

**Paths in Remnant Movement:
A Single Solution to Three Problems in the Polish OVS Syntax***

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1. Introduction

On the one hand it has been advanced that remnant movement (RM) serves as a replacement for head movement and leads to certain permutations in word order while it disallows some others (e.g. Cinque (2005)), on the other hand, little attention has been devoted to the consequences RM has for clausal syntax. In this work, I illustrate one such consequence, namely the rise of crossing and nesting movement dependencies and their reflexes. In particular, I make a case for the existence of massive RM that involves entire clausal subtrees in Polish. The analysis provides a uniform solution to three robust puzzles in the Polish OVS construction in a straightforward way.

2. The Puzzles

Polish is a canonical SVO language, which allows for a non-canonical OVS word order, as in (1b):

- (1) a. Jan kocha Marię. (canonical **SVO**)
Jan-NOM loves Mary-ACC
'Jan loves Mary.'
- b. Marię kocha Jan. (non-canonical **OVS**)
Mary-ACC loves Jan-NOM
'Jan loves Mary.'

The OVS construction in Polish is notorious for exhibiting three puzzles, provided below.

2.1 Puzzle #1

In OVS constructions, wh-movement of the Object does not give rise to W(eak) C(ross)-O(ver) (cf. (2a)), while wh-movement is sensitive to WCO in OSV constructions (cf. (2b)):

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- (2) a. [Którego sąsiada]_i otruła jego_i żona? (O_{wh}VS)
 which neighbor-ACC poisoned his wife-NOM
 b. ??[Którego sąsiada]_i jego_i żona otruła? (O_{wh}SV)
 which neighbor-ACC his wife-NOM poisoned
 ‘Which neighbor did his wife poison?’

2.2 Puzzle #2

Likewise, Object-fronting in OVS constructions does not produce the WCO effect (cf. (3)), while Object-fronting to the left periphery of the clause is sensitive to WCO elsewhere, as for instance in (4):

- (3) Piotra_i kocha [jego_{i/j} mama]. (OVS)
 Peter-ACC loves his mom-NOM
 ‘His_{i/j} mom loves Peter_i.’
- (4) [Syna Kowalskich]_i policja odesłała [jego_{??i/j} mamie]. (O_{dir}SVO)
 son-ACC Kowalski’s police-NOM sent-back his mom-DAT
 ‘The Kowalski’s son, the police sent back to his parents.’

2.3 Puzzle #3

As reported in Tajsner (2008), in constructions with Experiencer verbs (e.g. Polish *irytować* ‘irritate’, etc.), the Experiencer Object in OVS fails to bind the anaphor inside the Agent Subject (cf. (5a)) while it binds it inside the Theme Subject (cf. (5b)):

- (5) a. *Marię_i irytowali [sąsiedzi ze swojej_i kamienicy]
 Mary-EXP.ACC irritated [neighbors-NOM from self house]-AG
 ‘Mary was irritated by her neighbors from her apartment-house.’
 b. Marię_i irytowały [historie ze swojego_i dzieciństwa]
 Mary-EXP.ACC irritated [stories-NOM from self childhood]-TH
 ‘Mary was irritated by the stories from her childhood.’
 (Tajsner (2008, 349))

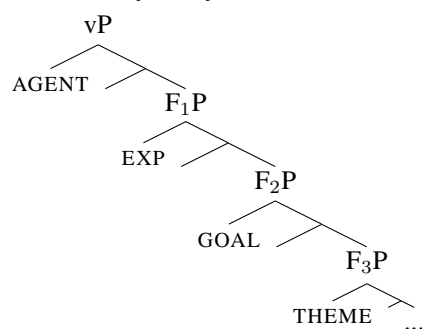
3. The Form of the Solution

3.1 Assumptions

The solution that I will advance rests on two basic assumptions: (i) the reduction of the θ -hierarchy to the hierarchy of syntactic projections in syntax (fseq)¹ and (ii) the role of c-command between the dependents. Under the first assumption, the θ -hierarchy of AGENT > EXP(ERIENCER) > GOAL > THEME (cf. Belletti and Rizzi (1988), Van Valin (1990), Grimshaw (1990), a.o.) reflects the order in which arguments are base-generated in the articulate vP, as roughly represented in (6).

