A STRESS-BASED APPROACH TO CLIMBING*

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1 Introduction

Hungarian infinitival complement taking verbs fall into three classes (Kálmán et al. 1989). The first class exhibits climbing in neutral sentences (i.e. sentences that involve no contrastive focus or sentential negation) and (optional) inversion in non-neutral ones. Verbs that belong to this group are *akar* 'want', *fog* 'will', *tud* 'can' etc. The second class, does not participate in inversion and does not allow climbing (cf. *elfelejt* 'forget', *elkezd* 'begin', *imád* 'adore', *utál* 'hate' etc.). Verbs of the third class allow inversion, but do not trigger climbing (cf. *látszik* 'seem', *tanul* 'learn'). In this paper I shall concentrate on the verbs that belong to the first class.

One property that distinguishes these verbs from the other verbs that take infinitival complements is that these verbs do not take neutral, main sentential stress (cf. Kálmán et al. 1989). Therefore, I will call these verbs stress avoiding verbs. In this paper, I argue that it is this property that is responsible for the occurrence of climbing. (See É. Kiss 1998 and Dalmi 1999 for a similar view.)

Climbing can be illustrated by the following example. In a neutral Hungarian sentence whose tensed predicate is a stress avoiding verb, the verbal modifier (VM) of the most embedded verb appears in front of the stress avoiding verb.

(1) *Át$_i$* *fogja* *tudni* *úszni* *a Dunát*
Across will can-to swim-to the Danube-ACC
'(S)he will be able to swim across the Danube.'

Hungarian is standardly assumed to be a VO language, so most analyses assume that in (1) the VM has moved to the sentence-initial position[1]. The status of the movement and the origin of the VM are widely debated. Bródy (1997), Koopman & Szabolcsi (2000) take the movement to be an instance of phrasal movement. Bródy's (1997) main argument in favour of such an approach is the non-local nature of the movement. É. Kiss (1998) and Dalmi (1999) argue that the particle is a head, hence undergoes head-movement. In this paper I defend the position that particle climbing is an instance of syntactic phrasal movement to the specifier of the finite stress-avoiding verb (SAV). This is illustrated in (2).

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[1] However, see Ackema (this volume) for an analysis where the VM is in situ.

(2) [SAVP *Át*$_i$ [SAV *fogja*] *tudni* [VP t$_i$ *úszni* *a Dunát*]]
Across will can-to swim-to the Danube-ACC
'(S)he will be able to swim across the Danube.'

As for the origin of the moved VM, I take the VM, whether it is a head or a phrase, and the V to form a complex predicate in syntax (cf. Komlósy & Ackerman 1983, Neeleman 1994a, Ackema & Neeleman 2000, Ackema this volume, É. Kiss this volume). Thus, I take the VM to be adjoined to the verbal head.[2] Note that phonologically speaking the VM-V complex is one phonological word, with one stress falling on the VM, as in Hungarian stress at the word level is on the left.

The VM is stranded if the verb undergoes V-movement. This is illustrated in (3a) for a sentence that involves a contrastively focused constituent (Bródy 1990, 1995), and in (3b) for an imperative sentence (Szendr□i 1998).

(3) a. *PÉTER* *várta* *meg* *Marit* *a mozi elött.*
PETER waited VM Mari- ACC the cinema in-front-of
'It was PETER who waited for Mary in front of the cinema.'

b. *Fogd* *meg* *ezt a kötelet!*
hold-IMP/SUBJ VM this the rope-ACC
'Hold this rope.'

Following Bródy (1990, 1995), I assume that in a Hungarian sentence with a contrastively focused constituent the constituent moves to the specifier of a functional head which projects above the VP. The V moves to the head of the projection: obligatorily in tensed clauses, optionally in infinitivals. I do not assume the existence of a syntactic [+Focus]-feature (see Szendr□i 2001 for more discussion of this point). Instead, I argue that focus movement in Hungarian is stress-driven. The focused constituent targets the position where main stress is assigned in Hungarian: the left-edge of the clause.

In this paper, I show that the same mechanism ensures that a stress avoiding verb does not receive main stress. In particular, I argue that the trigger for particle climbing is stress avoidance: the particle moves to the left-peripheral position to pick up main stress. It follows from the above that climbing should be blocked by the presence of a focused constituent, which is indeed the case.

The paper is structured as follows. In Section 2 I sketch the Hungarian nuclear stress rule. In Section 3 I argue that Hungarian exhibits movement triggered by stress in focus constructions. In Section 4 I show that climbing can be understood as an instance of last resort movement in order to avoid main stress falling on the stress avoiding verb. In Section 5 I argue for the following two claims. First, that climbing happens in the syntax, rather then on the PF branch, and second, that it is phrasal movement. Section 6 draws a tentative parallel between particle climbing in Hungarian and the distribution of the Basque expletive particle *ba*. Section 7 concludes the paper.

