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On VP- focus projection and the integration of adjuncts. Evidence from Polish

Abstract

The two main topics of the paper are VP focus projection and the integration of adjuncts in VPs. First, a few conceptual and empirical questions are raised to Hornstein's (2009) account of VP focus projection which is based on the "pure Concatenate/dangling off" way of adding adjuncts to a VP. It is argued that an account along these lines may have to recourse to a derivational look-ahead, which is a disadvantage. It is also noted that the "dangling off " solution proves problematic if adjuncts have to fulfill the function of modifying events. What is more, it is not clear why the integration in a structure, necessary for movement, should be treated as a sufficient condition for focus projection.

Next, the paper offers a short taxonomy of VP-pre-posing types in Polish. They appear to fall in two major categories: (i) VP- pre-posing for focus, and (ii) VP-pre-posing for topic. It is argued that in the former type, representing Focus Fronting (FF), a pre-posed VP is a separate Intonation Phrase, in which, as predicted by Truckenbrodt (2006) and others, the rightmost accented phrase must receive a prominent phrasal stress. Thus, the VP-final main stress on adjuncts is derived from the interplay of syntax and phonology, unlike in Hornstein's (2009) account. Such a view is supported by the observed cases of VP pre-posing for topic in Polish in which the earlier distribution of stresses within a VP (derived by a Nuclear Stress Rule) is conserved after movement, and no extra phonological stress rule applies.

The second major topic of the paper is the mechanics of adjunct integration in VPs. It is argued that there are two ways in which adjuncts may be added to the structure of a VP; by Concatenate (a default option) or by Merge. The former is only possible if no further instance of Merge is to follow, which is at the completion of vP and CP phases. The less economical Merge option is used when the VP-plus-adjunct undergoes further pre-posing for focus or for topic. Finally, it is shown how the phase-wise derivation may map on the procedure of stress promotion in a structure of a VP. It is argued that adjuncts concatenated to the root, prior to Spell-out, cannot receive an appropriate number of stress grids, and hence cannot carry main VP-stress.

Key words:

Focus, topic, adjunct, Concatenate, Merge, Focus Fronting, Intonation Phrase, phase

Streszczenie

Projekcja „fokusu" w ramach frazy czasownikowej i syntaktyczna integracja okolicznika z uwzględnieniem danych z języka polskiego.

Dwa główne tematy artykułu to: projekcja „fokusu" w frazie werbalnej oraz sposób integracji okolicznika z tego typu frazą. Na początku postawionych jest kilka kwestii koncepcyjnych i empirycznych w stosunku do propozycji Hornsteina (2009) w tym zakresie. Uznaje się tam, że okoliczniki dodane są do struktury składniowej z użyciem prostej operacji „Połącz" (a nie operacji „Scal") i przez to są zawieszone „luźno" w strukturze. Jednak przy tym rozwiązaniu nie da się uniknąć niekorzystnej zasady „derywacyjnej antycypacji" (ang. *look-ahead*). Takie rozwiązanie jest też trudne do pogodzenia z realizacją funkcji okolicznika, którą jest modyfikacja wydarzenia wyrażonego przez czasownik. Dodatkowo, nie jest jasne dlaczego integracja w strukturze, konieczna dla przesunięcia, ma być warunkiem wystarczającym dla projekcji fokusu.

Następnie przedstawiona jest klasyfikacja polskich konstrukcji z przesuniętą do przodu frazą czasownikową. Wyróżnia się tutaj dwa typy: (i) przesunięcie dla fokusu, oraz (ii) przesunięcie dla topika. Dla pierwszego typu, fraza przesunięta uzyskuje status „frazy intonacyjnej" i przez to, jak proponują Truckenbrodt (2006) i inni autorzy, jej najbardziej na prawo wysunięta akcentowana fraza uzyskuje dodatkowy akcent frazowy. Tak więc umieszczony w tej pozycji okolicznik uzyskuje dodatkowy silny akcent poprzez współdziałanie syntaksy z fonologią, a nie na skutek integracji w ramach frazy czasownikowej, jak proponuje Hornstein (2009). Taka analiza znajduje potwierdzenie w przypadkach przesunięcia frazy czasownika dla topika. Tutaj, fraza nie ma statusu frazy intonacyjnej i nie uzyskuje dodatkowego akcentu, niezależnie od formy integracji we frazie.

Drugi główny temat artykułu to mechanika integracji okoliczników w frazie czasownikowej. Proponuje się dwa sposoby takiej integracji; poprzez regułę „Połącz"(opcja bardziej ekonomiczna) i poprzez „Scal". Pierwsza dostępna jest tylko wtedy, gdy nie następuje po niej żadna operacja typu „Scal", czyli przy zamknięciu faz vP i CP. Mniej ekonomiczna integracja poprzez operację typu „Scal" ma zastosowanie wówczas, gdy następuje po niej przesunięcie do przodu dla fokusu lub dla topika. W ostatniej części, pokazane jest jak derywacja fazowa determinuje promocję akcentów we frazie czasownikowej. Wykazane zostaje, że okoliczniki dołączone do najwyższego piętra struktury, tuż przed transferem do komponentu fonologicznego, nie otrzymują wystarczającej liczby znaczników akcentu dla realizacji silnego akcentu frazowego.

Słowa klucze:
Fokus, topik, okolicznik, operacja "Połącz", operacja "Scal", przesunięcie dla fokusu, fraza intonacyjna, faza

1. Focus Projection

Let us begin by briefly recalling the notion of VP focus projection. A standard view of VP focus projection, formulated as in Selkirk (1995), holds that focus can be projected to a VP from an accented constituent of the VP if this constituent is a head of VP (an instance of *vertical* focus projection), or from a complement of the head of VP (a case of *horizontal* focus projection). When focus is projected to a VP from one of its constituents, then we have a case of *broad VP focus* which answers a *wh*-question of the form: *What did x do*? The link between a wh-question and focus is formulated in the rule of focus interpretation given in (1) below:

(1)   FOC Interpretation:
      'A *wh*-question expression focuses a constituent, and an appropriate answer to a *wh*-question must focus the same constituent.' (Selkirk 1995: 553)

As discussed by Büring (2006), Selkirk's (1995) formulation of focus projection represents a restricted view, and should be complemented by the formulation of the

rules of Default Prominence to prevent cases like *She SENT a book to Mary* from being interpreted as instances of VP (broad) focus. Default Prominence should guarantee for such cases that horizontal focus projection prevails over vertical projection, and for any V-complement structure, a complement, not a V head projects its focus to the VP, as in: *She sent a book to MARY*.

A way of determining prominence of focus projection could be along the lines of Nuclear Stress Rule (henceforth NSR), as originally formulated by Halle and Vergnaud (1987) and then revised, e.g. by Cinque (1993), Zubizarreta (1998) and Zubizarreta and Vergnaud (2005). A common denominator of the approaches based on the NSR is a generalization that a nuclear phrasal stress (accent) falls on the most deeply embedded constituent in a phrase. Such a nuclear stress is an unmarked case used for broad focus. Thus, for *She sent a book to MARY* it remains to determine the status of *Mary* as the most deeply embedded part of the VP. This is possible under standard structural analyses of complex transitive structures in terms of VP-shells (a $[_{vP}v\,VP]]$ structure). If *Mary* is the most deeply embedded element of the VP, then it carries the VP's main stress, and the whole VP may be interpreted as broadly focused.

Büring (2006) further proposes a different, i.e. unrestricted view of VP focus projection by which all constituents dominated by a VP, including adjuncts and specifers, if accented, may project their focus to the VP. A condition for such an unrestricted view is the adoption of Schwarzschild's (1999) idea of *Giveness*, by which all unaccented constituents of a VP must be interpreted as *Given*. Thus, e.g. the adjunct in (2) below, could project its focus to the VP if put in the context of (3A):

(2)   He will play soccer on SUNDAY
(3)   A: He always plays soccer on Saturday, but this Saturday the pitch will be occupied by the school feast. What will he do?
       B: He will play soccer on SUNDAY, then.

