOC}$ *CSAK KOCSMÁ-BAN*] *TV fel hangosít*
pub-IN everywhere only pub-IN TV up add.volume
'{ In the pub/ everywhere/ *ONLY IN THE PUB}, (someone) turns up the volume on the TV.'

On the basis of these, I follow Szendrői (2003) and É. Kiss (2010) in claiming that while foci have dedicated specifier in a left-periphery projection (FocP), quantifiers and topics do not have dedicated specifiers in the clausal extended projection but adjoin to various projections.[6] These projections, include finite TPs as in (20), or radically truncated VPs as in (21) (Halm 2021).

2.2 Generalization 1: Opacity depends on the embedded left-periphery

Having introduced the relevant movement types landing in the different left-periphery positions, this subsection discusses which movement types can cross which left-periphery positions. Particle movement cannot cross any left-periphery positions. Focus movement is somewhat less restricted, and relative movement is the least restricted when it comes to long movement. However, all movement types will be shown to be sensitive to complex NP islands.

Particle extraction from the embedded clause to matrix Spec,PartP is the most constrained cross-clausal operation. Firstly, as it is expected for any kind of genuine syntactic movement, particle movement from relative clauses with a filled Spec,RelP is ungrammatical because of the complex NP constraint (Ross 1967):

(22) $[_{\text{PartP}}$ × … $[_{\text{VP}}$ … $[_{\text{RelP}}$ relative pronoun [… XP …]]]]

⟨PART *Keresztül⟩$_1$	*lát-t-ad*	*az*	*ember-t,*	[[REL	*aki*]	⟨PART *keresztül*⟩$_1$		
across	see-PST-2SG.DEF	the	man-ACC		who	across		

fut-ott-∅	*a*	*város-on*	__$_1$]
run-PST-3SG.INDF	the	city-SUP	

Intended:'You saw a man who ran across the city.'

Secondly, if the Spec,EvalP of the embedded clause is filled by adverbs like *következésképpen* 'consequently', no particle extraction can proceed to matrix Spec,PartP:

[6] To be more precise, negative existential quantifiers behave in the same way as foci (É. Kiss 1998), so only quantifiers not belonging to this group will be assumed to be an adjunct. In the case of topics, all subtypes will be assumed to be adjuncts.

(23) [$_{PartP}$ × … [$_{VP}$ … [$_{EvalP}$ sentential adverbs [… XP …]]]]

[$_{PART}$ *Keresztül*]$_1$ *akar-t-am,* [*hogy* *([$_{EVAL}$ *következésképpen*]) *fus-s-anak a város-on* __$_1$]
across want-PST-1SG.DEF that consequently run-SUBJ-3PL.INDF the city-SUP
'I wanted them to run across the city.'

In a similar way, when a constituent has undergone focus movement to the embedded Spec,FocP, particle movement is blocked from within that embedded clause as shown in (24) (Koopman and Szabolcsi 2000):

(24) [$_{PartP}$ × … [$_{VP}$ … [$_{FocP}$ focus [… XP …]]]]

[$_{PART}$ *Keresztül*]$_1$ *akar-t-am,* [*hogy* (*[$_{FOC}$ *CSAK* *MARI-VAL*]) *fus-s-anak a város-on* __$_1$]
across want-PST-1SG.INDF that only mari-INS run-SUBJ-3PL.INDF the city-SUP
'I wanted them to run across the city (*ONLY WITH MARI).'

Finally, if the embedded clause contains a verb particle, no verb-particle can move from within the embedded clause to the matrix clause. For instance, the PP-internally generated *keresztül* 'across' cannot move to the matrix Spec,PartP if the embedded clause has a particle like *el* 'away' base generated in Spec,PartP:

(25) [PartP × … [VP … [PartP particle [… XP …]]]]

[PART *Keresztül*]₁ *akar-t-am,* [*hogy* (*[PART *el*]) *fus-s-anak* *a*
across want-PST-1SG.INDF that away run-SUBJ-3PL.INDF the

város-on __₁]
city-SUP

'I wanted them to run across the city (away).'

The next type of sub-extraction is focus/*wh*-movement to matrix Spec,FocP. Just like particle movement, focus/*wh*-movement is a case of genuine syntactic movement, and as such, it cannot escape relative clause islands with a filled embedded Spec,RelP:

(26) [FocP × … [VP … [RelP relative pronoun [… XP …]]]]

⟨FOC *CSAK A VÁROS-ON⟩₂ *lát-t-ad*₁ __₁ *az ember-t,* [[REL *aki*] ⟨FOC
only the city-SUP see-PST-2SG.DEF the man-ACC who

CSAK A VÁROS-ON⟩₂ *fut-ott-∅*₃ [PART *keresztül*]₄ __₃ __₂ __₄]
only the city-SUP run-PST-3SG.INDF across

With low-clause foci: 'You saw the man who had ran across ONLY THE CITY.'

Similar to particle movement, focus movement cannot proceed if high sentential adverbs like *szerencsére* 'fortunately' occur in the embedded clause's Spec,FocP:

(27) [FocP × … [VP … [EvalP sentential adverbs [… XP …]]]]

[FOC (*CSAK*) *A VÁROS-ON*]₂ *hall-ott-am*₁ __₁, [*hogy* (??[EVAL *szerencsére*])
only the city-SUP hear-PST-1SG.INDF that fortunately

[PART *keresztül*]₃ *fut-nak* __₂ __₃].
across run-3PL.INDF

'I heard that (*fortunately) they ran across ONLY THE CITY.'

On the other hand, Horváth (1986) as well as É. Kiss (2002) mention that *wh*-phrases can move across other *wh*-phrases, that is, filled embedded Spec,FocPs do not block movement to matrix Spec,FocP. Focus movement across foci is grammatical likewise:

(28) $[_{\text{FocP}}$ ✓ … $[_{\text{VP}}$ … $[_{\text{FocP}}$ focus [… XP …]]]]

[*FOC* *CSAK* *A* *VÁROS-ON*$_1$] *akar-t-am*$_2$ __$_2$, [*hogy* [*FOC* *CSAK* *MARI-VAL*]
only the city-SUP want-PST-1SG.INDF that only mari-INS

fus-s-anak$_3$ [*PART* *keresztül*]$_4$ __$_3$ __$_1$ __$_4$]
run-SUBJ-3PL.INDF across

'ONLY THE CITY I wanted them to run across ONLY WITH MARI.'

Finally, long focus movement can proceed across particles in embedded Spec,PartP:

(29) $[_{\text{FocP}}$ ✓ … $[_{\text{VP}}$ … $[_{\text{PartP}}$ particle [… XP …]]]]

[*FOC* *(CSAK)* *A* *VÁROS-ON*]$_2$ *hall-ott-am*$_1$ __$_1$, [*hogy* [*PART* *keresztül*]$_3$
only the city-SUP hear-PST-1SG.INDF that across

fut-ott-ak __$_2$ __$_3$].
run-3PL.INDF

'I heard that they ran across ONLY THE CITY.'

The last type of long movement type to be tested is relative movement to the matrix Spec,RelP. Similar to the movement types above, the movement nature of relative movement can be demonstrated by its sensitivity to relative islands:

(30) [$_{\text{RelP}}$ × … [$_{\text{VP}}$ … [$_{\text{RelP}}$ relative pronoun [… XP …]]]]

**Ez az a város,* [$_{REL}$ *amelyik-en*]$_1$ *lát-t-ad az ember-t,* [*hogy* [$_{PART}$
this is the city which-SUP see-PST-2SG.DEF the man-ACC who

keresztül]$_2$ *fut-ott-∅* __$_1$ __$_2$]
across run-PST-3SG.INDF

Intended: 'This is the city which you saw the man who ran across.'

On the other other hand, the cross-clausal movement of relative pronouns is not blocked by either sentential adverbs occurring in the embedded Spec,EvalP in (31), foci occurring in the embedded Spec,FocP in (32) (Horvath 1981), or particles occurring in the embedded Spec,PartP in (32):

(31) [$_{\text{RelP}}$ ✓ … [$_{\text{VP}}$ … [$_{\text{EvalP}}$ sentential adverbs [… XP …]]]]

Ez az a város, [$_{REL}$ *amelyik-en*]$_1$ *az-t akar-t-am,* [*hogy*
This that the city which-SUP it-ACC want-PST-1SG.INDF that

[$_{EVAL}$ *következésképpen*] [$_{PART}$ *keresztül*]$_2$ *fus-s-anak* __$_1$ __$_2$]
consequently across run-SUBJ-3PL.INDF

'This is the city which I wanted them to run across {finally/ with Mari tomorrow}'

(32) [$_{\text{RelP}}$ ✓ … [$_{\text{VP}}$ … [$_{\text{FocP}}$ focus [… [$_{\text{PartP}}$ particle [… XP …]]]]]]

Ez az a város, [$_{REL}$ *amelyik-en*]$_1$ *az-t akar-t-am,* [*hogy* [$_{FOC}$
This that the city which-SUP it-ACC want-PST-1SG.INDF that

CSAK MARI-VAL] *fus-s-anak*$_2$ [$_{PART}$ *keresztül*]$_3$ __$_2$ __$_1$ __$_3$]
only mari-INS run-SUBJ-3PL.INDF across

'This is the city across which I wanted them to run across{ONLY WITH MARI}'

These observations are summarized in table (33). This table shows that lower matrix positions can be reached from fewer embedded clauses and fewer movement types can cross larger clauses. That these movement types are sensitive to filled Spec,RelPs is expected under the complex NP constraint. However, even beyond these cases long particle movement is only successful if the embedded clause has neither particles, nor foci nor high sentential adverbs. Long focus movement can cross particles and foci but cannot cross sentential adverbs. Finally, relative movement can cross particles as well as foci and high sentential adverbs.

(33) **How does intervening left-periphery material influence opacity?**

	Particle extraction	*wh*-/focus extraction	Relative extraction
Filled Spec,PartP	×	✓	✓
Filled Spec,FocP	×	✓	✓
Filled Spec,EvalP	×	×	✓
Filled Spec,RelP	×	×	×

Focusing on the overtly intervening left-periphery material, we can derive the following generalization from (33):

(34) **Generalization 1:** Movement to Spec,βP cannot proceed across a filled Spec,αP, where α > β in the functional sequence.

As mentioned above, the exclusion of relative extraction can also be done on the basis of the islandhood of complex NPs.

Moreover, the generalization in (34) does not exclude long particle movement across particles. This is excluded for an independent reason, which is *superiority*. Even if there are multiple morphemes capable of being particles, only the highest of them can become a particle. This holds within clauses: *keresztül* ‘across’ can become a verb particle in (11), unless there is another candidate like *el* ‘away’ somewhere closer to Spec,PartP:

(35) [$_{\text{PartP}}$ ✓ × … [$_{\text{VP}}$[$_{\text{PP}}$ … XP [… YP …]]]]

Peti [$_{PART}$ *el*]$_1$ ⟨$_{PART}$ **keresztül*⟩$_2$ *fut-ott-∅* [$_{PP}$ *a* *város-on* ⟨*keresztül*⟩$_2$
Peti away across run-PST-3SG.INDF the city-SUP
__$_1$]
across
'Peti ran away across the city.'

This also holds across clauses: only the highest available candidate can move to Spec,PartP in (36).

(36) [$_{\text{PartP}}$ ✓ × … [$_{\text{VP}}$ … [$_{\text{VP}}$[$_{\text{PP}}$ … XP [… YP …]]]]

Peti [$_{PART}$ *el*]$_1$ ⟨$_{PART}$ **keresztül*⟩$_2$ *akar-t-am,* [*hogy* *fus-s*
Peti away across want-PST-1SG.DEF that run-SUBJ-2SG.INDF
[$_{PP}$ *a* *város-on* ⟨*keresztül*⟩$_2$ __$_1$]]
the city-SUP across
'I wanted you to run away across the city.'

Therefore, a particle can never cross a particle as the crossed particle would count as a closer candidate. However, this does not hold for all movement types, in focus movement, foci can cross other foci as in (28). In sum, the generalization in (34) does not need to be changed.

This generalization extends to structures with multiple embedding. The careful case-by-case demonstration of this is not possible due to space limitations, instead, only a few examples will be brought. Firstly, the long movement of *keresztül* 'across' can proceed from a doubly embedded clause, however, if Spec,FocP is filled in either the deepest or the intermediate clause, the structure is ungrammatical:

(37) [$_{\text{PartP}}$ × … [$_{\text{VP}}$ … [$_{\text{FocP}}$ ⟨focus⟩ [… [$_{\text{VP}}$ … [$_{\text{FocP}}$ ⟨focus⟩ [… XP …]]]]]]

[$_{PART}$ *Keresztül*]$_1$ *kell-ett-∅,* [*hogy* ⟨$_{FOC}$ **CSAK MARI-VAL*⟩
across be.needed-PST-3SG that only mari-INS

akar-j-am, [*hogy* ⟨$_{FOC}$ **CSAK MARI-VAL*⟩ *fus-s-anak a*
want-SUBJ-1SG.INDF that only mari-INS run-SUBJ-3PL.INDF the

város-on __$_1$]]
city-SUP

'I needed to want them to run across the city (*ONLY WITH MARI).'

In a similar way, even if focus movement can proceed across multiple clauses, it gets blocked by intervening high sentential adverbs in either of the clauses:

(38) [$_{\text{FocP}}$ × … [$_{\text{VP}}$ … [$_{\text{EvalP}}$ sentential adverbs … [$_{\text{VP}}$ … [$_{\text{EvalP}}$ sentential adverbs … [XP]]]]]

[$_{FOC}$ *(CSAK) A VÁROS-ON*]$_2$ *gondol-t-am*$_1$ __$_1$, [*hogy (??*[$_{EVAL}$
only the city-SUP think-PST-1SG.INDF that fortunately

szerencsére]*)* *hall-ott-ad* [*hogy (??*[$_{EVAL}$ *szerencsére*]*)* [$_{PART}$ *keresztül*]$_3$
hear-PST-1SG.INDF that fortunately across

fut-nak __$_2$ __$_3$].
run-3PL.INDF

'I thought that you (*fortunately) heard that (*fortunately) they ran across ONLY THE CITY.'

On the other hand, a single sentence can exhibit multiple movement types crossing each other if they all respect (34). This is indicated by the double embedding structure in (39). Within the deepest embedded clause, there are two instances of movement: a focus movement indicated by Index 3, and a particle movement indicated by Index 5. There is an additional particle movement (Index 2) from the intermediate embedded clause to the matrix clause. This particle movement (Index 2) does not interfere with the previous two movement operations (Index 3 and 5) as those happen within the deepest embedded clause, that is, the particle movement (Index 2) does not cross any particles, foci, adverbs, or relative pronouns. In other words, (39) demonstrates that only crossed constituents lead to intervention effects. Finally, the relative movement of *amelyiken* (Index 1) originates in the deepest clause and lands in the matrix clause. This movement crosses *keresztül* in the Spec,PartP and *csak Mari* in the Spec,FocP of the deepest clause, and *el* in the Spec,PartP of the highest clause. This is not a problem as both Foc and Part are lower in *fseq* than Rel.

(39) [$_{\text{RelP}}$ ✓ … [$_{\text{PartP}}$ ✓ [$_{\text{VP}}$ … [$_{\text{PartP}}$ XP [$_{\text{VP}}$ … [$_{\text{FocP}}$ focus [$_{\text{PartP}}$ particle [… YP WP ZP …]]]]]

Ez az a város, [$_{REL}$ *amelyik-en*]$_1$ [$_{PART}$ *el*]$_2$ *akar-t-am,* [*hogy*
This that the city which-SUP away want-PST-1SG.INDF that

__$_2$ *ér-d* [*hogy* [$_{FOC}$ CSAK MARI]$_3$ *fut-has-s-on*$_4$ [$_{PART}$
accomplish-SUB.2SG that only Mari run-SUBJ-3PL.INDF

keresztül]$_5$ __$_3$ __$_4$ __$_1$ __$_5$]]
across

‘This is the city which I wanted you to accomplish that ONLY MARI runs across.’

Essentially, successive cyclicity and intermediate stops are ignored for this example. That is, the particle movement indicated by Index 2 does not interfere with the relative movement indicated by Index 1. In my proposal in Section 4, I give a more principled explanation for the absence of intermediate stops.

2.3 Clause types and Clause sizes

The extent to which an embedded clause is transparent is also dependent on its *type*. This subsection introduces two embedded-clause types distinguished by the inflection of the verb of the embedded clauses: subjunctive vs. tensed.

Here I define the type of the embedded clause on the basis of the tense inflection of its verb. The various embedded clause types are assumed to be selected by the matrix verb. The matrix verb *akar* 'want' always occurs with clauses headed by subjunctive verbs and it is ungrammatical with tensed (here past tense) embedded clauses as in (40) (Farkas and Sadock 1989).[7] Importantly, Hungarian subjunctive inflection does not exhibit tense-contrasts, but only agreement with the subject and the object. Additionally, there is a complementizer *hogy* 'that' even in subjunctive clauses.

(40)	*Akar-t-am,*	[$_{Subj}$	*hogy*	*Mari*	*{vág-j-a/*	**vág-t-a}*	*az*
	want-PST-1SG.INDF		that	Mari	cut-SUBJ-3SG.INDF	cut-PST-3SG.INDF	the

almá-t]
apple-ACC
'I wanted Mari to cut the apple.'

Other verbs that require subjunctive complement clauses are *kell* 'it is needed that...', *szabad* 'it is allowed that', *hagy* 'let do that...', *szeretne* 'would like'.

In contrast, verbs like *hall* 'hear' stand with embedded clauses which are headed by tensed verbs:

[7] Example (40) as it stands has an emphasis 'I did want...'. In order to avoid this, we can insert a clausal expletive 'azt', which is discussed in Section 3.3.

(41) *Hall-ott-am,* [$_{Tensed}$ *hogy* *Mari* *{vág-t-a/* **vág-j-a}* *az*
Hear-PST-1SG.INDF that Mari cut-PST-3SG.INDF cut-SUBJ-3SG.INDF the
almá-t]]
apple-ACC
'I heard that Mari was cutting the apple in the next room

Further verbs standing with tensed clauses are *lát* 'hear', *hisz* 'believe', and *gondol* 'think'.

Here I follow the intuition of Ramchand and Svenonius (2014), Wurmbrand (2015) and Wurmbrand and Lohinger (2020) in that I derive clause-type differences from the syntactic hierarchy. Hungarian subjunctive inflection does not show any contrasts for tense i.e. no past vs. present subjunctive can be expressed in the syntactic structure. At the same time, subjunctive verbs agree with the object and the subject(40). Hence, tense and agreement can be encoded separately. In *fseq*-terms, the T(ense) head introducing tense inflection is higher than the Agr(eement) head introducing agreement:[8]

(42) T>Agr

Section 2.5 extends this idea to overall size of syntactic constituents: Subjunctive clauses, minimally AgrPs, will be assumed to be syntactically smaller than tensed clauses minimally TPs). Where these tense- and agreement-related heads are located relative to other heads in the *fseq* and how selection for the various clause-types may work is also discussed in Section 2.5.