[2] Bródy (1997) and Koopman & Szabolcsi (2000) take a different view. They assume that the VM is base-generated in a postverbal position along with the arguments of the verb and that the VM-V order in neutral sentences is derived by movement of the VM.

2 Stress in Hungarian

Following Nespor & Vogel (1986), Selkirk (1986) and many others, I argue that stress is assigned to an independent prosodic representation, rather than directly to the syntactic representation. The prosodic representation is made up of prosodic words (ω) that form phonological phrases (ϕ) that, in turn, form intonational phrases (IntP). The syntax-phonology mapping ensures that the syntactic and prosodic representations match. Following the spirit, but not the detail of Nespor & Vogel (1986), I assume that the phonology-syntax mapping in Hungarian is as follows[3] (cf. also Selkirk 1986, Inkelas 1989, McCarthy & Prince 1993, Neeleman & Weerman 1999).

(4) *Syntax-phonology mapping of phrases (Hungarian)*
Align the left edge of a phonological phrase with the left edge of a syntactic phrase.

(5) *Syntax-phonology mapping of clauses (Hungarian)*
Align the left edge of the intonational phrase with the left edge of the clause.

'Clause' in (5) is understood as the largest extended projection of the V whose head is lexically filled. In what follows, I assume that in a neutral sentence, where there is no evidence for verb-movement, the verb remains in situ, and the clause corresponds to a VP. If the V moves to a functional head position, then it is this projection that is relevant for the syntax-phonology mapping.

Nuclear stress is assigned as follows.[4]

(6) *Nuclear Stress Rule (NSR) (Hungarian)*
Main stress falls on the leftmost phonological word (ω) in the leftmost phonological phrase (ϕ) of the intonational phrase (IntP).

In a neutral sentence, where no contrastive focus is present, the verb stays in situ, and the clause consists of a VP. If material is adjoined to the VP, then both segments of the VP are mapped onto a segmented intonational phrase. As I show in Szendr□i (2001), the nuclear stress rule operates on the innermost intonational phrase segment. Thus, VP-adjoined material, like topics, fall outside its scope. Alternatively, one may analyse topics to sit in the specifier of some appropriate, higher functional head. Given that the V does not move to this head overtly, the mapping principle in (5) will ensure that the specifier of this head falls outside the core intonational phrase. Thus, in a neutral Hungarian sentence, such as the one in (7), main stress falls on the verb, as the verb is the leftmost non-adjoined constituent in the VP.[5]

[3] See Szendr□i (2001) for a more detailed discussion of the phonology-syntax mapping and the nuclear stress rule in Hungarian, English and Italian.

[4] See É.Kiss (1992), Vogel & Kenesei (1987, 1990) for similar approaches; Kálmán & Nádasdy (1994) for a different approach. See Szendr□i (2001) for a comparison of some of these.

[5] Throughout the paper, main stress is indicated by double quotes in the syntactic representation, and

(7) [IntP {ϕω} [IntP {ϕω} [IntP {ϕ**ω**}]]]
[VP *A n* [VP *a kalapját* [VP [V *"le vette.*]]]
the woman her hat-ACC off took
'The woman took her hat off.'

In a sentence with an embedded clause, as in (8), two distinct leftward VP boundaries are present, one projected by the matrix verb and another one projected by the embedded verb.[6] As a result, two intonational phrases are formed. The stress rules operate on both intonational phrases, yielding main stress on both the matrix and the embedded V.

(8)
[IntP {ϕω} [IntP {ϕ**ω**}]] [IntP {ϕω} [IntP {ϕ**ω**} {ϕω}]]
[VP *Péter* [VP "*mondta*, [CP *hogy* [VP *Marit* [VP "*meg látogatta* *az anyja*]]]]]
Peter said that Mary-ACC VM-visited the mother-her
'Peter said that Mary was visited by her mother'.

In the case of a series of infinitival complements involving stress avoiding verbs it seems to be possible to assign a single intonational phrase to the whole sentence with only one main stress for the whole sentence. This behaviour suggests that the stress avoiding verbs behave as if they were part of the extended projection of the lowest infinitival verb (cf. Van Riemsdijk 1998 Fn 12 and Wurmbrand 2001 for a similar claim). In Grimshaw's (1991) sense the heads of an extended projection all share certain features. Indeed all heads in an infinitival complex (including the highest finite verb) are [+V]. However, the stress avoiding verbs are not fully functional heads as they have their own (c- and) s-selectional properties and they can be (c- and) s-selected for. Thus, in this sense they are lexical heads. This explains why the topmost verb, the finite verb, marks the left-edge of the clause for the syntax-phonology mapping principle in (5). Functional heads are invisible for the syntax-phonology mapping (Zubizarreta 1998), but lexical heads are not. Nevertheless, it is only the projection of the highest verb, the finite one, that is matched by a left-edge of an intonational phrase, as the lower infinitival heads, though lexical, they are not in the highest position of their extended projection, so they do not meet the structural description of the mapping principle in (5).