Following strictly Selkirk's (1995) rule for focus interpretation, given in (1) above, sentence (2) may be said to feature VP-focus if all other constituents of the VP, i.e. *play* and *soccer* are *Given* in Schwarzschild's (1999) sense. As may be observed in (3), focus interpretation is linked to a corresponding *wh*-question, in accordance with (1) above, which applies to both restricted and unrestricted views of VP-focus projection distinguished by Büring (2006). The *what* of the question in (3A) is appropriately answered by (3B).

However, if one sticks to a restricted sense of focus projection, example (2) may be seen as an instance of marked, contrastive focus, by virtue of implying an opposition: *on SUNDAY – not on Saturday*. Büring (2006) dismisses this option, though, by arguing that either all focus is contrastive, or there is no genuine grammatical contrastive focus distinguishable from "normal" focus. In that he argues against the classical Kiss's (1998) distinction between identification and informational (presentational) focus and a whole line of research into focus, represented by such authors as e.g. Rooth (1992), Drubig (1998), Zubizarreta (1998), Winkler (2000), Reinhart (2006), and others. A point shared in the accounts representing this line of research is that contrastive

(exhaustive) focus is a marked case and an independent grammatical category which has its own syntax and/or semantics.

In what follows I subscribe to these views and assume that a marked category of focus for (exhaustive) identification and contrast is reflected at both interfaces of the grammar; at PF – through special constructions (e.g. English cleft sentences or Hungarian focus fronting), and at LF – through a distinct LF interpretation (Rooth's (1992) alternative semantics). Consistently, I do not incorporate the notion of *Giveness* into a grammatical description of focus because I think it implies a form of discourse-linking, which cannot be reconciled with the autonomy of grammar, which I wish to sustain.

2. Some questions to Hornstein's (2009) account

In his reference to VP focus projection, Hornstein (2009) assumes a restricted view of focus projection, without applying the category of *Giveness*. Thus, he assumes that adjuncts, unlike arguments, do not project focus to a VP. He argues that the contrast follows from the fact, that adjuncts are not fully integrated into the structure of a VP. Instead, they *dangle off* a structure, as in (4) below:

(4) $[_T$ John^$[_T$ T^$[_V$ reads^books]]]^in-the-car

Hornstein (2009: 97)

Such a *dangling-off* position of an adjunct is an outcome of pure concatenation without labeling. On economy grounds, a dangling off position of adjuncts is a default option. The integration of an adjunct into the structure occurs only when required by some interface condition. This happens, for example, when the whole VP-plus-adjunct is to be focus-moved to the front, as is the case in inverted pseudo-gapping, exemplified by (5):

(5)   Play soccer on SUNDAY is what he'll do.

When this movement applies, the pitch stress on the adjunct observed in (5) projects to the whole VP, as is confirmed by the felicity of (5) in response to *What will John do*? Because only labeled structures may undergo Merge, for the VP-plus-adjunct to undergo Merge for focus, it must be a labeled constituent in the first place.

Before passing to a confrontation of Hornstein's (2009) proposals with some data from Polish, let us raise a few points of a more conceptual nature, which I find troublesome in this proposal.

2.1. How can adjuncts be integrated into structure?

First, it is not clear how adjuncts are in fact integrated into the VP in cases like (5), above. If integration is a pre-condition for VP focus projection, one would like to know what kind of integration applies in (5) to make focus projection possible. Hornstein (2009) considers two forms of adjunct integration into a structure discussed in the

literature; the first is a standard Chomsky-adjunction, and the second represented in the MP, in which the label of an adjoined structure and the label of the host are different. The two are exemplified below:

(6) $[_{XP} [_{XP} \dots X^0 \dots]$adjunct$]$
(7) $[_{<x,x>} [_{X(P)} \dots X^0 \dots]$ adjunct$]$

Neither option is fully satisfactory on conceptual and empirical grounds, hence Hornstein (2009) argues that adjuncts are not integrated into a structure in a default case. But, the question of the mode of the integration of the adjunct in a special case (5) is left un-raised. It is not clear if it is done like in (6) or like in (7), or still in some other third way. It is implied only that the integration makes adjuncts indistinguishable from complements for the needs of focus projection. In other words, it is not explained why the integration of adjuncts into a VP can make them project their focus higher.

2.2. Is phrase integration a sufficient condition of focus projection?

Second, in Hornstein's (2009) proposal it is implied that the lack of adjuncts' integration into a VP is what blocks the projection of focus from an adjunct to the VP; once the adjuncts are integrated into a VP, the projection of their focus to the VP becomes possible. More generally, it is implied that any constituent integrated in a structure of XP may freely project its focus to the XP. However, this prediction appears to be wrong. In example (8) below, a verb *play* is certainly integrated into a structure of a VP, but it cannot project its focus to the VP (under the restricted view of focus projection). The only possible interpretation of focus on *play* in (8) is narrow:

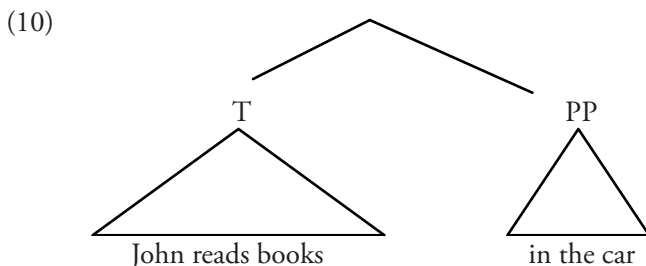(8)   He will PLAY soccer on Sunday.

Likewise, in a case of double objects, only the second of the two objects can project its focus to the VP, although both objects are certainly integrated into a VP:

(9)   She sent Mary a BOOK.

Thus, integration is a necessary but not a sufficient condition for focus projection to occur. What appears to be required in such cases is a special form of integration, which has traditionally been linked to 'deepest embedding'. As already mentioned, the situation may be accounted for in terms of the Nuclear Stress Rule, by which it is always the most deeply embedded constituent of a phrase which carries the phrase's stress in the unmarked case (i.e. in an instance of broad focus). A task of determining why the most embedded elements are the noun *soccer*, not the verb *play* in (8), and the noun *book* not *Mary* in (9) is not trivial, but this line of explanation seems quite promising at the least. If one adopts this plausible account, the reason why adjuncts cannot project their focus to VPs may be seen as independent of the question of their integration into structure.

2.3. How can non-integrated adjuncts modify events?

Third, the lack of integration of adjuncts into a VP in fact means their lack of integration into any structure. If they dangle off a VP they actually dangle off the whole structure because they can only be concatenated to the root node. As evident from the tree (10) below, an adjunct dangles off a whole sentence (T):

(10)

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              ●
           /     \
          /       \
         T         PP
       /   \      /  \
      /     \    /    \
 John reads books   in the car
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But this seems to create problems for the realization of the function of VP adjuncts which Hornstein (2009) describes as "direct modification of events". It is unclear if an adjunct dangling off a structure can be called a *VP adjunct* and how it can be distinguished from a *sentence adjunct*. Also, if an adjunct is not integrated into a complement clause, it is not clear why it should be interpreted as modifying the event expressed by the lower verb and not the verb of the matrix clause, as illustrated below, i.e. why cannot the interpretation of (11) be (12):

(11) *John believes Mary to love him sincerely.*
(12) *John sincerely believes Mary to love him.*

The question of fulfilling a modifying function by adjuncts is just an off-shot of a larger problem of the interpretation of adjuncts. Some form of integration of adjuncts in a structure appears to be needed for their interpretation. Hornstein (2009: 92 fn16) notes that in single cycle theories one cannot wait till LF for the integration of adjuncts in a structure for their interpretation because there is no LF in such theories. Thus, he says his proposal of concatenation without labeling may be a form of integration in "another dimension" which is needed for the interpretation of adjuncts in a single cycle theory. He does not explain however how else an adjunct could be concatenated if not to a root node of the whole structure, as illustrated in (10). Any instance of pure concatenation of an adjunct with another node should instantly stop the derivation since no further Merge could be performed on an un-labeled construct in (10). Without defining the form of integration in "another dimension" Hornstein's (2009) proposal appears inconclusive with respect to the interpretation of adjuncts.

