Bartosz Wiland

Adam Mickiewicz University in Poznań

Le Charme Discret of Remnant Movement: Crossing and Nesting in Polish OVS Sentences*

Abstract

Remnant movement, once believed not to be a part of grammar at all, has since become a tool of analyzing phenomena like verb fronting, word order alternations, or covert movement. What has been largely missing from the discussion of remnant movement are the effects a remnant constituent has on the nodes in the clause it has crossed. This paper argues that remnant movement has particular consequences for clausal syntax since it gives rise to crossing and nesting movement dependencies. This point is illustrated on the example of certain robust asymmetries in the Polish OVS syntax. The analysis of Polish OVS sentences has a broader benefit, namely that the proper identification of crossing and nesting paths provides convergent evidence for the existence of remnant movement in the first place.

Streszczenie

Przesunięcie pozostałości składnika, do niedawna w literaturze przedmiotu uważane za niewystępujące w gramatyce, stało się ważnym narzędziem analitycznym w zjawiskach przesunięć czasownika, derywacji szyku wyrazowego, czy przesunięć skrytych. Efekty, jakie przesunięcie pozostałości składnika ma dla innych struktur zdania, są jednak pomijane w dyskusjach dotyczących tego typu przesunięć. Niniejszy tekst przedstawia tezę, że wystąpienie przesunięcia pozostałości składnika powoduje konkretne konsekwencje dla składni zdania, ponieważ powoduje ono powstanie zależności skrzyżowanych oraz

zagnieżdżonych względem pozostałych składników konstrukcji. Zjawisko to jest zilustrowane na wybranych przykładach wyraźnych asymetrii obserwowanych w składni zdań o uszeregowaniu dopełnienie–czasownik–podmiot w języku polskim. Analiza tego typu konstrukcji wraz z wyjaśnieniem asymetrii obserwowanych pomiędzy nimi i konstrukcjami o szyku podstawowym (neutralnym) w zakresie tzw. efektu słabego przekroczenia oraz wiązań anaforycznych stanowi silny argument za występowaniem przesunięć pozostałości składnika w gramatyce języka naturalnego.

Słowa kluczowe
przesunięcie pozostałości, przemycanie, wiązania, efekt słabego skrzyżowania, składnia języka polskiego

1. Introduction

Since its appreciation in the late 90s, remnant movement has been implored to account for certain word order permutations (e.g. Kayne (1998)) and advanced as a replacement for head movement (e.g. Hinterhölzl (1999), among many others). Remnant movement, traditionally defined as a remerger of a constituent with an ungoverned trace, can in principle target constituents of different sizes, including constituents with only a single overt element (which is the case with reanalyses of head movement as remnant movement), but also constituents of a considerable size, only a single element of which is a trace and several other elements are overt.

This paper focuses on and makes a case for the existence of the latter scenario, in particular remnant movement of entire clausal subtrees in Polish. The analysis provides a uniform solution to three robust SVO–OVS asymmetries in weak cross-over and binding in a structural way.

2. Asymmetries in the Polish SVO/OVS syntax

2.1. The canonical position of objects

Polish is a consistent head-initial SVO language, as in (1), which allows for non-canonical OVS word orders, as in (2).[1]

---

[1] The genitive case of the object in (1b) and (2b) is an instance of the Genitive-of-Negation, a phenomenon whereby a nominal object with a structural case in an affirmative clause surfaces with a genitive case in the scope of sentential negation. Gen-of-Neg will not be discussed in the remainder of the paper; (1b) and (2b) are provided in order to indicate the position of sentential negation in SVO sentences.

(1) Canonical SVO:
    a. Jan   kocha   Marię.
       Jan-NOM loves   Mary-ACC
       'Jan loves Mary.'
    b. Jan   nie   kocha   Marii.
       Jan-NOM not   loves   Mary-GEN
       'Jan does not love Mary.'

(2) Non-canonical OVS:
    a. Marię   kocha   Jan.
       Mary-ACC   loves Jan-NOM
       'Jan loves Mary.'
    b. Marii   nie   kocha   Jan.
       Mary-GEN   not   loves   Jan-NOM
       'Jan does not love Mary.'

Although the canonical SVO word order in Polish can be altered by object scrambling, there exists convincing evidence that the basic/unmarked order of an affirmative monotransitive sentence in Polish is indeed SVO and the basic/unmarked word order of a double object construction is S-V-Indirect Object (IO)-Direct Object (DO). The relevant facts come from often discussed asymmetries in binding (see, a.o., Willim (1989) and Witkoś (2003), (2007)) and the syntax of idioms discussed in detail in Witkoś and Dziemianko (2006).

Further evidence for S-V-(IO)-DO as basic (as opposed to, e.g., S-V-DO-IO or S-DO-V-IO, which are derived by scrambling) comes from pragmatically unmarked answers and scope reconstruction facts.[2]

The basic word order of a double object construction in Polish is S-V-IO-DO. This is indicated by the fact that only this order, as for instance in (3) or (4), can serve as a pragmatically unmarked answer to the question 'What happened?':

(3) Jan   dał   Marii   swoją   najnowszą   książkę.   S-V-IO-DO
    Jan-NOM   gave   Mary-DAT   his   newest   book-ACC
    'Jan gave Mary his newest book.'

(4) Jan   posłał   Marii   list   miłosny.   S-V-IO-DO
    Jan-NOM   sent   Mary-DAT   letter-ACC   love-ADJ
    'Jan sent Mary a love letter.'

---

[2] For the purposes of this paper, I only briefly report on an often made assumption that the S-V-IO-DO word order is basic in Polish and other word orders result from short or long-distance scrambling. For a more elaborate argumentation, see Witkoś (2003, 2007), Witkoś and Dziemianko (2006), and Wiland (2009), where it is argued that word orders other than S-V-IO-DO in Polish are all derived by discourse-sensitive movements.

In turn, the fact that the S-V-DO-IO word order is derived from the canonical S-V-IO-DO order by a local scrambling of the DO across the IO is indicated by scope reconstruction. Consider the sentences in (5). When both internal arguments are quantificational and the IO precedes the DO, only the surface scope reading is available, as in (5a). When the DO is placed in front of the IO as in (5b), both narrow and wide scope readings are available, which indicates that the IO c-commands the trace of the DO, given standard assumption about the c-command requirement on scope in syntax.

(5) a. Piotr dał   [jakiemuś chłopcu] [każdą naszą monetę] $\exists > \forall$
       Piotr gave   some   boy-DAT   each our   coin-ACC
    b. Piotr dał   [każdą naszą monetę]   [jakiemuś chłopcu] $\forall > \exists, \exists > \forall$
       Piotr gave   each our   coin-ACC some   boy-DAT
       'Piotr gave some boy each coin of ours.'

In the remainder of the paper I will continue to assume that the SVO order is basic, the position now widely accepted in the literature on the Polish word order.

    There are three robust asymmetries between canonical SVO and non-canonical OVS sentences in Polish: the sensitivity of wh-movement and object-fronting with respect to weak cross-over and binding contrasts with experiencer verbs.

2.2. WCO asymmetry in wh-movement

Weak cross-over effects arise when a quantificational operator (WH, Focus, or a quantifier like *everyone)* c-commands a pronoun it binds, as in (6).

(6) *Who$_i$ does [his$_i$ mother] like t$_i$?

In other words, the WCO effect configuration is as follows, where the pronoun$_i$ and the trace t$_i$ do not c-command each other:[3]

(7) *Op$_i$ ... pronoun$_i$ ... t$_i$

In contrast, as illustrated by a well-formed (8), in an environment such as (9), where the trace of the quantifier is in an A-position, the WCO effect does not arise.

(8) Who$_i$ t$_i$ loves [his$_i$ mother]?

(9) Op$_i$ ... t$_i$ ... pronoun$_i$

---

[3] If the pronoun$_i$ and the trace t$_i$ c-command each other, the strong cross-over effect arises, as in the ill-formed (i):
(i) *Who$_i$ did she$_i$ think [t$_i$ looked beautiful]?

But in OVS constructions, which on the surface may look like an instance of (7), the wh- movement of the object does not give rise to weak cross-over, as in the (a) examples below. In contrast, wh-movement is sensitive to WCO in OSV constructions, as in the (b) examples:

(10) 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$_i$ did his$_i$ wife poison?' (intended)

(11) a. [Którą dziewczynkę]$_i$ odebrała ze szkoły   jej$_i$ matka?   O$_{wh}$VS
         which girl-ACC   took   from school her   mother
     b. ??[Którą dziewczynkę]$_i$ jej$_i$ matka   odebrała   ze szkoły?   O$_{wh}$SV
         which girl-ACC   her   mother took   from school
         'Which girl$_i$ did her$_i$ mother pick up from school?' (intended)

(12) a. Kogo$_i$ uratował [jego$_i$ ojciec]?   O$_{wh}$VS
         who-ACC rescued   his   father-NOM
     b. Kogo$_i$ [jego$_i$ ojciec]   uratował?   O$_{wh}$SV
         who-ACC his   father-NOM rescued
         'Who did his father rescue?'

The contrast is not limited to the fronting of accusative whPs, as dative indirect wh-objects produce a similar result:

(13) a. Komu$_i$ podarował [jego$_i$ ojciec]   zegarek?   IO$_{wh}$VSDO
         who-DAT gave   his   father-NOM watch-ACC
     b. *Komu$_i$ [jego$_i$ ojciec]   podarował   zegarek?   IO$_{wh}$SVDO
         who-DAT his   father-NOM   gave   watch-ACC
         'Who did his father give a watch to?'