Thus only the leftward XP-boundary projected by the topmost or finite verb is relevant for the syntax-prosody mapping in (5) and one single intonational phrase wraps the whole complex sentence. (9) illustrates the way the syntax-phonology mapping and the stress-rule operates in a sentence with a series of stress avoiding infinitival complements and particle climbing.[7] Recall from (2) that in climbing, the

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focus is indicated by caps. In the prosodic representation, which is always given above the syntactic representation, prosodic words are marked by ω, while prosodic phrases are marked by ϕ. The prosodic word that bears main stress is in bold.

[6] The complementizer does not indicate the left edge of the clause for the syntax-phonology mapping principle as it is a functional head, not a lexical one. Functional heads are metrically invisible (Zubizarreta 1998). In (8) *hogy* 'that' is assumed to cliticise onto the preceding verb. Arguably, it may also cliticise onto the following word. This does not effect the argumentation presented here.

[7] The optional stress heard on the lowest infinitive is secondary, or phrasal stress. In Szendr□i (2001) I

particle targets the specifier of the highest, finite stress avoiding verb.

(9) [IntP {ω} [IntP {**ω** ω} {ω} {ω} {ω}]]
[SAVP *Én* [SAVP *"haza$_i$ fogok kezdeni akarni* [VP t_i (')*menni*]]]
I home will-I begin-to want-to go-to
'I will begin to want to go home.'

3 STRESS-DRIVEN FOCUS MOVEMENT

I follow Reinhart (1995: 62) and Neeleman & Reinhart (1998) in assuming that 'the focus of a clause is a(ny) constituent containing the main stress of the clause, as determined by the stress rule'. In Szendr□i (1999, 2001) I argued that so-called focus movement in Hungarian (cf. Bródy 1990, 1995) is in fact movement of a constituent to the main stress position accompanied by verb-movement.

(10) *Stress-driven movement*:
In Hungarian, movement of the focused constituent to the left-periphery is triggered by the requirement that a focused constituent be stressed.

(Szendr□i 1999: 552)

(11) shows that in the so-called Hungarian focus construction the main stress falls on the focused constituent according to the nuclear stress rule in (6).

(11) [IntP {ω} [IntP {**ω** ω } {ω}]]
[FP *A n*□ [FP *A "KALAPJÁT vette* [VP [V *le* t_V] t_{DP}*]] (*nem a sáját*.)
the woman her cap-ACC took off
'It was her hat that the woman took off (not her scarf.)'

This stress-driven approach to focus-movement makes a number of predictions. For example, it predicts that only *one* focused constituent may move to the left-periphery to take up main stress, the second focus and any subsequent foci get stress by an extra, marked stress rule. This is a straightforward consequence of the fact that there is a single main stress assigned by the nuclear stress rule in (6) in every clause. The prediction is born out as it is illustrated by the following example. The VM, which marks the original position of the verb —at the left edge of the VP—, precedes the second focus indicating that the second focus is in situ.

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show that phrasal stress is deleted in Hungarian if the phrase is accessibly discourse-linked in Ariel's (1990) sense. As expected, the lowest infinitive is unstressed if it is mentioned in previous discourse.

(i) A: *"Mikor akarsz 'haza menni?*
when want-you home-go-to
'When do you want to go home?'
B: *Csak "reggel fogok akarni haza menni.*
only morning will-I want-to home-go-to
'I will only want to go home in the morning.'

(12) *Csak "HÁRMAN ettek meg csak "KÉT KENYERET.*
Only three ate VM only two bread-ACC
'It was only three people who ate up only two slices of bread.'

A further prediction of this approach is that verb-focusing will involve *no* movement, as the verb is in the neutrally stressed position even in its base-position. This is true, as it is shown in (13), as the VM-V order is not disturbed. Since V-movement in Hungarian generally strands the verbal particle in the base-position (cf. 3a and 3b), the VM-V order suggests that the verb is in situ.

(13) *De,*[VP *én* [VP "*ODA VITTEM a levelet*]].
But I VM took the letter-ACC
'But, I DID take the letter there.' or
'I TOOK the letter THERE (not brought it here).'

Given that there are two intonational phrases in a complex sentence, it is not surprising that contrastively focused constituents may appear in both clauses:

(14) *"PÉTERT kértem meg, hogy A "KÓRHÁZBA vidd el,*
Peter-ACC asked-I VM that the hospital-into take-IMP VM

(és nem a gyereket az oviba).
(and not the child to the nursery)
'I asked you to take PETER to the HOSPITAL, and not to take the child to the nursery.'

To sum up, there are a number of predictions in a stress-based approach to focus that are born out.