¹This is in line with the nano-syntax approach, whereby all sort of hierarchies in grammar reflect the one and only hierarchy of functional projections in syntax (cf. Starke (2001), (2006); Ramchand (2008)).

(6) θ -hierarchy in syntax²

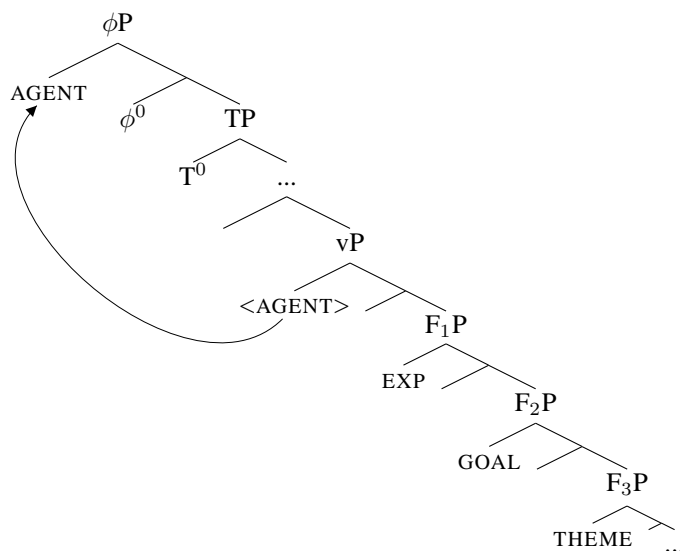


Under the second assumption, c-command—but not a linear word order—is necessary for establishing a dependency relation between nodes in syntax.

3.2 Analysis

In what follows, I will argue that the non-canonical OVS in Polish (and perhaps more generally in Slavic) does not involve independent movements of the Object and the Verb across the Subject³ but instead it involves remnant movement of an entire TP above the surface position of the Subject (in Spec- ϕ P).⁴ This remnant TP-fronting, which includes, among others, the silent copy of the Subject feeds Object-fronting to Spec-FocP (or also TopP), as outlined in (7)–(9).

(7) Step 1: Subject raising to ϕ P

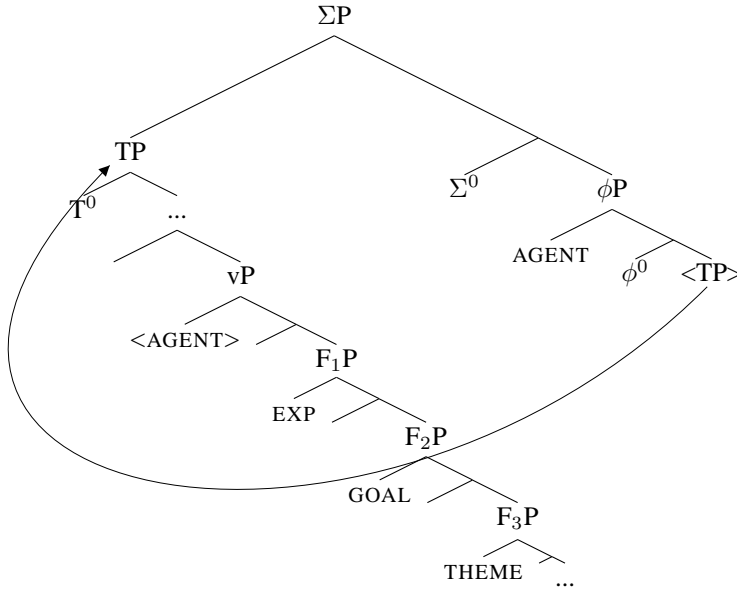


²For present purposes, I will continue to refer to F_n P_s simply as placeholders indicating layers of embedding without making or adopting auxiliary claims about their semantic content. See ongoing work on cartography of the vP (such as Ramchand (2008), for instance) for independent arguments in favor of its decomposition.