2.4. What about the linearization of adjuncts?

Leaving adjuncts un-integrated with structures inevitably leads to a problem of their linearization. Hornstein (2009) recourses to Chomsky's (1995) idea that adjuncts do not fall under the restrictions of the LCA. If so, he notes, "the linearizing adjuncts will

require special considerations on any theory of adjunction" Hornstein (2009: 92 fn15). No proposal on how to resolve the problem of adjunct linearization is raised though.

2.5. Can a derivation look ahead?

Finally, Hornstein's (2009) proposal seems to allow derivational look-ahead. He argues that labeling after concatenating an adjunct "is only grammatically available if the VP-plus-adjunct is moved (and possibly subsequently elided)" (Hornstein 2009: 98). The choice between the default option for the concatenation of adjuncts (no integration, no labeling) and a special case of adjunct merging (integration into structure, labeling) is conditioned by subsequent re-Merge of the VP-plus-adjunct. Such a view may be troublesome if one agrees that look-ahead is "architecturally suspect, empirically problematic, and computationally inefficient" as stated by Epstein and Seely (2002: 67).

3. VP movement in Polish

In this section, I present a brief typology of VP-movements in Polish with emphasis on the conditions of placement of unmarked focal stress within a moved VP. In agreement with the minimalist economy of movement, I will assume that VPs may be forced to move upward in a structure if required by an interface condition which attributes to a pre-posed VP some special interpretation. I will also follow a view of the left sentence periphery, as of Rizzi (2004) among others, by which the two major interpretive functions of the left periphery are Focus and Topic.

3.1. VP movement for focus

Within these cartographic limits, I propose to distinguish two major ways of pre-posing the whole VP in Polish. The first way is illustrated in the set (13)–(16):

(13) Zagra w piłkę z kolegami, oto co zrobi Tomek.
  play in ball with friends, this is what do$_{FUT}$ Tomek
  'Play soccer with friends is what Tomek will do.'

(14) Grać w piłkę z kolegami, oto co Tomek lubi najbardziej.
  to play in ball with friends this is what Tomek likes most
  'Play soccer with friends is what Tomek likes most.'

(15) Grać w piłkę z kolegami – to Tomek mógłby robić codziennie.
  to play in ball with friends – this Tomek could do everyday
  'Play soccer with friends is what Tomek could do everyday.'

(16) Tomek, to grać w piłkę z kolegami lubi najbardziej.
  Tomek this to play in ball with friends likes most
  'As for Tomek, it's playing soccer with friends that he likes most'.

From a functional point of view, the cases of VP movement illustrated above could be classified in two types: instances of inverted pseudo-clefts (13)–(15) and VP movement accompanying DP topicalization (16). In (13)–(15) the VP appears in a front position, while in (16) it follows a fronted topic. On a structural side, the pre-posed VPs in (13)–(16) are adjacent to special lexical markers (particles), *oto* and *to* (which,

as evident from the English glosses, are isomorphic with Polish demonstrative determiners). What is most relevant for our discussion is that the structures of examples (13)–(16), given in (17)–(20) below, show a uniform pattern of accentuation within a VP: a phrasal stress falls on the adjunct *z kolegami*:

(17) [$_{VP}$ Zagra w piłkę z KOLEGAMI]$_i$ oto co zrobi Tomek t$_i$.
(18) [$_{VP}$ Grać w piłkę z KOLEGAMI]$_i$ oto co Tomek lubi t$_i$ najbardziej.
(19) [$_{VP}$Grać w piłkę z KOLEGAMI]$_i$ – to Tomek mógłby t$_i$ robić codziennie.
(20) Tomek to [$_{VP}$grać w piłkę z KOLEGAMI]$_i$ lubi t$_i$ najbardziej.

The particle *oto* appears to have a "designating" function in the formation of Polish equivalents of inverted pseudo-clefts. The part placed to the left of the particle has a status of a new, un-presupposed part of information, which fills a gap created by a corresponding wh-question. In examples (17) and (18), the question is *What does/will x do?* The pre-posed VPs display then broad VP focus.[1]

Likewise, as I also argue elsewhere, the role of the second type of particle *to* in Polish sentences appears to be that of a lexical licenser of a focused element. On appearing in a structure it "selects" a constituent in its c-command domain and designates it for focus (Tajsner 2008: 357). Typical uses of *to* fall in two categories: (i) cases in which *to* is preceded by a constituent with a status of a topic, usually a DP (or PP, AP, VP) as in (20) above or (21) below, and (ii) cases in which *to* is clause-initial and followed directly by a focused constituent (DP or PP), as in (22) below. The latter type appears to be a Polish counterpart of a cleft-sentence.

(21) Tomek, to w PIŁKĘ zagra.
    Tomek this in ball play$_{FUT}$
    'As for Tomek, he will play soccer'.
(22) To TOMEK zagra w piłkę.
    this Tomek play$_{FUT}$ in ball
    'It is Tomek that will play soccer.'

Additionally, example (15) features the use of *to* in a pattern typical for *oto*, licensed in orthography by the use of a hyphen. I will thus regard the form of "– *to*" as equivalent to *oto* .

Given that all instances of VP movement in cases (13)–(16) result in some form of designation for focus, I suggest that they all involve instances of (VP) Focus Fronting (henceforth, FF). In (16) FF is additionally accompanied by an instance of DP topic

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[1]   It need not be so for pseudo-clefting, though, and the part designated for focus by *oto* may as well be a DP (or PP, AP), and the focus may be narrow, as in:
(i)   Nową PIŁKĘ, oto co Tomek sobie kupi.
       new ball this what Tomek himself buy$_{FUT}$
       'A new ball is what Tomek will buy for himself.'
In (i) a corresponding wh-question is *What will Tomek buy for himself*, hence the DP in (i) features a case of narrow focus.

fronting. Finally, if an interpretive alternative to being a focus for a fronted VP is being a topic, one could apply an "aboutness" test to cases (13)–(16) to check if the moved VPs could also qualify as topics. It may be observed that such a test is failed for all these cases. For example, the "aboutness test" is clearly failed for (14):

> (23) A: A co z graniem w piłkę z kolegami?
>   B: (14) !Grać w piłkę z KOLEGAMI, oto co Tomek lubi najbardziej.
> (24) A: And what about playing soccer with friends?
>   B: !Play soccer with FRIENDS is what Tomek likes the most.

3.2. VP movement for topic

The second way of pre-posing a VP is for topicalisation of which two subtypes can be distinguished, as illustrated by (25) and (26), and their corresponding structures given in (27) and (28):

> (25) Grać w piłkę z kolegami, (to) Tomek mógłby codziennie.
>   to play in ball with friends this Tomek could everyday
>   'As for playing soccer with friends, Tomek could do it everyday'.
> (26) Grać w piłkę przed budynkiem zakazał im dozorca.
>   to play in ball in front of building forbade them janitor
>   'The janitor forbade them to play soccer in front of the building.'
> (27) [$_{VP}$ Grać w PIŁKĘ z kolegami]$_i$ (to) Tomek mógłby t$_i$ codziennie.
> (28) [$_{VP}$ Grać w PIŁKĘ przed budynkiem]$_i$ zakazał im t$_i$ dozorca.

The displacement in (25) is to a well-defined structural position before the particle *to*. As discussed in Tajsner and Cegłowski (2006:121), the presence of the lexical marker *to* cannot be compatible with a topic interpretation of any other element than the one in the sentence front position. This may be interpreted as strongly indicating that the presence of the lexical marker *to* designates a position immediately preceding it as the only possible Topic position in a sentence. What is more, the interpretation of the VP in (25) is not that of a new, un-presupposed part of the information. Instead, VP is here the selected, "given" part of the message, while the "new" part is exactly what is left behind after VP is extracted: *Tomek mógłby t$_{VP}$ codziennie* ('Tomek could t$_{VP}$ everyday'). The same conclusion can be drawn from the application of the "aboutness" test used for the checking of the felicity of the designation for topic. Here is how the test applies to (25):

> (29) A: A co z (Tomka) graniem w piłkę z kolegami?
>   B: Grać w piłkę z kolegami, (to) Tomek mógłby codziennie.
> (30) A: And what about (Tom's) playing soccer with friends?
>   B: As for playing soccer with friends, Tomek could do it everyday.