4 Particle climbing in a stress-based approach

As a further consequence of this approach, the structural position that is filled by the contrastively focused constituent can be created to *avoid* stressing of a constituent that would otherwise be clause-initial. I would like to show that particle climbing is a last resort operation that applies to avoid stress falling on a stress avoiding verb.

Recall from Section 2 that in a sentence involving stress avoiding verbs a single intonational phrase is assigned to the whole sentence, as the stress-avoiding verbs, though lexical, are part of a single extended projection. Thus only the leftward XP-boundary projected by the topmost or finite verb is relevant for the syntax-prosody mapping in (4-5) and one single intonational phrase wraps the whole complex sentence. As a result, the finite stress-avoiding verb ends up as the leftmost prosodic word of the leftmost phonological phrase of the intonational phrase, thus it receives main stress by the nuclear stress rule in (6). Since stress-avoiding verbs cannot bear main stress, the sentence is ungrammatical. This is shown in (15).

(15) [IntP {ϕω} [IntP {ϕ**ω**} {ϕω} {ϕω} {ϕω}]]
[SAVP *Én [SAVP "*fogok kezdeni akarni haza menni*]]
I will-I begin-to want-to home-go-to
'I will begin to want to go home.'

In order to save (15), a last resort operation takes place that moves the particle of the lowest verb (16a), or the lowest verb itself if it has no particle (16b), to the sentence initial position. The moved element takes up the main stress of the utterance.

(16)

a. [IntP {ϕω} [IntP {ϕ**ω** ω} {ϕω} {ϕω} {ϕω}]]
[SAVP *Én* [SAVP "*haza*$_i$ *fogok kezdeni akarni* t$_i$ *menni*]]
I home will-I begin-to want-to go-to
'I will begin to want to go home.'

b. [IntP {ϕω} [IntP {ϕ**ω** ω} {ϕω} {ϕω} {ϕω}]]
[SAVP *Én* [SAVP "*úszni*$_j$ *fogok kezdeni akarni* t$_j$]]
I swim-to will-I begin-to want-to
'I will want to begin to swim.'

As (17) shows, a finite stress-avoiding verb may be saved from being sentence-initial by the presence of a contrastively focused element as well. Recall from Section 3 that focus movement is stress-driven in the sense that it targets the main stress position. If so, it is not surprising that focusing saves the structure in (15). The focused element moves to the initial position, takes up main stress, and thus allows the stress avoiding verb to surface unstressed.

(17) [IntP {ϕω} [IntP {ϕω ω} {ϕω} {ϕω} {ϕω}]]
[SAVP *Én* [SAVP "*MOST fogok kezdeni akarni haza menni*]]
I NOW will-I begin-to want-to home-go-to
'It is NOW that I will want to begin to go home.'

Koopman & Szabolcsi (2000) observed that it is not only the case that particle climbing can be omitted if a constituent is contrastively focused, rather it is in fact *blocked* in this case, see (18a). Interestingly, an intervening quantifier or topic does not block climbing, (18b).

(18) a. (*Át) *A "DUNÁT* (**át*) *fogom akarni kezdeni *(át) úszni.*
across the Danube-acc across will-I want-to begin-to across swim-to
'It is the Danube that I will want to begin to swim across.'

b. "*Át fogom a Dunát akarni kezdeni úszni.*
across will-I the Danube-acc want-to begin-to swim-to
'As for the Danube, I will want to begin to swim across it.'

The present approach to climbing and focussing allows a straightforward analysis of the complementary distribution of focused elements and climbed particles. The blocking effect is due to the fact that once focusing happened there is *no trigger* for climbing. Recall that focus-movement is triggered by the interpretative requirement that the DP gets stressed (10), and that climbing happens to ensure that the stress avoiding verb does not get stressed. Clearly, focus-movement alone satisfies both its own need to get stressed and the verb's need not to get stressed. Thus, in sentences with a focused constituent, climbing is ruled out by economy in the sense of Reinhart (1995): an unnecessary operation is blocked.[8]

Koopman & Szabolcsi (2000: 84-85), account for the observed blocking effect as follows. They claim that in their [$_{PredP}$ [$_{WP}$ VM [$_{VP}$ V t_{VM}]]] sequence the VP moves to [Spec, PredP] in a neutral clause, thus arriving at a separation of the VM and the V. In non-neutral clauses, however, the WP, containing the VM plus the V, moves to [Spec, PredP], thus keeping the VM-V order unchanged. It is easy to see that separation of the VM and the V is necessary for climbing, so it will be ruled out exactly in non-neutral clauses. They assume that the 'motivation may be ultimately phonological (intonational); the effects are directly syntactic' (Koopman & Szabolcsi 2000: 85). My analysis is in line with this claim in that I assume that climbing is indeed phonologically conditioned syntactic movement.

The stress-driven approach to climbing presented above extends to complex sentences as well. Recall from Section 2 that an embedded clause forms a separate intonational phrase from the main clause as in (8), repeated here for convenience.