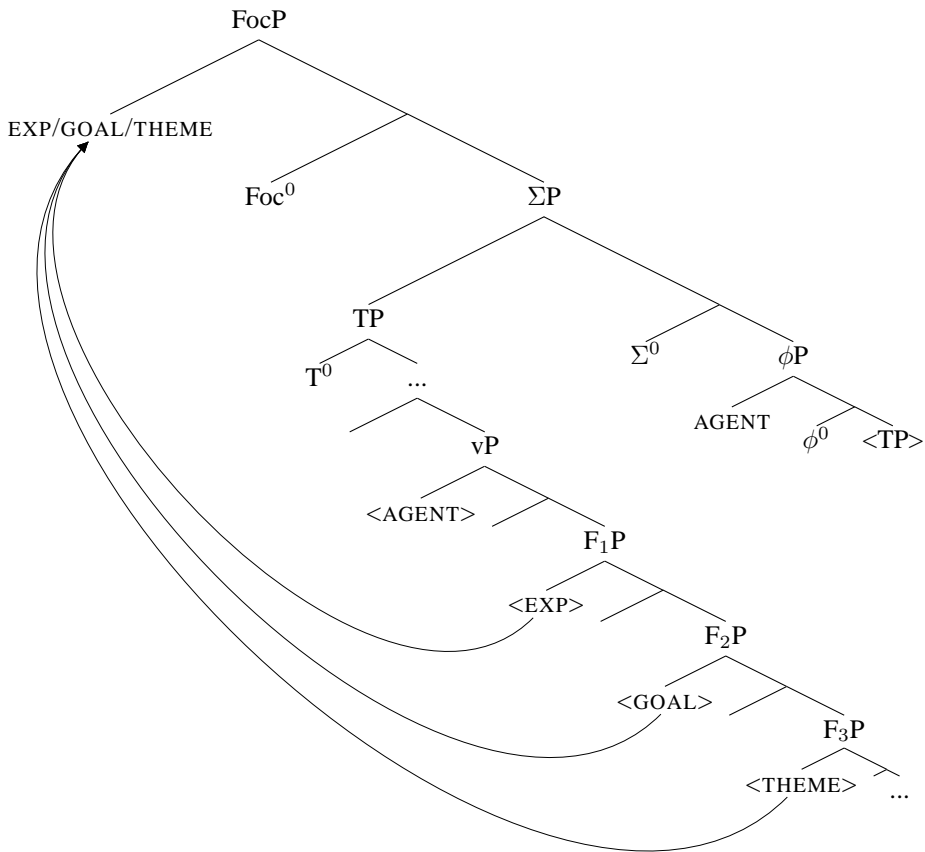
³Contra Witkoś (2008) and Tajsner (2008) for OVS in Polish and Bailyn (2003), (2004) for OVS in Russian.

⁴“ ϕ P” is a simplification in an approach in which each feature projects its own head in syntax; see Wiland (2009, Chap. 2) where the Polish ϕ P is split into the sequence of PersP>NumP>GenP.

(8) Step 2: Remnant TP-fronting to some Σ P



(9) Step 3: Focus-movement of the Object (EXP, GOAL, or THEME)



In step 1, the closest DP raises from its θ -position in the vP to the criterial Subject-position to satisfy the “classical” EPP-requirement. In step 2, the entire TP including the trace of the Agent-Subject undergoes remnant movement to some projection above the criterial position of the Subject. I will simply label this projection as Σ P. Finally, in step 3, the Object, be it

Experiencer, Goal, or Theme, becomes Focalized by moving to the functional specifier in the left-periphery of the clause.

In what follows, I first make a case for steps 1 and 2 and then I demonstrate that puzzles #1, #2, and #3 reflect dependency relations resulting from step 3 in (9).

4. The Position of O and V in OVS

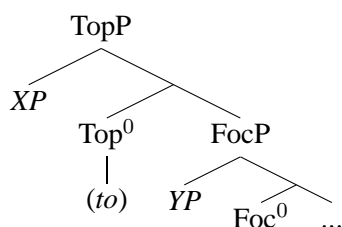
4.1 The Position of the Object

The intermediate step 1 in (7) is independently attested in Polish, since VOS sentences are also well-formed, as indicated in (10-b).

- (10) a. $Marię_i$ okradli jej_i (własni) sąsiedzi. (OVS)
 Mary-ACC robbed her (own) neighbors-NOM
 ‘Mary’s neighbors robbed her.’
- b. Okradli $Marię_i$ jej_i (własni) sąsiedzi. (VOS)
 robbed Mary-ACC her (own) neighbors-NOM
 ‘Mary’s neighbors robbed her.’