2.3. WCO asymmetry in object fronting

Just like wh-movement, Focus-fronting also gives rise to the WCO effect. This can be seen in an often discussed contrast between (non-quantificational) Topic-fronting in (14a) and (quantificational) Focus-fronting in (14b) in Italian given in Rizzi (1997):

(14) a. Gianni$_i$, [sua$_i$ madre] lo$_i$ ha sempre apprezzato.
         Gianni   his mother him has always appreciated
     b. ??GIANNI$_i$ [sua$_i$ madre] ha sempre apprezzato   (non Piero).
         Gianni   his mother has always appreciated (not Piero)
         'Gianni, his mother always appreciated him.'

Similarly to wh-movement, object-fronting in OVS constructions does not produce the WCO effect either, as in (15a) or (16a). The canonical SVO orders

like in (15b) or (16b) are ill-formed due to a general prohibition on backward pronominalization in Polish.[4]

(15) a. Piotra$_i$ kocha [jego$_i$ mama].   OVS
       Piotr-ACC loves   his   mom-NOM
   b. *[Jego$_i$ mama]   kocha Piotra$_i$.   SVO
       his   mom-NOM loves Piotr-ACC
       'His mom loves Piotr.' (example from Witkoś (2008: 317))

(16) a. Marii$_i$ nie lubi   [jej$_{i/j}$ siostra].   OVS
       Mary-DAT not likes her   sister-NOM
   b. *[Jej$_i$ siostra]   nie   lubi Marii$_i$.   SVO
       her   sister-NOM not likes Mary-DAT
       'Her sister does not like Mary.'

In contrast, object fronting to the left periphery of the clause is sensitive to WCO elsewhere, as for instance in (17) or (18), where the fronting of the direct object over the indirect object with a coindexed pronoun produces a certain degree of ill-formedness.

(17) [Syna   Kowalskich]$_i$ porywacz   odesłał   [jego$_{??i/j}$ mamie].
     son-ACC Kowalski-GEN.PL kidnapper-NOM sent-back   his   mom-DAT
     'The Kowalski's son, the kidnapper sent back to his mom.'

(18) Piotra$_i$, wczoraj sekretarka   przedstawiła [jego$_{??i/j}$ nowemu szefowi].
     Piotr-ACC yesterday secretary-NOM introduced   his   new   boss-DAT
     'The secretary introduced Piotr to his new boss.'

It is important to note that only certain instances of object-fronting to the left periphery produce an observable yet rather moderate degree of the WCO effect. Sentences like in (17–18) contrast with sentences in which the fronted object is followed by a particle *to* 'it', which do not exhibit the WCO effect at all.

(19) [Syna   Kowalskich]$_i$ **to**   policja   odesłała   [jego$_{i/j}$ mamie].
     son-ACC Kowalskis it-PRT police-NOM sent-back   his   mom-DAT
     'The son of the Kowalskis, the police sent back to his mom.'

---

[4] In Polish, the dispreference toward cataphoric relations in A-contexts is robust and is not limited to subjects. We observe it also in clause internal scrambling where the accusative direct object is fronted to a position before the dative indirect object, like in (ii):

(i)   Jan   zwrócił [adwokatom żony$_i$] [jej$_{i/j}$ pieniądze].
      Jan-NOM returned attorneys   wife-DAT her money-ACC
(ii) Jan   zwrócił [jej$_{*i/j}$ pieniądze] [adwokatom żony$_i$].
      Jan-NOM returned her   money-ACC attorneys wife-DAT
      'Jan returned his wife's attorneys their money.' (examples from Wiland (2009: 12))

The ill-formedness of (15b–16b) might also be due to Condition C violation if the referential features of pronouns contained in an NP can percolate to the NP, as argued for in Despić (2013), or due to a combination of both constraints holding at the same time in such a configuration.

(20) Piotra*i*, **to** wczoraj sekretarka przedstawiła [jego*i/j* nowemu szefowi].

Piotr-ACC it-PRT yesterday secretary-NOM introduced his new boss-DAT

'The secretary introduced Piotr to his new boss.'

This contrast follows from the fact that constituents placed in front of *to* are fronted Topics, which contrary to Focus-fronted constituents, do not give rise to WCO in a way similar to what we see in the Italian contrast in (14a–b). We will resume this issue in section 4.

In summary, it turns out that while wh- and object-fronting in OSV orders give rise to the WCO effect in the relevant contexts, both wh- and object-fronting obviate the WCO effect in OVS orders.

2.4. Agent vs. theme binding asymmetry with experiencer verbs

As reported in Tajsner (2008: 349), in constructions with experiencer verbs (which include psych verbs like *irytować* 'irritate', *straszyć* 'frighten', *zasmucić* 'sadden', etc.), the experiencer object in OVS sentences fails to bind the anaphor inside the agent subject, while it properly binds the anaphor inside the theme subject, as in the (a) and (b) examples, respectively:

(21) a. *Marię*i* irytowali [sąsiedzi ze swojej*i* kamienicy].

Mary-EXP.ACC irritated neighbors-NOM from self house - AGENT

'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 - AGENT

'Mary was irritated by the stories from her childhood.'

(22) a. *Jana*i* przestraszyli [doradcy ze swojego*i* banku].

Jan-EXP.ACC frightened counsellors-NOM from self bank - AGENT

'Jan was frightened by financial counsellors from his bank.'

b. Jana*i* przestraszył [stan swojego*i* konta].

Jan-EXP.ACC frightened balance-NOM self account - THEME

'Jan was frightened by the balance of his bank account.'

(23) a. *Właściciela*i* zasmucił [księgowy swojej*i* firmy]

owner-EXP.ACC saddened consultant-NOM self firm - AGENT

'The owner was saddened by the accountant of his company.'

b. Właściciela*i* zasmuciły [wyniki sprzedaży swojej*i* firmy].

owner-EXP.ACC saddened sales revenue-NOM self firm - THEME

'The owner was saddened by the sales revenue of his company.'

As pointed out in Tajsner's work, the extension of the binding domain past the NP boundary is lost in the case of experiencer verbs if the NP includes a possessive lexical subject:

(24) Marię$_i$ irytowały   [ich$_j$ historie   o   sobie∗$_{i/j}$].
     Maria-EXP.ACC irritated   their stories-NOM about self
     'Mary was irritated by their stories about themselves.'

This holds true also of experiencer verbs which take dative subjects:

(25) a. Marii$_i$ spodobała   się [ta   historia   o   sobie$_i$].
        Maria-DAT appealed.to CL   that history-NOM about self
        'Maria liked that history about herself.'
     b. Marii$_i$ spodobała   się [ich$_i$ historia   o   sobie∗$_{i/j}$].
        Maria-DAT appealed.to CL   their   story-NOM about self
        'Maria liked their story about themselves.'

Nevertheless, this contrast in binding from experiencer subjects into agents vs. themes illustrated in (21–23) is not reduced to a general prohibition against the extension of the binding domain since it does not hold in the case of binding from non-experiencers. This is illustrated in (26) where the binding from a sentential agent subject into the theme NP object which has a lexical possessive is licit.

(26) Maria$_i$ przeczytała [ich$_j$ historie   o   sobie$_{i/j}$].
     Maria-NOM read   their stories-NOM about self
     'Mary read their stories about herself/themselves.'

3. The form of the solution

3.1. Assumptions

In what follows, I advance a uniform account of the three asymmetries which rests on two basic assumptions, namely (i) the reduction of the θ-hierarchy to the hierarchy of syntactic positions and (ii) the role of c-command between the nodes.
    The first assumption is in line with the well-established cartographic approach to syntactic representations, which advances the reduction of all sort of syntactic hierarchies to the one and only hierarchy of functional projections in syntax (cf. Cinque and Rizzi (2008: 50)).[5] Under this assumption, the

---

[5] Examples of such analyses include the reduction of the Silverstein's Hierarchy to a sequence of nominal projections (Jabłońska (2008)), the reduction of the Blake's (1994) Case Hierarchy to the sequence of individual Case layers (Caha (2009)), the reduction of the hierarchy of directional expressions to the sequence of syntactically represented Locations and Paths (e.g. Pantcheva (2010) or Svenonius (2008), (2010)), or the association of prefix stacking patterns in Polish to the hierarchy of aspectual projections (Wiland (2012)), among others.

θ-hierarchy of Agent > Experiencer > Goal > Theme (e.g. Belletti and Rizzi (1988); Jackendoff (1990); Van Valin (1990); Grimshaw (1990), among others) reflects the relative order in which arguments are merged in the articulate vP, as roughly represented in (27).

(27)

```
              vP
            ╱  ╲
       AGENT    ╲
              ╱  ╲
           F₁P    ╲
          ╱  ╲
       EXP    ╲
            ╱  ╲
         F₂P    ╲
        ╱  ╲
     GOAL    ╲
          ╱  ╲
       F₃P    ╲
      ╱  ╲
  THEME    ╲
             …
```
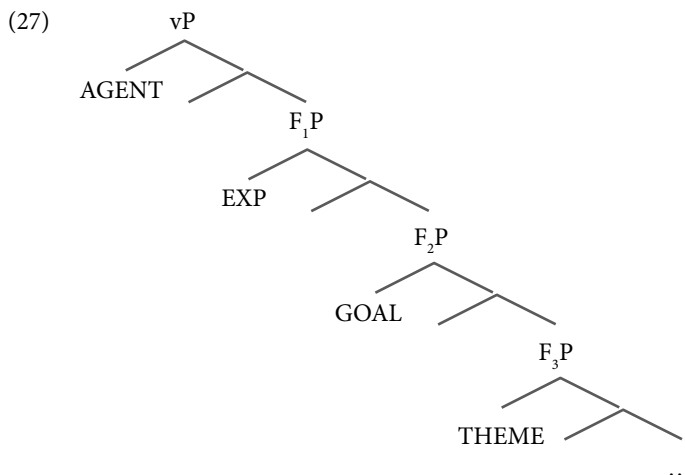
For present purposes, I will continue to refer to FnPs inside the vP simply as placeholders indicating layers of embedding without making or adopting auxiliary claims about their feature content. Note that (27) is not merely a consequence of adopting a fine-grained approach to syntactic representations. Analyses couched within a different set of assumptions about the degree of decomposition of the vP have recognized independent reasons for adopting a hierarchically layered VP (e.g. 'VP shells' in Larson (2014) or serial verb structure in Aboh (2009)). In order to observe that asymmetries in WCO and binding like in (10–23) teach us that remnant movement creates nesting and crossing dependencies at a clause level, all we need to assume is any version of the vP that links the θ-hierarchy to syntactic positions.