(8)

[$_{IntP}$ {$_{\varphi}$ω}	[$_{IntP}$ {$_{\varphi}$**ω**}		]]	[$_{IntP}$ {$_{\varphi}$ω}	[$_{IntP}$ {$_{\varphi}$**ω**}		{$_{\varphi}$ω}]]
[$_{VP}$ *Péter*	[$_{VP}$ "*mondta*,	[$_{CP}$ *hogy*		[$_{VP}$ *Marit*	[$_{VP}$ "*meg látogatta*		*az anyja*]]]]]
Peter	said	that		Mary-ACC	VM-visited		the mother-her

'Peter said that Mary was visited by her mother'.

This prosodic structure gives the prediction that an embedded verbal cluster will exhibit climbing if the finite verb in the complement clause is a stress avoiding verb. As (19) shows, the prediction is born out if the embedded clause is declarative.[9]

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[8] É.Kiss (p.c.) claims that some Hungarian speakers allow so-called partial climbing, i.e. a focused phrase precedes the finite verb and particle climbing targets a position immediately preceding one of the infinitival heads:

(i)	*Figyelj!*	"MOST	*fogja*	"*szét*$_i$	*kezdeni*	*f□részelni*$_i$	*a b□vész*	*a n□t!*
	Look!	Now	will	PV	start-to	saw-to	the illusionist	the woman

'Look! The illusionist will start sawing the woman into to two NOW.'

Note that the questionnaire survey reported by Szendr□i & Tóth (this volume) did not find speakers of this dialect. Nevertheless, if such dialect existed, under the present analysis, it would have to be assumed that in this dialect, at least optionally, more than one intonational phrases are formed in the case of complex sentences involving infinitival complements. Thus, in this dialect, it is expected that two main stresses are heard in an utterance like (i), one on the focused constituent and one on the particle. If the argumentation following van Riemsdijk (1998) is on the right track, this would mean that the infinitival heads that trigger climbing would be fully lexical rather than semi-lexical in this dialect, and thus not form part of an extended projection of the lowest verb.

[9] (19b) is, of course, grammatical under the reading that puts focus on the stress-avoiding verb *kezdett* 'started'. Similarly, (20b) is grammatical under the reading where *haza* 'home' is contrastively focused

(19)

a. [IntP {ˌω} [IntP {ˌω}]] [IntP {ˌω ω} {ˌω}]]
[VP *Péter* [VP *el mesélte*, [CP *hogy* [SAVP "*haza kezdett* [VP tVM *úszni*.
Peter VM-told that home started swim-to

b. [IntP {ˌω} [IntP {ˌω}]] [IntP {ˌω} {ˌω}]]
[VP **Péter* [VP *el mesélte*, [CP *hogy* [SAVP "*kezdett* [VP *haza úszni*.
Peter VM-told that started home swim-to
'Peter told (us) that he started swimming home.'

However, in the case of non-declarative clauses, climbing seems to be optional in some cases, as in (21), even though it is obligatory in other cases, such as (20).

(20)a. "*Kizárt, hogy "részt akarjunk venni a projektumban*.
out-of-the-question that part- ACC want- SUBJ/IMP take-to the project-in

b. *"*Kizárt, hogy "akarjunk résztvenni a projektumban.*
out-of-the-question that want-SUBJ/IMP part-ACC-take-to the project-in
'It is out of the question that we want to take part in the project.'

(21)a. "*Elvárja, hogy "részt akarjunk venni a projektumban.*
expects that part-ACC want- SUBJ/IMP take-to the project-in

b. *?*"*Elvárja, hogy "akarjunk résztvenni a projektumban.*
expects that want- SUBJ/IMP part-ACC-take-to the project-in
'He expects us to want to take part in the project.'

Moreover, in certain other cases, climbing is impossible. As (22) shows, the optionally stress avoiding verb *próbál* 'try' does not trigger climbing under the matrix predicate *megparancsol* 'order'.

(22)a. *"*Megparancsolta, hogy be "próbáljak jutni a házba.*
VM-ordered that in try- SUBJ/IMP get the house-to

b. "*Megparancsolta, hogy "próbáljak bejutni a házba.*
VM-ordered that try- SUBJ/IMP in-get the house-to
'He ordered that I try to get into the house.'

At first sight, the optionality or the impossibility of climbing seems to be in violation of the stress avoiding property of the lower finite V. However, this is only apparent. In Szendr□i (1998) I argued that certain matrix predicates may lexically select for subjunctive or imperative embedded complement clauses. Some matrix predicates allow both type of complement clauses. Morphologically, the imperative and subjunctive forms of the verb are the same, as also indicated by the glosses in (20) to (22). But syntactically, the two are different, since the verb is fronted, leaving the VM stranded, in imperative clauses, whereas in subjunctive clauses it stays in situ.