[8] Kempchinsky (2009) challenges the "tenseless subjunctive" view for Western Romance languages. However, *subjunctive* is not a theoretical primitive, therefore, what we call subjunctive may significantly differ across languages. For instance, unlike many Western European languages, Hungarian does not distinguish present subjunctives and past subjunctives. Additionally, as in many Balkan-languages, Hungarian subjunctives show a highly infinitive-like distribution (É. Kiss, to appear). In fact, with subjunctive-selecting verbs like *akar* 'want', subjunctive clauses obligatorily replace infinitives when the subject of the embedded clause is different from the subject of the matrix clause.

2.4 Generalization 2: Opacity depends on the type of the embedded clause

The opacity of the embedded clause depends on its type; that is, even if no embedded left-periphery positions are filled, certain clause types are opaque for certain types of sub-extraction.

Long particle extraction is possible from subjunctive clauses (É. Kiss 1994; Koopman and Szabolcsi 2000) but impossible from any tensed clauses. This contrast is illustrated by the grammatical (43) and the ungrammatical (44), respectively.

(43) $[_{\text{PartP}}$ ✓ … $[_{\text{VP}}$ *akar* [… $\text{V}_{\text{Subjunctive}}$ [… XP …]]]

$[_{PART}$ *Keresztül*$]_1$ *akar-t-am,* $[_{Subj}$ *hogy* *fus-s-anak* *a* *város-on*
across want-PST-1SG.DEF that run-SUBJ-3PL.INDF the city-SUP
$\_\__1]$

'I wanted you to run across the city.'

(44) $[_{\text{PartP}}$ × … $[_{\text{VP}}$ *hall* [… V_{Tensed} [… XP …]]]

??$[_{PART}$ *Keresztül*$]_1$ *hall-ott-am,* $[_{Tensed}$ *hogy* $\_\__1$ *fut-ott-ak* *a*
across hear-PST-1SG.DEF that run-PST-3PL.INDF the
város-on $\_\__1]$
city-SUP

Intended: 'I heard that you ran across the city.'

Cross-clausal movement landing in matrix Spec,FocP is grammatical from subjunctive as well as tensed clauses. The examples below demonstrate this with long-*wh*-movement.[9]

(45) $[_{\text{FocP}}$ ✓ …$[_{\text{VP}}$ *akar* […$\text{V}_{\text{Subjunctive}}$ [… XP …]]]

[*FOC* *Melyik* *város-on*]$_1$ *akar-t-ad*$_2$ __$_2$, [*Subj* *hogy* [*PART*
which city-SUP want-PST-2SG.INDF that across

keresztül]$_3$ *fus-s-anak* __$_1$ __$_3$]?
run-SUBJ-3PL.INDF

'Which city did you want them to run across?.'

(46) $[_{\text{FocP}}$ ✓ …$[_{\text{VP}}$ *hall* […V_{Tensed} [… XP …]]]

[*FOC* *Melyik* *város-on*]$_1$ *hall-ott-ad*$_2$ __$_2$, [*Tensed* *hogy* [*PART* *keresztül*]$_3$
which city-SUP hear-PST-2SG.DEF that across

fut-ott-ak __$_1$ __$_3$]?
run-PST-3PL.INDF

'Which city did you hear that we ran across?'

Finally, relative extraction is possible from both clause types as in (47) and (48).

(47) $[_{\text{RelP}}$ ✓ …$[_{\text{VP}}$ *akar* […$\text{V}_{\text{Subjunctive}}$ [… XP …]]]

Ez *az* *a* *város,* [*REL* *amelyik-en*]$_1$ *az-t* *akar-t-ad,* [*Subj* *hogy* [*PART*
this that the city which-SUP it-ACC want-PST-2SG.INDF that

keresztül]$_2$ *fus-s-anak* __$_1$ __$_2$]
across run-SUBJ-3PL.INDF

'This is the city which you wanted them to run across.'

9 Verbs describing the manner of speech do not allow long focus and *wh*-movement. I will ignore these in this paper.

(48) $[_{\text{RelP}}$ ✓ … $[_{\text{VP}}$ *hall* [… V_{Tensed} [… XP …]]]

Ez *az* *a* *város,* $[_{REL}$ *amelyik-en*$]_1$ *hall-ott-ad,* $[_{Tensed}$ *hogy* $[_{PART}$
this is the city which-SUP hear-PST-1PL.INDF that

keresztül$]_2$ *fut-ott-ak* $\_\__1$ $\_\__2$]
across run-PST-1PL.INDF

'This is the city which you heard that they ran across.'

These findings are summarized in the following table:

(49) **How does clause-type influence opacity?**

	Particle extraction	Focus extraction	Relative extraction
Embedded subjunctive clause	✓	✓	✓
Embedded tensed clause	×	✓	✓

Section 2.3 discussed that Hungarian subjunctive verbs do not encode tense. The content of (49) can be reformulated as the generalization in (50), which is relatively similar to the findings of Wurmbrand (2015) in that the opacity of embedded clauses depends on the embedded tense. [10]

(50) **Generalization 2:**

Particle-extraction is impossible from tensed clauses.

2.5 Tracing back Generalization 1 and 2 to the Williams Cycle

Generalization 2 can be collapsed with Generalization 1. The key idea is that supposing the complementizer is not a head in the clausal *fseq*, the size of embedded clauses depends

[10] More specifically, Wurmbrand (2015) describes that future clauses are cross-linguistically more transparent than non-future tensed clauses. This can be related to future-like meaning of subjunctives, if subjunctive inflection is handled as prospective aspect rather than true tense (cf. Ramchand and Svenonius 2014) in order to keep the size-difference between tensed and subjunctive clauses (T>Asp). Future inflection shows aspect-like behaviour in other Uralic languages like Tundra Nenets (e.g. Nikolaeva 2014).

on the size of their left-periphery and their type. The unified generalization will turn out to be equivalent with the Williams Cycle (Williams 2003, 1974).

First of all, I claim that the complementizer *hogy* 'that' is not a head in the clausal *fseq*. Instead, I follow Manetta's (2006; 2011) proposal for Hindi-Urdu and Poole's (2023) proposal for English in stating that *hogy* is an edge-marker that always adjoins to the maximal projection of embedded clauses. Koopman and Szabolcsi (2000) observe that *hogy* is an "invariant sentential subordinator," that is, we find *hogy* 'that' with multiple clause-types. Indeed, all of the example sentences so far contained *hogy* 'that' even if the embedded clauses came in various types i.e. subjunctive and tensed. Moreover, *hogy* 'that' occurs in *if*-clauses preceding *ha* 'if':

(51) *Örül-ök,* [*hogy ha jö-ssz*]
be.happy-1SG.INDF that if come-2SG.INDF
'I am happy if you come.'

Kenesei and Szeteli (2022, p. 98) describe that *hogy* can not only occur with subjunctive and tensed clauses but also with infinitivals:

(52) *Egy élet-et le-het-ne ar-ra áldoz-ni,* [*hogy az-ok-at meg*
a life-ACC be-POT-COND it-SUB sacrifice-INF that that-PL-ACC PART
ír-ni]
write-INF
'One could sacrifice a life for writing them.'

In sum, one can argue that *hogy* is not one of the heads of the clausal *fseq*. Instead of having a dedicated head in the clausal *fseq*, *hogy* will be handled as an edge marker adjoining to clauses of various sizes e.g. to TPs or AgrPs as in (53) and (54),respectively.[11] Consequently, the sister of the matrix verbs in (53) and (54) is not a CP but a TP or an AgrP.

(53) $[_{VP}$ V $[_{TP}$ *hogy* $[_{AgrP} \ldots]]]$

(54) $[_{VP}$ V $[_{AgrP}$ *hogy* $[_{VP} \ldots]]]$

Embedded clausal spines base generated without a projecting complementizer have been proposed by Koopman and Szabolcsi (2000) for Hungarian, by Manetta (2006; 2011) for Hindi-Urdu, Williams (2013) and Poole (2023) for English , by Angelopuolos (2019) for Greek, and by Kayne (2000) for a number of other languages. In essence, my treatment of *hogy* is somewhat similar to Wurmbrand's (2001) treatment of German *zu* in that just like *zu*, *hogy* does not unambiguously indicate constituent-size.

I claim that with the right adjustments, Generalizations 1 and 2 can replaced with the Williams Cycle (Williams 2003, 1974):

(55) **Williams Cycle:** Movement to Spec,βP cannot proceed from Spec,αP or across αP, where α>β in the functional sequence. (based on Poole 2023; Williams 2003)

The most well-known illustration of the Williams Cycle is the ban on *hyper-raising* in English. For instance, consider the following sentence in which *John*, cannot raise from the embedded CP to the matrix Spec,TP:

(56) *John$_1$ seems $[_{CP}$ __$_1$ has eaten an apple$]$?

On the other hand subject raising can proceed from embedded TPs:

[11] Koopman and Szabolcsi (2000) assume that *hogy* is base generated above the matrix VP along the clausal spine. Base-generating *hogy* in the VP is problematic if we consider cases like (51) and sentetial subjects like the matrix clause of (37).

(57) *John$_1$ seems [$_{TP}$ __$_1$ to have eaten an apple]?

This falls under the Williams Cycle in (55) if C>T in *fseq*.

Since the Hungarian embedded clauses have been assumed to lack a CP layer, the maximal projection of the various embedded clauses is potentially different. The general intuition here is that an embedded clause's size is identified as the highest projection for which we have positive evidence.

The Hungarian data covered by Generalizations 1 and 2 are summarized in the table below.

(58) **Size-dependet opacity**

	Particle extraction	Focus extraction	Relative extraction
Bare subjunctive clause (embedded AgrP)	✓	✓	✓
Starts with filled Spec,PartP (embedded PartP)	×	✓	✓
Bare tensed clause (embedded TP)	×	✓	✓
Starts with filled Spec,FocP (embedded FocP)	×	✓	✓
Starts with filled Spec,EvalP (embedded EvalP)	×	×	✓
Starts with filled Spec,RelP (embedded RelP)	×	×	×

The rows whose label is *Starts with filled Spec,αP* are drawn from Section 2.2, and mean that once we ignore the complementizer *hogy*, the highest filled left-periphery position in the embedded clause is Spec,αP. If the Spec,αP of an embedded clause is filled, its maximal projection is at least an αP. For instance, if the embedded clause's Spec,FocP is filled, the embedded clause is at least a FocP. If so, Generalization 1 (repreated below) can be replaced by the Williams Cycle.

(59) **Generalization 1:** Movement to Spec,βP cannot proceed across a filled Spec,αP, where α > β in the functional sequence.

In other words, rather than saying that particles cannot cross filled embedded Spec,FocPs, it is sufficient to say that long particle movement to matrix Spec,PartP cannot cross FocPs if Foc>Part in *fseq*.

The remaining rows in (58), whose label is *Bare* α*P*, are drawn from Section 2.4. In these cases, the size of the clause cannot be determined based on the presence of some left-periphery material. Instead, the minimal clause-size is determined on the basis of the specification of tense/agreement-related heads. For instance, tensed clauses must have a T head specified as [+tense], whereas subjunctive clauses may lack the T head (and heads above it). Subjunctive clauses must have an Agr head in their structure because although they are not tensed, they show agreement with the subject and the object. In general, *bare* means that in the absence of higher left-periphery material, these sentences lack further projections above their highest agreement/tense head with a "+" value. Thus, tensed clauses will be assumed to be bare TPs, and subjunctive clauses can be assumed to be AgrPs. Section 2.3 mentioned that T>Agr in *fseq*, that is, bare tensed clauses are structurally larger than bare subjunctive ones.

Generalization 2 (repeated below) falls under the Williams Cycle in (55) if the tense- and agreement-related heads occur in *fseq* as in (61): Movement to matrix Spec,PartP can proceed from subjunctive clauses because Part>Agr in *fseq*, but cannot proceed from tensed clauses because T>Part in *fseq*. On the other hand, both TPs and AgrPs are transparent to long movement to Spec,FocP and Spec,RelP because Rel>Foc>T>Agr in *fseq*.

(60) **Generalization 2:**

Particle-extraction is impossible from +tense clauses (at least TPs).

(61) *fseq*=Rel>Eval>Foc>T>Part>Agr>V

Even if the main focus of this paper is not to defend (61), putting Part between Agr and T in *fseq* is supported by the literature. Hungarian pre-verbal particles have been claimed to be related to aspectulaity (e.g. Csirmaz 2004), and aspect heads have been claimed to occur cross-linguistically below tense heads(e.g. Ramchand and Svenonius 2014). Cross-linguistically, FocP is usually assumed to dominate TP (e.g. Rizzi 1997).

The united clause structure of Hungarian is the following:

(62) $[_{\text{RelP}}$ relative pronouns $[_{\text{EvalP}}$ sentential adverbs $[_{\text{FocP}}$ foci/*wh*-phrases $[_{\text{TP}}$ present/past tense $[_{\text{PartP}}$ particles$[_{\text{AgrP}}$ SO agreement[VP]]]]]]]

That Generalization 1 and 2 can be traced back to a single generalization is also supported by the direct interaction between left-periphery material and clause-types. For instance, *akar* 'want' has been shown to select for a subjunctive clauses, but subjunctive AgrPs can be turned into FocPs with the addition of foci in (63). The addition of left-periphery material has the expected effect on the embedded clause's opacity: While AgrP subjunctive clauses are transparent to particle extraction in (43) because Part>Agr in *fseq*, the addition of foci makes long particle movement impossible in (63) because Foc>Part.

(63) $[_{\text{PartP}} \times \ldots [_{\text{VP}} \ldots [_{\text{FocP}}$ focus $[\ldots [_{AgrP}$ $V_{\text{Subjunctive}} \ldots$ XP …]]]]]

⟨$_{PART}$	**Keresztül*⟩$_1$	*akar-t-am,*	[*hogy*	[$_{FOC}$	*CSAK*	*MARI-VAL*]
	across	want-PST-1SG.INDF	that		only	mari-INS

fus-s-anak$_2$	⟨$_{PART}$	*keresztül*⟩$_1$	__$_2$	*a*	*város-on*	__$_1$]
run-SUBJ-3PL.INDF		across		the	city-SUP	

'I wanted them to run across the city ONLY WITH MARI.'

Another example of this interaction is (64). The addition of a focus to the embedded tensed TP renders a FocP. However, this does not affect the clause's transparency to relative extraction because Rel>Foc>T in *fseq*.

(64) $[_{\text{RelP}} \checkmark \ldots [_{\text{VP}} \ldots [_{\text{FocP}} \text{ focus } [\ldots [_{\text{TP}} \text{V}_{\text{Tensed}} \ldots \text{ XP } \ldots]]]]]]$

Ez *az* *a* *város,* [$_{REL}$ *amelyik-en*]$_1$ *hall-ott-ad,* [*hogy* [$_{FOC}$ *CSAK*
this that the city which-SUP hear-PST-1SG.INDF that only

MARI-VAL] *fut-ott-ak* [$_{PART}$ *keresztül*]$_2$ __$_1$ __$_2$]
Mari-INS run-PST-1PL.INDF across

'This is the city which you heard that they ran across ONLY WITH MARI.'

If adding a focus means that embedded AgrPs or TPs become FocPs, the syntactic size-difference between the clause types proposed for (40) and (41) (ArgP vs. TP) disappears in (63) and (64) (FocP vs. FocP). Thus, since the syntactic size- and category-differences between clause-types can be neutralized by the addition of extra layers, we cannot use the topmost projections to encode a verb's clause-type preferences.

Grimshaw (2000) proposes that information on lower projections can spread within extended projections: "information about the lexical head projects automatically through the lexical projection and through the functional extended projection." (Grimshaw 2000:p. 123-124) Hence, the [+tense] feature of a T head may be visible even if there is a FocP layer above TP in tensed clauses. On the other hand, subjunctive clauses get a T head whose specification is [-tense], which can also get a FocP layer. All clauses will have a [+agr]specification Agr head. Hence, what clause-type really defines is the *minimal* size of the clause: In order to be [+tense], a clause needs to be at least TP. In this way, we can claim the following selectional properties: While verbs like *akar* 'want' select for [+agr] and[-tense][12](at least AgrP), verbs like *hall* 'hear' select for [+ tense] (at least TP).

Finally, the verb's position within a clause is not clause-type dependent i.e. verbs occur in the same positions in subjunctive and tensed clauses. For the sake of simplicity, I assume that in any clause type, the inflected verb stays in the head of Agr, tense inflection

[12] [-tense] clause can emerge in two ways: 1) with a [-tense] head; 2) in the absence of head. This can be encoded by stating that subjunctive-selecting verbs are incompatible with [+tense] clauses.

in T lowers to Agr via Affix Hopping. The verb moves to the Foc head when Spec,FocP is filled.

In sum, this subsection has united Generalization 1 concerned with the left-periphery and Generalization 2 concerned with clause-types under the Williams Cycle.

Section 3

Beyond the Williams Cycle: Position-dependent opacity

The previous section has demonstrated that Hungarian exhibits Williams Cycle effects. The Williams Cycle is concerned with *size-related opacity*: It is sufficient to know the size of the embedded clause to predict the operations that can target it. This section reveals that opacity in Hungarian depends not only on the clause's internal size but also on its final *position*. Section 3.1 discusses the potential positions for embedded clauses in the Hungarian sentence, Section 3.2 describes how the position of an embedded clause influences its opacity. Section 3.3 introduces clausal expletives in the matrix left-periphery. Finally, Section 3.4 demonstrates how the opacity of embedded clauses depends on the position of their expletives. The most general finding will be that movement from within an embedded clause must land higher in the matrix clause than the final position of the clause or its expletive.

3.1 The movement of embedded clauses

Subections 2.3 and 2.5 have demonstrated that different matrix verbs select for different kinds of embedded clauses. In order to keep this selection local, clauses need to be base-generated VP-internally. However, if so, constituents occurring between the matrix verb and post-verbal embedded clauses suggest that the embedded clause must have moved to the right (É. Kiss 2002). As example (65) indicates, sentential adverbs like *szerencsére* 'fortunately' modifying the matrix clause must occur between the verb and the clause. If one does not want to rely on the verb's position, Section 3.3 discusses the distribution of clausal expletives. It will be demonstrated that *pro*-dropped expletives like *rá* in (65) can only occur VP-internally, thus sentential adverbs showing up between the clause and the expletive clearly indicate that the clause ends up in a VP-external position.

(65) [[[VP V [*hogy* …]] sentential adverbs] ✓]

[FOC CSAK $ő_{i/*j}$] *hivatkoz-ott-∅* ~~*az*~~*-rá* __1 ⟨*szerencsére*⟩, [*hogy* $Mari_j$
only she refer-PST-3SG.INDF pro-SUB fortunately that Mari

alsz-ik]1 ⟨ **szerencsére*⟩.
sleep-3SG.INDF fortunately

'Fortunately, only $she_{i/*j}$ referred (to the fact) that $Mari_j$ was sleeping'

According to É.Kiss's (2002) generalization, extraposition occurs because *that*-clauses cannot be internal to lexical projections. Why embedded clauses cannot occur VP-internally is not addressed in this paper.