Tajsner (2008) advances that the left-peripheral FocP is projected below TopP in Polish and argues that the topic particle *to* ‘it’ optionally lexicalizes Top⁰, to the effect that fronted Foci can be optionally preceded by *to* and fronted Topics can be optionally followed by *to*, according to the representation in (11).

- (11) Topic > *to* > Focus >...



The fronted Object can indeed either optionally follow or precede the particle *to* in OVS sentences, as shown in (12-a), but not in VOS sentences, as shown in (12-b):

- (12) a. (To) $Marię_i$ (to) okradli jej_i sąsiedzi. (OVS)
 (it) Mary-ACC (it) robbed her neighbors-NOM
 ‘Mary’s neighbors robbed her.’
- b. (*To) Okradli (?*to) $Marię_i$ jej_i sąsiedzi. (VOS)
 (*it) robbed (?*to) Mary-ACC her neighbors-NOM
 ‘Mary’s neighbors robbed her.’

Thus, it can be concluded that the Object in OVS sentences occupies an A'-specifier in the left-periphery of the clause.

4.2 Remnant TP-fronting

In turn, with respect to the position of the Verb, there are three pieces of evidence that OVS in Polish is not about V^0 -movement but, instead, it involves RM of the TP to the exclusion of the Subject (which stays in its criterial Subject- ϕ position above TP after it is raised from its vP-internal θ -position). The evidence comes from the position of reflexive clitics, double object constructions, and the position of adverbs.

Consider first the placement of the reflexive clitic *się* in an OVS sentence.

- (13) a. Marii spodobał się brat Pawła.
 Mary-DAT liked REFL brother-NOM Paweł-GEN
 ‘Mary got attracted to Paweł’s brother’
 b. *Marii spodobał brat Pawła się
 Mary-DAT liked brother-NOM Paweł-GEN REFL

In (13-a) with the reflexive verb *podobać się* ‘like/please + refl’, it is not only the verb itself but the subtree containing verb and the reflexive clitic *się* that occupies the position before the Subject. As indicated in (13-b), stranding the reflexive clitic in the post-Subject position is in fact impossible.

In turn, in a double object construction as in (14), only the verb immediately precedes the Subject, and the clause initial position (below the optional Topic particle *to* ‘it’) can be occupied by either a single or both Objects. This latter possibility is illustrated in (14-c) and is expected if OVS is about the fronting of the subtree of a considerable size (“RM of the TP”) but not about a simple V^0 -movement.

- (14) a. (To) Marii dał Jan [swoją najnowszą książkę]. (O_{ind} VSO)
 (it) Mary-DAT gave Jan-NOM [his newest book]-ACC
 b. (To) [swoją najnowszą książkę] dał Paweł Marii. ($OVSO_{ind}$)
 (it) [his newest book]-ACC gave Jan-NOM Mary-DAT
 c. (To) Marii [swoją najnowszą książkę] dał Jan. (O_{ind} OVS)
 (it) Mary-DAT [his newest book]-ACC gave Jan-NOM
 ‘Jan gave his newest book to Mary.’

Thirdly, as indicated in sentences like in (15) or (16), certain frequentive and perfective adverbs precede the Subject in OVS constructions:

- (15) Marię często/zawsze irytowały [historie ze swojego dzieciństwa]
 Mary-ACC often/always irritated [stories from self’s childhood]-NOM
 (*często/*zawsze).
 (*often/*always)
 ‘Stories from Mary’s childhood (often/always) irritated her.’

- (16) Marii (często/zawsze) podobał się [brat Jana]
Mary-DAT (often/always) liked REFL [Jan's brother]-NOM
(*często/*zawsze).
(*often/*always)
'Mary would (always/often) get attracted to Jan's brother.'

In sentences like above we observe that adverbs like 'always' or 'often' must precede the verb in the fronted constituent and they cannot be stranded behind the surface position of the Subject. Thus, given the relevant subset of Cinque's Hierarchy of Adverbs as in (17), the placement of adverbs constitutes a challenge to an analysis based on V^0 -movement.