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in the embedded clause. But this is irrelevant here.

Let us determine the selectional properties of the verbs involved in (20) to (22). As it is shown in (23), the adjective *kizárt* 'out of the question' only allows a subjunctive subject clause. In (24) we can see that the V *elvárja* 'expect' allows both a subjunctive and an imperative complement. Finally, (25) shows that megparancsol 'order' selects an imperative rather than a subjunctive complement. This is in accordance with the obligatory lack of climbing in (22), and the optional climbing in (21). I argue that the observed lack of climbing is due to the independently motivated V-movement of the topmost verb in the embeded clause to license the imperative.[10]

(23)a. *"Kizárt, hogy "részt vegyünk ebben a projektumban.*
out-of-the-question that part-ACC take- SUBJ/IMP this-in the project-in

b. *"Kizárt, hogy "vegyünk részt ebben a projektumban.*
out-of-the-question that take- SUBJ/IMP part-ACC this-in the project-in
'It is out of the question that we take part in this project.'

(24)a. *"Elvárja, hogy "részt vegyünk ebben a projektumban.*
expects that part-ACC take- SUBJ/IMP this-in the project-in

b. *"Elvárja, hogy "vegyünk részt ebben a projektumban.*
expects that take- SUBJ/IMP part-ACC this-in the project-in
'He expects us to take part in the project.'

(25)a. *"Megparancsolta, hogy "jussak be a házba.*
VM-ordered that get- SUBJ/IMP in the house-to

b. *"Megparancsolta, hogy "bejussak a házba.*
VM-ordered that in-get- SUBJ/IMP the house-to
'He ordered that I get into the house.'

Thus, climbing can be avoided if the topmost verb is in the imperative, and is licensed by V-movement. This is a possibility only if the matrix predicate allows an imperative complement. If the matrix verb selects a subjunctive, or takes a declarative complement, climbing in the embedded clause is obligatory, as expected.

To summarize, so far I argued that in the case of climbing a specifier position is projected in order to avoid stressing of the stress avoiding verb which cannot take neutral main stress. If focussing happens climbing is blocked as it would be an unnecessary operation.

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[10]It is an independent fact that imperative licences stress avoiding verbs in the sentence-initial position. I speculate that stress avoiding verbs can be sentence-initial and bear stress in this case (cf. i) in the same way they can do so if they are focused (cf. ii).

(i) *Akarj felmászni!*
(I want you to) want to climb up!

(ii) *De hiszen én AKAROK felmászni!*
But, I DO WANT to climb up!

5 Climbing: syntactic XP-movement

At this point I would like to underline that climbing (or focussing) is not an instance of movement on the PF branch, following Spellout. This is so because it observes conditions on syntactic movement, for example the adjunct island constraint as is illustrated in (26).[11] It would be unexpected from an instance of PF-movement to observe subjacency, which is essentially the syntactic condition that requires a trace to be bound by the moved element.

(26) a. *Be kell* [$_{CP}$ *hogy* t_{be} *engedjenek*].
VM must that allow-SUBJ-they
'They must allow me in.' (CP complement to V '*must*')

b. **Be kell* pro [$_{CP}$ (*azért*) *hogy* t_{be} *engedjenek*].
VM must that-for that allow-SUBJ-they
'I need it so that they allow me in.' (CP adjunct to V '*must*')

The analysis of climbing presented in the previous section takes climbing to be phrasal movement, but note that it is in no way crucial to it whether this is in fact so. If climbing was head movement, blocking could not be a result of the fact that they compete for the same position. However, it would still hold that if focusing takes place, climbing is blocked because there is no trigger for it, as the stress avoiding

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[11] Focussing also licenses parasitic gaps. This can be illustrated in Hungarian as follows. In (i), the focused element is an indefinite DP. It triggers indefinite agreement on the verb in the adjunct clause, indicating that it binds a trace in that clause as well.

(i) *Egy "könyvet$_i$ rakott el t_V t_i anélkül, hogy meg nézett t_i volna.*
a book-ACC put-INDEF away withoutthatVM-looked-INDEF would
'He put away a BOOK without reading (it).'

One might argue that the account presented here entails that climbing should also license parasitic gaps, as climbing and focussing is analysed in a parallel fashion. As (iia) shows, climbing of 'proper' verbal particles does not license parasitic gaps, while climbing of other verbal modifiers, such as bare nouns may arguably do so.

(ii) a. ** Péter haza$_i$ akar t_i menni anélkül, hogy t_i telefonálna.*
Peter home wants go-to withoutthat would-phone-INDEF
'PETER wants to go home without phoning (home).'
b. *Kenyeret$_i$ akar t_i enni, anélkül, hogy t_i szelne/*é*
bread-ACC want-to eat-to withoutthatwould-cut-INDEF/DEF
'He wants to eat bread without cutting slices (of it).'