The B answers to questions in (29) and (30) are fully felicitous which proves that the fronted VPs are topics.

The second major difference between VP movement in (25) and the previous cases is in prosody. As indicated in structure (27), the accent of the VP falls on the complement *w piłkę*, not on the phrase-final adjunct.[2] In that it appears to be unchanged with respect to a neutral (all new, out-of-the-blue, etc.) phrasal VP stress observable in non-moved instances of VP, e.g. in (31) and its structure in (32):

(31) Tomek mógłby codziennie grać w piłkę z kolegami.
  Tomek could everyday play in ball with friends
  'Tomek could play soccer with friends everyday'.

(32) Tomek mógłby [$_{VP}$ codziennie grać w PIŁKĘ z kolegami]

The second type of VP movement for topic I propose to distinguish here is exemplified by (26), and its structure in (28). It differs from the first one in that it does not contain a lexical topic marker *to*. If the status of *to* is this of a head of a dedicated TopP, as argued for in Tajsner&Cegłowski (2006) and Tajsner (2008), then its absence in (26) may indicate that the displacement here is not strictly to a dedicated Topic position in the left-sentence periphery. Rather, the type of operation involved here might be an instance of displacement similar in status to *Dislocation*, postulated for Russian in Bailyn (2003), functional in licensing the sentence EPP position.[3] In functional terms, the VP pre-posing in (26) appears to provide a Theme for the sentence, hence may informally be called an instance of *Thematization*, a form of topicalization, in which a constituent is fronted, but not to the dedicated Topic position in the left sentence periphery. I would like to leave open the question of the actual syntactic status of the movement involved in (26).

The interpretive status of the moved VP in (26) as topic may be determined by the application of the "aboutness test", which is passed in such cases, as indicated by the exchange below:

(33) A: A co z graniem w piłkę przed budynkiem?
  B: Grać w piłkę przed budynkiem zakazał im dozorca.
  A: And what about playing soccer in front of the building?
  B: Playing soccer in front of the building was forbidden by the janitor.[4]

The accentuation of the VP in (26) is the same as in (25), and does not differ from the un-moved case illustrated by (31) and its structure (32). Thus, the phrasal stress in the VP falls on the complement *w piłkę*, not on the adjunct *przed budynkiem*.

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2 This appears to be the most natural, preferred way of accenting the phrase, as univocally confirmed by a group of 12 native speakers.

3 I leave open a non-trivial question how a VP, a phrase presumably without a D feature, can satisfy the EPP here.

4 The English version is best rendered by passivization not a "Topic" sentence starting with "As for playing soccer…" which seems to further corroborate the status of (26) as a form of Thematization different from Topicalization .

3.3. The Polish VP movement facts and Hornstein's (2009) analysis

Let us now confront the above typology of VP pre-posing in Polish with Hornstein's (2009) analysis. The facts of VP movement for focus exemplified by (13)–(16) appear to align with Hornstein's observation of the situation in English inverted pseudo-cleft sentences. The accent within the Focus-fronted VPs falls on the adjunct, and the interpretation involved in such cases is this of broad VP focus, not of narrow PP-adjunct focus. However, I would like to propose a different interpretation of these facts. Significantly, for Hornstein (2009) an option of focus projection from an adjunct to the VP is not pre-conditioned by the application of an instance of Focus Fronting specifically. Rather, it is an outcome of any instance of Re-Merge that the VP may undertake. In other words, the fact that the inverted VP in English cases like *Play soccer on SUNDAY is what he'll do* is interpreted as focused is not linked to the possibility of focus projection from adjunct to the VP. These are treated as two independent facts: VP is focused because such is the interpretation of the inverted VP in a pseudo-cleft sentence, and focus can project from adjunct to VP because the VP is re-Merged, and thus requires prior adjunct integration, a precondition for such a projection. Consistently, one might presume that if VP movement was not for focus but for some other reason, the facts of focus projection from adjunct to the whole VP should hold just the same.

Hornstein (2009) does not discuss instances of VP movement other than this operative in the formation of inverted pseudo-clefts. In section 3.2 above I examined two instances of VP-movement for Topic in Polish in which the predictions concerning VP focus projection from adjuncts to the whole VP do not appear to hold. The whole VPs-with-adjuncts can undertake re-Merge, but the distribution of accents within the VP stays intact in comparison to the unmoved option; the main phrasal stress avoids the adjunct and falls on the complement phrase, as generally predicted by Selkirk's (1995) formulation of focus projection and Nuclear Stress Rule. Thus, an option of placing VP main stress on the adjunct turns out to be conditioned by the application of Focus Fronting in Polish, and is not realized in the other instance of VP movement, which may be called VP Topic fronting.

It may be noted also that the idea of changing accentuation within a VP from a neutral one, in which an adjunct avoids main stress, to a marked one, in which it carries it, appears counterintuitive within Hornstein's (2009) derivational framework. It is assumed there that re-Merge is an operation applying to atoms, as a way of satisfying the Inclusiveness Condition. If, after adjunct integration, a VP-with-adjunct forms such an atom, then the distribution of accents should be "sealed" within the VP at the point of re-Merge. In particular, the idea that focus can now project from the adjunct to the VP appears dubious. One would rather expect that, in a standard situation, re-Merge does not affect the stress-pattern within the VP. If, after all, a new stress pattern is observed, it should rather be an outcome of a late PF intervention than of a process of syntactic adjunct integration, the issue to which I return.

This raises the question of the determination of a stress pattern within a VP in a neutral case. We will recourse here to a standard line of argumentation based on the idea of Nuclear Stress Rule by which the constituent most deeply embedded within

a VP carries its phrasal accent. Thus, we will assume that regardless of the form of integration of an adjunct in a VP, or the lack thereof, the adjunct is not predestined to carry main VP stress due to its not occupying the most embedded position in a VP. Consistently, we would not expect a late adjunct integration in Hornstein's (2009) sense to place an adjunct in the most embedded position in a VP, to qualify it for the unmarked phrasal stress.

3.4. Pre-posed VPs as Intonational Phrases

Having said the above, one has to address the question of why in instances of VP movement for focus (FF) a phrasal VP accent in fact "shifts" to the adjunct. I would like to propose an analysis which dwells on two basic premises. One premise is that any instance of focus movement to the left sentence periphery involves contrastive or exhaustive focus interpretation at both interfaces of the grammar.[5] This is a rather well-attested and generally adopted view of Focus Fronting (e.g. Kiss 1998, Lopez 2009). I therefore take the case of the inverted pseudo-cleft in English, as well as all instances of VP movement for focus in Polish discussed in section 3.1., to be instances of focus movement to the left periphery of a sentence. As generally recognized (e.g. Tajsner 2008, or Lopez 2009), there are two major interpretations of such a movement; either it is an instance of displacement to a dedicated "criterial" position of the Spec. FocP (e.g. Rizzi 2006), or it is movement to one of the Spec. of CP positions, where the C head is equipped with a specialized (focus) feature.[6] I will not take a stance on which of these two cartographic options should be preferred. In what follows, I adopt a version of Rizzi's template for expository purposes. I assume however, that there may be specific structural or lexical "anchors" for Focus Fronting. For English, the structural anchors are both cleft and pseudo-cleft (inverted or not) sentences, for Polish the anchors are lexical markers *oto* and – *to*. On the appearance of such an "anchor" in the structure, which may be associated with the presence of the formal feature F (OCC, EPP) in the Focus probe, a head of a dedicated Focus Phrase, overt movement of an XP to the Spec. FocP is triggered.[7]

The second premise is an assumption that the PF component assigns stress prominence to the fronted VP in abstraction from its internal syntactic structure. We assume

---

[5]   Contrastive and exhaustive foci are not identical. As discussed by Lopez (2009: 25), "contrastive focus opens up a variable and simultaneously resolves it", while exhaustive focus additionally entails opening up a quantification set from which one element satisfies a variable and denies "that the complementary set satisfies the variable"(2009: 65). Fronted foci in Hungarian are both contrastive and exhaustive, while in Romance only contrastive.