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

3.2. Analysis

In what follows, I argue that the non-canonical OVS word order does not involve independent movements of the object and the verb across the subject but instead it involves the remnant movement of the entire TP above the surface position of the subject merged in a higher Spec-ϕP.[6] This remnant TP fronting,

---

[6] This contrasts with accounts of OVS in Polish in Witkoś (2008) and Tajsner (2008), which are to a certain approximation based on the analysis of a similar OVS in Russian in Bailyn

which includes the silent copy of the subject, feeds object-fronting to the left
periphery of the clause, in particular to the specifier of Q(estion)P (in the case
of wh-movement as in (10) or (11)) and FocP or TopP (in the case of object-
fronting as in (17)).[7]

The three relevant steps of the derivation of OVS are as outlined in (28–30).

(28) Step 1: subject raising to Spec-ϕP

---

(29) Step 2: remnant TP fronting to a position above the subject (Spec-ΣP)

(30) Step 3: wh-movement or discourse-related movement of the object (experiencer, goal, or theme) to a projection in the left periphery of the clause (QP, FocP, or TopP)

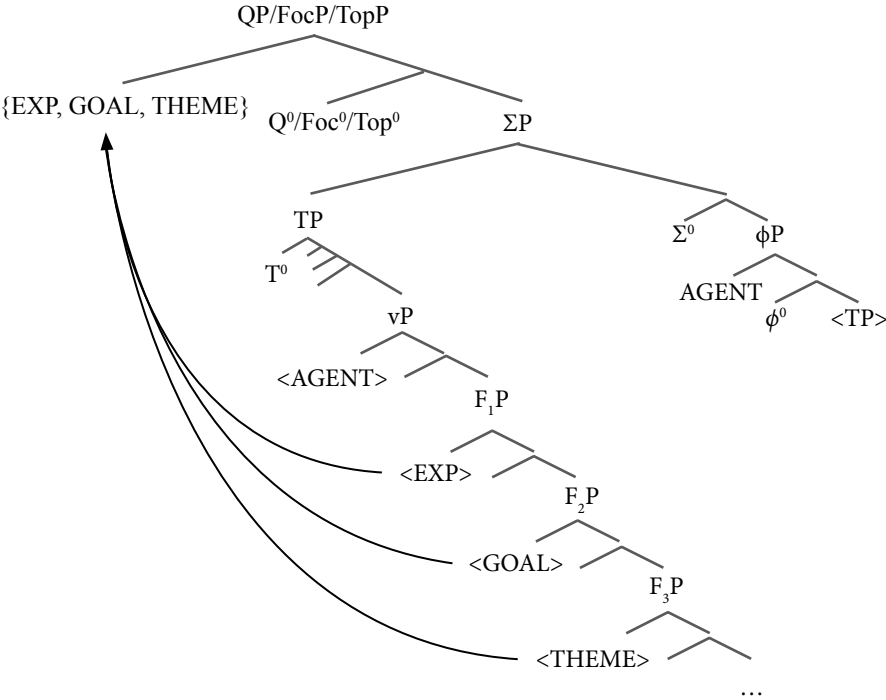In Step 1, the closest NP overtly raises from its θ-position in the vP to its surface position (in Spec-ϕP) to satisfy the classic EPP requirement on subjects. This is the position where nominative case is licensed.

It is quite clear that subjects in Polish raise higher than TP, given the fact that they precede higher modal particles and other material of the articulate functional area above the vP (see Migdalski (2006) for an extensive discussion). One of the indicators of a high position of subjects is their placement above temporal adverbs like *dzisiaj* 'today' or *wczoraj* 'yesterday', which are often taken to modify the TP:[8]

(31) Maria   {dzisiaj, wczoraj}   zrobiła zakupy.
     Maria-NOM   today   yesterday   made   shopping-ACC
     'Yesterday/today Maria did the shopping.'

Moreover, Polish verbs agree with subjects in person, number and gender, which are lexicalized as a fusional agreement morpheme on the verb or auxiliaries, as in the following format of the Polish verb (cf. Zagórska-Brooks (1975); Gussmann (1980); Czaykowska-Higgins (1988), a.o.):

(32) **Morphological structure of the Polish verb**
     (PREFIX) - ROOT - THEME - PARTICIPLE - ϕ-AGR
     a. z   - rob - i - L - a   (active non-present: L-participle)
         PREF - do - I - L - FEM.3SG
         '(she has) done (it)'
     b. z   - rob - i - (o)n - a   (passive: N/T-participle)
         PREF - do - I - N   - FEM.3SG
         '(she has been) done'

The structure of the Polish verb comprises the root, which can be optionally preceded by a prefix, a thematic morpheme (the so-called theme vowel), the participle morpheme (L for active nonpresent tense, and N/T for passive), and the subject agreement suffix. Given the mirror principle, the projection of ϕ agreement features must be merged above the tense (or passive) participle projection in syntax. For this reason, it has been often accepted that the subjects in Polish, as well as several other Slavic languages which exhibit similar properties, raise to Spec-ϕP above TP (e.g. Veselovská (1995) for Czech; Bailyn (2004) for Russian; and Witkoś (2008) for Polish), assuming for the ease of

---

[8] Stjepanović (2003) uses exactly the same argument of *today*-placement to indicate that subjects raise higher than TP in Serbo-Croatian. However, just like Bailyn's (2004) analysis of the OVS in Russian, Stjepanović's (2003) analysis of OVS in Serbo-Croatian is not based on remnant movement but on the mechanism of pronunciation of lower copies motivated by PF reasons. It is beyond the scope of this paper to review this approach in detail.

exposition that at least non-present tense L-participle roughly corresponds to the TP projection in syntax.[9]

In Step 2, the entire TP constituent, which includes the trace of the raised agent argument, undergoes remnant movement to a projection above the surface position of the subject. I will continue to label this projection as ΣP.[10]

Finally, in Step 3, any given internal argument of the vP, be it experiencer, goal, or theme, can become subsequently wh-fronted or Focus-fronted to the functional specifier in the left periphery of the clause to give the surface OVS word order. Since the accusative case is licensed vP-internally (or simply put, in a lower A-position than nominative), we correctly expect accusative objects to appear above nominative subjects as a result of A′-fronting to the left periphery of the clause, without any auxiliary assumptions about the hierarchy of case positions other than structural nominative > accusative.[11]

In what follows, I will first make a case for Steps 1 and 2. Next, it will be demonstrated that the asymmetries in the sensitivity to WCO and binding reflect the dependency relation created as a result of Step 3 in (30).

4. The position of the object and the verb in OVS sentences

4.1. The position of the object

What is essential in the investigation of the nature of the derivation resulting in the surface OVS word order is the observation that its intermediate step in (29) is independently attested. Namely, Step 2 predicts that VOS is well-formed in Polish. As demonstrated in the (b) examples below, this prediction is borne out.

---

[9] However, for a detailed syntactic structure of Polish and Czech L- and N/T-participles see Taraldsen Medová and Wiland (in press), where it is argued that different types of participles correspond to different kinds and amounts of projections that make up the participle zone of the clause.

[10] It (i.e. ΣP) is in fact orthogonal to the analysis (though, 'ΣP' is reminiscent of a projection put forward in Nilsen (2003), which in Wiklund et al. (2007) is taken to attract Topicalized non-subjects). What is important is that the entire remnant TP constituent becomes fronted to *some higher position* above the surface position of the subject. Section 4.2 presents positional evidence that this movement indeed takes place.

[11] In fact, given the recent work on case in Caha (2009) et seq., there is no cross-linguistic variation with respect to the height of positions in which cases are licensed. According to Caha's work, heads that select for (or 'check') nominative case (above the TP in Caha (2009) and in this work) are always higher than accusative selectors, which are in turn higher than genitive selectors, dative selectors, and other cases, if present in a given language, as in the hierarchy:

(i)   NOM > ACC > GEN > DAT > prepositional cases > INST > COMITATIVE

(33) a. Dzisiaj   nasza   babcia   zrobiła   zakupy.   SVO
       today   our   grandma-NOM   did   shopping-ACC

   b. Dzisiaj   zrobiła zakupy   nasza   babcia.   VOS
       today   did   shopping-ACC   our   grandma-NOM

   c. Dzisiaj   zakupy   zrobiła   nasza   babcia.   OVS
       today   shopping-ACC   did   our   grandma-ACC
       'Today, our grandma did the shopping.'

(34) a. Sąsiedzi   okradli   Marię.   SVO
       neighbors-NOM   robbed Mary-ACC

   b. Okradli   Marię$_i$ jej$_i$ własni   sąsiedzi.   VOS
       robbed   Mary-ACC   her   own   neighbors-NOM

   c. Marię$_i$ okradli jej$_i$ własni   sąsiedzi.   OVS
       Mary-ACC   robbed her   own   neighbors-NOM
       'Mary's neighbors robbed her.'

Likewise, the VOS/OVS pattern equally holds with PP objects, as shown below.