This behaviour is not surprising if parasitic gaps are understood to turn the adjunct CP into a predicate, which is licensed by being predicated of a suitable NP (Neeleman 1994b following Chomsky 1977 and 1986). A particle, which is itself predicative, cannot act as an argument licensing a predicate. A bare noun object, on the other hand, may do so. The bare noun is, of course, part of the complex predicate *kenyeret vesz* 'bread-ACC buy', but this does not mean that the bare noun itself would be predicative. The details of this analysis are left open here. Nevertheless, I tentatively conclude that even though focussing licenses parastic gaps, and focussing and climbing are treated in a parallel fashion, this does not imply that particles should license parasitic gaps in a climbing construction.

verb is not clause initial anymore. This view is taken by Dalmi (1999). Nevertheless, let me argue here for the claim that climbing is XP movement.

Bródy (1997) noted that climbing may cross several clause boundaries, even tensed ones, which he takes as decisive argument against a treatment of climbing as head movement. É. Kiss (1998, this volume) provides a counter-argument to such a view. She claims that an analysis that takes a climbed particle to be in a specifier position makes the prediction that the following sentence is grammatical, since the bar-level categories could be coordinated.

(27) **János* [*szét* [[*akarja* t *vágni a rajzot*]
John apart wants cut-to the drawing-ACC

és [*fogja* t *szedni a rádiót*]]]
and will take-to the radio-ACC
'John wants to cut the drawing to pieces and will take the radio apart.'

In fact, she draws a parallel with cases where the V and the VM form a lexical complex predicate. She claims that in both cases the ungrammaticality is due to the fact that the VM is in fact head-adjoined to the verb, thus the coordinated elements are not constituents.

(28) **János* [*szét* [[*vágta a rajzot*] *és* [*szedte a rádiót*]]]
John apart cut the drawing-ACC and took the radio-ACC
'John cut the drawing to pieces and took the radio apart.'

To provide further support for her position, Katalin É.Kiss (p.c.) provides the example in (29). According to É.Kiss, (29) is a coordination of bar-level categories. Since, the focused constituent is not head-adjoined to the finite verb, but is in a specifier position, it is no surprise that coordination below it is possible.

(29) *?JÁNOS akarja SZÉTVÁGNI a RAJZOT*
John wants apart-cut-to the drawing-ACC

és fogja SZÉTSZEDNI a RÁDIÓT.
will apart-take-to the radio-ACC
'JOHN wants to CUT THE DRAWING TO PIECES and will TAKE THE RADIO APART.'

But note that (29) is only possible if the constituents in the second conjuncts are disanaphoric to the corresponding consituents in the first conjuct. In other words, the special intonation of (29), indicated by the capitals, is crucial. Thus the status of (30a) is seriously degraded and (30b) is ungrammatical.

(30) a. ?**JÁNOS akarja szét szedni a TÉVÉT*
John wants apart-take-to the telly-ACC

és fogjaszét szedni a RÁDIÓT.
and will apart-take-to the radio-ACC
'JOHN wants to take apart THE TELLY and will take apart THE RADIO.'

b. **JÁNOS akarja szét szedni a tévét*
John wants apart-take-to the telly-ACC

és fogja szét szedni a tévét.
and will apart-take-to the telly-ACC
'JOHN wants to take apart the telly and will take apart the telly.'

If (29) involved coordination of bar-level categories below the focus, then this disanaphora requirement would be unexpected. Williams (1997) argues that the disanaphora requirement is a hallmark of coordinate structures with ellipsis. In particular, he argues that in the case of coordinate ellipsis, any constituent that is present in the second conjunct has to be disanaphoric to the corresponding constituent in the first conjunct. He also shows that no disanaphora requirement holds of ordinary coordination structures, where no elision took place. Following Williams's (1997) argumentation, I would like to propose that the observed disanaphora requirement in (30) shows that (30) and (29) involve FP coordination, with conjunct reduction in the second clause. So the structure for (29) is really as in (31).

(31) ?[$_{FP}$ *JÁNOS akarja SZÉT VÁGNI a RAJZOT*]
John wants apart-cut-to the drawing-ACC

és [$_{FP}$ ~~*JÁNOS*~~ *fogja SZÉT SZEDNI a RÁDIÓT*]
and John will apart-take-to the radio-ACC
'JOHN wants to CUT THE DRAWING TO PIECES and will TAKE THE RADIO APART.'

If this is on the right track, then the reason why (27) (and also possibly 28) is ungrammatical might be that particles cannot undergo conjunct reduction, while focused DPs can. Although it is not clear to me why this should be so, some support for this idea comes from coordination under topicalised particles. As (32) shows, a topicalised particle, cannot undergo conjunct reduction either. (32) is ungrammatical, while the first conjunct of (32) on its own would be grammatical, indicating that there is nothing wrong with particle topicalisation as such. Under É.Kiss's view this is unexpected, as the particle is not in a head-adjoined position. If one assumes the presence of a functional Topic head, then the particle is in [Spec, TopicP] otherwise it is adjoined to FP. But in any case, particle topicalisation, is phrasal movement, thus the possibility of coordination under the landing site of the moved element should be possible.