At the same time, (65) indicates that the embedded clause cannot be base generated in its extraposed position above the sentential adverb (EvalP) as it reconstructs for Principle C violations to a position below FocP (Eval > Foc in *fseq*).[13] Therefore, I will follow the standard assumption that complement clauses are base generated within the VP, where they are locally selected by matrix verbs them, and then they are obligatorily leave the VP.

The movement of the clause can not only happen to the right but also to the left, as shown by the modified example of Kenesei 1994 in (65). Here the embedded clause can occur in three different positions: Before the high sentential adverb *szerencsére* 'fortunately', between a adverb and the verb, and after post-verbal adjuncts. The pre-posed embedded clause has a topic-like interpretation.

[13] See Lipták (2009) on reconstruction in Hungarian. The exact position of the adverb occurring in the right (ie. specifier vs. adjunct) is not discussed in this paper. What is essential is that it is higher than FocP but lower than the clause.

(66) [✓ [$_{\text{EvalP}}$ sentential adverbs[✓ […[$_{\text{VP}}$ V [*hogy* …]]]]]]

⟨ *hogy* *Mari*$_j$ *ismer-t-e* *Péter-t*⟩$_1$ [$_{EVAL}$ *szerencésre*] ⟨ *hogy* *Mari*$_j$
that Mari know-PST-3SG.DF Péter-ACC fortunately that Mari

ismer-t-e *Péter-t*⟩$_1$ [$_{FOC}$ *CSAK* *ő*$_{i/??j}$] *mond-t-a* ⟨* *hogy*
know-PST-1SG.DEF Péter-ACC only she say-PST-3SG.DEF that

Mari$_j$ *ismer-t-e* *Péter-t*⟩$_1$ *tegnap* *Emmá-nak* ⟨ *hogy* *Mari*$_j$
Mari know-PST-3SG.DF Péter-ACC yesterday Emma-DAT that Mari

ismer-t-e *Péter-t*⟩$_1$.
know-PST-3SG.DEF Péter-ACC

'Yesterday, she did not tell Emma that Mari had known Péter.'

Again, reconstruction for Principle C indicates that the clause cannot be base-generated in the left- or right-periphery(Kenesei 1994).

The positions available for clauses moving leftward are limited. É.Kiss (1981) observes that entire clauses cannot be foci, the pre-position of clauses cannot land in Spec,FocP:

(67) [$_{\text{FocP}}$ × […[$_{\text{VP}}$ V [*hogy* …]]]]]]

⟨$_{FOC}$ **CSAK* *HOGY* *ISMER-T-EM* *PÉTER-T*⟩$_1$ *nem* *mond-t-am* ___$_1$
only that know-PST-1SG.DEF Péter-ACC not say-PST-1SG.DEF

tegnap *Emmá-nak* ⟨ *hogy* *ismer-t-em* *Péter-t*⟩$_1$.
yesterday Emma-DAT that know-PST-1SG.DEF Péter-ACC

Intended: 'Yesterday, I did not tell Emma THAT I HAD KNOWN PÉTER.'

Embedded clauses cannot occur in Spec,Part, either. A subset of Hungarian verbs including *akar* 'want' counts as *stress-avoiding*: These cannot bear the phonetically neutral sentential stress, that is, they cannot be sentence-initial unless they are contrastively or emphatically stressed as in (40) (Komlósy 1992; Szendrői 2003). Particles can move to Spec,PartP to bear neutral sentential stress as in (12), however, entire clauses occurring pre-verbally cannot behave like particles as in (68). Intuitively it is not surprising that clauses cannot occur in the position of particles

(68) $[_{\text{PartP}} \times [\ldots[_{\text{VP}}$ V [*hogy* …]]]]]]

*[$_{PART}$	*hogy*	*Mari*	*vág-j-a*	*az*	*almá-t*]$_1$	*akar-t-am*	___$_1$
	that	Mari	cut-SUBJ-3SG.INDF	the	apple-ACC	want-PST-1SG.INDF	

'I wanted Mari to cut the apple.'

In sum, clauses moving must c-command FocP. Kenesei (1994) proposes that the ban on left-periphery clauses within FocP has a phonological reason. The exact landing site of embedded clauses leaving their VP-internal position will be discussed in Section 4.

3.2 Generalization 3: Opacity depends on the position of the embedded clause

If embedded clauses move, their landing site determines the types of movement possible from within them. The pattern becomes visible once the movement of the embedded clause lands in the left-periphery: Long-moved material must land higher than its pre-posed clause of origin.

Now that examples involve the movement of clauses as well as their sub-constituents, the terminological separation of the moving constituents makes the discussion easier to follow. The term *re-merge* will only refer to the movement of clauses, while the term *sub-extract* will only refer to the movement from within clauses (i.e. particle-, focus-, and relative-movement). At this point, this is a descriptive distinction; how these may refer to different operation-types, will be discussed in Section 4.1. The terms *move* and *land* will be kept as general terms that can refer to both clauses and constituents smaller than clauses.

No particle can be sub-extracted from the embedded clauses that are re-merged in a pre-verbal position as in (69). Since re-merger to the left must be higher than Spec,PartP, the sub-extraction of particles to matrix Spec,PartP cannot proceed from embedded clauses that are land higher than Spec,PartP. Notice that post-verbal subjunctive clauses have been shown to be transparent to particle sub-extraction in (43).

(69) $[_{\text{EvalP}}$ … [*hogy* … XP] … $[_{\text{PartP}}$ × [… $[_{\text{VP}}$ V ~~[*hogy* … XP]~~]]]]

⟨ * *hogy* $\_\__2$ *fus-s-ak* *a* *város-on*$\rangle_1$ $[_{\textit{PART}}$ *keresztül*$]_2$ *akar-t-a*
that run-SUBJ-1SG.INDF the city-SUP across want-PST-3SG.DEF

$\_\__1$, ⟨ *hogy* $\_\__1$ *fus-s-ak* *a* *város-on*$\rangle_1$
that run-SUBJ-1SG.INDF the city-SUP

'She wanted me to run across the city.'

The ban on sub-extraction from pre-posed clauses extends to long focus movement as well in (70) even if focus sub-extraction has been demonstrated to be able to proceed from post-verbal clauses in (45) and (46). More specifically, since it has been shown in the previous section by (68) and (67) that clauses clauses moved to the left cannot land within the matrix FocP, the sub-extraction of foci cannot proceed from clauses occurring higher than matrix Spec,FocP.

(70) [EvalP … [*hogy* … XP] … [FocP × [… [VP V ~~[*hogy* … XP]~~]]]]

⟨* *hogy* [*PART* *keresztül*]3 *fut-ott-am* ___2 ___3⟩1 [*FOC* *CSAK A VÁROS-ON*]2
that across run-PST-1SG.INDF . only the city-SUP

hall-ott-a ___1, ⟨ *hogy* [*PART* *keresztül*3] *fut-ott-am* ___2 ___3⟩1
hear-PST-3SG.DEF that across run-PST-1SG.INDF

'She heard that I ran across ONLY THE CITY.'

However, clause re-merged to the left are not islands, relative pronouns can be extracted from them as in (71). It has been indicated that the movement of clauses can land lower than sentential adverbs, that is, if Rel>Eval in *fseq*, the relative pronoun ends up in a structurally higher position than its clause of origin in (71).

(71) [RelP ✓ [EvalP … [*hogy* … XP] … [VP V ~~[*hogy* … XP]~~]]]]

Ez az a város, [*REL* *amelyik-en*]2 ⟨ *hogy* [*PART* *keresztül*3] *fut-ott-am*
this that the city which-SUP that across run-PST-1SG.INDF

___2 ___3⟩1 [*FOC* *CSAK MARI*] *hall-ot-a* ___1, ⟨ *hogy* [*PART* *keresztül*3]
only Mari hear-PST-3SG.DEF that across

fut-ott-am ___2 ___3⟩1
run-PST-1SG.INDF

'This is the city which only Mari heard that I ran across.'

The data of the section are summarized in the following table:

(72) **Which movement types get blocked from pre-posed embedded clauses?**

	Particle extraction	Focus extraction	Relative extraction
Post-verbal clause	✓	✓	✓
Clause pre-posed above FocP	×	×	✓

Even if I did not specify the exact landing site of clauses re-merged to the left of the matrix clause, it is clear that sub-extraction is only banned if it lands in a position lower than re-merger site of its clause of origin. This is formulated as the following generalization:

(73) **Generalization 3:** Embedded clauses must not asymmetrically c-command the material long-extracted from them.

[✓[… [*hogy* … XP] … [× [… [$_{\text{VP}}$ V ~~[*hogy* … XP]~~]]]]

In other words, the movement of the clause cannot be remnant movement, that is, after a constituent has moved from an embedded clause, the clause cannot move as a whole.

3.3 Clausal expletives in the left-periphery

Similar to a number of languages like Hindi (Mahajan 1990), *that*-clauses in Hungarian co-occur with overt- or covert pronominals(e.g. É. Kiss 1987; Kenesei 1994; Horvath 1997). The pronominal, whose overt form is *az* 'it', bears the case suffix assigned by the matrix verb. This case-assignment is exemplified by the accusative case on the pronominal *az-t* 'it-ACC' assigned by *hall* 'hear' in (74) and the sublative case on *ar-ra* 'it-SUP' assigned by *hivatkozik* in (75). In addition, accusative-marked pronominals trigger definite agreement on the verb.

(74) [⟨ expletive$_{i\text{ACC}}$⟩ …[$_{\text{VP}}$ *hall*$_{\text{DEF}}$ [⟨ ~~expletive~~$_{i\text{ACC}}$⟩ [*hogy* …]$_i$]]

⟨*Az-t*⟩ *hall-ott{-ad/*-ál}* ⟨*pro.ACC*⟩, [*hogy* [$_{PART}$ *keresztül*$_1$]
it-ACC hear-PST-2SG.DEF/-2SG.INDF pro.ACC that across

fut-ott-am a város-on __$_1$]
run-PST-1SG.INDF the city-SUP

'You heard that I ran across the city.'

(75) [⟨ expletive$_{i\text{SUB}}$⟩ …[$_{\text{VP}}$ *hivatkozik*$_{\text{INDF}}$ [⟨ ~~expletive~~$_{i\text{SUB}}$⟩ [*hogy* …]$_i$]]

⟨*Ar-ra/ *~~az~~-rá*⟩ *hivatkoz-t-ál* ⟨*~~az~~-rá*⟩, [*hogy* [$_{PART}$ *keresztül*$_1$]
it-SUB pro-SUB refer-PST-2SG.INDF pro-SUB that across

fut-ott-ál a város-on __$_1$]
run-PST-2SG.INDF the city-SUP

'You referred to the fact you ran across the city.'

I will refer to *az* 'it' with the term (*clausal*) *expletive* following Kenesei (1994), Horváth (1997), É. Kiss (2002), and Den Dikken (2018).

I propose that the clause is base-generated in a small clause (SC) with the expletive in a verb-complement position as in the following structure:[14]

(76) [$_{\text{VP}}$ V [$_{\text{SC}}$ [*az/pro*]$_i$ [embedded clause]$_i$]]

The expletive is always present in the structure (Kenesei 1994) but it must undergo *pro*-drop if it stays in its VP-internal position as in (74) and (75). The presence of *pro*-dropped expletives can be detected in two ways. On the one hand, if expletive has nominative or accusative case, the verb shows agreement with it. For instance, (74) shows that the

[14] This structure implies that the expletive pronoun is always present. The general presence of expletives is not trivial: Den Dikken (2018) assumes that in the absence of an overt pronoun, the object-agreement happens with the embedded clause.

pro-dropped accusative expletive still triggers definite agreement on the verb (É. Kiss 2002). If the case of the expletive is not nominative or accusative, the case marker is left behind (Marácz 1989). In (75), the sublative case marker *rá* is left behind even if the expletive is silent. Example (75) shows, furthermore, that the *pro*-dropped expletive can only show up in a post-verbal, VP-internal position is.

The expletive associated with an embedded clauses may occur in various left-periphery positions, and its position sometimes influences the interpretation of the embedded clause (É. Kiss 2002). The rest of this subsection focuses on the positions in which the expletive occurs starting with its lowest possible position.

The lowest relevant left-periphery specifier position has been assumed to be Spec,PartP, where verb particles land as well. In this paper, every non-*pro*-dropped expletive is assumed to occur at least as high as this position: [15]

(77) $[_{\text{PartP}}$ ✓ … $[_{\text{VP}}$ V [expletive$_i$ [*hogy* … $]_i$]]

Peti $[_{PART}$ *az-t*$]_1$ *akar-t-a* $\_\__1$, [*hogy* $[_{PART}$ *keresztül*$_2]$

Peti it-ACC want-PST-3SG.INDF that across

fu-s *a* *város-on* $\_\__2$]

run-SUBJ.2SG.INDF the city-SUP

'Peti wanted you to run across the city.'

Example (13) demonstrated that whenever Spec,FocP is filled, the verb moves to the Foc head, and the particle ends up following the verb. This verb-particle inversion occurs even if Spec,PartP is filled by an expletive:

[15] If we are following the stress-based approach (e.g. Komlósy 1992; Szendrői 2003), the movement of expletives and particles serve the same purpose at least for a sub-class of matrix verbs: They attract the stress from the matrix verb.

(78) [$_{\text{FocP}}$ focus [Foc+V[$_{\text{PartP}}$ ✓ [$_{\text{VP}}$ V [expletive$_i$ [*hogy* …]$_i$]]]]]

[$_{FOC}$ *CSAK PETI*] *akar-t-a*$_2$ [$_{PART}$ *az-t*]$_1$ __$_2$ __$_1$, [*hogy* [$_{PART}$ *keresztül*$_3$]
only Peti want-PST-3SG.INDF it-ACC that across

fu-s *a* *város-on* __$_3$]
run-SUBJ.2SG.INDF the city-SUP

'ONLY PETI wanted you to run across the city.'

Clauses with expletives in Spec,PartP are interpreted in the same way as clauses whose expletive is VP-internal.

If a stressed expletive occurs in Spec,FocP, the embedded clause associated with it is interpreted as a focus:

(79) [$_{\text{FocP}}$ ✓ [Foc+V … [$_{\text{VP}}$ V [expletive$_i$ [*hogy* …]$_i$]]]]]

Peti [$_{FOC}$ *CSAK AZ-T*]$_1$ *akar-t-a*$_2$ __$_2$ __$_1$, [*hogy* [$_{PART}$ *keresztül*$_3$]
Peti only it-ACC want-PST-3SG.INDF that across

fu-s *a* *város-on* __$_3$]
run-SUBJ.2SG.INDF the city-SUP

'The only thing that Peti wanted was you to run across the city.'

Finally, the expletive can occur in front of foci either to the left or to the right of sentential adverbs in Spec,EvalP, but always below the relative pronoun:

(80) [$_{\text{EvalP}}$ ✓ … [$_{\text{VP}}$ V [expletive$_i$ [*hogy* …]$_i$]]

A *nap,* ⟨**az-t*⟩$_1$ *amikor* ⟨$_{\text{EVAL}}$ *az-t*⟩$_1$ [$_{\text{EVAL}}$ *szerencsére*] ⟨$_{\text{EVAL}}$ *az-t*⟩$_1$ [$_{\text{FOC}}$ *CSAK*
the day it-ACC when it-ACC fortunately it-ACC only

PETI] *akar-t-a*$_2$ __$_2$ __$_1$, [*hogy* [$_{\text{PART}}$ *keresztül*$_3$] *fu-ss*
Peti want-PST-3SG.INDF that across run-SUBJ.2SG.INDF

a *város-on* __$_3$]
the city-SUP

'The day, when as for your running across the city, fortunately ONLY PETI wanted that.'

In this position, the embedded clause gets a topic-like interpretation. In addition, a preverbal/pre-focus position has been found to be related to the factivity of the predicate (cf. Tóth 1999; de Cuba and Ürögdi 2009). This paper does not discuss the exact position and the consequences for interpretation. Only the relative structural height of the expletive is relevant in (80): The expletive asymmetrically c-commands Spec,FocP and it is asymmetrically c-commanded by Spec,RelP. For the sake of simplicity, I will refer to this position as Spec,EvalP.

3.4 Generalization 4: Opacity depends on the position of expletives

In previous studies on cross-clausal movement in Hungarian (e.g. Lipták and Büky L 1998; É. Kiss 2002), the presence of the clausal expletive has been claimed to lead to the embedded clause's absolute islandhood. In contrast, I demonstrate that the mere presence of expletives does not rule out sub-extraction in general, rather the opacity of the embedded clause depends on the expletive's position and the movement type.

Throughout this section, three positions will be considered for expletives: 1. VP-internal expletives, which undergo *pro*-drop; 2. Expletives in Spec, PartP, which are overt but stay behind foci; 3. Expletives in Spec, EvalP, which are overt and precede foci but follow relative pronouns.

(81) $[_{\text{RelP}}$ relative pronouns $[_{\text{EvalP}}$ ⟨expl$_i$⟩
$[_{\text{FoP}}$ foci $[_{\text{PartP}}$ ⟨expl$_i$⟩ … $[_{\text{VP}}$ V [⟨ ~~expl~~$_i$⟩ [*hogy* … XP]$_i$]]]]]

The sub-extraction of particles is only possible when the expletive is covert and VP-internal, that is, at least for this movement type, overt expletives brings about general islandhood.

(82) $[_{\text{EvalP}}$ ⟨*expletive$_i$⟩ … $[_{\text{PartP}}$ ⟨*expletive$_i$⟩ ✓ … $[_{\text{VP}}$ V [⟨ ~~expletive~~$_i$⟩ [*hogy* … XP]$_i$]]

⟨$_{EVAL}$	**az-t$_i$*⟩	*Mari*	⟨$_{PART}$ **az-t$_i$*⟩	[$_{PART}$ *keresztül*]$_1$	*akar-t-a*	⟨*pro$_i$*⟩	__$_2$,
	it-ACC	Mari	it-ACC	across	want-PST-3SG.DEF	pro.ACC	

[	*hogy*	*fus-s*	*a*	*város-on*	__$_1$]$_{i2}$
	that	run-2SG.SUBJ.INDF	the	city-SUP	

VP-internal expletive: 'Mari wanted you to run across the city.'

If the wh-sub-extraction lands in matrix Spec,FocP, the expletive can be either covert and VP-internal or occur in Spec,PartP. At the same time, expletives c-commanding Spec,FocP are incompatible with *wh*-sub-extraction:

(83) [$_{\text{EvalP}}$ ⟨*expl$_i$⟩ [$_{\text{FocP}}$ ✓ V+Foc [$_{\text{PartP}}$ ⟨expl$_i$⟩ … [$_{\text{VP}}$ V [⟨ ~~expl~~$_i$⟩ [*hogy* … XP]$_i$]]

⟨$_{EVAL}$ **az-t$_i$*⟩ *Mari* [$_{FOC}$ *melyik város-on*]$_1$ *akar-t-a*$_2$ ⟨$_{PART}$ *az-t$_i$*⟩ __$_2$
it-ACC Mari which city-SUP want-PST-3SG.DEF it-ACC

⟨*pro$_i$*⟩ __$_3$, [*hogy* [$_{PART}$ *keresztül*$_4$] *fus-s-∅* __$_1$ __$_4$]$_{i3}$
pro.ACC that across run-SUBJ-2SG.INDF

VP-internal expletive/Spec,PartP:'Which city did Mari want you to run across?.'