- (17) $T_{Past}P > \dots > often > \dots > always > \dots > vP$ (Cinque (1999, 106))

These three facts strongly suggest that in an OVS construction, it is not the verb itself but rather an entire clausal subtree ("TP") that is fronted above the surface position of the Subject.⁵

5. The Surface Position of the Subject

The surface OVS order could also be hypothesized to involve individual movements of the Object and the verb above the Subject, under the supposition that the Subject does not raise to its canonical position in Spec- ϕ P but, instead, stays in situ in the vP.⁶ However, the hypothesis that the Subject in OVS sentences stays in situ in the vP must be rejected on the basis of word order facts and the ambiguous scope between the Subject and sentential negation. These facts indicate that the Subject in OVS constructions obligatorily raises to its criterial Subject position (Spec- ϕ P) just like in canonical SVO sentences.

5.1 Word Order

In canonical SVO sentences in Polish, the Subject obligatorily raises to its criterial Subject position. This is indicated by the fact that in stylistically unmarked declarative SVO sentences, which can serve as an answer to the question 'What happened?', tense adverbs, temporal and modal auxiliaries, modal particles, and sentential negation all follow the Subject and precede the verb. This holds in both singleton and double object sentences, as shown in (18) and (19).⁷

- (18) Jan by nigdy nie dał Marii kwiatów.
Jan-NOM MOD-PRT never not gave-3SG.MSC Mary-DAT flowers-GEN
'Jan would never give Mary flowers.'

⁵Note that this conclusion about Polish OVS is in line with what Slioussar (2006) has proposed for apparent V^0 -fronting in the Russian OVS, contra Bailyn (2003), (2004).

⁶Such an alternative hypothesis is in fact already challenged by the adverb placement facts in (15) or (16).

⁷GEN on the direct Object appears in the presence of sentential negation (the so-called 'Genitive of Negation'). In the absence of Neg, the direct Object surfaces in ACC in both singleton and double object sentences (see, for instance, (3) or (4)).

- (19) Jan wczoraj mógł nie pić tyle wina.
 Jan-NOM yesterday might-3SG.MSC not drink-INF so-much wine-GEN
 ‘Jan shouldn’t have drunk so much wine yesterday.’

Clearly, the Subject cannot be left in situ in its base-generated position in the vP:

- (20) * ___ by nigdy nie dał Jan Marii kwiatów.
 MOD-PRT never not gave-3SG.MSC Jan-NOM Mary-DAT flowers-GEN
 ‘Jan would never give Mary flowers.’

5.2 Inverse Scope between the Subject and Neg

Further evidence for Subject-raising to its surface position comes from the ambiguous scope between the Subject and sentential negation.

- (21) Wszyscy nie żyją. $\forall > \neg; \neg > \forall$
 all/everybod-NOM not live-3PL
 ‘Everybody is dead.’
- (22) Wszystkie dzieci nie zjadły jeszcze mielonki. $\forall > \neg; \neg > \forall$
 all children-NOM not ate-3PL yet spam-ACC
 ‘All the children haven’t eaten the spam yet.’

In sentences such as in (21) or (22), the inverse scope between the quantificational Subject and Neg is perhaps best accounted for in terms of the reconstruction of the Subject in the position of its lower copy in the vP, below NegP. Importantly, the inverse scope between the Subject and Neg holds also in OVS sentences:

- (23) Mielonki nie zjadły jeszcze wszystkie dzieci. $\forall > \neg; \neg > \forall$ (O Neg V ‘yet’ S)
 spam-ACC not ate-3PL yet all children-NOM
 ‘All the children haven’t eaten the spam yet.’

Under the remnant movement analysis proposed in (7)–(9), the $\forall > \neg$ scope in (23) is predicted, as the Subject c-commands Neg before Neg is fronted as a subconstituent of the remnant TP, as in (24):

- (24) $[_{FocP} \mathbf{Obj} [_{\Sigma P} [_{TP} \dots [_{NegP} \mathbf{Neg} [_{vP} <Subj> [\mathbf{V} [<Obj>]]]]]]] [_{\phi P} \mathbf{Subj} <TP>]]]$
-

In turn, the $\forall > \neg$ scope in ONegVS sentences is not predicted by an alternative analysis which assumes that the Subject does not raise to its surface position (above NegP) and stays in situ in the vP, given the functional sequence NegP > vP.