(32) *[$_{\text{TopicP}}$ *Haza$_i$* [$_{\text{FP}}$ *JÁNOS* t$_i$ *küldte a CSOMAGOT*]]
home John sent the package-ACC

és [$_{\text{TopicP}}$ ~~*haza*~~$_j$ [$_{\text{FP}}$ *PÉTER* t$_j$ *hozta a LEVELET*]
and home Peter brought the letter-ACC
'As for home, JOHN sent the package (there) and Peter brought the letter (there).'

To conclude, I attempted to show in this section that climbing is syntactic XP-movement. I argued that what É.Kiss takes to be coordination of F-bar-level constituents is in fact not that, but coordination of FPs and conjunct reduction in the second conjunct. I also gave some support for the idea that particles cannot undergo conjunct reduction. If so, the ungrammaticality of (27) follows irrespective of the position of the particle. Thus, the data seems compatible with an analysis of particle climbing in terms of syntactic XP movement.

6 CROSS-LINGUISTIC COMPARISON: THE BASQUE PARTICLE *BA*

The phenomenon of stress-avoidance seems to occur in other languages, too. For example, as Ortiz de Urbina (1994) reports, the occurrence of the Basque particle *ba* is restricted to the following contexts. Basque has a handful of verbs that form a synthetic unit with their auxiliary. Periphrastic forms have 'V aux' order, synthetic forms, 'aux-V' (cf. 33, 34). Basque is a rigid V-final language. If the verb or auxiliary is to be focused, it is moved to an initial position. In (33), the V Aux complex, in (34), the Aux-V complex has fronted to be focused.

(33) *EROSI du Jonek liburua.*
Bought has John book
'John HAS bought a book.'

(34) **(BA) dator Jon orain.*
PRT INFL-come John now
'John COMES now.'

In (33) the fronted verb bears main accent, while in (34) a particle *ba* is inserted which receives main stress. [12] It seems from the stress patterns of (33) and (34) that the initial position is the main stress position in these Basque constructions. I assume following standard practice that the synthetic form is a morphological unit. I further assume that Basque auxiliaries that undergo synthetic complex formation are stress-avoiding. The synthetic Aux-V complex inherits the stress-avoiding property from the auxiliary (cf. Ackema this volume). As a result synthetic forms may not surface sentence initially. If a synthetic form is fronted, something has to appear in front of it to take up main stress in the initial position, thus in (34) the particle *ba* is insterted.

[12] Ortiz de Urbina (p.c.) confirmed that the constituent bearing main stress is the V in (33), the particle *ba* in (34) and (35b), and the focused constituent in (35a). He also informed me that the particle *ba* also occurs in some cases where the synthetic auxiliary-V complex does not seem to be stress-avoiding. According to him, these are only a handful of lexicalised forms.

Thus *ba*-insertion is a last resort stress-avoiding operation of the same kind as I argued above that particle climbing is in Hungarian.

If the parallel is valid, then we predict that the *ba*-insertion operation is blocked if a contrastively focused constituent precedes the 'aux-verb' complex (35a), but not by a sentence-initial topic (35b). This is because in (35a) the focused constituent bears main stress rendering the synthetic verb unstressed, while in (35b), the synthetic verb is initial, and thus receives main stress. This prediction is born out:

(35) a. *JONEK (*ba) daki hori.*
John PRT INFL-know that
'JOHN knows that.'

b. *Jonek, *(BA) daki hori.*
John PRT INFL-know that
'John, knows that.'

Thus, I tentatively conclude that *ba*-insertion in Basque is a stress-avoiding last resort operation.

6 Conclusion

In this paper I argued that particle climbing is a last resort operation to avoid stressing of a stress avoiding verb. As a result of the syntax-phonology mapping and the nuclear stress rule in Hungarian, the finite stress avoiding verb at the top of a series of infitival complements involving stress avoiding verbs would end up in the position where main stress is assigned. Since a lexical property of these verbs disallows main stress falling on them, a last resort operation, particle climbing is invoked to save the structure.

I presented arguments in favour of a stress-driven approach to focus movement. If both views turn out to be correct we obtain an explanation for the intriguing fact that focussing and climbing block each other. This is because, in focus fronting, the focused element takes up main stress, and thus saves the stress avoiding verb. Additional climbing would be unnecessary and therefore a violation of economy.

I also presented arguments in support of the position that takes climbing to be an instance of syntactic XP-movement. Finally, I sketched a possible analysis of the Basque particle *ba*, suggesting that stress avoidance may trigger last resort operations in other languages as well.

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