Finally, relative sub-extraction is compatible with all of these expletive-positions:

(84) [$_{\text{RelP}}$ ✓ [$_{\text{EvalP}}$ ⟨expl$_i$⟩ … [$_{\text{PartP}}$ ⟨expl$_i$⟩ … [$_{\text{VP}}$ V [⟨ ~~expl~~$_i$⟩ [*hogy* … XP]$_i$]]

Ez az a város, [$_{REL}$ *amelyik-en*]$_1$ ⟨$_{EVAL}$ *az-t$_i$*⟩ [$_{FOC}$ CSAK MARI]
this that the city which-SUP it-ACC only Mari

akar-t-a$_2$ ⟨$_{PART}$ *az-t$_i$*⟩ __$_2$ ⟨*pro$_i$*⟩ __$_3$, [*hogy* [$_{PART}$ *keresztül*$_4$]
want-PST-3SG.DEF it-ACC pro.ACC that across

fus-s-∅ __$_1$ __$_4$]$_{i3}$
run-SUBJ-2SG.INDF

Silent expletive/ Spec,PartP: 'This is the city, which Mari wanted you to run across.'

Pre-focus expletive: This is the city for which the following is true: That you run across it, Mari did not want that."

These findings are summarized in (85). The pattern is somewhat similar to Generalization 3 except that we are now focusing on the position of the expletive rather than the left-periphery position of the clause associated with it.

(85) **How does the matrix position of expletive influence the transparency of embedded clause associated with it?**

	Particle extraction	*wh*-extraction	Relative extraction
VP-internally *pro*-dropped	✓	✓	✓
Spec,PartP	×	✓	✓
Spec,EvalP	×	×	✓

The new generalization is that sub-extraction can only land in positions c-commanding the expletive associated with the clause of origin:

(86) **Generalization 4:** Clausal expletives cannot c-command sub-extracted material originating in the clause associated with them.

$[_{\alpha P}$ ✓ $\ldots [_{\beta P}$ $\text{expl}_i \ldots [_{\gamma P}$ $\times \ldots [_{VP}$ V [*hogy* … XP]$_i$]]]

3.5 Interim summary

While Generalizations 1 and 2 were concerned with *size-dependent opacity*, Generalizations 3 and 4 are concerned with *position-dependent opacity*. The latter two can be collapsed into the following constraint:

(87) **Position-dependent opacity:** Sub-extraction from embedded clauses must land higher in the matrix clause than the final position of the embedded clause or the expletive associated with it.

In other words, the movement of the expletive and the clause associated with it must precede sub-extraction from the clause. This restriction on the re-merger site of the clause and the material sub-extracted from it is somewhat similar to the Generalized Proper

Binding Condition (Fiengo 1977; Lasnik and Saito 1994), which claims that traces must be bound throughout a derivation. At the same time, unlike this condition, my Generalizations 3 and 4 do not claim that all cases of remnant movement are ungrammatical.

Section 4

The proposal

The Williams Cycle or *size-dependent* opacity discussed in Section 2 has been derived in various ways in the syntactic literature (for a survey of these see Section 5). Here I argue for an account in which syntactic material sub-extracted from Hungarian embedded clauses can only move to the matrix clause after the embedded clause has been moved to a matrix-projection of its size. Consequently, larger embedded clauses are opaque to operations landing lower in the matrix clause. In addition, since clauses are immobile after they merge with a matrix projection of their size, this account makes correct predictions beyond the Williams Cycle and derives Generalization 3 and 4 (i.e. *position-dependent* opacity). In short, size- and position-dependent opacity get a unified treatment in this account: Clauses are only transparent to sub-extraction after they re-merge with a matrix projection, but this re-merger gets delayed for larger clauses and for clauses occurring higher in the matrix clause.

4.1 Williams Cycle derived from the size-dependent movement of clauses

In this subsection, I propose that Williams Cycle effects in Hungarian can be derived if we constrain movement in terms of extended projections. In this account, the maximal projections of extended projections rather than specific projections like CPs or *v*Ps function as locality- or phase-boundaries (cf. Bošković 2014). I claim that while other languages can do long movement across clausal extended projections via making intermediate stops between extended projections (successive cyclicity), these escape hatches are unavalaible in Hungarian. At the same time, cross-clausal movement is possible in Hungarian once embedded clauses move to the matrix-clause projection of their sizes. The movement of clauses serves as a kind of clause-union: The sequence of matrix-clause projections dominating the re-merged embedded clause will be continuation for the extended projection of the embedded clause. As a consequence, the embedded clause on its own ceases to be a locality domain or phase. Since the internal structure of embedded clauses is only available after they have re-merged with the matrix clause, positions below the landing site of embedded clauses are unavailable for cross-clausal movement. The Williams Cycle (Generalizations 1 and 2) will automatically fall out because larger clauses re-merge later in the derivation.

In the minimalist syntactic literature, the positions syntactically available from a certain position are described relative to locality domains, which are called *phases*. The constraint on the maximal distance over which operations can proceed is the Phase-Impenetrability Condition (PIC) (Chomsky 2000, 2001), whose original form is the following:

(88) **Phase-Impenetrability Condition (PIC)**: The domain of H is not accessible to operations outside HP; only H and its edge are accessible to such operations. (Chomsky 2000:p.13).

$[\ \times \ldots [_{\text{HP phase}}\ \checkmark\ [\ \text{H}\ [\ \ldots \text{XP} \ldots\ ]]]]$ $\qquad$ $[\ \checkmark \ldots [_{\text{HP}\mathit{phase}}\ \text{XP}\ [\ \text{H}\ [\ \ldots]]]]$

In Chomsky's original work, phasehood is associated with specific heads in the lexicon. For example, the phrase headed by C (I ignore *v* for now) is a phase. Therefore, whenever the building of a CP is complete, no material c-commanded by the C head can leave the CP. At the same time, if something has moved to Spec,CP, it is available for operations outside CP.

Under the PIC, the only way to do sub-extraction from phases is Successive Cyclicty: Because the highest specifier of phases remains visible for operations landing outside of the phase, XPs can escape phases as long as they stop in the highest specifiers of phases. These specifiers can be referred to as *escape hatches*. Thus, if there is a single intervening phase-boundary, long-movement proceeds in two steps:

(89) **Successive cyclicity**: [✓ … [$_{\text{HP phase}}$ XP [H [… ~~XP~~ …]]]]

The PIC as defined in (88) is independent of the Williams Cycle in (90) (Williams 2003). After an XP gets sub-extracted to the highest specifier of a phase, PIC only specifies the highest position XP can land in (i.e. the next highest phase edge), whereas it says nothing about the *lowest* position XP can land in (Keine 2016, 2019, 2020). The Williams Cycle, on the other hand, constrains the lowest position landing site for an XP leaving an extended projection. For instance, nothing in the PIC in (88) precludes an XP's movement from Spec,CP′ to Spec,TP, even if this violates the Williams Cycle.

(90) **Williams Cycle:** Movement to Spec,βP cannot proceed from Spec,αP or across αP, where α>β X in the functional sequence. (based on Poole 2023; Williams 2003)

In what follows, I propose an alternative to the PIC and demonstrate that assuming Hungarian lacks clausal phase-edge escape hatches, this PIC-alternative is sufficient to derive the Williams Cycle in Hungarian. The PIC-alternative in (91) says that the original position of a moving XP and its landing site must belong to the same extended projection. This is implemented in the following way: Along the path of the movement, it must hold that the crossed heads belong to the same *fseq* and that their *fseq*-indices increase. The idea of relating movement to a well-formed sequence of *fseq*-heads is reminiscent of the intuition of Müller (2014a; 2014b).

(91) **Move Along Increasing *fseq*-indices (*weak* MAIF):**

XP can move from position A to a c-commanding position B iff the following holds:

For any two heads α and β both c-commanded by B and both c-commanding A, if α c-commands β, i) {α; β} ⊂ some *fseq* and ii) α>β in this *fseq*.

In (92), XP c-commands the its trace. The heads c-commanding the lower XP-copy are α, β, and γ. The first condition on XP's movement is that α, β, and γ must belong to the same *fseq*. Secondly, it must hold that α>β and β>γ in this *fseq*. If either of these fails to hold, the movement is ruled out. At the same time, it is irrelevant to what *fseq* δ belongs to as it does not c-command XP's lower copy.

(92) [XP [$_{\alpha P}$ α [$_{\beta P}$ β[$_{\gamma P}$ γ[$_{\delta P}$ ~~XP~~ [δ [. . .]]]]]]]

Assuming that *fseq* is C>T>*v*>V for (93), if CP is complement to an embedded V, it can move to the emebdded Spec,CP, as XP crosses the following c-commanding heads (in this order): V′, *v*′, T′, and C′ as in the first movement step in (93). In the second step, the first head that is crossed is V. In short, the movement of XP is MAIF-compliant. On the other hand, XP cannot be sub-extracted from CP in one step to position c-commanding the matrix V as after crossing C′, it would cross V, and this would violate (91) as C>V in *fseq*.

(93) [✓ × [$_{VP}$ V [$_{CP'}$ XP [C′ [$_{TP'}$ T′ [$_{vP'}$ *v*′ [$_{VP'}$ V′ [. . . ~~XP~~ . . .]]]]]]]]

In short, MAIF in (91) derives successive cyclicity just as the original PIC (88) relativized to extended projections would do.

The output of MAIF is similar to the spirit of Bošković (2014): Locality-boundaries coincide with the boundaries between extended projections.[16] For instance, TP′ will not be a phase-boundary if it is selected by a C′, which is part of the same *fseq*. On the other hand, TP′ will be phase-boundary if it is directly selected by a matrix V, which starts another *fseq*:

[16] Bošković (2014) assumes that the clausal spine contains two *fseq*s, a *v-fseq* and a C-*fseq*. For now, I assume that clausal spines are a single *fseq*, and I return to separation of the *v-fseq* in Section 4.3.

(94) [✓ × [$_{VP}$ V [$_{TP}$ XP [[$_{vP}$ *v* [$_{VP}$ V [… ~~XP~~ …]]]]]]]

On the other hand, while Bošković (2014) does not depart from the original PIC in (88) in that he keeps concept of phases in the theory, MAIF in (91) does not make reference to any locality domains. Thus, for the purposes of syntactic movement, the concept of phases could be dropped under MAIF. This would raise questions on phase-related operations not involving movement. The alternative is to build on Bošković's (2014) idea and claim that extended projections are phases for the purposes of all operations including movement, ellipsis, case, and agreement. Under this option, MAIF is merely a technical implementation for movement. As far as this movement-oriented paper is concerned, there is no theoretical motivation to choose one of these options over the other. For practical reasons, I refer to extended projections as *phases* and their highest specifiers as *edges*.

The specifiers introduced for Hungarian so far are Spec,RelP for relative pronouns, Spec,Eval for sentential adverbs, Spec, FocP for foci, and Spec, PartP for particles. Following Rizzi's analysis for Italian (Rizzi 1997), I assume that these left-periphery positions are criterial positions and movement to these positions bring about *criterial freezing*: Constituents moving to these positions cannot move further, that is, these specifiers cannot be used as escape hatches. I assume moreover that the projections associated with clause-types, AgrP and TP, lack specifiers.

That left-periphery specifiers cannot be used as escape hatches is supported by the absence of visible reflexes in intermediate stops. The only Hungarian movement-type triggering reflexes in its environment is focus movement. As shown in Section 2.1, whenever Spec, FocP is filled, the verb gets in front of its particle. With long movement, if constituents used the embedded Spec, FocP as an escape hatch, we would expect verb-particle inversion in embedded clauses. However, this is not the case: Under long focus movement in (95), verb-particle inversion occurs only in the matrix clause with *el*, whereas the particle *keresztül* in embedded clause stays in front of its verb (Horvath 1981, 1986; Richards 1997).

(95) [$_{\text{FocP}}$ ✓ Foc+✓ [$_{\text{PartP}}$ particle … [$_{\text{VP}}$ V [Foc+× [$_{\text{PartP}}$ particle … [$_{\text{VP}}$ V [… XP …]]]]]

[$_{FOC}$ *CSAK A VÁROS-ON*]$_2$ *ér-t-em*$_1$ [$_{PART}$ *el*] __$_1$ *pro,* [*hogy*
only the city-SUP achieve-PST-1SG.INDF PART pro.ACC that

[$_{PART}$ *keresztül*$_3$] *fus-s-anak* __$_1$ __$_3$]?
across run-SUBJ-3PL.INDF

'I only achieved that they ran across the ONLY THE CITY.'

The verb-particle inversion is also absent in the embedded clause of (48) and (47) suggesting that long relative movement does not have an intermediate stop in Spec,FocP′, either. Particle sub-extraction is not possible across particles (cf. Section 2.2).

I claim that in the absence of any other specifiers along the clausal spine above *v*P, successive cyclic movement cannot emerge in the clausal left-periphery of Hungarian. That is, embedded RelPs, EvalPs, FocPs, TPs, PartPs, and AgrPs cannot be left via Successive Cyclic movement. The phasehood of *v*P and possibility of successive cyclic movement via *v*Ps is discussed in Section 4.3.

Since no successive cyclic long movement via left-periphery specifiers is available in Hungarian, I propose that MAIF-compliant long movement emerges in an alternative way: by the movement of embedded clauses. As indicated in Section 3.3, there is independent evidence that Hungarian embedded clauses must leave the VP even if the motivation for this is unclear.

(96) **Embedded clauses cannot be inside the VP:** βP′ must leave its VP-internal position and re-merge with a maximal projection of the matrix clause. (based on É. Kiss 2002)

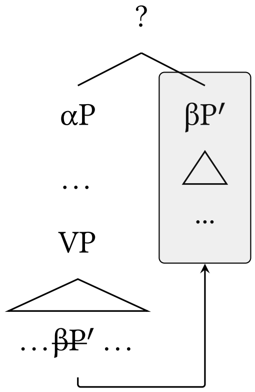
If the heads along clausal spine belong to a single extended projection from V to the head the highest left-periphery projection, the movement of clauses from the matrix VP to a maximal projection in the same extended projection is MAIF-complaint.[17]

Although embedded clauses must leave the VP, that is, their movement is obligatory in a sense, this re-merger operation does not involve feature-checking. Thus, the re-merger of embedded clauses is rather adjunction-like, and can happen with any dominating maximal projection in the matrix clause.

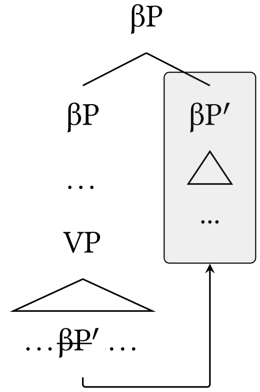
The embedded clause's size can relate in three ways to the matrix projection with which it re-merges. Firstly, this matrix projection can be larger than the embedded clause. This configuration is depicted in (97): If α>β in *fseq*, the re-merger of an embedded βP with a matrix αP can be described as *smaller-to-larger*. Secondly, the category label of the highest head of the embedded clause may be the same as that of the matrix projection with which it re-merges. This symmetric configuration is depicted in (98), and can be described as the embedded clause's re-merger with an *equal-sized* matrix projection. Finally, the embedded clause can be larger than the matrix projection with which it re-merges. This configuration is depicted in (99): If α>β in *fseq*, the movement of an embedded αP to a matrix βP can be referred to as *larger-to-smaller*.

[17] How this changes if *v* tops a *fseq* is discussed in Section 4.3

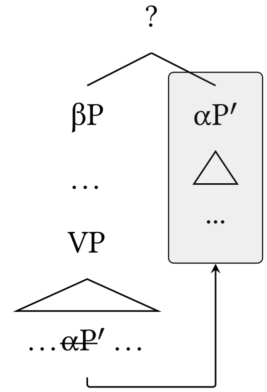
(97) ***Smaller-to-larger***



(98) ***Equal-sized***



(99) ***Larger-to-smaller***

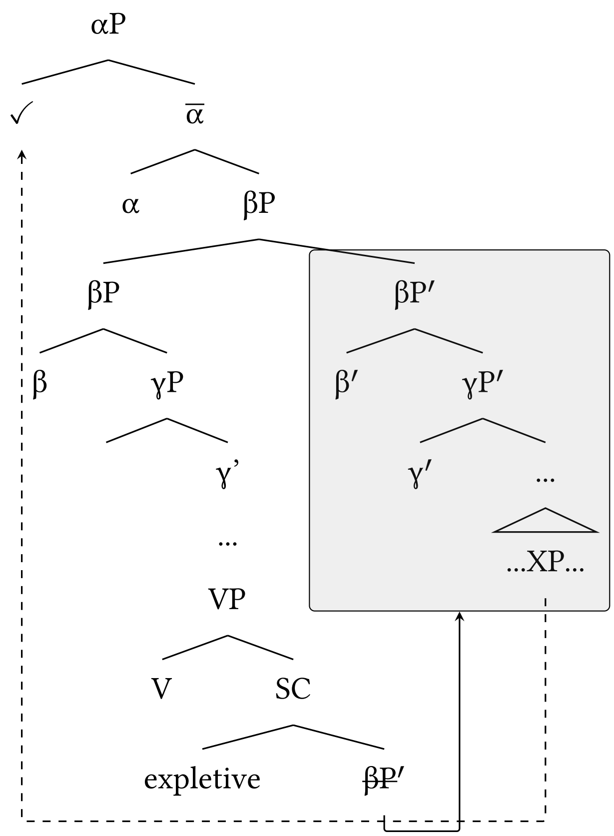


Since the *equal-sized* setting in (98) is symmetric, both βPs project. That is, the immediately dominating the re-merger site takes the shared label of its children (as in Chomsky 2013), and becomes a shared maximal βP projection of the two lower projections. The labels of the nodes immediately dominating non-equal-sized matrix and embedded projections in (97) and (99) are not central to this paper, so I will label nodes above these asymmetrical structures as "?".[18] In the remaining part of this subsection, I demonstrate that even if the embedded clause can re-merge with matrix projections of various sizes, this re-merger is only a way around the violation of (91) if the movement of embedded clauses lands next to an *equal-sized* matrix projection.

Supposing the structure-building continues in the matrix clause even after the movement of the embedded clause in (100), the last heads c-commanding the XP in the re-merged embedded clause are the following: α>β′>γ′>... . Under *fseq* = α>β>γ, the *fseq*-indices of the heads keep increasing between the two copies of the sub-extracted XP.

[18] One solution is to assume that in asymmetric configurations, the node above the re-merger site gets the label of the matrix projection. Another solution could be to assume with Starke (2001) and Adger (2003) that when two projections with category labels from the same *fseq* merge, the one with the higher *fseq*-index projects.