6. Solving the Puzzles

6.1 Re: Puzzles #1 and #2

If the derivational scenario in (7)–(9) holds and OVS involves the fronting of the remnant TP, puzzles #1 and #2 are readily resolved at this point in a straightforward way. As we see in (25-a), the fronting of the *wh*-Object does not produce the WCO effect in OVS since its movement does not cross the Subject (in Spec- ϕ P). This happens so since the Object c-commands the Subject only after it ultimately moves to its final position in Spec-FocP. Thus, in terms of Collins (2005a), (2005b) the Object is ‘smuggled’ in the fronted TP across the Subject. In contrast, the *wh*-movement of the Object leading to OSV as in (25-b) is correctly expected to produce the WCO effect, as the Object fronting quite obviously does cross the Subject in this case.

- (25) a. $\checkmark [_{QP} \mathbf{whO}_i \dots [_{\Sigma P} [_{TP} \dots \mathbf{V} \dots \langle \mathbf{whO}_i \rangle] [_{\phi P} \mathbf{S}_i \dots \langle \mathbf{TP} \rangle]]] (\mathbf{O}_{wh} \mathbf{VS})$
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- b. $?? [_{QP} \mathbf{whO}_i \dots [_{\Sigma P} [_{\phi P} \mathbf{S}_i [_{TP} \dots \mathbf{V} \dots \langle \mathbf{whO}_i \rangle]]] (\mathbf{O}_{wh} \mathbf{SV})$
-

Likewise, puzzle #2 with Focus-movement of the Object in OVS sentences reflects the same scenario that holds for *wh*-movement of the Object in such sentences (cf. (25-a)). As we see in (26), the remnant TP-fronting across the Subject which smuggles a co-referential Object will not lead to a WCO violation, as the subsequent Focus-movement of the Object does not cross the Subject.

- (26) $\checkmark [_{FocP} \mathbf{O}_i \dots [_{\Sigma P} [_{TP} \dots \mathbf{V} \dots \langle \mathbf{O}_i \rangle] [_{\phi P} \mathbf{S}_i \dots \langle \mathbf{TP} \rangle]]] (\mathbf{O}_{foc} \mathbf{VS})$
-

Thus, the difference between puzzles #1 and #2 reduces to the subtype of A'-dependency derived by Object-fronting (*wh* and *Foc*, respectively).

6.2 Re: Puzzle #3

With respect to puzzle #3, if the derivation involving the fronting of the remnant TP is on the right track, then there are two independent reasons why (5-a) is ill-formed, and—as I attempt to show below—none of these reasons applies to the well-formed variant in (5-b).

Consider one more time (5-a), repeated below as (27), with an OVS sentence where the Experiencer Object fails to bind the anaphor inside the Agent Subject.

- (27) **Marię_i irytowali [sąsiedzi ze swojej_i kamienicy]*
 Mary-EXP irritated [neighbors-NOM from self house]-AG
 ‘Mary was irritated by her neighbors from her apartment-house.’

The derivation of (5-a)/(27) according to the scenario in (7)–(9) proceeds as follows:

- (28) Step 1: [$_{FocP}$... [$_{\Sigma P}$... [$_{\phi P}$ AG_i ... [$_{TP}$... [$_{vP}$ $\langle AG_i \rangle$ [V [EXP_i]]]]]]]]]
 Step 2: [$_{FocP}$... [$_{\Sigma P}$ [$_{TP}$... [$_{vP}$ $\langle AG_i \rangle$ [V [EXP_i]]]] [$_{\phi P}$ AG_i $\langle TP \rangle$]]]
 Step 3: * [$_{FocP}$ EXP_i [$_{\Sigma P}$ [$_{TP}$... [$_{vP}$ $\langle AG_i \rangle$ [V [$\langle EXP_i \rangle$]]]]] [$_{\phi P}$ AG_i $\langle TP \rangle$]]]