[6]   Lopez (2009) argues that FF is into a Spec. of FinP, triggered by the feature [+c] (contrastive) in F.

[7]   Following these tentative lines, our proposal for the left sentence periphery in the cases of Polish VP movement for focus is based on Rizzi's (2006) template. (i) below is a finer version of the structure of example (13):

(i)   [$_{FocP}$ [$_{VP}$ Zagra w piłkę z KOLEGAMI]$_i$ [$_{Foc}$ [$_{Foc}$ oto] [$_{FinP}$ co zrobi Tomek t$_i$]]]

As for VP movement for topic, we assume a structure like (ii) which corresponds to example (25):

(ii)   [$_{TopP}$ [$_{VP}$Grać w PIŁKĘ z kolegami]$_i$ [$_{Top}$ [$_{Top}$ to] [$_{FocP}$Tomek mógłby t$_i$ codziennie]]]

Thus, *oto* (and – *to* which we take to be a variant of *oto*) is a lexical head of FocF, while *to* is a lexical Top head. The appearance of the latter triggers an instance of the overt XP movement for topic (topicalization) to a Spec. TopP position.

that if VP moves for focus, it is treated by the PF component as a phonological unit, and its internal composition has no bearing on the assignment of contrastive stress. We base this prediction on Selkirk's (2005) proposals with respect to intonational phrasing and Gussenhoven's (1992) and Truckenbrodt's (2006) view of phrasal stress. Selkirk (2005) argues that "contrastive focus is required – by a syntax-phonology interface constraint – to contain a metrical prominence of Intonational Phrase" and that "there will be as many Intonational Phrase *constituents* as there are contrastive foci" (:17). Thus, the moved VP, if contrastive, constitutes a separate Intonational Phrase (IP). Then, Selkirk (2005) shows that VP adjuncts, unlike sentence adjuncts, are not separate "Comma-phrases", and there is no major intonation break (IP break) separating them from the VP. We interpret this as showing that a VP-adjunct, even if not perfectly integrated in a VP in a syntactic sense, is phonologically integrated into a VP which constitutes a separate Intonational Phrase.

Next, in the framework of Sentence Accent Assignment Rule (SAAR), Gussenhoven (1992) argues that "the rightmost p-stress in the intonation phrase is strengthened to the strongest stress". Truckenbrodt (2006) sustains this view in his account of phrasal stress (Stress XP rule) and proclaims: "strengthen the last phrasal stress of the intonation phrase" (Truckenbrodt 2001: 577). It follows from such proposals that if a focused VP is an independent Intonational Phrase, its rightmost accented phrase must receive prominent phrasal stress. Thus, the assignment of contrastive focus stress at PF may be interpreted as a case of "strengthening the last phrasal stress of the intonational phrase" predictable in Gussenhoven's and Truckenbrodt's accounts without a need for postulating a separate PF mechanism for contrastive stress assignment. Next, if the rightmost p-stress in the Intonational Phrase falls on an adjunct phrase, it is automatically strengthened to the strongest VP stress. This is observed in both Hornstein's example *Play soccer on SUNDAY is what he'll do*, and in Polish examples (13)–(16) illustrating VP movement for Focus. The PF rule simply does its standard job on the Intonational Phrase in which the adjunct is phonologically integrated. In such a case, the application of the syntactically conditioned Nuclear Stress Rule is either ruled out completely, or suppressed by a late PF rule applicable to the Intonational Phrase.

Also, it may be observed that if the above line of interpretation is adopted, then there is no VP focus projection *per se* from adjunct to VP in such cases. The sequence of events is rather as follows: the VP is moved forward (re-Merged) for focus (FF) to a well-defined structural position (or to the vicinity of a lexical focus "anchor"). This triggers contrastive focus interpretation of the whole VP (LF interpretation). Independently, when already in the pre-posed position, the VP acquires a status of a separate Intonational Phrase, and its rightmost phrasal stress is strengthened by a late PF rule (PF interpretation).

Under such a scenario, it is still necessary that some form of syntactic integration of the adjunct to the VP is needed for the re-Merge to occur, as suggested by Hornstein (2009). It is only that we argue that this integration is not what allows the adjunct PP to carry main VP's stress or project its focus to the whole VP. The former is the

result of an independent PF rule applying to the VP as an Intonational Phrase and the latter follows from the contrastive focus interpretation of the whole VP, as a result of syntactic Focus Fronting.

Thus, the situation of stress is different for the instances of the two types of VP movement in Polish discussed in sections 3.1. and 3.2. When the VP moves for contrastive focus the standard "rules of the game" (NSR) are suppressed by the assignment of stress to the VP functioning as an Intonational Phrase. However, when the VP moves for Topic, the stress pattern in the VP is not changed with respect to the un-moved case: nuclear VP stress falls on the complement, not on the adjunct as evident from the structures (27) and (28), repeated below for convenience. This should follow from a different phonological status of the moved VPs in such cases. In particular, if they are not separate Intonational Phrases, a late PF rule of "strengthening the last phrasal stress of the intonational phrase" should not apply to them.

(27) [$_{VP}$Grać w PIŁKĘ z kolegami]$_i$ (to) Tomek mógłby t$_i$ codziennie.
(28) [$_{VP}$Grać w PIŁKĘ przed budynkiem]$_i$ zakazał im t$_i$ dozorca.

As discussed by Selkirk (2005: 12ff), there are two types of breaks distinguishable within phonological units. One type are *Intonational Breaks* which separate Intonational Phrases, and the other type are lower-rank *Major Breaks* which separate phonological phrases. She further discusses a question of the mapping between phonological and syntactic phrasing and puts forth a category of a *Comma Phrase* as a syntactic correlate of an Intonational Phrase. Thus, for example, root sentences, non-restrictive and appositive relative clauses, or right-adjoined sentence adjuncts have the status of Comma Phrases. On the other hand, restrictive relative clauses or right adjoined VP-adjuncts are not Comma Phrases and they are separated only by Major Breaks. As for the elements situated in the left periphery, she makes a distinction between two types of topics; those which are base-derived in the left periphery, and those which are placed there as a result of topicalization. In the first type she classifies standard *as for* – topics, and cases involving resumptive pronouns, as illustrated below:

(34)   As for llamas, do you think they're meaner than other ruminants?
(35)   Those alpacas, did you look for them for a long time?

<div align="right">(Selkirk 2005: 12)</div>

She classifies these two occurrences of in-situ topics as instances of syntactic Comma Phrases mapping on separate Intonational Phrases and separated from the rest of the sentence by Intonation Breaks.

The situation with moving Topics is different. Two of her examples are (36) and (37):

(36) Alpacas you have to treat *t* with kid gloves
(37) The alpacas she got *t* recently from some guy in New Hampshire.

She says "Indisputably these pre-posed constituents are semantically (and syntactically) an integral part of the root sentence, and so cannot have the status of a Comma Phrase themselves". She further notes, that the situation with moving topics may be obscured if they have the status of contrastive topics. In such cases, they have "a semantics that is very close to that of contrastive focus status." (Selkirk 2005: 13). Thus, it is their being contrastive which makes them separate Intonational Phrases, not their being moved topics.

Let us now relate these points to the cases of VP movement for topic in Polish discussed in section 3.2. The pre-posed VPs in structures like (27) and (28) have the status of moved Topics, as confirmed by the results of the "aboutness tests" discussed in section 3.2. As predicted in Selkirk's (2005) analysis, such moved VPs are not syntactic Comma Phrases, hence they do not constitute separate Intonational Phrases, and the breaks which separate them from the rest of the utterances are just Major Breaks, not Intonational Breaks. They are not instances of Focus Fronting and their interpretation is not contrastive. As a result, no late PF rule applicable to Intonational Phrases operates on them, and the distribution of stresses within such pre-posed VPs is not changed with respect to the original (neutral) pattern derived by the application of the structure-sensitive NSR; the main VP stress falls on the most deeply embedded constituent, which is a complement, not adjunct.