(100) **The embedded clause finds a continuation in the matrix clause**



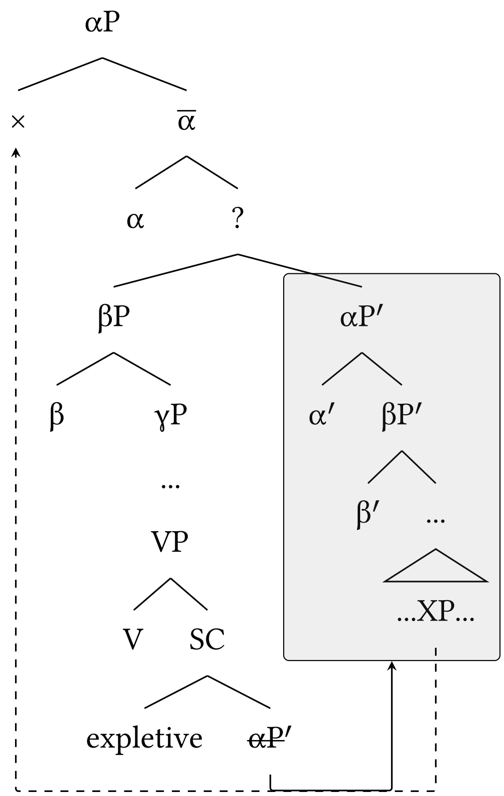
In other words, the sub-extraction of XP to Spec,αP is compatible with MAIF in (91) because the embedded *fseq* finds a continuation in the matrix *fseq*. In other words, this apparent case of long movement remains within an single extended projection because the highest projection of the embedded clause ceases to be the maximal projection in the extended projection after the movement of the embedded clause.

Notice that as long as the embedded clause is VP-internal, the next highest head above β′ is V, that is, β′ tops a sequence of heads constituting a well-formed *fseq*-fragment. Under MAIF in (91), βP′ is a barrier for movement in its low position. No XP can leave it as that movement operation would cross β′ and then V in one step, which does not follow the increase-in-*fseq* requirement. However, after the embedded clause has moved, the next highest head above β′ is $\alpha_{Matrix/Embedded}$; therefore, a moving XP can leave βP′ and land higher as long as the heads c-commanding the embedded clause belong to the same *fseq* and increase in their *fseq*-indices. This follows Bošković's (2014) intuition: if a projection ceases to be the maximal projection in an extended projection, it ceases to be a phase. In this way, cross-clausal movement is possible even in the absence of successive cyclicity.[19]

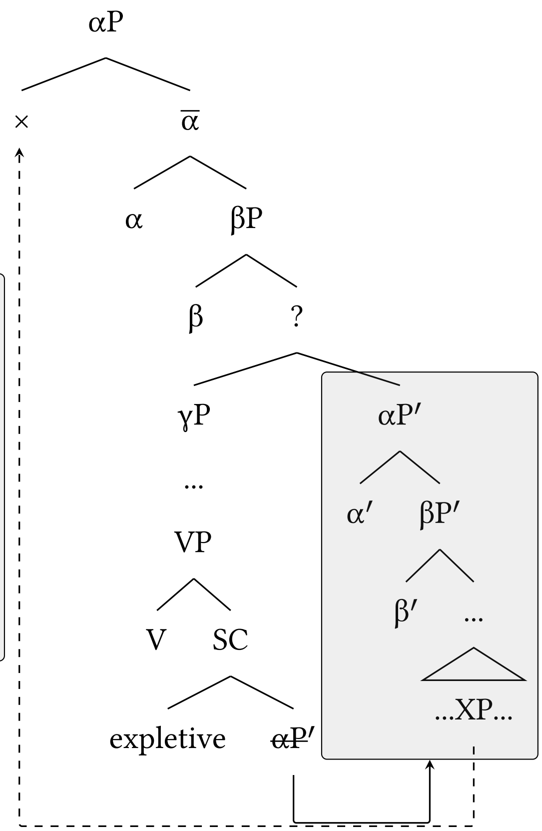
MAIF as formulated in (91) rules out sub-extraction from within embedded clauses that have been re-merged with a matrix projection that is smaller than their size as in (99). That clauses move to a matrix projection at least of their size does not need to be stipulated independently but it follows from MAIF that only such movements make sub-extraction possible. In (101), a larger αP′ re-merges with a smaller βP. In this case, XP cannot be sub-extracted to Spec,αP even after its movement as XP would have to cross α′ and then α. That is, since these two heads have the same label, MAIF in (91) is violated as the *fseq*-increase is not obeyed. In (102), the embedded αP merges with the matrix γP. In this case, sub-extraction the embedded clause to matrix Spec, αP needs to cross α then β, which is a decrease in the *fseq*-indices, and hence a violation of MAIF. To put it another way, since the αP′ remains a maximal projection in the extended projection in (101) and (102), no movement can leave it.

[19] The tree structure in (100) is similar to the tree structures in É. Kiss (2023), who proposes that Hungarian complement clauses were historically derived from correlative CPs adjoined to the matrix CP (also see Lipták 2009). Consequently, even if complement clauses were base-generated VP-internally after a certain point, in É.Kiss's analysis, the movement of clauses keeps rendering symmetric CP-CP structures up until today. My proposal only differs from this in that embedded clauses can come in various sizes and they can adjoin to various matrix projections e.g. in (100) βP′ internally merges with βP.

(101) ***Larger-to-smaller***



(102) ***Larger-to-much-smaller***

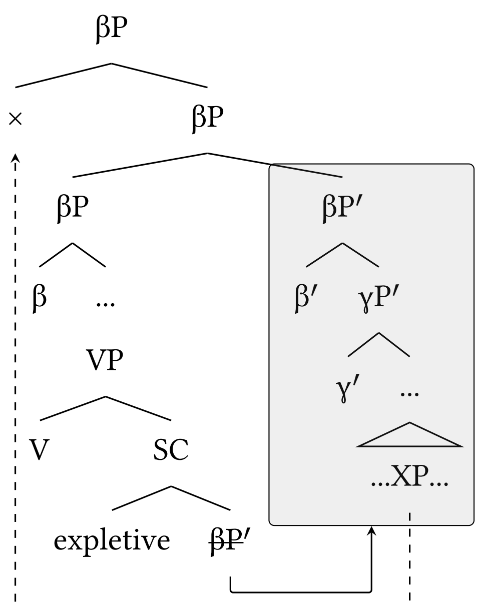


In sum, since no successive cyclic movement via high specifiers can happen in Hungarian, sub-extraction from embedded clauses is only possible after they have re-merged. Matrix specifiers merging below the landing-site of embedded clauses are unavailable for sub-extraction from the embedded clause. In other words, Spec,γP in (100) is unavailable even after the re-merger of βP′. In general, lower matrix specifiers will only c-command smaller moved embedded clauses, so fewer types of sub-extraction will be possible from larger clauses and lower matrix clause positions will be harder to reach. For now, I am setting aside the question of the *smaller-to-larger* configuration in (97), and return to it in Section 4.4.

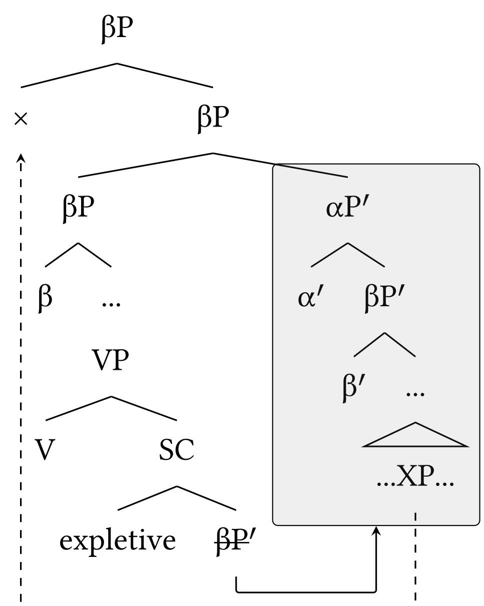
What is central here is that if the movement of the embedded clause follows the *larger-to-smaller* configuration, sub-extraction from the embedded clause violates MAIF in (91). The earliest point at which a βP's extended projection can find a continuation in the matrix clause (making sub-extraction MAIF-compliant) is when the matrix clause is also a βP. Hence, the lowest available specifier c-commanding both clauses must be a Spec,αP such that α>β in *fseq*. In short, the Williams Cycle in (55) is derived if a language uses the re-merger of embedded clause to enable MAIF-compliant long movement.

Before concluding this formal discussion, I address the question whether there is a Spec,βP c-commanding both clauses if βP′ merges with βP as in (103). This is critical because an XP moving to this specifier would only cross heads in the embedded clause, that is, any movement to this specifier would be MAIF-compliant. This becomes problematic if we are dealing not dealing with a βP′ as in (103) but with a larger αP′ merging with a smaller βP as in (104). In short, movement to a specifier directly above the re-merger site of the embedded clause could potentially lead to MAIF-compliant sub-extraction from larger-to-smaller configurations.

(103) **No specifier above re-merger**



(104) **No specifier above re-merger**



According to (96), the maximal projection of the embedded clause re-merges with a maximal projection in the matrix clause. So far, there was no theoretical distinction made between the *re-merger* of clauses, and *sub-extraction* of constituents from clauses. Here the re-merger of clauses is handled as an adjunction-like operation, which happens after feature-checking movement operations including the *sub-extraction* of particles, foci, *wh*-constituents, and relative pronouns (cf. e.g. Hunter 2010, 2015). Hence, the projection emerging above the re-merger-site of the embedded clause, βP in (103), cannot have a specifier above this landing site. Consequently, no Spec,βP c-commanding the both clauses is available if the embedded clause is a βP.

4.2 Applying the MAIF-based analysis to the Hungarian Williams Cycle data

This section describes how the proposal described above applies to Hungarian. I claimed that Hungarian exhibits Williams Cycle effects based on this table:

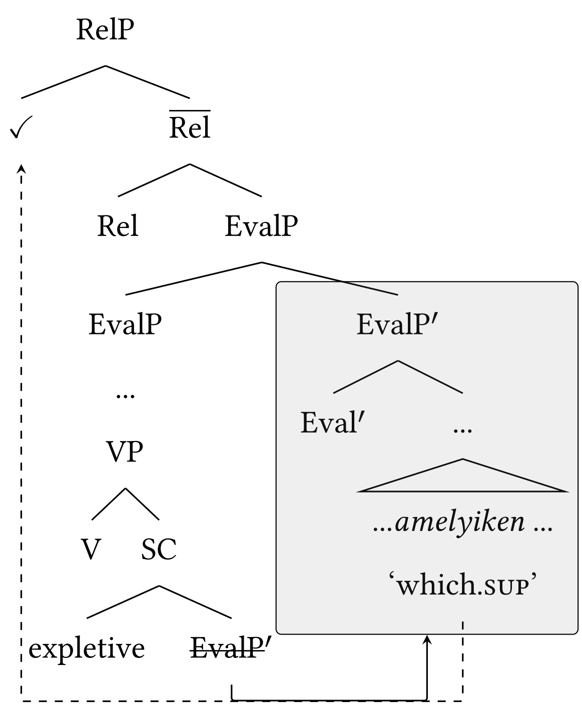
(105) **Size-dependent opacity**

	Particle extraction	Focus extraction	Relative extraction
Embedded AgrP	✓	✓	✓
Embedded PartP	×	✓	✓
Embedded TP	×	✓	✓
Embedded FocP	×	✓	✓
Embedded EvalP	×	×	✓

The sub-extraction of relative pronouns is possible for any clause size. The freedom of relative movement finds an explanation from the MAIF-based analysis under the functional sequence introduced in Section 2: Rel>Eval>Foc>T>Part>Agr>V.

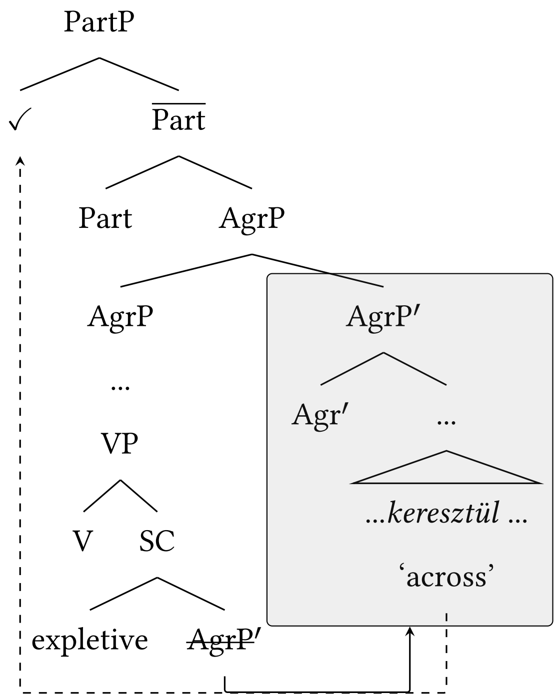
As supported by the observation that relative pronouns precede topics, foci, and particles, RelP is the highest projection of clauses, hence its specifier merges in the structure after the rest of the clause has been built. Consequently, Spec,RelP c-commands any embedded clauses that have re-merged lower. The tree diagram in (106) demonstrates this with the second largest embedded clause, which was defined as EvalP. The last two heads crossed by the sub-extracted relative pronoun are Eval′ and Rel, respectively. Therefore, the relative movement does not violate MAIF. This generalizes to embedded clauses smaller than EvalP as well.

(106) **Relative sub-extraction from EvalP**



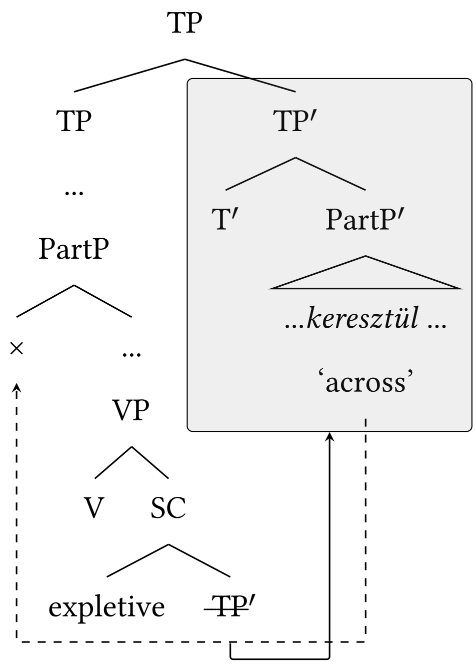
At the other extreme, the sub-extraction of particles is only possible from the smallest subjunctive clauses, that is, AgrPs. In (107), if the AgrP′ re-merges with AgrP, the shared Spec,PartP c-commands the embedded clause in way long movement to this position does not violate MAIF because the last two heads crossed are Agr′ and Part.

(107) **Particle sub-extraction from AgrP**

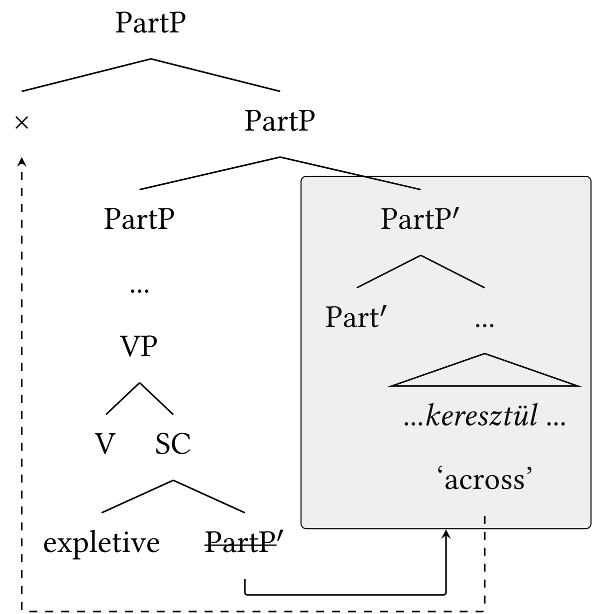


The re-merger of tensed clauses (at least as big as TP), and clauses with foci or high adverbs (at least as big as FocP, EvalP) with the matrix AgrP exemplifies the *larger-to-smaller* configuration hence it does not facilitate MAIF-compliant long-movement. If embedded TPs, FocPs, and Evalps do not leave the VP until the matrix clause reaches their size, particle sub-extraction is impossible because no Spec,PartP c-commands both clauses. This is demonstrated with TP′ in (108). Furthermore, long particle movement cannot proceed if another particle occurs in the embedded Spec,PartP. This follows from the stipulation that no specifier projects above the landing site of embedded clauses, more specifically, in (109), no Spec,PartP projects above the landing site of PartP′.

(108) **No particle-sub-extraction from TP**

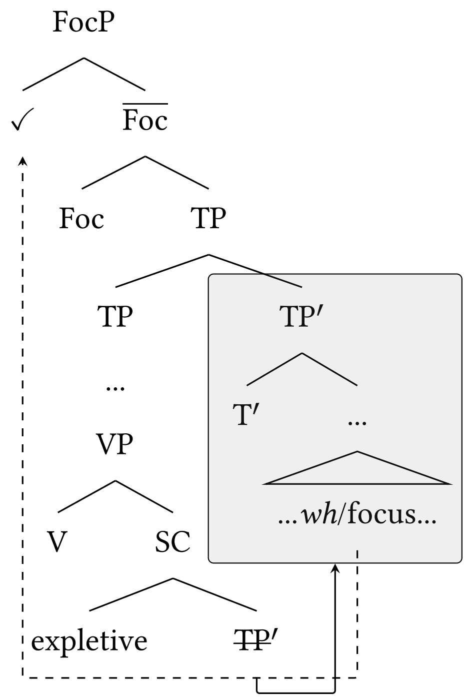


(109) **No Spec,PartP projects upon the re-merger of PartP′**

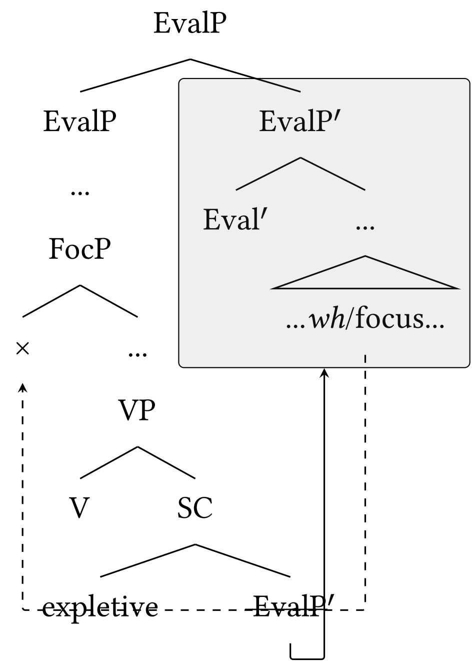


If the embedded clause is a TP or smaller, sub-extraction to matrix Spec,Foc is possible. If the sub-extraction happens from a TP′ as in (110), the last heads crossed by long focus movement are T′ and Foc, respectively, that is, MAIF is obeyed. This generalizes to smaller embedded clauses like AgrPs and PartPs as well. On the other hand, focus extraction is impossible from EvalPs. In the system presented here, this is predicted as in order to be open for MAIF-compliant movement, embedded EvalPs need to re-merge above FocP as in (111). Therefore, no Spec,FocP c-commands both clauses. Again, if embedded EvalPs re-merge with a smaller matrix-clause projection, sub-extraction from them would violate MAIF.