(35) a. Dzisiaj   nasza   babcia   poszła   na zakupy.   SVO
       today   our   grandma-NOM   went   on shopping-ACC

   b. Dzisiaj   poszła na zakupy   nasza babcia.   VOS
       today   went   on shopping-ACC   our   grandma-NOM

   c. Dzisiaj   na zakupy   poszła nasza babcia.   OVS
       today   on shopping-ACC   went   our   grandma-ACC
       'Today, our grandma did the shopping.'

With respect to the fronted position of the object, there exists positional evidence for its placement in the functional specifier[12] in the left periphery of the clause, which comes from Tajsner's (2008) work on the position of contrastive Topics and Foci in Polish.

Tajsner advances that the left-peripheral FocP is projected below TopP in Polish and argues that the Topic particle *to* 'it' optionally lexicalizes Top^0, to the effect that fronted contrastive Foci can be optionally preceded by *to*, whereas fronted Topics can be optionally followed by *to*, according to the representation in (36).

(36) **Topic > *to* > Focus > ...**

---
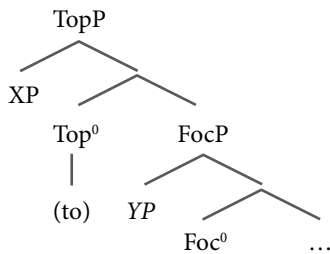
[12] The 'functional specifier' is used here in the same sense as in Rizzi (1997), et seq.

The fronted object can indeed either follow or precede the particle *to* in OVS sentences, as shown in (37a), but not in VOS sentences, as shown in (37b):

(37) a. (To)	Marię*i*	(to)	okradli	jej*i*	sąsiedzi.	OVS
(it)	Mary-ACC	(it)	robbed	her	neighbors-NOM	
b. (*To)	Okradli	(?*to)	Marię*i*	jej*i*	sąsiedzi.	VOS
(*it)	robbed	(?*it)	Mary-ACC	her	neighbors-NOM	

'Mary's neighbors robbed her.'

This positional evidence for Topicalized or Focalized status of the fronted object is corroborated by the question–answer tests. It has been often observed (e.g. Büring (1999)) that contrastive Topics are used in constructions which move the conversation away from a presupposition given in the previous discourse. Consider (38).

(38) A: Czy wiesz, kto wczoraj okradł Jana?
    'Do you know who robbed Jan yesterday?'

B: Wiem	tylko, że	Marię	(to)	okradli	jej	własni	sąsiedzi.
know-1SG	only	that	Mary-ACC	(it)	robbed	her	own	neighbors-NOM

    'I only know that it was Maria's own neighbors who robbed her.'

Speaker B's statement is not an answer to speaker A's question as it does not accommodate the presupposition that it was *Jan* who was robbed. Instead, speaker B provides a contrastively conveyed proposition. The constituent that is substituted, *Maria*, the object of robbery, is a contrastive Topic. As predicted by Tajsner's representation in (36), *Maria* can be optionally followed by the Topic particle *to*.

Another typical use of contrastive Topics are answers to pair-list questions like in (39) (e.g. Büring (2003); van Hoof (2003); Stoyanova (2008: 52)).

(39) A: Kogo okradli jacy złodzieje?
    whom robbed which thieves
    'Who was robbed by which thieves?'

B: Marię okradli jej sąsiedzi, Jana okradli
    Mary-ACC robbed her neighbors-NOM, Jan-ACC robbed
    nieznani sprawcy…
    unknown perpetrators-NOM
    'Maria was robbed by her own neighbors, Jan was robbed by unknown perpetrators…'

In speaker B's answer, the objects that belong to the asserted set are contrasted with each other.

In turn, the fronted object in OVS sentences can also serve as a left peripheral Focus. Consider (40), where speaker B's answer to speaker A's question includes a correction by a contrastive Focus, which is further manifested by the addition of a negative tag (e.g. Kiss (1998); Vallduví and Vilkuna (1998); Drubig (2003)).

(40) A: Powiedziano mi, że sąsiedzi okradli Jana. Wiesz coś o tym?
      'I was told that the neighbors robbed Jan. Do you know anything about it?'
     B: (To) Marię   okradli sąsiedzi,   (nie Jana).
        (it) Mary-ACC robbed neighbors-NOM (not Jan-ACC)
        'It was Mary who was robbed by the neighbors, not Jan.'

As predicted by the representation in (36), in such a case, the fronted object in an OVS sentence can be preceded by *to*.

All in all, both positional and interpretive facts indicate that the object in OVS sentences creates a position in the left periphery of the clause.

4.2. Remnant TP fronting

There are four pieces of evidence that OVS in Polish is not about simple verb movement but instead it involves movement of the entire TP, which includes the trace of the subject. The subject stays in its subject-ϕ position above TP after it raises from its vP-internal θ-position, as outlined in Step 2 in (29). Note that neither the central claim of this paper – that is that remnant movement targets entire subclauses, which in turn gives rise to crossing and nesting movement dependencies and their consequences at the sentence level – nor any piece of the argumentation in the remainder of this paper relies on the supposition that it is precisely the Tense projection that undergoes remnant movement. What is essential, instead, is that there exists a constituent of a considerable size that undergoes remnant movement, rather than an identification of its precise label. In what follows, it will be demonstrated that the constituent with a trace of a vP-internal subject that undergoes fronting is definitely larger than the vP but minimally smaller than the projection which the subject overtly moves to, i.e. ϕP. For this reason, I have labelled this projection as TP, but it might well become evident upon a detailed investigation that it is in fact an AspP or some other projection in the articulate IP-area in Polish that undergoes this fronting.

The evidence in favor of the remnant fronting a tree of a considerable size comes from the position of the reflexive clitic, double object constructions, and the position of adverbs. At the same time, these facts provide evidence against deriving OVS by a simple verb movement.[13]

Consider first the placement of the clitic *się* in OVS sentences.

---

[13] This conclusion about Polish OVS is to an extent in line with what Slioussar (2006) proposed as a replacement for head movement of V^0 in the Russian OVS. An analysis based on head V^0 movement is proposed in Bailyn's (2003), (2004) account of Russian OVS sentences and is further extended with modifications to the Polish OVS sentences in Witkoś (2008).

(41) a. Maria   przestraszyła się Jana.   SVO
        Mary-NOM scared   CL   Jan-ACC
        'Mary got scared of Jan.'
     b. Jana   przestraszyła się Maria.   OVS
        Jan-ACC   scared   CL   Mary-NOM
     c. *Jana   przestraszyła Maria   się.   OVS
        Jan-ACC   scared   Mary-NOM CL

(42) a. Brat   Pawła   spodobał się Marii.   SVO
        brother-NOM Paweł-GEN appealed.to CL   Mary-DAT
        'Mary got attracted to Paweł's brother.'
     b. Marii   spodobał się   brat   Pawła.   OVS
        Mary-DAT   appealed.to CL   brother-NOM Paweł-GEN
     c. *Marii   spodobał brat   Pawła   się.   OVS
        Mary-DAT   appealed.to brother-NOM Paweł-GEN CL

In (41b) and (42b) with *przestraszyć się* 'scare CL' and *podobać się* 'like/appeal
to CL', respectively, it is not only the verb itself but a constituent containing at
least the verb and the clitic *się* that occupies the position before the subject.
As indicated in (41c) or (42c), stranding the clitic in a post-subject position is
impossible, while the ill-formedness of these structures does not come from a
ban on splitting the verb and the clitic, since the two need not be adjacent, as
in well-formed (43).

(43) Marii   spodobał nagle   się brat   Pawła.
     Mary-DAT   liked   suddenly CL   brother-NOM Paweł-GEN
     'Mary got suddenly attracted to Paweł's brother.'

Consider now the positions of objects in OVS sentences with double object
verbs.

(44) a. Marii   dał   Jan   [swoją najnowszą książkę].   IO-V-S-DO
        Mary-DAT gave Jan-NOM his   newest   book-ACC
     b. [Swoją najnowszą książkę]   dał   Jan   Marii.   DO-V-S-IO
        his   newest   book-ACC   gave Jan-NOM Mary-DAT
     c. Marii   [swoją najnowszą książkę]   dał   Jan.   IO-DO-V-S
        Mary-DAT his   newest   book-ACC gave Jan-NOM
        'Jan gave his newest book to Mary.'

(45) a. Marii   posłał Jan   list   miłosny.   IO-V-S-DO
        Mary-DAT sent   Jan-NOM letter-ACC love
     b. List   miłosny posłał Jan   Marii.   DO-V-S-IO
        letter-ACC love   sent   Jan-NOM Mary-DAT
     c. Marii   list   miłosny posłał Jan.   IO-DO-V-S
        Mary-DAT letter   love   sent   Jan-NOM
        'Jan sent Mary a love letter.'

In (44) or (45) only the verb immediately precedes the subject and the clause initial position can be occupied by either a direct or indirect object or both. This latter possibility is illustrated in (44c) and (45c) and is expected if OVS sentences are derived by the fronting of a constituent of a considerable size rather than by a simple verb movement.

Another argument comes from the placement of frequentive and aspectual adverbs in OVS sentences in (46) or (47). These adverbs can only precede the subject in OVS constructions as in the (a) examples but follow the subject in canonical SVO sentences, as in the (b) examples:

(46) a. Marię   {często/zawsze} irytowały [historie   ze   swojego dzieciństwa]
        Mary-ACC often/always   irritated   stories-NOM from self's   childhood
        {*często/*zawsze}.
        often/always
     b. {*Często/*zawsze} [historie   ze   swojego dzieciństwa] {często/zawsze}
        often/always   stories-NOM from self's   childhood   often/always
        irytowały Marię.
        irritated   Mary-ACC
        'Stories from Mary's childhood {often/always} irritated her.'