3.5. Partial recapitulation

To recap, I postulate, contrary to Hornstein (2009), that the possibility of placing main VP stress on an adjunct, with the preservation of broad VP-focus, is not a result of adjunct integration in a VP needed for the VP's re-Merge in a left periphery of a sentence. If it were so, any instance of VP pre-posing to the left sentence periphery should have the same effect. The facts from Polish show however, that an option of accentuating the adjunct arises only in the cases of VP pre-posing for focus, but not in the cases of VP movement for topic. I think VP pre-posing for focus is an instance of Focus Fronting which is performed always for a contrastive effect; such a focus-fronted VP is then bound to be interpreted as contrastive at both LF and PF interfaces. I also assume that FF is to a well-defined structural position, such as in clefts and (inverted)pseudo-clefts in English, or to the vicinity of lexical markers *to* or *oto* in Polish.

I then follow Selkirk (2005) in assuming that a contrastive phrase constitutes a separate Intonational Phrase, which, as I take after Truckenbrodt (2006), is subject to a late PF rule strengthening the rightmost stress of the appropriate metrical tree. Since the VP adjuncts are not separated from the VP by an Intonational Break, it is their stress which is strengthened into VP's main stress, if they occupy the rightmost position in a VP. This late PF rule overrides the earlier accentuation of the VP. If, on the other hand, a pre-posed VP is an instance of a moved Topic – it is not interpreted as contrastive and does not constitute a separate IP (Intonational Phrase), hence a late PF rule does not strengthen the rightmost stress in the VP, and the earlier accentuation derived by the NSR is conserved.

4. Adjunct integration revisited

Despite numerous proposals, the question of the integration of adjuncts in a structure remains unresolved. Some of the major ideas advanced in this respect have been of their post-cyclic insertion (Lebeaux 2000, Chomsky 1995), addition through Pair Merge and the operation SIMPL (Chomsky 2001, 2004), Latest Merge (Stepanov 2001) or Concatenate without Labeling (Boeckx 2008, Hornstein 2009). As discussed in section 2.3, Hornstein's (2009) proposal leads to a question of how adjuncts if un-integrated in VPs, perform their function of modifying events expressed by VPs rather than of modifying propositions expressed by whole sentences. Let us now return to the question of the integration of adjuncts in the structure of VPs by confronting a set of facts from Polish.

4.1. The position of VP adjuncts in Polish and the distribution of accents

As a language with a much more relaxed word order, Polish allows for a notorious breaking of the strict adjacency between heads and their complements by intruding adjuncts, as illustrated in (38)–(39) below:

> (38) Janek zbierał w lesie jagody.
>   Janek collected in forest blueberries
>   'Janek picked up blueberries in the forest'
> (39) Tomek grał z kolegami w piłkę.
>   Tomek played with colleagues in ball
>   'Tomek played soccer with friends'

The facts observed in (38)–(39) lead to a question of the possible derivation line for a VP with a PP adjunct in Polish. If a verb first just concatenates with an adjunct without labeling, then a next step becomes dubious; how can an un-labeled structure undergo a further Merge with a complement? The no-labeling solution inevitably leads to a derivational stalemate – unless adjuncts are allowed to be concatenated at a root node, i.e. unless they are Latest Merged (cf. Stepanov 2001), they could not be integrated in a structure at all.

On such logical grounds, it appears to be more reasonable to assume that adjuncts are concatenated only after the complements are merged with their heads. The intrusion of adjuncts between heads and complements could then be an effect of some systematic late insertion into this position, an issue to which we return. Such a conclusion appears to be confirmed by the facts of VP's phrasal stress and focus projection observed in (40)–(42) below. (40) is a focus-sensitive notation of example (38) and cases (41) and (42) present the distribution of VP phrasal stress in examples in which the order is canonical, i.e. complements immediately follow verbal heads:
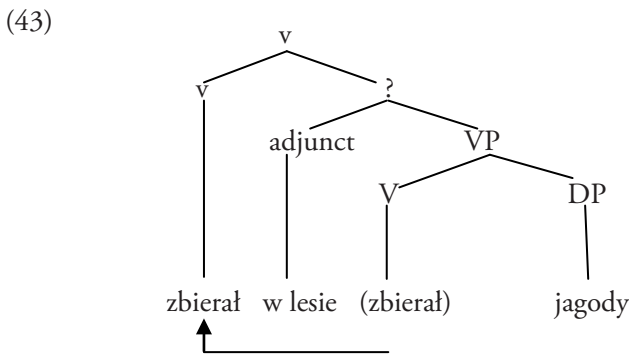
> (40) Janek zbierał w lesie [$_{FOC}$ JAGODY]. (information (broad VP) focus/ narrow
>   (contrastive) focus)

(41) Janek zbierał [FOC JAGODY] w lesie. (information (broad VP) focus/ narrow (contrastive) focus)

(42) Janek zbierał jagody [FOC W LESIE]. (information(broad VP) focus*/ narrow (contrastive) focus)

Examples (40)–(41) show that if a complement is focally stressed then, either the whole VP is interpreted as broadly focused, or the complement itself is interpreted as contrastively (narrowly) focused, subject to contextual factors. (42) shows, in turn, that if the focal stress falls on the adjunct PP, then there is no choice: it may only represent narrow (contrastive) focus. I will assume that the rule governing the placement of main phrasal stress in examples (40) and (41) under broad VP focus interpretation is Nuclear Stress Rule, by which it is assigned to the most embedded constituent of the VP. On the other hand, in (42), which can only be interpreted to have narrow (contrastive) focus on the adjunct, the stress on the adjunct may be assigned by some special rule responsible for contrastive stress, along the lines suggested, e.g. by Zubizarreta (1998).

4.2. Why cannot adjuncts project focus to a VP in standard cases?
There arises a question of the exclusion of adjuncts from VP phrasal stress in a neutral (non-contrastive) situation. I would like to add substance to Hornstein's (2009) proposal that the reason is that they are not integrated in a VP but rather they "dangle off" the structure. The case (40) is quite revealing in this respect. The main VP stress is still on the complement even if it is separated from the verb by the intruding adjunct. If we follow strictly the standard formulation of NSR and treat the placement of phrasal stress as a diagnostics for most embedding, then we have to conclude that in (40) the object is still most embedded despite the intruding position of the adjunct. A way to envisage this in structural terms could be by recourse to an analysis involving a v-VP complex (VP shells) and the verb moving to a pre-adjunct position, as shown in (43) below:

(43)

```
                    v
             _____/ _____
            v               ?
            |         _____/ _____
            |      adjunct         VP
            |         |        ____/ \____
            |         |       V          DP
            |         |       |           |
         zbierał   w lesie (zbierał)   jagody
            ↑_____|
```

I do not determine yet the form of the late integration of the adjunct in structure (43) and therefore I use a question mark to indicate that it is not clear by which mode (Concatenate or Merge) and at which stage of the derivation (at a root or not) it should be inserted. It may be noted that the position of the adjunct in (43) is compatible with the subsumption of the linearization of adjuncts under the restrictions of the LCA.

However, a reasonable option, adopted in many recent accounts, is that adjuncts are exempted from the requirement of LCA and linearized only at PF. It may be added that a more canonical order, in which an adjunct follows the complement, would be more problematic for LCA; how can an adjunct be sentence-final unless most deeply embedded in a structure of a VP?[8] The issue is of importance but I leave it unresolved.

4.3. Phrasal stress promotion in broad VP focus

In what follows, I present a tentative proposal of an analysis of the mechanism of VP stress assignment for the cases of broad VP-focus. My aim will be to show how it is possible that the adjunct is systematically ignored in the distribution of the VP stress in a non-contrastive situation. As a starting point, I propose to adopt a derivational variant of the NSR, as in (45):

> (45) Nuclear stress falls on the element transferred to PF at a completion of a phase which has the largest number of stress grids. (cf. Tajsner 2008: 299)

By advancing (45) it is suggested that nuclear stress placement is a function of First Merge rather than of *Most Embedding*. It is the element selected earliest in the derivation that receives a larger number of stress grids, hence major stress prominence. A technical implementation of the derivational NSR would be by applying a general idea of stress grid promotion (Halle and Vergnaud 1987). The gist of the idea is that by staying longest in a derivation, an element collects the largest number of stress grids in a metrical tree. Such a metrical tree expands consecutively in parallel to a syntactic tree.