In the 1st step of the derivation in (28), the Agent Subject raises from its vP-internal θ -position to its surface Subject-agreement position in Spec- ϕ P. Importantly, AGENT is base-generated above EXP (cf. assumption about the θ -hierarchy in (6)), to the effect that EXP does not bind AGENT. Next, in the 2nd step, the remnant TP is fronted to Σ P, a position above the raised AGENT-Subject. At this point, the EXP still does not bind the AGENT, since the former is embedded inside the larger TP-constituent and does not c-command the latter. In the final 3rd step, the EXP Object is A'-fronted to Spec-FocP. At this point, the EXP does c-command the AGENT but it fails to properly bind it since anaphoric binding is impossible from an A'-position⁸

At the same time, the construction in (5-a)/(27) also appears to be ruled out by WCO.⁹ The reason for which puzzle #3 can be also about WCO is that Focus movement of the Object to the functional specifier in the left-periphery is of the A'-type and the puzzle involves co-indexed dependents. If this is the case, then step 3 of the derivation produces the WCO effect, as the A'-fronted EXP crosses the silent copy of the Agent Subject with a co-indexed reflexive pronoun.

In contrast, the variant with the co-indexed EXP and the THEME—repeated in (29)—is well-formed, since here the EXP does bind the THEME from its base position in the vP. Moreover, this variant involves a nesting dependency between the co-indexed arguments.

- (29) Marię_i irytowały [historie ze swojego_i dzieciństwa] (=5b))
 Mary-**EXP** irritated [stories-NOM from self childhood]-**TH**
 'Mary was irritated by the stories from her childhood.'

The derivation with a remnant TP-movement proceeds as in (30):

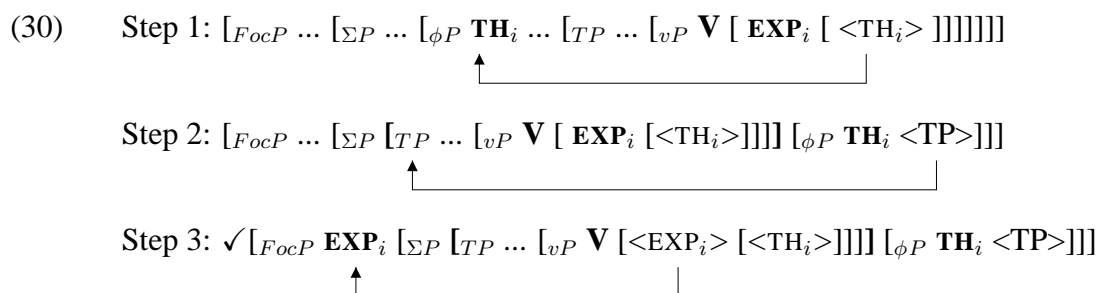
⁸Examples of impossible anaphoric binding from an A'-position:

- (i) *Who_i do [each other's_i supporters] like $\langle who_i \rangle$?
 (ii) *Who_i does himself_i like $\langle who_i \rangle$?

⁹Assuming that DPs which contain a reflexive pronoun can be relevant in WCO, as it is the case for instance in (i):

- (i) *Who_i did a friend of {his_i/himself_i} call $\langle who_i \rangle$? (Büring (2005, 165))

Paths in remnant movement



According to the θ -hierarchy, whereby the EXP is generated above the THEME (cf. (6)), the relevant difference between the two variants surfaces at step 3 of the derivation where the copy of the A'-fronted EXP c-commands the copy of the A-fronted THEME Subject. So, in both variants there is an EXP antecedent which ultimately c-commands the Subject from its surface A'-position (in the FocP), but only in the well-formed variant does the copy of the antecedent c-command the Subject from an A-position. Likewise, if this puzzle can be reduced to the asymmetry in feeding/bleeding WCO, then we also see that after the remnant TP-movement 'smuggles' the EXP Object, the subsequent extraction of the EXP Object does not cross (the copy of) the THEME Subject.

7. Conclusion

I have made a case for RM that targets entire clausal subtrees. In particular, I have tried to demonstrate that the three robust asymmetries between canonical SVO and non-canonical OVS constructions in Polish all reduce to dependency relations derived by RM. In this way, if RM can target subtrees of a considerable size, certain phenomena at the sentence level can receive a structural, hence straightforward, account.

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