(47) a. Marii   {często/zawsze} podobał się brat   Jana {*często/*zawsze}.
        Mary-DAT often/always   liked   CL brother-NOM Jan's often/always
     b. {*Często/*zawsze} brat   Jana {często/zawsze} podobał się Marii.
        often/always   brother-NOM Jan's often/always   liked   CL Mary-DAT
        'Mary would {always/often} feel attracted to Jan's brother.'

In sentences like above, adverbs 'always' or 'often' must precede the verb in the fronted constituent and cannot be stranded behind the surface position of the subject. Thus, given the relevant subset of Cinque's hierarchy of adverbs as in (48), the placement of adverbs constitutes a challenge to analyses of the OVS based on verb movement.

(48)   T*Past*P > ... > *often* > ... > *always* > ... > vP   (Cinque 1999: 106)

Instead, just like the position of clitics and double objects, the adverb placement facts indicate that in an OVS construction it is not the verb itself but rather an entire clausal subtree that is fronted above the surface position of the subject. The fourth argument comes from the observation about binding made in Stjepanović (2003). She notes that the subject in OVS in Serbo-Croatian behaves as if it occupied an A-position high in the clause, as it binds a reflexive inside an adverbial which precedes the subject, as in (49):

(49) Marię   oblał wbrew swojej*i* woli nauczyciel*i*   od   fizyki.
     Maria-ACC failed against self   will teacher-NOM from physics
     'The physics teacher*i* failed Mary against his*i* own will.'

In line with the present analysis, the subject is indeed higher than the adverbial phrase before the TP-constituent is fronted above the surface position of the subject in ϕP. Since binding is established in A-contexts and subsequent A′-movements do not change binding relations, TP-fronting to a position above *nauczyciel od fizyki* correctly predicts that the reflexive remains properly bound. We return to this issue in greater detail in section 6.

4.3. TP-fronting as new information marking of the subject

In her analysis of Serbo-Croatian OVS, Stjepanović (2003: 157) correctly observes that such sentences are felicitous when the sentence-final subject represents new information focus. The same is true about subjects in OVS sentences in Polish.

There is a considerable body of work on new information focus. Some analyses pursue the explanation that discourse-sensitive movement is triggered by old information marking (e.g. *givenness*-movement by Kucerova (2007)) and some other argue that it is new information marking that triggers the fronting of other material over it (cf. Neeleman et al. (2009)). What is well established, however, is that the sister of a fronted constituent which is marked as old information (or 'given') becomes marked as new information, not vice versa, as outlined below after Neeleman et al. (2009):

(50) a. [*old info* α [*new info* β . . .]]
    b. *[*new info* β [*old info* α . . .]]

The evidence for old/new information marking by movement comes from the wh-question and answer test. Since a wh-phrase in a wh-question licenses a new information focus in an answer sentence, we predict an answer constituent to be licensed in the sentence-final position, in line with (50a). This prediction is correct and holds equally in clause-internal scrambling, resulting in non-canonical S-V-DO*ACC*-IO*DAT* orders as in (51) where the wh-question requires a direct object as an answer, and in OVS contexts as in (52).

(51) Q: Komu mama dała książkę?
      'Who did mom give a book to?'
    A: Mama   dała   książkę   <u>Janowi</u>.
       mom-NOM gave book-ACC Jan-DAT
       (cf. *Mama dała <u>Janowi</u> książkę.)
       'Mom gave a book to Jan.'

(52) Q: Kto oblał Marię?
      'Who failed Mary?'
    A: Marię   oblał   <u>nauczyciel od fizyki</u>.
       Maria-ACC   failed   teacher-NOM from physics
       (cf. *<u>Nauczyciel od fizyki</u> oblał Marię.)
       'The physics teacher failed Mary.'

In (52), the wh-question requires a subject as an answer, which is achieved by fronting the given TP-constituent on top of the subject, to the effect that the latter becomes new information focus.

In view of the proposal that OVS structures are not only derived by remnant TP-fronting but also by subsequent object-fronting, one may wonder if this Focus- or Topic-fronting of the object is legal considering the fact that such sentences already include a sentence-final new information subject. There exists one potential well-known prohibition on complex information structures in the literature, namely, Topic-Comment structures cannot be embedded in the Background of the contrastive Focus (but Focus and Background can be embedded in the Comment) (e.g. Reinhart (2006); Lambrecht (1994); Neeleman and van de Koot (2008)). But sentences with new information subjects in the sentence-final position do not violate this constraint either by subsequent Topicalization or the fronting of a contrastively Focused object, as neither case results in the Topic-Comment structure embedded inside the Background.

New information marking also seems to be ruling out VP fronting instead of the TP fronting. We see in examples like (53) that VP fronting which strands the sequence *subject+particle+Modal* in the sentence final position is ill-formed.

(53) a. *Marię$_i$ [$_{VP}$ oblać (wbrew swojej$_i$ woli)] nauczyciel   od   fizyki
     Mary-ACC   fail   against self   will   teacher-NOM from physics
     by   mógł.
     SUBJ.PRT could

    b. *?[$_{VP}$ oblać Marię   (wbrew swojej$_i$ woli)] nauczyciel$_j$ od   fizyki
          fail   Mary-ACC against self   will   teacher-NOM from physics
       by   mógł.
       SUBJ.PRT could

In the context of deriving the OVS construction by a subject-oriented wh--question, it seems legitimate to state that in ill-formed structures derived by VP fronting there does not seem to be a corresponding wh-question which requires an answer made of the subject plus the post subject material to the exclusion of the fronted VP. In other words, the sequence of *subject+particle+Modal* does not serve as new information focus for any well-formed wh-question.

5. The surface position of the subject

The present analysis feeds on the fact that the subject raises from its vP internal θ-position to its surface position in the specifier of the agreement ϕP. In other words, it accommodates the fact that the classic EPP requirement on subjects

is satisfied overtly in Polish. Alternatively, the surface OVS order could be hypothesized to involve individual movements of the object and the verb above the position of the subject under the supposition that the subject does not raise to its surface position in Spec-ϕP but stays in situ in the vP.[14] Such a hypothesis must be rejected on the basis of word order facts and the ambiguous scope between the subject and sentential negation, which indicate that the subject in OVS sentences raises to its surface EPP position (in Spec-ϕP) just like in canonical SVO sentences.

5.1. Word order

In canonical SVO sentences in Polish the subject always raises. This is indicated by the fact that in stylistically unmarked declarative SVO sentences, which can serve as an answer to the question 'What happened?', temporal adverbs 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 (54–55).[15]

(54) Jan   by   znowu chętnie wystartował w wyborach.
Jan-NOM MOD-PRT again   gladly   started   in elections
'Jan would gladly take part in the election again.'

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

As shown in the corresponding examples in (56) and (57), the subject cannot be left in situ in its θ-position in the vP (this fact holds even if we allow some flexibility in assuming the base position of the subject to be either above the verb and the manner adverb, or below them, as indicated in the following sentences by placing the subject in parentheses).

(56) *___ by   znowu (Jan) chętnie (Jan) wystartował (Jan) w wyborach.
       MOD-PRT again Jan gladly Jan started   Jan in elections
'Jan would gladly take part in the election again.' (intended)

(57) *___ by   nigdy (Jan) nie (Jan) dał (Jan) Marii   kwiatów.
       MOD-PRT never Jan not Jan gave Jan Mary-DAT flowers-ACC
'Jan would never give Mary flowers.' (intended)

---

[14] Note that such an alternative hypothesis which involves the verb movement is in fact already challenged by the clitic and adverb placement facts discussed in the previous section.

[15] The genitive case on the direct object appears in the presence of sentential negation, cf. (1b), (2b) and footnote 1. Sentential negation is included in (55) in order to better identify the relative placement of other elements in the clause.

5.2. Inverse scope between the subject and negation

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

> (58) Wszyscy   nie żyją. $\forall > \neg, \neg > \forall$
>   all/everybody-NOM not live-3PL
>   'Everybody is dead.'

> (59) Wszystkie dzieci   nie zjadły jeszcze mielonki. $\forall > \neg, \neg > \forall$
>   all   children-NOM not ate-3PL yet   spam-ACC
>   'All the children have not eaten the spam yet.'

In sentences such as (58) or (59), the inverse scope between the quantificational subject and negation 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 negation holds also in OVS sentences:

> (60) Mielonki   nie zjadły   jeszcze   wszystkie dzieci. $\forall > \neg, \neg > \forall$
>   spam-ACC not ate-3PL   yet   all   children-NOM
>   'All the children have not eaten the spam yet.'

Under the remnant movement analysis outlined in (28–30), the inverse $\forall > \neg$ scope in (60) is predicted, as the subject c-commands Neg before Neg is fronted as a subconstituent of the remnant TP, as shown in (61).