(110) **Focus/*wh*-sub-extraction from TP**



(111) **No focus/*wh*-sub-extraction from EvalPs**



The sub-extraction of foci from FocP′ should be possible even if sub-extraction of particles from PartP′ was not in (109). The essential difference is that while it is possible to have two foci in one clause as in (112) (É. Kiss 1998:p.16) only one particle is permitted in a single clause as in (113). In addition, the verb raises to a position right after the first focus.

(112) [$_{\text{FocP}}$ XP [Foc+✓ [$_{\text{FocP}}$ YP [Foc+V particle [$_{\text{VP}}$ ~~V~~ … ~~XP~~ … ~~YP~~]]]]]

[$_{PART}$ *Csak két lány*]$_1$ *olvas-ott-∅*$_2$ [$_{FOC2}$ *Csak egy könyv-et*]$_3$ __$_2$
only two girl read-pst-3sg.indf only one book-acc

[$_{FOC1}$ *el*] __$_2$ __$_1$ __$_3$ *a vizsgá-ra*
away the exam-sub

'Only two girls were such that they read only one book for the exam.'

(113) [$_{\text{PartP}}$ × [$_{\text{PartP}}$ particle [$_{\text{VP}}$[$_{\text{PP}}$ … XP …]]]

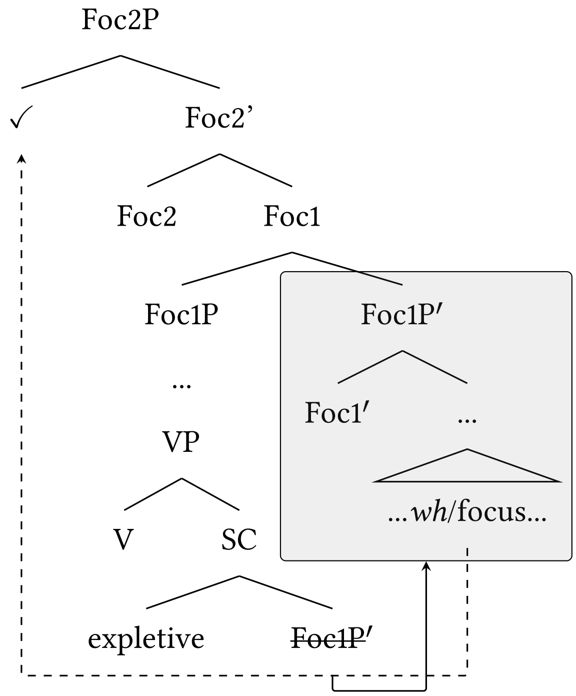
[$_{PART}$ *Keresztül*]$_1$ (*[$_{PART}$ *el*]) *fut-ott-ak* *a* *város-on* __$_1$
across away run-PST-3PL.INDF the city-SUP
Intended: 'They ran away across the city.'

From this, É.Kiss (1998) infers that we are dealing with two rather than one focus projection in sentences like (112), and the verb raises first to a lower Foc head then to the higher one. Thus, according to É.Kiss (1998), we need to propose two Foc heads in double-focus constructions meaning that *fseq* will look as follows:

(114) Rel>Eval> Foc2>Foc1>T>Part>Agr>V

Thus, in multicalusal structures in which a focus/*wh*-constituent moves across another, Foc1P′ re-merges with Foc1P in a way that the higher Spec,Foc2P can c-command it as in (115). In this way, XPs sub-extracted after the clause's re-merger will cross Foc1′ and then Foc2, that is, these sub-extractions will be MAIF-compliant.

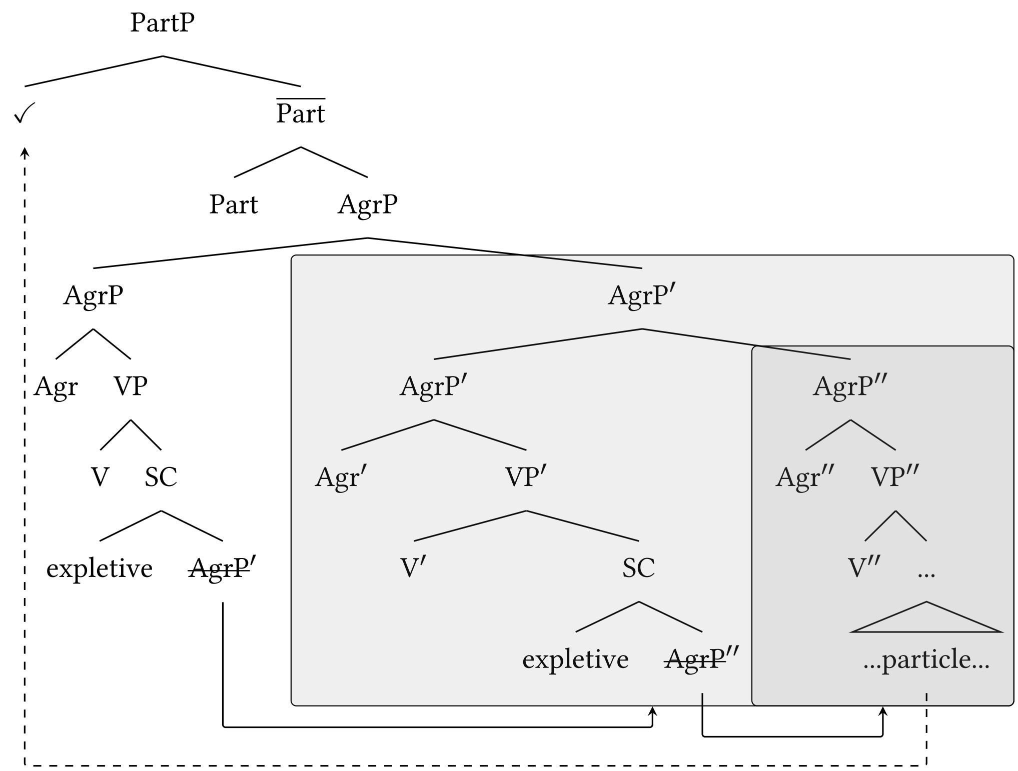
(115) **Focus/*wh*-extraction from FocP**



For the sake of simplicity, in the remainder of the paper, the Foc1-Foc2 distinction will not be made.

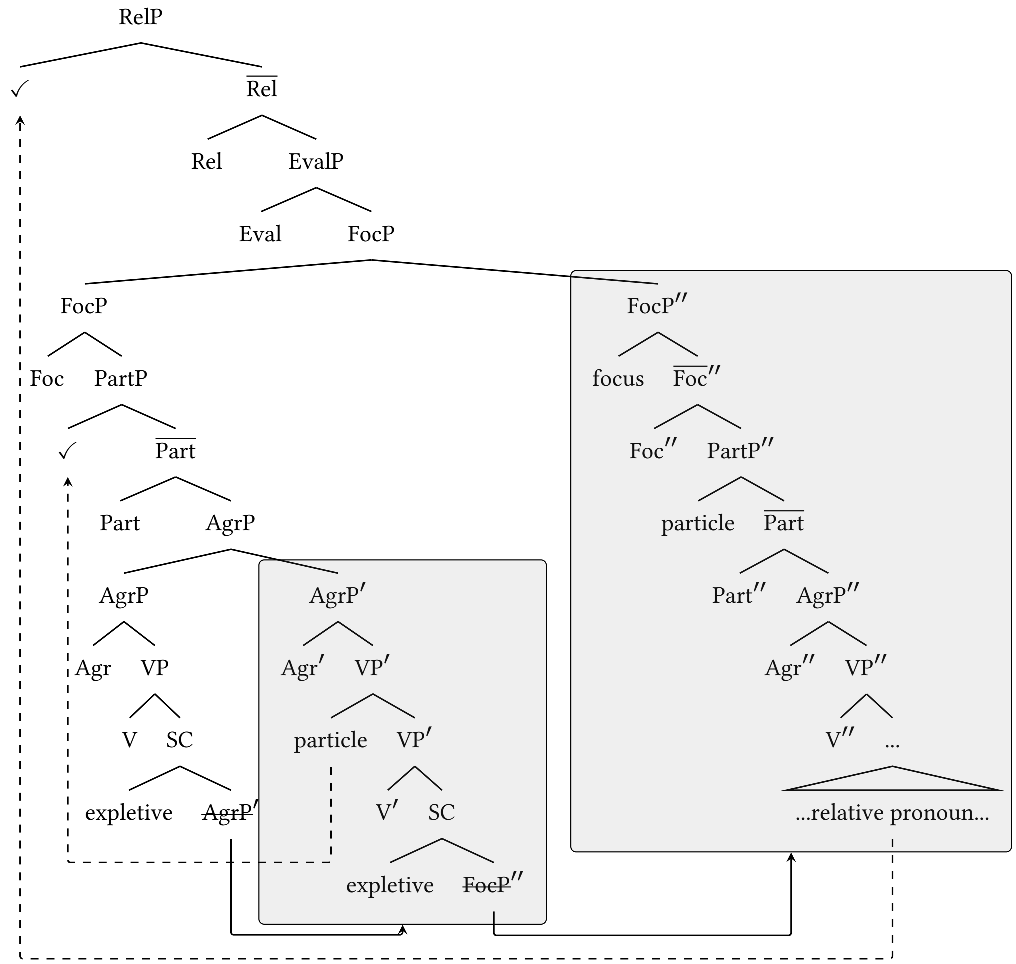
As it has been demonstrated in Section 2.2, Williams Cycle holds to multiple embeddings as well. For instance, (37) demonstrated that particle movement is possible across multiple clause boundaries unless one of these clauses turns out to be larger than AgrP. In the derivation in (116), two clauses move: First the deepest AgrP re-merges with the intermediate AgrP, then the phrase emerging immediately above these re-merges with the matrix AgrP. Neither of these movement steps cross any extended-projection boundary, that is, they are MAIF-compliant. Henceforth, the particle in the deepest AgrP can move as the heads it crosses are V″, Agr″ and Part, that is, the derivation is MAIF-compliant. Here the rationale is that after the two re-mergers the matrix PartP serves as a continuation not only for the extended projection of the intermediate clause but also for extended projection of the deepest embedded clause.

(116) **Particle movement across multiple clauses**



In (39), the intermediate clause must be an AgrP because a particle gets sub-extracted from it, whereas the deepest clause has a focus, that is, it must be a FocP. In other words, the deepest clause is larger than the intermediate clause. The derivation of the sub-extraction of the particle and the relative pronoun is shown in (117): The intermediate AgrP′ first re-merges with the matrix AgrP, after which the particle can move from the intermediate clause to the matrix Spec, PartP. This is MAIF-compliant in the same way as (107). After this, the deepest FocP″ re-merges with the matrix FocP. This is also MAIF-complaint as the heads crossed are V′, Agr′, Part, and Foc_{mart}. In this way, the sub-extraction of the relative pronoun from the deepest clause is MAIF-compliant because it crosses V″, Agr″, Part″, Foc″, Eval, and Rel.

(117) **The deepest clause re-merges with the matrix clause**



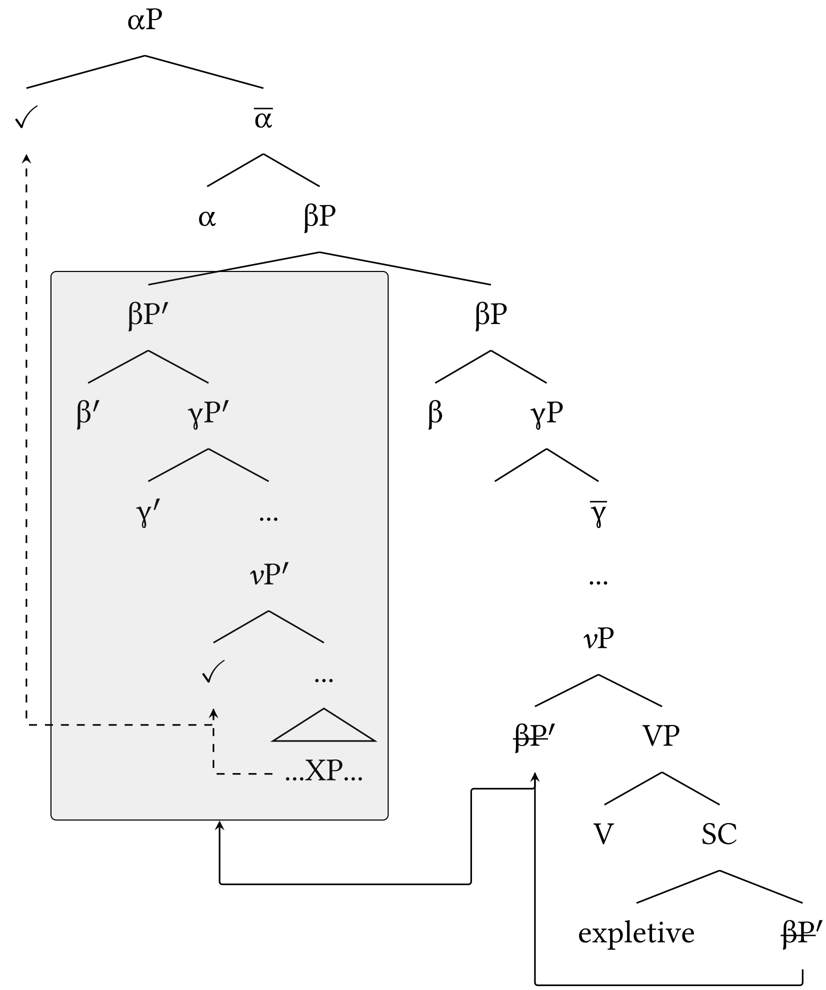
4.3 Successive Cyclic movement via Spec,*v*P

So far it has been assumed that heads between V and Rel belong to a single *fseq*. Here I briefly point out that the analysis keeps working if we break this *fseq* into two in a way that *v* is the highest head in the lower *fseq*, that is, *v*P is a locality domain on its own. While the lack of escape hatches in the Hungarian left-periphery can be traced back to the lack of specifier positions that do not exhibit criterial freezing, I do not claim that Hungarian lacks successive cyclic movement in general. Even if this section only discusses the *v*-*fseq*, the analysis presented here can be extended to other *fseq*s like the P-*fseq* and the D-*fseq*.[20]

If movement to Spec,*v*P not bring about criterial freezing, we can see that the movement of the clause can happen via this escape hatch. In (118), the embedded βP′ moves first to the matrix Spec, *v*P. This is followed by the re-merger of the embedded βP′ to the left of matrix βP′. The sub-extraction of XP to matrix Spec,αP proceeds through the embedded Spec,*v*P′. After leaving Spec,*v*P′, XP the last heads crosses before landing in Spec,αP are β′ and α′, that is, the movement is MAIF-compliant.

[20] For instance, Dékány and Hegedűs 2015 propose movement via the highest specifier of PPs.

(118) **Re-merger via Spec,*v*P**



This indicates even in the presence of intermediate stops in Spec,*v*Ps, the analysis presented in so far is keeps the Williams Cycle effects within *fseq*s. That is, even if the embedded βP moves via Spec,*v*P, its re-merger with the matrix βP opens the floor only for sub-extraction to matrix αP while sub-extraction to matrix γP remains impossible (assuming *fseq*=αP>βP>γP).

This analysis of Hungarian is compatible with successive cyclicity exclusively through Spec,*v*Ps as it has been suggested by Den Dikken (2009). At the same time, it needs to be noted that successive cyclic movement from CP edges to *v*P edges does not rule out Hyperraising in languages with Spec,CP escape hatches. In the remainder of this paper, I ignore *v*P-phases.

4.4 Embedded clauses frozen upon movement

This section discusses cases where it is the position of the embedded clause or its expletive that determine the opacity of a clause. In order to derive Generalizations 3 and 4, I will refine the definition of MAIF.

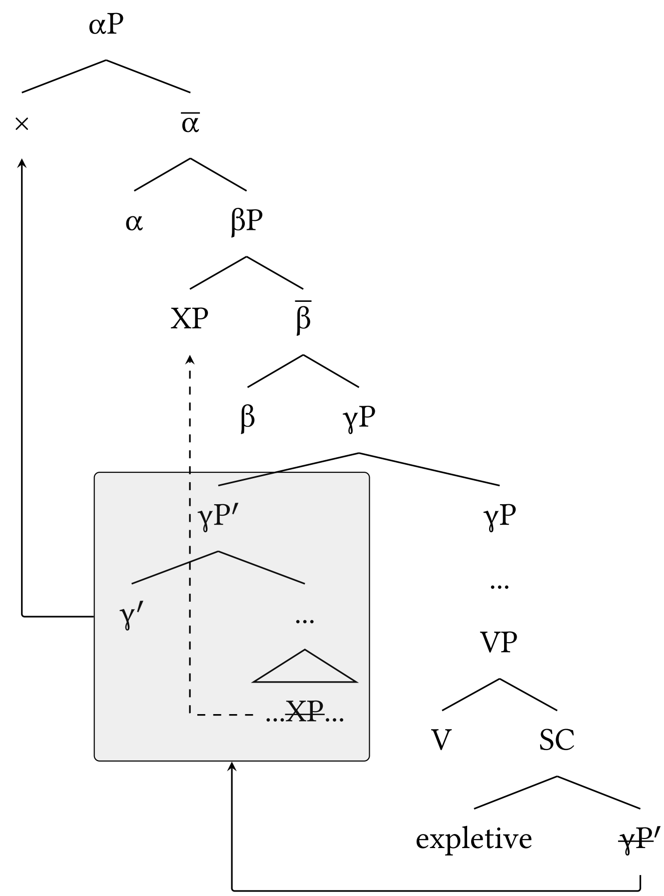
The cases on the basis of which Generalization 3 (repeated below) was drawn were the ones in which the sub-extraction from the embedded clause landed on the same side of the matrix VP as the movement of the embedded clause. In such cases, it is visible that sub-extraction must land higher in the matrix than its clause of origin. In other words, the movement of a clause cannot be remnant movement.

(119) **Generalization 3:** Embedded clauses must not move to a position in which they asymmetrically c-command the material sub-extracted from them.

In this paper, the leftward movement of clauses is assumed to be the same adjunction-like operation as the rightward movement of clauses; they are assumed to happen for the same reason, that was specified in (96).

The scenario depicted in (120) has not been discussed so far. In (120), γP′ first re-merges with γP. This re-merger is followed by the MAIF-compliant long-extraction of XP to matrix Spec,βP. (The last two heads XP crosses are γ′ and β.) It has not been made explicit why this cannot be followed by the embedded clause's movement to a Spec,αP asymmetrically c-commanding XP, but this structure would contradict to Generalization 3. For example, if βP is FocP and γP is PartP, then after the embedded PartP re-merges with the matrix PartP, the sub-extraction of a focus to matrix Spec, FocP is grammatical. The clause's re-merger above Spec,FocP should be ruled out.

(120) **The re-merged clause cannot move any further**



As seen in the previous section, movement makes the embedded clause transparent when the matrix clause projection with which it gets re-merged is as *at least* as large as the embedded clause itself. For example, the lowest landing site that makes γP′ transparent is at the matrix γP. For now, let us focus on cases in which the embedded clause's re-merger happens with an *equal-sized* matrix projection. As seen in (120), the node emerging from γP′ and γP is a γP as both of the lower γPs project. I stipulate that the higher γP not only inherits the shared category label of the two γPs (as in Chomsky 2013), but the union of their feature matrices. In other words, γP′ and γP are no longer maximal projections once another γP emerges above them.