A particular view of stress grid promotion mapped on a phase-wise derivation on which I model my proposal is Adger's (2007). A crucial assumption made in this account is that each phase receives a single stress marking, i.e. "the grid is constructed on the basis of the phasal status" Adger (2007: 245). One of his examples is a sentence *The baby ate the GLOOP*. The main stress on *gloop* is derived as follows: first, *gloop* receives a lexical stress grid and, then another one, after the merger with *the* at the completion of the DP phase.[9] Next, after the merger of *the gloop* with the v-V complex, the verb *ate* gets a single lexical stress grid. The merger with *the baby* results in the assignment of two stress grids to this phrase, one lexical and one by the DP phase. Next, since both the verb *ate* and the external argument *the baby* are at the edge of the vP phase, they are not to be spelled-out at this phase. As a result, the extra grid at the completion of the vP phase goes again to *gloop*. Finally, at the completion of the CP phase, one more stress grid is assigned to *gloop*, and the final stress pattern of *The baby ate the GLOOP* is successfully derived.

In what follows, I slightly modify this proposal in one point and adjust it to the version of the phase-wise derivation advocated in Chomsky (2001), Nissenbaum (2000) in which the phases that spell out are TP and VP, and the triggers for Spell-out

---

8   In particular, if LCA applied to adjuncts any right-adjoined VP adjunct should precede the complement (unless shifted, or scrambled forward).

9   Adger (2007) takes DPs to be phases.

are the heads which select them, C and v, respectively.[10] The modification I propose is that an element first selected in the derivation receives an extra "bonus" stress grid. Following these lines, we can say that in the derivation of *Janek zbierał w lesie JAG-ODY*, first the object DP receives three stress grids (one for lexical stress, one by the completion of the DP phase, and one bonus), then one grid is assigned to the verb *zbierał* and then again two grids to the external argument *Janek*. At a completion of the vP phase, one more grid is assigned to the object *jagody*. If an adjunct is added post-cyclically at this stage it may have at most two stress grids (a lexical one and one from the completion of the DP phase), but it will have no chance of receiving the extra stress grid at a completion of the vP phase. Thus, regardless of the place in which it is inserted in the structure, it will not be marked for phrasal stress. The effect of the post cyclic insertion of the adjunct will be its exemption from the assignment of the phasal stress grid. As a result, nuclear stress will be placed on the complement *jagody*, and the result is achieved not by reference to the fact that it occupies a specific, most embedded position in a syntactic (or metrical) tree, but because it has collected the largest number of stress grids by staying longest in the derivation.

The relevant steps in the derivation of the stress pattern in (40) may be summarized as in (45):

(45) 1. [jagody] → NSR projects lexical stress mark on *jagody,* by DP phase, plus a bonus;

$$
\begin{array}{c}
x \\
x \\
x \\
\text{jagody}
\end{array}
$$

2. zbierał + [jagody]

$$
\begin{array}{cc}
 & x \\
 & x \\
x & x \\
\text{zbierał} & \text{jagody}
\end{array}
$$

3. v + [_VP_ zbierał jagody]→[_v_ v-zbierał [_VP_ (zbierał) jagody]] (V-to-v movement)

4. [_DP_Janek] + [_v_ v-zbierał [_VP_ (zbierał) jagody]]

5. [_vP_ Janek[_v_ v-zbierał [_VP_ (zbierał) jagody]]] →
NSR projects highest stress mark at the vP phase; since the verb *zbierał* and the subject *Janek* are at the edge of the phase they are not to be spelled out at the vP phase and they are not counted by NSR. (completion of a vP phase)

$$
\begin{array}{ccc}
 & & x \\
 & & x \\
x & & x \\
x & x & x \\
\text{Janek} & \text{zbierał} & \text{jagody}
\end{array}
$$

---

10   Cf. Svenonus (2004) for the illuminating discussion of the implications of different approaches to phases

6.　　$[_P w] + [_{DP} lesie]$

```
                                                        x
                                                        x
                                                     w lesie
```

7.　　$[_{vP}$ Janek $[_v$ v-zbierał $[_{VP}$ (zbierał) jagody]]] ∧ $[_{PP}$ w lesie$]$

```
                                             x
                                             x
                    x                        x          x
                    x            x           x          x
                  Janek        zbierał     jagody    w lesie
```

8.　　Spell-out at the vP phase: correct stressing is predicted.

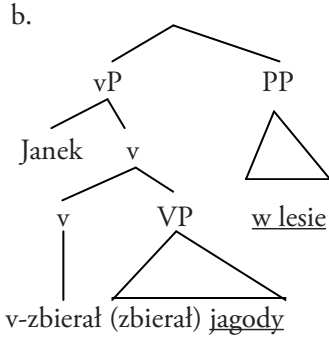　　　　　　　　　　　　　　　　　　　　　　adopted from Adger 2007)

The effect of the above derivation line is that the adjunct cannot ever receive a phrasal VP stress because it is merged (or rather: concatenated) too late in the structure. We have now substantiated what *late* or *post-cyclic* actually means; it means after the assignment of the phasal stress grid. A phasal vP stress grid can only be assigned to the VP, while the adjunct is concatenated with the vP. Note also that the place of the insertion of the adjunct into the vP is not determined in the above scenario as it is only concerned with the stress pattern and a metrical structure and not with the syntactic hierarchy or linearization.

4.4. Adjunct integration again: by Concatenate or by Merge?

In section 2.3. a question was raised concerning a way in which adjuncts non-integrated into a VP may perform a function of modifying events. What I think is necessary for a VP-adjunct to perform this function is some form of integration with a verbal phrase for appropriate interpretation at the semantic interface. This becomes problematic if an adjunct can only be concatenated at the root, as an instance of Latest Merge. I think, however, that the problem may be overcome if the insertion of an adjunct is properly orchestrated with the phase-wise derivation. There appear to be two specific points in the derivation at which an adjunct can be concatenated (and not necessarily merged) without invoking a derivational crash caused by the lack of labeling. This is at the points of the completion of the vP and CP phases. At such points, parts of the structure are transferred to Spell-out, and the remaining elements are "reconstructed" before they enter a next Merge at a higher phase. In such a case the output of Concatenate is not input to a further Merge and hence labeling need not occur.

What is more, if adjuncts are integrated with the structure at the point of a completion of a phase, just before Spell-out, then Concatenate is all they need for integration. In particular, there is no need for a more costly operation Merge (Concatenate and Label) to apply in such cases. As an illustration consider (47) below, where the concatenation of the adjunct occurs at a stage when the v head has already merged with its VP complement, the v has moved to V, and the external argument has been merged, as schematically presented below:

(47) a . [vP Janek [v v-zbierał [VP (zbierał) jagody]]] ^ [PP w lesie]
    b.

```
                        ●
                      /   \
                   vP       PP
                 /  \        /\
            Janek    v      /  \
                    /  \   /____\
                   v    VP  w lesie
                   |    /\
                   |   /  \
                   |  /____\
         v-zbierał (zbierał) jagody
```

The elements underlined in (47) are the ones to be spelled out at the vP phase. What remains in the derivation after their transfer to PF is a truncated vP structure, which gets restructured before it merges with a T head, as illustrated in (48):

(48)

```
   T        +        vP
                     /\
                    /  \
                   /____\
               Janek zbierał
```

Thus, the effect of Concatenate is wiped out at the stage illustrated by (48), and the derivation can continue at the higher phase. A very welcome result of this derivation is also that an adjunct is concatenated with a vP at the point given in (47). This allows for its interpretation at the semantic interface as a vP-modifier. By this, we achieve the result we did not have in an approach by which adjuncts can be concatenated only at the root.