(61)
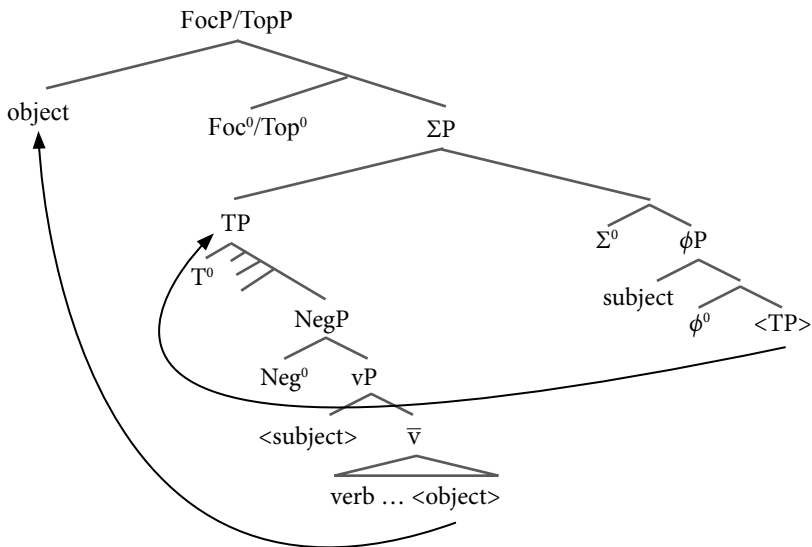
In contrast, the inverse $\forall > \neg$ scope in O*Neg*V(*yet*)S sentences is not predicted by an analysis which assumes that the subject stays in situ in the vP in such sentences, given the base-generated sequence NegP > vP.[16]

6. Crossing and nesting paths

6.1. Extraction from a remnant constituent

In a simple remnant movement derivation like in (62), the extraction of a subconstituent Y precedes the fronting of the remnant constituent X.

(62)
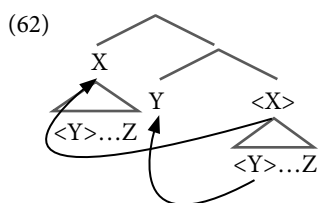
In a smuggling derivation, advanced in Collins's (2005a, b) work on English passive and raising, it is the fronting of a larger constituent X (possibly but not necessarily over a potentially intervening node) that is followed by an extraction of a subconstituent Y, as in (63).

(63)
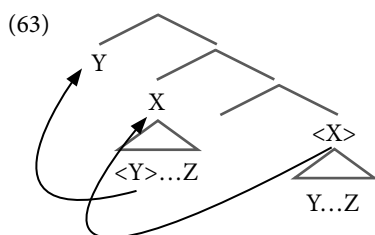
It is important to note that in a smuggling derivation the extraction of node Y violates the Freezing Principle, advanced in Wexler and Culicover (1980) and argued for in Müller (1998) to hold in German. Müller (1998) assumes Kayne's

---

(1998) analysis of negative NP preposing which is followed by remnant VP fronting:

(64) John [$_{VP2}$ watches t_1][no sitcoms$_1$] t_{VP}.

In German, remnant VP movement takes place overtly as it can derive V2 as in (65), where an independently attested NP1 scrambling feeds VP2 fronting.

(65) [$_{VP2}$ t_1 Gelesen] hat   das Buch$_1$ keiner t_2
            read   has   the book   no-one
      'No-one read the book.'

As Müller (1998) shows in (66b), extractions from the fronted remnant VP is blocked.

(66) a. Ich denke [$_{CP}$ [$_{VP2}$ t_3 t_1 gegeben] hat dem Fritz$_3$ das Buch keiner t_2]
         I   think   given   has ART Fritz   the book no-one
         'I think no-one gave Fritz the book.'
     b. *Wem$_3$ denkst du [$_{CP}$ [$_{VP}$ t_3 t_1 gegeben] hat das Buch$_1$ keiner t_2]?
         whom   think   you   given   has the book   no-one
         'To whom do you think that no-one gave the book?'

In Müller's analysis, the extraction of *wem* in (66b) from a previously fronted remnant VP in (66a) violates freezing.[17] While a considerable body of work has recognized environments in which freezing appears to hold (see e.g. Bošković (2016) and the references cited there), there exists telling evidence against a universal ban on movement from a moved constituent. In fact, Müller (1998) is explicit about the lack of its universality and gives examples of anti-freezing extractions in examples based on Kayne's (1998) preposing of negative and *only*-NPs:

(67) a. Which book$_3$ did John [$_{VP2}$ give t_3 t_1][$_{PP1}$ to no-one] t_2?
     b. About Nixon$_3$ John [$_{VP2}$ read t_1][$_{NP1}$ only one book t_3] t_2.

As advanced in Abels (2008), examples like the one above can be reduced to a generalized ban on improper movement rather than freezing.

While the format of this paper does not allow for a detailed assessment of constraints on remnant movement, it is essential to note that Polish generally tolerates extractions out of fronted constituents very well.[18] This can be illustrated by the extraction of wh-words from fronted wh-phrases. It is well known

---

[17] Müller (2002) discusses in detail why freezing should hold in this context by referring to the barrierhood (of the VP) and strict cyclicity of Chomsky (1995), an apparatus I do not review here for space reasons.

[18] This is not to say that there are languages where a moved constituent becomes an island and languages where a moved constituent does not. Instead, the following facts indicate that anti-freezing derivations are in principle permissible.

that Polish allows for both pied-piping (68a) and left-branch extraction (68b) of wh-words in question formation. However, left-branch wh-extractions from fronted wh-phrases are equally available (68c):

(68) a. [$_{WhP}$ Jaki samochód] Paweł kupił swojej żonie t$_{WhP}$?
           what car Paweł-NOM bought his wife-DAT
    b. Jaki$_i$ Paweł kupił swojej żonie [t$_i$ samochód]?
      what Paweł-NOM bought his wife-DAT car
    c. Jaki$_i$ Paweł [$_{WhP}$ t$_i$ samochód] kupił swojej żonie t$_{WhP}$?
      what Paweł-NOM car bought his wife-DAT
    'What car did Paweł buy his wife?'

As discussed in Wiland (2010), examples like (68c) are derived first by successive-cyclic fronting of the WhP and a subsequent left-branch extraction of the wh-word *jaki* and, thus, represent cases of anti-freezing.

Assuming that external arguments raise from their vP-internal to the surface subject position, another instance of the anti-freezing in Polish can be seen in extractions from subjects, which is licit in certain context, in particular, from subjunctive *żeby*-clauses.

(69) a. [$_{NP}$ Zawodnicy [której drużyny]] *pro* chciałeś, żeby t$_{NP}$
      wygrali mecz?
        players which team wanted-2SG.MSC COMP
      won game
    b. [Której drużyny] *pro* chciałeś, żeby [zawodnicy t] wygrali mecz?
      which team wanted-2SG.MSC COMP players won game
    'Players of which team did you want to win the game?'

In (69b), we see that the extraction of *której drużyny* 'which team' takes place from within the complex wh-NP subject of the *żeby*-clause. What is outlined in the derivational steps in (28–30) leading to OVS in Polish is a derivation that essentially combines remnant movement and smuggling, as in the following:

(70)
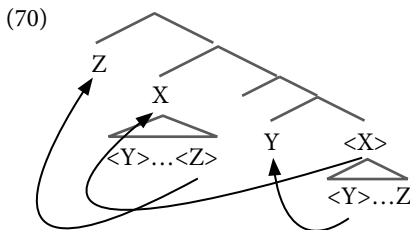
Essentially, such a combination of remnant movement and smuggling of a large constituent leads to the creation of crossing and nesting movement paths. Since, as assumed at the beginning, c-command is necessary for establishing a dependency relation between nodes in syntax, we expect the formation of

crossing and nesting paths in a derivation like in (70) to affect a dependency relation between the nodes. Indeed, it turns out that the existence of a dependency relation or the lack thereof is all we need to explain the three asymmetries in WCO and binding in the PolishOVS sentences.

6.2. The WCO asymmetries

Recall from (7) that an environment in which the WCO violation arises is the one in which a quantificational element c-commands a pronoun it binds from an A′-position. Consider again the derivational steps of OVS sentences in (28–30) and the way they are responsible for the lack of the cross-over effect in a sentence like in (71). According to this scenario, outlined in (72), the fronting of the wh-object co-indexed with a pronoun inside the subject does not produce the WCO effect in OVS since its movement does not cross the subject, which is moved to Spec-ϕP, as we saw earlier.

(71) [Którego sąsiada]i otruła   jego$i$ żona?   = (10a) O$_{wh}$VS
     which   neighbor-ACC poisoned his   wife-NOM

(72) [WH$_i$ [$_{\Sigma P}$ [$_{TP}$...[$_{vP}$ <Subj> verb <WH$_i$>]] [[$_{\phi P}$ Subj$_i$ <TP>]]]]   O$_{wh}$VS

The cross-over effect does not arise since the wh-object c-commands the co-indexed subject only *after* the wh-object has moved to the left periphery (Step 3 in (30)). Before this takes place, the object is 'smuggled' in the fronted TP-constituent to SP, that is to a position above the surface position of the raised subject (Step 2 in (29)). In other words, (71) does not constitute an environment in (7) for the WCO effect to arise.

   In contrast, the wh-movement of the object leading to O$_{wh}$SV as in (73) is correctly expected to produce the WCO effect in Polish just like in English, as the wh-fronting does cross the coreferential subject in this case, as outlined in (74).

(73) ??[Którego sąsiada]i jego$i$ żona   otruła?   = (10b) O$_{wh}$SV
      which   neighbor-ACC his   wife-NOM poisoned
     'Which neighbor$i$ did his$i$ wife poison?' (intended)

(74) ??[WH$_i$ [$_{\Sigma P}$ [$_{\phi P}$ Subj$_i$ [$_{TP}$...[$_{vP}$ <Subj> verb <WH$_i$>]]]]]   O$_{wh}$SV

The movement of the object to the left periphery in OVS sentences reflects the same scenario that holds for object wh-movement in such sentences in (72). Consider (16) again.

(75) Marii*i*   nie lubi   [jej*i/j* siostra].   = (16) OVS
     Mary-DAT   not likes her   sister-NOM
     'Her sister does not like Mary.'