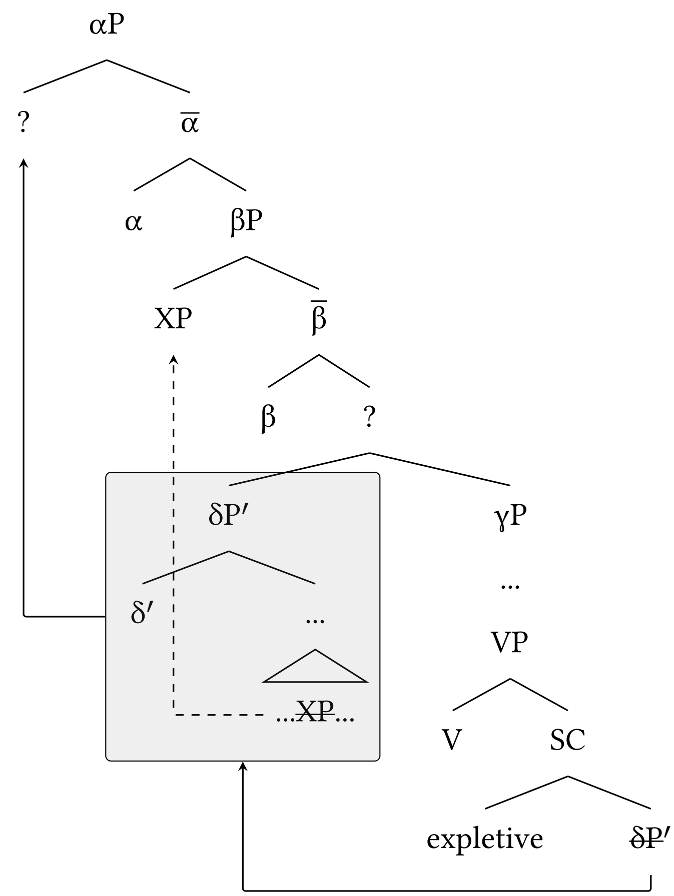
The ban on moving non-minimal and non-maximal (bar-level) projections is a standard assumption in the syntactic literature. Apart from minimal projections, the computation and the interfaces in the *Minimalist Program* can only see maximal projections, which do not project further (Chomsky 1995). Possible ways to explain this restriction are the *Relativized Minimality* (Rizzi 1990) and the *Minimal Link Condition* (Chomsky 1995): Since c-commanding probe's search must be minimal, the mother γP will be a closer goal than its γP′ daughter whose feature matrix is a subset of its mother's.

(121) Projections that are niether minimal nor maximal cannot undergo movement.

This means that by (121), the movement of γP′ to Spec,αP is impossible. This explains the ungrammaticality of (120), that is, we know why re-merger with an *equal-sized* matrix-clause projection blocks the embedded clause's further movement.

This leaves still open the possibility that a smaller embedded clause is re-merges with a larger matrix projection as in (97). In such cases, although the matrix projection with which the re-merger happens is *at least* as large as the embedded clause, the structure is asymmetric. This is depicted in (122): δP′ re-mergres with βP. According to MAIF in (91), the movement of XP is grammatical as it crosses first δ′ then an β and β>δ in *fseq*. Unlike in (120), the embedded δP does not merge with an equal-sized matrix projection, hence, δP′ should be a maximal projection capable of moving to matrix Spec,αP. In short, if a smaller clause re-merges with a larger matrix projection, the present form of MAIF does not rule out the remnant movement of this clause.

(122) ***Smaller-to-larger***



That is, while size-dependent opacity (Williams Cycle) was derived after banning sub-extraction from larger embedded clauses re-merging with smaller matrix projection i.e. *larger-to-smaller* configurations, position-dependent opacity can only be derived if we also rule out sub-extraction from smaller embedded clauses re-merging with larger matrix projections i.e. *smaller-to-larger* configurations. At the same time, configurations in which the embedded clause re-merges with an equal-sized matrix projection derives the expected position-dependent opacity effects because of the ban on moving non-maximal projections. Thus, ruling out long extraction from any asymmetric (i.e. *smaller-to-larger* as well as *larger-to-smaller*) instances of re-merger could solve this problem. Therefore, I propose the more restrictive MAIF in (123). The intuition here is that while the XP-movement in both (120) and (122) crosses heads with increasing *fseq*-indices, XP in (122) skips the γ head in *fseq*. That is, long movement should only be grammatical if the subsequently crossed heads do not only have increasing *fseq*-indices but are also adjacent in *fseq*.

(123) **Move Along Increasing *Fseq*-indices (*strong* MAIF):**

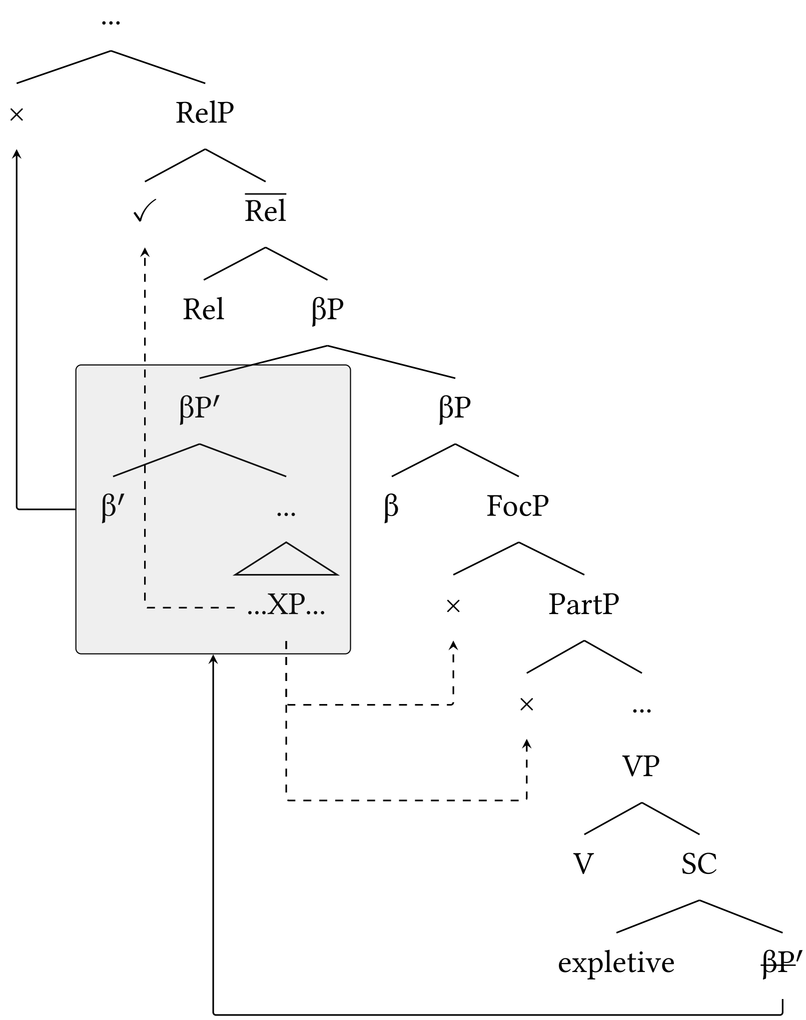
XP can move from position A to a c-commanding position B iff the following holds: For any two heads α and β both c-commanded by B and both c-commanding A, if α is the lowest head c-commanding β, i) {α; β} ⊂ some *fseq*, ii) α > β in this *fseq*, iii) there is no γ in *fseq* such that α > γ > β.

It needs to be highlighted that it still holds, that the system does not need any stipulation on the movement of the embedded clause apart from its bare possibility. Rather, MAIF, a constraint on movement, restricts the set of embedded-clause re-mergers that make cross-clausal movement possible. In addition, MAIF does not rule out remnant movement in general; it only rules out remnant movement for extended projections whose highest specifier cannot serve as an escape hatch (e.g. because of criterial freezing).

In sum, once MAIF only permits sub-extraction from embedded clauses that have re-merged with equal sized matrix projections, gaining transparency comes with the loss of mobility. As a consequence, no clause can move to a position c-commanding material extracted from it.

In what follows, this analysis is applied to the Hungarian data presented in Section 3. In (124), the embedded clause is some βP′ such Rel>β >Foc>Part, where I remain agnostic about the exact nature of β. Since the embedded clause is moved to the left, it is sandwiched between the relative pronouns and foci in the linear order. In this way, βP′ re-merges with βP. This re-merger site asymmetrically c-commands Spec,FocP and Spec,PartP, as the leftward movement of clauses cannot land within FocP(Kenesei 1994). Consequently, focus and particle sub-extraction are ruled out even after re-merger of the embedded clause. At the same time, Spec,RelP c-commands the embedded clause. Therefore, the long movement of the relative pronoun would cross β′ and Rel, respectively before landing in Spec,RelP, that is, this movement is MAIF-compliant because *fseq*=Rel>β. Finally, βP′ cannot move further and land in front of the relative pronoun because there is the maximal βP above βP′ is a closer goal than βP′.

(124) **Sub-extraction from a clause must land higher than its re-merger site**



If the embedded clause were an AgrP, that is, smaller than FocP and PartP, and this AgrP was re-merged with the matrix AgrP, sub-extraction to matrix Spec,PartP and Spec,FocP would be possible as demonstrated in (107). However, in this case, the embedded AgrP could not move further to a position c-commanding Spec,PartP and Spec,FocP because of the ban on the movement of non-maximal projections in (121). This analysis predicts that smaller clauses could re-merge with smaller matrix projections, which would make more matrix-positions available from them. However, as I have discussed in 3.1, full clauses are banned from the left periphery inside the matrix FocP.

Generalization 4 (repeated below) is only different from Generalization 3 in that it is not the embedded clause that cannot be higher than the long-moved constituent but the expletive associated with the clause.

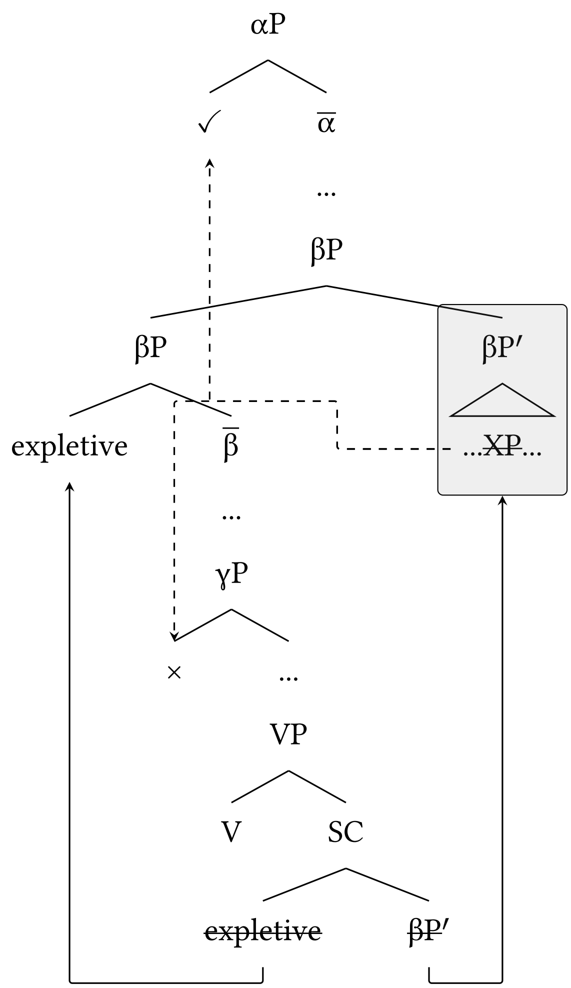
(125) **Generalization 4:** Clausal expletives cannot c-command long-extracted material originating in the clause associated with them.

The only assumption we need to add in order to cover Generalization 4 is that the clausal expletive acts as a bound variable, thus, it must be c-commanded by its binder:

(126) Every clausal expletive must be bound by the clause associated with it.

This is depicted in (127): First, expletive moves to Spec,βP in which position the embedded clause is to be interpreted. Then βP′ re-merges with βP in a way that βP′ c-commands the expletive in Spec,βP so the embedded clause can be interpreted in Spec,βP. Here we arrive at a known result: Spec,αP c-commands the re-merged clause (i.e. the two clauses share this specifier), whereas, γP does not c-command the landing-site of the embedded clause. Consequently, the cross-clausal movement of XP can land in Spec,αP as it crosses β′ and then α. Movement to Spec,γP, on the other hand, is still impossible.

(127) **The embedded clause moves in order to c-command the expletive**



If the expletive stays in its VP/SC-internal position, the embedded clause can move to any height as it always c-commands the expletive.

Since the re-merger of embedded clauses is an adjunction-like operation, if we had γP′ in (127) instead of βP′, this γP′ could re-merge with βP to c-command its expletive. However, sub-extraction from this re-merged clause would be banned by (123) in the same way as in (122).

Generalization 4 is accounted for because the movement of the embedded clause happens only after the expletive reaches its highest position in the matrix left-periphery, and sub-extraction from the clause can only land above the landing-site of the embedded clause. It has been shown in (120) that embedded clauses are frozen after being re-merged with an equal-sized matrix projection. It is ruled that an embedded clause first re-merges with a lower position in order to be able to long-move from within it, and then the same embedded clause is moved in order to c-command the expletive because clauses are frozen in their lading-site. In sum, just like Generalization 3, Generalization 4 is derived from the freezing effect of re-merger with an equal-sized matrix position: Embedded clauses cannot move to matrix left-periphery positions after their movement. In the remaining part of the section, I show how this works with actual Hungarian projections. Generalization 4 was derived from the following table:

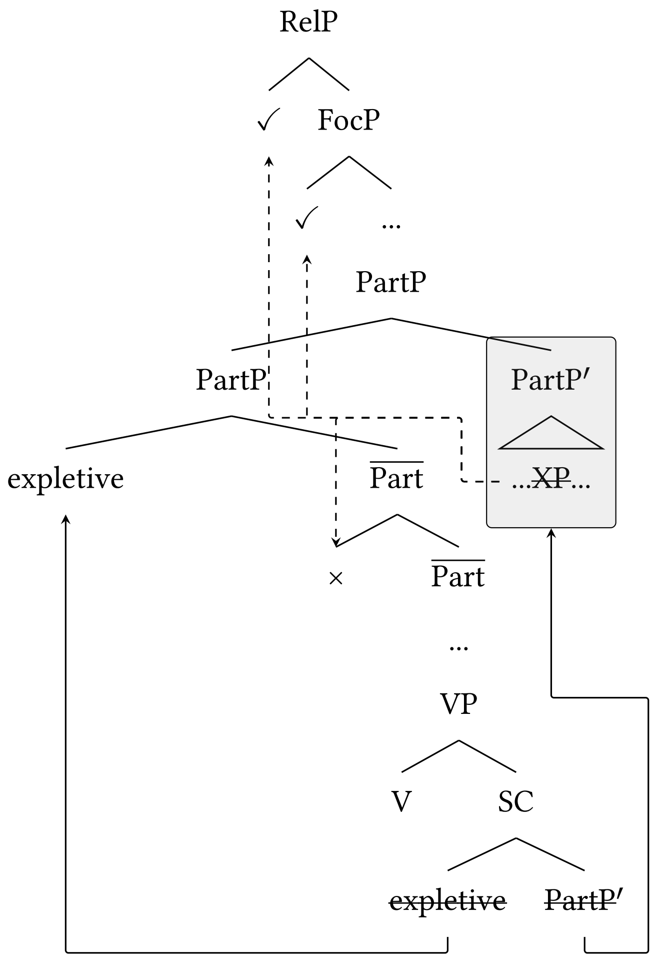
(128) **How does the matrix position of the embedded clause influence its transparency?**

	Particle extraction	*wh*-extraction	Relative extraction
VP-internally pro-dropped	✓	✓	✓
Overt in Spec,PartP	×	✓	✓
Overt adjoined to EvalP	×	×	✓

The discussion in Section 4.2 addressed the relevant examples with VP-internal and therefore *pro*-dropped expletives.

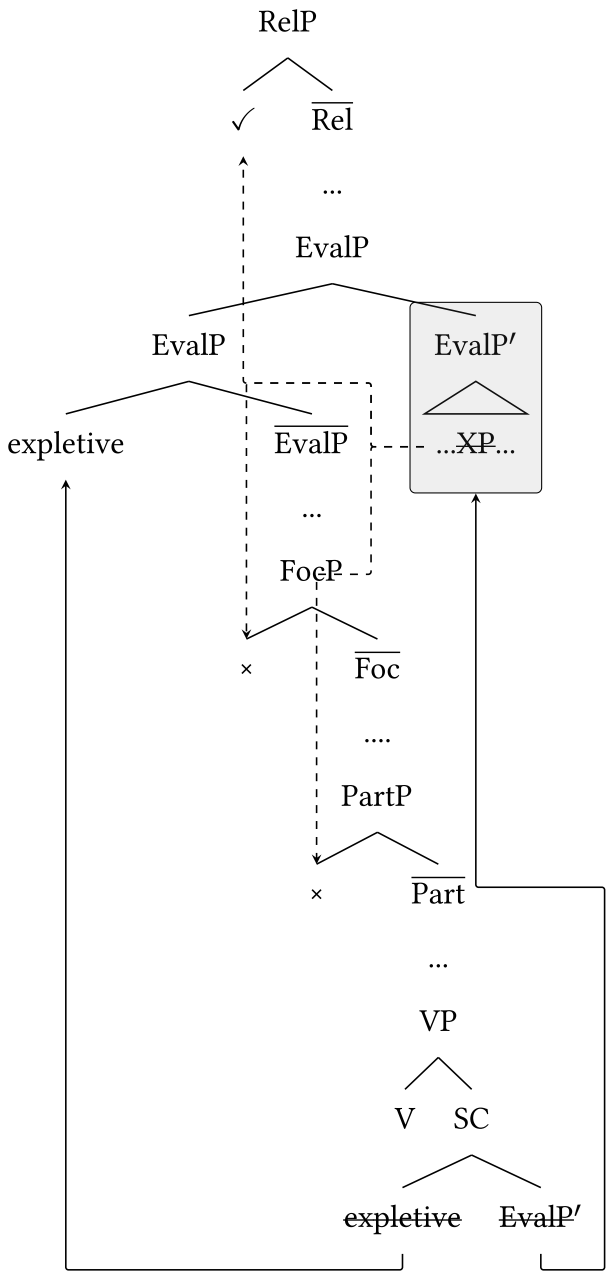
Assuming the lowest position in which the expletive is ever overt is Spec,PartP, the lowest possible c-commanding re-merger-site for the embedded clauses is at PartP. Since there is only a single Spec,PartP projecting per clause and in general and no projection-internal specifiers project above the re-merger-site, particle sub-extraction from the embedded clause to matrix Spec,PartP is ruled out in (129). At the same time, if re-merger happens with PartP, sub-extraction to matrix Spec,FocP and Spec,RelP is possible as these c-command the embedded clause and the intervening heads constitute a well-formed *fseq*-fragment; the last heads crossed are Part′, Foc, and, in the latter case, Rel.