4.5. Label for Move or for Merge?

The option of adding an adjunct at the completion of a vP phase by pure Concatenate entertained in the previous section apparently has one major disadvantage; it does not allow for the pre-posing of the whole VP-plus-adjunct. It is so for three basic reasons, which are evident from the structure in (47). First, for a VP-plus-adjunct to be moved forward as a unit, the adjunct has to form a syntactic constituent with the VP, which is not the case in (47). Second, the constituent to be moved would have to be labeled, and there is no such labeling in (47). Third, for a VP to move forward, the verb cannot independently move to v by an instance of syntactic V-to-v movement, while such a movement is involved in the derivation of (47). Thus, there arises a question of how the account in terms of the late integration of an adjunct at the point of the completion of a vP might be compatible with the facts of VP-pre-posing in both English and Polish discussed in sections 2 and 3.

A way to proceed is by noting that the derivational option discussed in the previous section need not be the only one. An alternative scenario appears to be available

leading to the integration of VP-adjuncts in the structure of VPs by Merge and not by pure Concatenate and allowing for the whole VP-plus-adjunct to undergo pre-posing. Let us see how. In Hornstein (2009) it is suggested that Label is enforced by subsequent Internal Merge. But, obviously, Internal Merge and External Merge are not substantially different, hence what is true of the former should also be true of the latter. Any instance of Merge should thus enforce the appearance of a label. Consider now what may happen in the derivations involving some form of VP-pre-posing discussed in sections 2 and 3. Let us look again at example (14) and its focus-sensitive structure in (18), both repeated below for convenience:

(14) Grać w piłkę z kolegami, oto co Tomek lubi najbardziej.
  to play in ball with friends this is what Tomek likes most
  'Play soccer with friends is what Tomek likes most.'

(18) [$_{VP}$ Grać w piłkę z KOLEGAMI]$_i$ oto co Tomek lubi t$_i$ najbardziej.

At the early stage of the derivation of (14), the verb *grać* gets merged with the complement PP *w piłkę*, as in (49) below:

(49) grać + w piłkę→ [$_{VP}$ grać w piłkę]

To satisfy Economy, the next step could be an instance of pure Concatenate with a PP adjunct *z kolegami*, as in (50):

(50) [$_{VP}$ grać w piłkę]^[$_{PP}$ z kolegami]

This would be a fatal move, though, instantly terminating the derivation, as discussed earlier, since no un-labeled structure can undergo Merge again. But, the VP formed so far should continue merging with a light verb v because the latter selects it as a complement. Therefore, the option of pure Concatenate at the stage given in (50) cannot be chosen. Instead, Merge is needed to provide the output with a label, as in (51):

(51) [$_{VP}$ grać w piłkę]+[$_{PP}$ z kolegami]→[$_{Label}$ [$_{VP}$ grać w piłkę][$_{PP}$ z kolegami]]

I do not want to take a stance on what sort of label it should be. I am not in a position to decide which form of structural integration of an adjunct mentioned in section 2.1 would be best and therefore I leave this question open.

The following steps in the derivation of sentence (14) would then lead to the pre-posing of the whole VP-with-adjunct to a dedicated Spec. FocP position, as discussed earlier, but the movement is local (consecutive-cyclic) and passes through the Spec. vP. The crucial difference with respect to the structural situation described in (47) is that now the three obstacles to VP movement are eliminated: (i) the moved phrase

is a constituent, (ii) the VP-with-an adjunct has a label, and (iii), the verb does not independently move to v.[11]

Let us summarize what this proposal gets us. First, we avoid a case of a problematic derivational look-ahead, mentioned in section 2.5. It may be assumed that VP-adjuncts, as non-selected elements, could in principle enter a derivation at any point. Whenever possible, they should enter the derivation by pure Concatenate, as a default option. This is possible, however, only at a completion of a phase, when the output of adjunct concatenation is not input to a further Merge. But, whenever a derivation is to continue with an instance of Merge, Concatenate has to give way to a more costly operation Merge.

Second, we gain a natural way of accounting for two ways of VP fronting, with or without an adjunct illustrated in (52):

(52) John could eat the cake in the yard with the fork…
　　a. …and eat the cake in the yard he did with a fork
　　b. …and eat the cake in the yard with a fork he did
　　　　　　　　　　　　　　　　cf. Hornstein (2009:84)

In (52a) one adjunct *in the yard* is integrated with VP by Merge prior to VP-fronting, while the other *with the fork* is only concatenated to the vP at the completion of the vP phase, after the VP-plus adjunct has already been raised to Spec.vP by consecutive Internal Merge. In (52b) however, both adjuncts are integrated by Merge.

Third, we avoid a problem with the proper determination of the function of adjuncts in modifying VPs. In any instance, whether adjuncts are integrated with the VP, prior to further Merge (and VP-pre-posing), or they just dangle off a VP at a completion of a vP phase, they appear in VP- related structural positions, hence can be interpreted appropriately at LF.

5. Summary and Conclusions

The paper has been in two major parts. In the first part, I was concerned with the question of VP focus projection, while in the second, the main topic was the integration of adjuncts in VPs. The first part started from a brief review of the notion of focus projection. Then, a few points related to Hornstein's (2009) proposal on the (lack of) integration of adjuncts in a structure of VPs were raised. It was noted that Hornstein's (2009) approach is inconclusive with respect to the mode of adjuncts' integration in cases involving VP pre-posing. It was further pointed out that the account along these lines may have to recourse to a derivational look-ahead, which is a disadvantage. It was also noted that the dangling off solution for adjuncts is problematic if they have

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[11]　That the V-to-v movement does not occur in such a case may be derived from pure Economy. We take verb movement to be a way of avoiding early Spell-out of the verb at the vP phase. But VP-movement to an edge Spec. vP position obviates a need for the movement of the verb: the verb anyhow avoids an early Spell-out if it is moved with the whole VP.

to fulfill the function of modifying events and a question was raised why the integration in a structure should be treated as a sufficient condition for focus projection.

Next, I presented a short taxonomy of VP-pre-posing types in Polish. These appear to fall in two major categories: (i) VP- pre-posing for focus, and (ii) VP-pre-posing for topic. I subscribed to a view that Focus Fronting (FF) is always for a contrastive effect and classified Polish VP pre-posing for focus as an instance of FF. Following Selkirk (2005) I took any occurrence of a VP-pre-posed for focus to constitute a separate Intonational Phrase in which, as predicted by Truckenbrodt (2006) and others, the rightmost accented phrase must receive prominent phrasal stress. Thus, the VP-final main stress on adjuncts was derived from the interplay of syntax and phonology to the effect that a PF rule operates on a contrastive phrase. That the integration of adjuncts in a VP needed for re-Merge is not a real cause of the placement of the VP-stress on the adjunct (and focus projection from adjunct to VP) was confirmed by the cases of VP pre-posing for topic in Polish in which the earlier distribution of stresses within a VP (derived by a Nuclear Stress Rule) is conserved after movement.

The second part of the paper was devoted to the proposal of the mechanism of adjunct integration in VPs. I argued that there are two ways in which adjuncts may be added to the structure of a VP. A default, more economical option is to add them by Concatenate. This is possible, however, only if no further instance of Merge (either Internal or External) is to follow, that is when Spell-out immediately occurs. This happens at the completion of vP and CP phases. If an adjunct is concatenated with the vP at this point, it gets immediately spelled out (maybe together with the complement) and the effect of Concatenate is "wiped out", nor resulting in a derivational crash due to a lack of label. The derivation may then proceed with the remaining, un-spelled out part of the structure. Alternatively, adjuncts may be integrated by Merge. The VP-plus-adjunct may then undergo an instance of pre-posing resulting in VP-fronting for focus or for topic.

Independently, I was trying to show how the phase-wise derivation maps on the procedure of stress promotion in a structure of a VP. I suggested a way of explaining how the fact of the avoidance of VP stress by adjuncts may be derived from the sequence of stress grid applications: if adjuncts are by default concatenated to the root, prior to Spell-out, they cannot receive an appropriate number of stress grids to carry main VP-stress.

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