(76) $[\textbf{Obj}_i \ [_{\Sigma P} \ [_{TP} ... [_{vP} \ <\text{Subj}> \ \textbf{verb} \ <\text{Obj}_i>]] \ [[_{\phi P} \ \textbf{Subj}_i \ <\text{TP}>]]]]$ OVS

Following the subject raising from its base position in the vP to its surface po-
sition in Spec-ϕP (Step 1 in (28)), the remnant TP-fronting smuggles the co-
referential object to ΣP, a projection above the subject in ϕP (Step 2 in (29)).
The remnant TP-fronting to ΣP does not result in a WCO violation since nei-
ther this movement nor the subsequent Focus or Topic fronting of the object
(Step 3 in (30)) results in the object crossing the subject in Spec-ϕP. This is,
thus, essentially the same scenario that holds in wh-object fronting in O*wh*VS
sentences in (10a)/(71) in that in both cases the object is A′-fronted to the left
periphery from a previously fronted (remnant) TP-constituent.

6.3. Binding asymmetry in OVS with experiencer verbs

The asymmetry in binding in OVS sentences with agent and theme arguments
also reduces to the contrast between crossing and nesting dependencies de-
rived as a result of remnant movement of a clause chunk of a large size. In
particular, an experiencer argument crossing an agent argument in an OVS
construction does not felicitously bind it under reconstruction from a left-pe-
ripheral A′-position, while it felicitously binds a theme argument.

   Recall that in OVS sentences with an experiencer object and an agent sub-
ject like in (77), the second fails to bind the anaphor inside the first.

(77) *Jana*i*   przestraszyli [doradcy   ze   swojego*i* banku]. (= 22a)
     Jan-EXP.ACC frightened   counsellors-NOM from self   bank - AGENT
     'Jan was frightened by financial counsellors from his bank.'

According to the derivation of OVS outlined in steps (28–30), the sentences
with agent arguments of experiencer verbs in (24), (22a), and (23a) are derived
as follows:

(78) Step 1: $[_{\phi P} \ \text{AG}_i \ [_{TP} ... [_{vP} \ <\text{AG}_i>[\text{verb} \ [\text{EXP}_i]]]]]$

Step 2: $[_{\Sigma P} \ [_{TP} ... [_{vP} \ <\text{AG}_i>[\text{verb} \ [\text{EXP}_i]]]] \ [_{\phi P} \ \text{AG}_i \ <\text{TP}>]]$

Step 3: $*[\text{EXP}_i \ [_{\Sigma P} \ [_{TP} ... [_{vP} \ <\text{AG}_i>[\text{verb} \ [<\text{EXP}_i>]]]] \ [_{\phi P} \ \text{AG}_i \ <\text{TP}>]]]$

In Step 1, the agent argument raises from its vP-internal θ-position to its surface position in Spec-ϕP (by the assumption made in (27), agents are base-generated higher than experiencers). Step 2 involves the fronting of the remnant TP constituent, which includes the trace of the agent argument in the vP, to Spec-ΣP, a projection above the raised agent subject. From this position the experiencer argument smuggled inside the TP does not c-command the agent subject in Spec-ϕP. In Step 3, the experiencer is fronted to a left-peripheral A'--position resulting in the OVS word order. From this position the experiencer ultimately c-commands the agent subject in Spec-ϕP.

Despite the fact that the experiencer argument ultimately c-commands the agent argument with a co-indexed pronoun, the binding is infelicitous. Quite clearly, this is due to the fact that the only position from which the experiencer c-commands the agent is its surface position in the left periphery, while binding relations are not established from A'-positions, as illustrated by the following:

(79) *John and Peter, each other's friends hate.

Note that the traces of both arguments in the A-positions inside the vP are ordered such that the agent c-commands the experiencer (in line with the assumption about the θ-hierarchy made in (27)), a configuration that yields Principle C violation. This violation is not undone later by the fronting of the experiencer argument to the left periphery in Step 3 of the derivation, as A'--movement does not create new binding configurations, as illustrated by the following familiar examples of Principle C violations:

(80) a. *He$_i$ painted [a picture of Peter$_i$] with his eyes shut.
    b. *[Which picture of Peter$_i$] did he$_i$ paint <which picture of Peter$_i$> with his eyes shut?

(81) a.*I think she$_i$ expects John to be quite afraid of Margaret$_i$.
    b.*[How afraid of Margaret$_i$] do you think she$_i$ expects John to be <how afraid of Margaret$_i$>?

<div align="right">Heycock (1995: 554)</div>
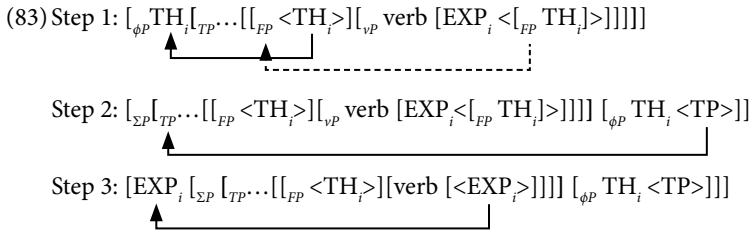
In contrast, when the agent argument is replaced with a theme argument, binding is felicitous:

(82) Jana$_i$ przestraszył [stan   swojego$_i$ konta].   = (22b)
    Jan-EXP.ACC   frightened   balance-NOM self   account - THEME
    'Jan was frightened by the balance of his bank account.'

The explanation of this contrast boils down to the fact that the experiencer c-commands the theme but not the agent in the argument positions in the vP and that binding relations hold in A-positions. Note that the derivational steps in (28–30) that lead to OVS do not alter the felicitous way in which Principle A is observed, either. Consider the following.

(83) Step 1: $[_{\phi P}\text{TH}_i[_{TP}…[[_{FP}<\text{TH}_i>][_{vP}\text{verb }[\text{EXP}_i<[_{FP}\text{TH}_i]>]]]]]$

Step 2: $[_{\Sigma P}[_{TP}…[[_{FP}<\text{TH}_i>][_{vP}\text{verb }[\text{EXP}_i<[_{FP}\text{TH}_i]>]]]]\ [_{\phi P}\text{TH}_i<\text{TP}>]]$

Step 3: $[\text{EXP}_i\ [_{\Sigma P}[_{TP}…[[_{FP}<\text{TH}_i>][\text{verb }[<\text{EXP}_i>]]]]\ [_{\phi P}\text{TH}_i<\text{TP}>]]]$

In Step 1, the theme argument raises to the subject position in ϕP and surfaces in nominative. However, since it is c-commanded by an experiencer in the vP, a direct raising across the experiencer is blocked for the reasons of locality. What the recent work on smuggling (Collins 2005a, b) has advanced is that intervention is circumvented if there exists a trigger which attracts a constituent containing a non-local NP to a position above the local NP. This smuggling movement is indicated in Step 1 above with a dashed line. While it remains a separate issue what exactly the label of the subconstituent (labeled simply as FP above) with a smuggled theme is and what exact position above the vP it targets, it is essentially the mechanism which must take place for the theme argument to be raised to the subject position and surface in nominative in the presence of an experiencer object (for Belletti and Rizzi (2012), the subconstituent with a smuggled theme which is fronted above the experiencer in Italian is simply a lexical VP).[19] Steps 2 and 3 proceed in by now a familiar way: the remnant TP is fronted to ΣP and the experiencer argument is fronted to a Focus or Topic position in the left periphery.

Note that the subject raising in Step 1 results in the theme argument c-commanding the experiencer from Spec-ϕP, which does not result in the violation of Principle C. This seems to be due to the fact that the possessive anaphor is embedded inside the theme argument *stan swojego konta* lit. 'balance (of) self account' and does not c-command the experiencer. This is supported by the fact that when, in the same context, the anaphor is not embedded, Principle C becomes violated, as in:

---

[19] There exist attempts in the literature to account for intervention obviation in A-context based on Chomsky's (1995) idea of equidistance between two arguments of the same type (i.e. two NPs in this case). A common problem for equidistance-based accounts is optionality. Namely, while it is possible to construe a definition of a domain in which vP-internal arguments do not intervene, it remains unexplained why it is one of them that gets attracted in a given derivation and not the other. That is, even if the theme and the experiencer are postulated to be equidistant from the subject position in ϕP in the vP, it remains puzzling why the theme but not the experiencer should move to this position. A smuggling derivation avoids this problem in a straightforward way.

(84) a. *Jana*i*   przestraszyło [swoje*i*   konto]
     Jan-ACC.EXP   frightened   [self-NOM.SG   account-NOM.SG] - THEME
     'Jan was frightened by the his account.'
   b. *Marię*i*   przestraszyły [swoje*i*   koty].
     Maria-ACC.EXP frightened   [self-NOM.PL   cats-NOM.PL] - THEME
     'Mary was frightened by her cats.'

Given the fact that A′-movement of the experiencer to its surface position in Step 3 does not alter the binding configuration, Principle C violation in (84) must result from the nominative anaphoric theme c-commanding the co-referential experiencer from the subject position derived in Step 1.

7. Conclusion

Cross-over effects and binding principles violations arise when co-reference fails in a structural context. Their account should, thus, be ideally based on the dependency relations resulting from constituency formation in the derivation. While remnant movement has been mostly advanced as a replacement for head movement (most notably, verb movement as a disguised remnant VP movement), the existence of remnant movement of an entire chunk of a clause which can include traces of arguments has been rarely explored. I have argued that the remnant movement of the entire subclause, of approximately TP size, which includes the trace of an extracted argument, derives a constituency from which the contrasts in WCO and binding follow under common assumptions about scope the application of the binding principles in syntax. The result is that the contrasts between canonical SVO and a marked OVS word orders as well as contrasts in behavior between different types of arguments in these word orders can receive a fairly straightforward account based on constituency.

References

ABELS Klaus (2008). Towards a restrictive theory of (remnant) movement. *Linguistic Variation Yearbook* 7, 53–120.

ABOH Enoch O. (2009). Clause structure and verb series. *Linguistic Inquiry* 40(1), 1–33.