(129) **Expletive in Spec,PartP**



If the expletive is in Spec,EvalP as in (130), the lowest c-commanding position with which the embedded clause can re-merge is EvalP. However, in such cases, neither PartP nor FocP c-command the re-merged embedded clause. So neither particle- nor sub-extraction focus-/*wh*-extraction is possible in such cases. However, since Spec,RelP c-commands the re-merged embedded clause and the movement happens on a well-formed sequence of heads (last heads crossed: Eval′ and Rel), relative pronouns in matrix Spec,RelP can originate in the embedded EvalP.

(130) **Expletive in Spec,EvalP**



In this subsection, MAIF has been made more restrictive. Under this version, the re-merger enables sub-extraction from embedded clauses only if the re-merger happens with an equal-sized matrix projection. However, assuming we cannot move the βP daughter of a maximal βP, a embedded clause's re-merger with equal-sized matrix position necessarily freezes it in the re-merger site. This derives Generalization 3, which says that sub-extraction from an embedded clause must happen to a position c-commanding the clause's final landing site. In order to cover Generalization 4, clausal expletives have been assumed to be obligatorily c-commanded by their associate clauses. In this way, the embedded clause needs to be mobile until its expletive reaches its left-periphery position. However, since gaining transparency comes with the loss of mobility, embedded clauses can only be associated with expletives that are lower than the lowest landing site of sub-extraction from them.

4.5 Interim summary

In this section, I proposed that assuming movement can only proceed along heads with monotonically increasing *fseq*-indices, Hungarian embedded clauses become transparent to sub-extraction after re-merging with an equal-sized matrix projection. The generalizations on size- and position-dependent opacity presented in Sections 2 and 3 are explained by the size-dependence and the freezing effect of this re-merger: Larger clauses are re-merged later and clauses cannot move out from their re-merger-sites.

There are some limitations for my analysis. Firstly, size- and position-dependent opacity were derived from the absence of specifiers serving as escape hatches, hence languages having visible reflexes of successive cyclicity via some specifier (for a survey see Georgi 2014, 2017) and size- and position-dependent opacity in the same extended projection may be problematic for my analysis. Secondly, this analysis can only deal with selective opacity in the context of syntactic movement. Hence known cases of Williams Cycle effects in case and agreement (e.g. Poole 2023) remain unaccounted for.

An alternative to my proposal could be to stipulate that instead moving, complement clauses are base-generated as sisters of a matrix clause position of their size.[21] In this way,

[21] This is somewhat similar to what É.Kiss (2023) proposes for modern Hungarian except she assumes the

Generalizations 1 and 2 would be derived because the matrix specifiers asymmetrically c-commanded by the base-generation site of an embedded clause would be unavailable from this clause. Generalizations 3 and 4 would be derived from the symmetry of the matrix-embedded adjunction as in Section 4.1: Embedded clauses would be unable to leave their base-generated positions because they are dominated by a featurally identical node. This analysis would be compatible with successive cyclicity via escape hatches and it would derive Williams Cycle effects for case and agreement. Nevertheless, this alternative has its own problems. Firstly, embedded clauses reconstruct to (low) VP-internal position for Principle C as demonstrated in Section 3.1. Moreover, the verbs' selection for various clause-types discussed in Section 2.3 would be difficult to encode in the absence of VP-internal clauses. Since these are rather serious problems, I stay with the analysis for Hungarian presented in Sections 4.1-4.4.

same size for embedded clauses.

Section 5

Existing accounts and their limitations

The Williams Cycle has been demonstrated to occur in a number of languages including English (Williams 2003, 1974), Italian (Abels 2012), German (Wurmbrand 2001; Müller 2014a,b), Hindi (Keine 2016, 2019, 2020), and Finnish (Poole 2023).

Williams' original analysis relies on *delayed-substitution* (Williams 2003): Larger embedded clauses occur later in the matrix clause, and before they occur, they are unavailable for syntactic operations. Another account is Abels' (2012) *locality- and intervention-based* account, which relies on the observation that the constraints on within-clause orderings of left-periphery constituents also apply across clauses, hence, the intervention effects seen within clauses can be extended to multi-clausal contexts. Müller (2014a; 2014b) proposes that movement of XP needs to stop in every projection in a way that the categorial information of the head of the projection is recorded in a *buffer*. After XP has reached its final position, the buffer needs to satisfy certain output conditions. Finally, Keine (2016; 2019; 2020) introduces the concept of *horizons*, which delimit how far a probe can "see". The Williams Cycle is derived if probes located higher in the matrix clause can "look into" larger embedded clauses than probes located on lower heads.

In general, these theoretical accounts are designed to explain *size-dependent* opacity i.e. Generalizations 1 and 2. However, these accounts do not aim to provide an explanation for *position-based* opacity i.e. Generalizations 3 and 4. This is problematic as *a priori*, a constituent's position is not derivable from its size. Thus, one way of adjusting these accounts remains to stipulate that position is actually related to its size: Clauses occurring higher in the structure must be larger. However, the predictions of this stipulation will turn out to be too strong for the Hungarian data.

5.1 Major accounts deriving size-dependent opacity

This section discusses the major problems that existing accounts on *size-dependent* opacity have with *position-dependent opacity*. This subsection presents a minimalist implementation of Willams' explanation similar to that of Poole (2023), but on a more general level, the criticism also extends to Keine's *horizon-based* account (Keine 2016, 2019, 2020) as well as Müller's *buffer-based* account (Müller 2014a,b).

Williams (2003; 2013) relies on the idea that the clausal structure can be broken down into levels in a way that syntactic operations are restricted to specific levels. Moreover, matrix and embedded clauses are built in parallel, and the embedded clause is only embedded (substituted) in the matrix clause when the matrix clause gets as large as the embedded clause:

(131) **Delayed substitution (Level Embedding Conjecture):** An αP can only be embedded in a structure that is also built up to αP. (based on Poole 2023; Williams 2003)

The diagram in (132) depict the process of delayed substitution: The matrix VP's structure is built with a CP-placeholder, not with a fully spelled out CP. The structurally complete embedded CP is not inserted until the matrix C is merges in. Consequently, while the matrix *v*P and TP are being built, *v* and T cannot access the internal structure of the embedded CP. Therefore, no constituent merging in matrix Spec,*v*P or Spec,TP can originate in the embedded clause. The latter explains the ban on *hyperraising*. However, when the matrix C merges in, the VP-internal CP-place holder gets replaced by a spelled-out CP structure, hence, XPs can leave it and land in Spec,CP of the matrix clause.

(132) **Delayed Substitution of CPs**

$[_{VP}$ V (CP′)$]$ →

$[_{vP}\ v[_{VP}\ \mathrm{V}\ (\mathrm{CP}')]] \rightarrow$

$[_{TP}\mathrm{T}[_{vP}\ v[_{VP}\ \mathrm{V}\ (\mathrm{CP}')]]] \rightarrow$

$[_{CP}$ ✓ $[\mathrm{C}[_{TP}\mathrm{T}[_{vP}\ v[_{VP}\ \mathrm{V}\ [_{CP}[\ \mathrm{C}'\ [_{TP'}\ \mathrm{T}'\ [_{vP'}\ v'\ [_{VP'}\ \mathrm{V}'\ [\ \dots$ ~~XP~~ $\dots]]]]]]]]]]]$

If the embedded clause were a TP, it would show up one step earlier, and raising to the subject position of the matrix TP would be possible. In general, this theory explains the Williams Cycle relying on the idea that larger clauses show up later in the structure.

This theory does not aim to cover Generalizations 3 and 4, that is, *position-dependent* opacity. Here I will demonstrate this with Generalization 3: Assume that after (132), the embedded CP gets a left-periphery role in the matrix clause e.g. assuming Foc>C in *fseq*, it moves to matrix Spec,FocP:

(133) $[_{FocP}$? $[_{CP}$ XP $[_{CP}[_{EmbCP} \dots$ ~~XP~~ $]\ [_{MatrCP} \dots [_{VP}\ \mathrm{V}\ [_{EmbCP}$ ~~… XP~~ $]]]]$

According to Generalization 3, structures of this kind are ungrammatical, whereas, nothing in the delayed-substitution theory rules out this movement. Cases violating Generalization 4 would be very similar to (133) except that Spec,FocP would be filled by the expletive and the embedded clause would have to move to a position c-commanding it. This is expected as these theories focus on the clause-size while they do not consider the embedded clause's position in the matrix clause.

In order to make delayed substitution theory work for Generalizations 3 and 4, the following stipulation needs to be added:

(134) **The position-size correlation:** If a clause or its expletive occurs in Spec,αP, this embedded clause must be αP or larger.

For example, if an embedded clause or its expletive is in matrix Spec,EvalP, this embedded clause must be at least an EvalP. Therefore movement from Spec,FocP is blocked from this clause because of delayed substitution or any other derivation of the Williams Cycle. On the other hand, if the clausal expletive occurs in Spec,PartP, the clause itself may be a PartP, from which focus extraction can proceed. Thus, in theory, position-based opacity is derivable from any explanation of size-dependent opacity under (134).

However, (134) implies unusual treatment for non-clausal constituents. More concretely, non-clausal constituents in the left periphery should have syntactic layers associated with clausal constituents. For example, DPs, PPs, and all constituents that can occur in Spec,FocP should be somehow a FocPs, and focus movement should be possible within DPs and PPs. Szendrői (2010) argues that although there are some apparent examples of DP-internal focus movement in languages like Greek, these cannot be analyzed as movement to some Spec,FocP because the notion of focus is essentially proposition-based, hence it cannot be defined within DPs. Alternatively, clausal left-periphery constituents should be distinguished non-clausal ones.

Additionally, (134) predicts that position- and size-based opacity always go hand in hand. If a constituent X can move across another constituent Y in the embedded clause, the movement of X should not be blocked if the embedded clause occurs in Y. In Hungarian, particles occurring in the embedded clause's left-periphery do not block the long *wh*- and focus movement as in (29), and *wh*- and focus movement is also possible from clauses whose expletive occurs in Spec,PartP as in (83). So far topics and quantifiers have been left out from the discussion. Koopman and Szabolcsi (2000) observe that quantifiers do not block long particle and movement. For instance, the quantifier *Marival is* 'also with Mari' headed by the additive *is* does not block the long movement of the focus *csak a városon* 'only the city':

(135) [$_{\text{FocP}}$ ✓ … [$_{\text{VP}}$ … [quantifier *is* [… XP …]]]]

[$_{FOC}$ *CSAK A VÁROS-ON*]$_1$ *akar-t-am*$_2$ __$_2$, [*hogy* [$_Q$ *Mari-val*
only the city-SUP want-PST-1SG.INDF that

is] *keresztül*$_3$ *fus-s-anak* __$_1$ __$_3$]
Mari-INS also across run-SUBJ-3PL.INDF

'I wanted them to run across ONLY THE CITY also with Mari.'

This is not problematic if we assume that quantifiers with the do not have a dedicated head along the clausal spine but adjoin to various projections as discussed in Section 2.1. In (135), if the quantifier *Marival is* 'also with Mari' adjoins to FocP, it is in line with the Williams Cycle that this quantifier does not block focus sub-extraction to matrix Spec,FocP. However, if there is no dedicated quantifier-projection in the clausal *fseq*, clauses whose expletive occurs in a quantifier position should not have any special opacity-reduction according to (134). This does not seem to be the case: If the expletive of an embedded clause combined with the additive *is* occurs in a pre-verbal quantifier position, the sub-extraction of foci is blocked from it:

(136) [[expletive$_i$ is] … [$_{\text{PartP}}$ × … [$_{\text{VP}}$ V [[*hogy* … XP]$_i$]]

??[$_Q$ *Az-t is*]$_{i1}$ ⟨$_{FOC}$ *CSAK A VÁROS-ON*⟩$_2$ *akar-t-am*$_3$ __$_3$ __$_1$ __$_4$, [
it-ACC also only the city-SUP want-PST-1SG.DEF

hogy ⟨$_{FOC}$ *CSAK A VÁROS-ON*⟩$_2$ *fus-s*$_5$ *keresztül*$_6$ __$_5$ __$_6$ __$_1$]$_{i4}$
that only the city run-2SG.SUBJ.INDF across

With the embedded focus:'I also wanted you to run across ONLY THE CITY. (In addition to wanting something else)'

The ungrammaticality of (136) could be explained with some additional constraint excluding the remnant movement of clauses. However, this would still mean that (136), which is intuitively a sub-case of position-dependent opacity, cannot be derived from the combination of size-dependent opacity and (134). In contrast, my proposal in Section 4 does not handle (136) differently from any other case of position-based opacity. In particular, (136) receives the same analysis as other sentences in which the expletive (or the clause) occurs higher than the particle e.g. (136): Since the expletive is in a position asymetrically c-commanding Spec,PartP, even if the embedded clause is smaller than PartP, it cannot move to a position that is c-commanded by Spec,PartP as this would not c-command the expletive.

In sum, tracing back position to size is too strong because it predicts that non-clausal constituents have left-periphery projections. Simultaneously, it is too weak because it predicts that only those projections lead to position-dependent opacity that have a dedicated head in the *fseq*.

5.2 Cross-clausal intervention (Abels 2012)

Abels' (2012) account relies on Relativzed Minimality or the Minimal Link Condition (Chomsky 1995): XP cannot move across a c-commanding YP if YP is of the same kind as XP because YP will count as a closer goal for this operation. Informally, constituents of the same kind block each other's movements. However, intervention can be asymmetric: Even if a constituent XP may move across another constituent YP, YP's movement across XP may be banned. In this case, while YP counts of the same kind as XP while YP is moved i.e. intervention occurs, YP does not count count as the same kind as XP while XP is moved i.e. no intervention occurs.

Abels makes use of a feature geometry in order to derive intervention-asymmetries. In general, if XP intervenes in the movement of YP, but not vice versa, XP will be a more specific type of constituent than YP. In terms of features, this means that the XP's feature matrix is a proper superset of YP's feature matrix. If XP c-commands YP, YP cannot move across XP because XP has all the features that YP has and XP is closer than YP. On the other hand, if YP c-commands XP, XP can move across YP because of the Pāṇini Principle: the featurally richer XP's movement counts as more specific operation than the featurally less rich YP's movement. In other words, YP's closeness is suppressed by XP's specificity.

If we apply this to Hungarian, the feature matrices of the left-periphery specifiers will be as follows:

(137) Relative pronouns: [Rel, Eval, Foc, Part]
Sentential adverbs: [Eval, Foc, Part]
Foci: [Foc, Part]
Verb particles: [Part]

If a particle moves either within a clause or across clauses, it cannot cross relative pronouns, senential adverbs, foci, or particles because all of these constituents have the [Part] feature hence they will all count as closer constituent of the same kind as the moving particle. Foci can cross particles because foci have an extra [Foc] feature, that is, their movement counts as a more specific operation than the movement of particles. On the other hand, foci cannot be moved across relative pronouns, sentential adverbs, and other foci as these are also specified as [Foc, Part] and are higher than foci. Finally, relative pronouns can move across particles, foci, and sentential adverbs as none of these have the [Rel] feature in their matrices, that is, the movement of relative pronouns counts as a more specific operation than the movement of either of these constituents. Only other relative pronouns can intervene in the movement of relative pronouns. In this way, Generalization 1 and the movement of particles across other particles gets derived.

Abels' idea can be extended to the left-periphery position of clauses: For instance, we can focus-mark entire clauses by assigning them the focus-matrix in (137). The focus-marking of clauses makes particle-extraction impossible from these clauses: The clause as a whole has the same features as the particle and it counts as closer than the particle because of containment. Relative extraction is possible from focus-marked clauses because the movement of relative pronouns counts as a more specific operation than the focus-movement of the clause. In short, Generalization 3 is derived as well. This explanation can be extended to Generalization 4 once the feature matrices from (137) are assigned to the small clause containing both the expletive and the clause associated with it.

However, this account has the similar problems to the previous accounts: The treatment of clauses in the left-periphery seems to be unnatural for non-clausal material. For instance, if we assign the feature matrix [Foc, Part] to embedded clauses that serve as foci in the matrix clause, should we assign the same feature matrix to DPs, PPs, and other constituents with a focus-interpretation? In addition, the treatment of quantifiers and topics remains problematic in the same way as in the previous section. If we add the features [Quantifier] and [Topic] to to the feature matrices of topics and quantifiers, these should lead to intervention contrary to (135). On the other hand, if no features like [Topic] or [Quantifier] are involved in the feature geometry, the theory does not account for the ungrammaticality of (136). Another difficulty occurs with this account once we consider projections not involved in movement. This problem arises with projections associated with clause types. In order to involve clause types, we would have to propose that probe specifications also refer to clause types. For instance, any TP should have the specification [T, Part] in order to terminate particle-searches. This seems to be unappealing as we predict to have operations in which specifically TPs move. A more fundamental problem with this account is *defective intervention*: The theory predicts that the intervening phrase not only intervenes but also moves instead of the true goal. For instance, if the movement of a particle with the matrix [Part] is blocked by a focused constituent with the [Foc, Part] matrix, there is nothing in Abels' theory that says why the focused constituent cannot move to the position of the particle in the matrix clause. What we find in all of these cases is that the intervener simply blocks the movement of the lower phrase resulting in ungrammatical structures.

Section 6

Conclusion

In this paper, I have first shown that Hungarian exhibits Williams Cycle effects, which can be described as *size-dependent opacity*. Clauses with a more spelled-out left-periphery positions were opaque to more movement types, and the lowest specifiers of the matrix left-periphery can be reached from only from syntactically smallest embedded clauses. In addition, Hungarian exhibits *position-dependent opacity*: Neither clauses nor their expletives can be higher in the left-periphery than material extracted from these clauses. My proposal relied on a new theory of movement: Syntactic movement needs to happen along well-formed *fseq*-sequences. Therefore, while an embedded clause is in its VP-internal position, any XP leaving it would violate this constraint if the highest head of the embedded clause and the matrix V is crossed in one step. In the absence of specifiers usable as escape hatches for long movement, Hungarian relies on the movement of embedded clauses. If an embedded clause re-merges with a matrix projection of its own size, the higher matrix heads will serve as a continuation for the embedded *fseq*. Hence, specifiers c-commanding the re-merger site are possible landing sites for material originating in the embedded clause. Size-dependent opacity emerges as the re-merger of larger clauses happens later than that of smaller clauses, and no matrix projection is available from the embedded clause before its re-merges with a matrix projection. Position-dependent opacity emerges as in the merger of the embedded clause with an equal-sized matrix projection both of these project. Consequently, this higher node that shares its features with the embedded clause will be a closer target for higher probes. In short, re-merger making sub-extraction possible leads to the immobility of embedded clauses. Fundamentally, this account did not have to make an *ad hoc* connection between a clause's position and its size.

This paper has restricted its attention to the Hungarian data. It remains an open question whether size- and position-dependent opacity co-occur in other languages as well, and whether the analysis introduced here can be applied to them.

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