BAILYN John (2003). Does Russian scrambling exist? In *Word Order and Scrambling*, Simin KARIMI (ed.), 156–176. Amsterdam: John Benjamins.

BAILYN John (2004). Generalized inversion. *Natural Language and Linguistic Theory* 22(1), 1–49.

BELLETTI Adriana, RIZZI Luigi (1988). Psych-verbs and theta-theory. *Natural Language and Linguistic Theory* 6(3), 291–352.

Belletti Adriana, Rizzi Luigi (2012). Moving verbal chunks in the low functional field. In *Functional Heads*: *The Cartography of Syntactic Structures* Vol. 7, Laura Brugé, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro, Cecilia Poletto (eds.), 129–137. Oxford: Oxford University Press.

Blake Barry (1994). *Case*. Cambridge, UK: Cambridge University Press.

Bošković Željko (2016). The ban on movement out of moved elements in the phasal/labeling system. University of Connecticut. Ms. [URL: ling.auf.net/lingbuzz/002851, accessed June 20, 2016].

Büring Daniel (1999). Topic. In *Focus – Linguistic, Cognitive, and Computational Perspectives*, Peter Bosch, Rob van der Sandt (eds.), 142–165. Cambridge, UK: Cambridge University Press.

Büring Daniel (2003). On D-trees, beans, and B-accents. *Linguistics and Philosophy* 26(5), 511–545.

Caha Pavel (2009). The nanosyntax of case. Tromsø: CASTL, University of Tromsø. PhD dissertation.

Chomsky Noam (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

Cinque Guglielmo (1999). *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. New York: Oxford University Press.

Cinque Guglielmo, Rizzi Luigi (2008). The cartography of syntactic structures. *CISCL Working Papers, Studies in Linguistics* Vol. 2, 42–58.

Collins Chris (2005a). A smuggling approach to passive in English. *Syntax* 8(2), 81–120.

Collins Chris (2005b). A smuggling approach to raising in English. *Linguistic Inquiry* 36(2), 289–298.

Czaykowska-Higgins Ewa (1988). Investigations into Polish morphology and phonology. Cambridge, MA: MIT. PhD dissertation.

Despić Miloje (2013). Binding and the structure of NP in Serbo-Croatian. *Linguistic Inquiry* 44(2), 239–270.

Drubig Bernhard H. (2003). Toward a typology of focus and focus constructions. *Linguistics* 41(1), 1–50.

Grimshaw Jane (1990). *Argument Structure*. Cambridge, MA: MIT Press.

Gussmann Edmund (1980). *Studies in Abstract Phonology*. Cambridge, MA: MIT Press.

Heycock Caroline (1995). Asymmetries in reconstruction. *Linguistic Inquiry* 26(4), 547–570.

Hinterhölzl Roland (1999). Restructuring infinitives and the theory of complementation. Los Angeles, CA: University of Southern California. PhD dissertation.

Hoof Hanneke van (2003). The rise in the rise-fall contour: does it evoke a contrastive topic or a contrastive focus? *Linguistics* 41(3), 515–563.

Jabłońska Patrycja (2008). Silverstein's Hierarchy and Polish argument structure. In *Scales*, Marc Richards, Andrej Malchukov (eds.), *Linguistische Arbeits Berichte* 86, 221–245.

Jackendoff Ray (1990). *Semantic Structures*. Cambridge, MA: MIT Press.

Kayne Richard (1998). Overt vs. covert movement. *Syntax* 1(2), 128–191.

Kiss Katalin É. (1998). Identificational focus versus information focus. *Language* 74(2), 245–273.

Kucerova Ivona (2007). The syntax of givenness. Cambridge, MA: MIT. PhD dissertation.

Lambrecht Knud (1994). *Information Structure and Sentence Form*. Oxford: Oxford University Press.

Larson Richard (2014). *On Shell Structure.* London: Routledge.

Migdalski Krzysztof (2006). The syntax of compound tenses in Slavic. Tilburg: Tilburg University. PhD dissertation.

Müller Gereon (1998). *Incomplete Category Fronting: A Derivational Approach to Remnant Movement in German.* Dordrecht: Kluwer Academic Publishers.

Müller Gereon (2002). Two types of remnant movement. In *Dimensions of Movement: From Features to Remnants,* Artemis Alexiadou, Elena Anagnostopoulou, Sjef Barbiers, Hans-Martin Gärtner (eds.), 209–241. Amsterdam/Philadelphia: John Benjamins.

Neeleman Ad, van de Koot Hans (2008). Dutch scrambling and the nature of discourse templates. *Journal of Comparative Germanic Linguistics* 11(2), 137–189.

Neeleman Ad, Titov Elena, van de Koot Hans, Vermeulen Reiko (2009). A syntactic typology of topic, focus and contrast. In *Alternatives to Cartography*, Jeroen van Craenenbroeck (ed.), 15–51. Berlin: Mouton de Gruyter.

Nilsen Øystein (2003). Eliminating positions: Syntax and semantics of sentence modification. Utrecht: Utrecht University. PhD dissertation.

Pantcheva Marina (2010). The syntactic structure of locations, goals, and sources. *Linguistics* 48(5), 1048–1081.

Reinhart Tanya (2006). *Interface Strategies.* Cambridge, MA: MIT Press.

Rizzi Luigi (1997). The fine structure of the left periphery. In *Elements of Grammar: A Handbook in Generative Syntax,* Liliane Haegeman (ed.), 271–337. Dordrecht: Kluwer.

Slioussar Natalia (2006). Mysterious nature of the Russian EPP. In *UiL OTS Yearbook*, Cem Keskin (ed.), 113-130. Utrecht: Utrecht University.

Stjepanović Sandra (2003). A word order paradox resolved by copy deletion at PF. *Linguistic Variation Yearbook* 3, 139–177.

Stoyanova Marina (2008). *Unique Focus: Languages without Multiple Wh-questions*. Amsterdam: John Benjamins.

Svenonius Peter (2008). Projections of P. In *Syntax and Semantics of Spatial P*, Anna Asbury, Jakub Dotlacil, Berit Gehrke, Rick Nouwen (eds.), 63–84. Amsterdam: John Benjamins.

Svenonius Peter (2010). Spatial P in English. In *Mapping Spatial PP: The Cartography of Syntactic Structures*, Vol. 6, Guglielmo Cinque and Luigi Rizzi (eds.), 127–160. Oxford: Oxford University Press.

Tajsner Przemysław (2008). *Aspects of the Grammar of Focus: A Minimalist Perspective.* Frankfurt am Main: Peter Lang.

Taraldsen Medová Lucie, Wiland Bartosz (in press). *Fseq* zones and Slavic L>T>N participles. In *Exploring Nanosyntax*, Lena Baunaz, Karen De Clercq, Liliane Haegeman, Eric Lander (eds.). Oxford: Oxford University Press.

Vallduví Enric, Vilkuna Maria (1998). On rheme and contrast. In *The Limits of Syntax*, Peter Culicover, Louise McNally (eds.), 79–106. New York: Academic Press.

Van Valin Robert (1990). Semantic parameters of split intransitivity. *Language* 66(2), 221–260.

Veselovská Ludmila (1995). Phrasal movement and X-morphology: Word order parallels in Czech and English nominal and verbal projections. Olomouc: Univerzita Palackého. PhD dissertation.

Wexler Kenneth, Culicover Peter (1980). *Formal Principles of Language Acquisition.* Cambridge, MA: MIT Press.

Wiklund Anna-Lena, Hrafnbjargarson Gunnar Hrafn, Bentzen Kristine, Hróadsdóttir Thorbjörg (2007). Rethinking Scandinavian verb movement. *Journal of Comparative Germanic Linguistics* 10(3), 203–233.

Wiland Bartosz (2009). Aspects of order preservation in Polish and English. Poznań: Adam Mickiewicz University. PhD dissertation.

Wiland Bartosz (2010). Overt evidence from left-branch extraction in Polish for punctuated paths. *Linguistic Inquiry* 41(2), 335–347.

Wiland Bartosz (2012). Prefix stacking, syncretism, and the syntactic hierarchy. In *Slavic Languages in Formal Grammar*, *Proceedings of FDSL* 8.5, Mojmir Dočekal, Marketa Ziková (eds.), 307–324. Berlin/Frankfurt: Peter Lang.

Willim Ewa (1989). *On Word Order: A Government and Binding Study of English and Polish.* Kraków: Zeszyty Naukowe Uniwersytetu Jagiellońskiego.

Witkoś Jacek (2003). *Movement and Reconstruction: Questions and Principle C Effects in English and Polish.* Frankfurt am Main: Peter Lang.

Witkoś Jacek (2007). Polish and A-type scrambling. In *Linguistic Investigations into Formal Description of Slavic Languages*, Peter Kosta, Lilia Schürcks (eds.), 165–180. Frankfurt am Main: Peter Lang.

Witkoś Jacek (2008). On the correlation between A-type scrambling and lack of Weak Crossover effects. *Studia Anglica Posnaniensia* 44, 297–328.

Witkoś Jacek, Dziemianko Anna (2006). On the syntax of idioms and the Idiomatic Constituency Axiom. In *IFAtuation: A Festschrift for Professor Jacek Fisiak on the Occasion of His 70th Birthday*, Katarzyna Dziubalska-Kołaczyk (ed.), 773–794. Poznań: UAM Press.

Zagórska-Brooks Maria (1975). *Polish Reference Grammar.* The Hague: Mouton.

Bartosz Wiland
Wydział Anglistyki
Uniwersytet im. Adama Mickiewicza w Poznaniu
al. Niepodległości 4
61-874 Poznań
[bartek(at)wa.amu.edu.pl]