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STYLISTIC VERB MOVEMENT IN YES-NO QUESTIONS IN BULGARIAN AND BRETON

MARIA LUISA RIVERO.

Department of Linguistics,

University of Ottawa. Ottawa. Ontario, K1N 6N5. Canada.

E-mail: mrivero@aix1.uottawa.ca

*1. Introduction.**

In this paper, I discuss a type of V-raising that applies to satisfy a PF interface or bare output condition, and not to check a formal feature. From my perspective, this type of process differs not only from the ordinary syntactic rule, which in the minimalist program (Chomsky 1995) is the overt feature-checking operation before Spell Out, but also from the phonological rule of the PF branch. Thus I discuss a process that I consider a hybrid kind that bridges syntax and (post-syntactic) phonology, which leads to differences with two other recent prominent approaches roughly dubbed phonological and syntactic. On the one hand, a long tradition places in phonology the explanation of some of the phenomena I discuss here, and I dispute this view by stressing similarities between PF processes and syntactic processes. On the other hand, recent proposals that include my earlier work assume that the syntactic core is the key for an account of the same phenomena. Here, I also dispute this view by pointing out characteristics that in minimalist terms do not seem to fit the computational core. To repeat, the processes examined here bear a closer resemblance to the processes of the syntax than to those of the phonology; which makes my approach syntactic and not phonological. Still, these processes are not like ordinary syntactic rules, which adds the phonological flavor that captures some traditional intuitions.

The paper is organized as follows. Based on (Rivero in prep.), this section lists five properties that characterize this variety of V-movement, and section 2 gives a list of processes that exhibit them. Section 3 examines two unrelated languages, Bulgarian and Breton, and provides a global account for similarities and differences in the syntax of their Yes-no questions, with emphasis on the effect of PF conditions in their derivation.

The properties of the type of V-movement of interest here are the following:

(A) The process satisfies PF interface conditions external to the computational system proper. This means that it can apply after Spell-Out in the PF branch in the model

of grammar in (1). Thus, the operation is stylistic in the sense of Chomsky and Lasnik (1977) and Chomsky (1995), among others.

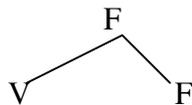
(1) Lexicon → Merge and (overt) Move → Spell-Out (covert) Move → LF
 (stylistic) Move → PF

(B) The process is triggered by a functional category, resembling syntactic and LF rules. The major difference is that computational rules are triggered by formal features or internal conditions while stylistic rules are triggered by external conditions. In this paper, I argue that internal and external conditions can be rather similar from the structural perspective.

(C) The process has a hierarchical output with familiar X-bar characteristics. This property also makes it resemble computational rules, and distinguishes it from morpho-phonological rules.

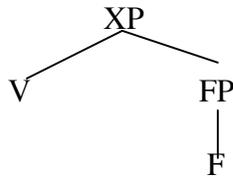
My claim is that stylistic V-Movement has two outputs, which are illustrated later with Yes-no questions and declaratives in Bulgarian and Breton. On the one hand, it may establish a Checking Configuration between V and attractor, even though no formal features are checked. With this output, the raising V targets a functional head F, and adjoins to it. Affected V and attractor thus form the configuration in (2).

(2) Checking Configuration



In (2) V is the sister of the attractor F, so structurally speaking the process resembles Move in the shape of (syntactic) Head-Movement. The trigger for the stylistic process is a functional category with overt content, and not just covert features, so V-raising in this case results in a sort of ‘PF incorporation’ sometimes with word formation characteristics. My argument is that in Bulgarian Yes-no questions the raising V incorporates or adjoins in PF to the question particle Q corresponding to the attractor F in (2). In this way, when V is attracted to Q to satisfy its interface condition, the two become sisters.

On the other hand, it may establish a Head-Complement configuration. The raising V ‘bypasses’ the trigger or attractor F, and lands into the immediately superior X-position heading XP, which is often called ‘long head movement’ in the literature. Moved category and attractor F thus are as in (3), which I dub the Complement Configuration from now on.

(3) (Head)-Complement Configuration.

The sisterhood relation is also basic for this output. V satisfies the interface condition imposed by F by becoming the sister of the phrase FP, and not the sister of the head F itself. In this case, the process has a structural effect that is reminiscent of Merge. I later argue that PF V-Movement establishes this configuration in Breton and Bulgarian declaratives and in Breton Yes-no questions.

The bare phrase structure proposals in (Chomsky 1995) combined with checking theory suggest reasons why stylistic Move may establish the Complement Configuration in (3), which is an output considered illicit for syntactic Move. Chomsky views phrase structure as derivative and not primitive. When an item raises, there should in principle be a choice as to the phrase structure that is obtained after movement. This choice is between projecting the item that moves or projecting the target, but the usual result is for the target and not the moved item to keep projecting in the resulting structure. For Chomsky this is due to the effect of the Last Resort Principle, which states that computational Move must apply to check formal features. Features can only be checked in a checking configuration. After movement, such a configuration is established between the moved item and target only if the target is chosen as the element that keeps on projecting, and not if the raised element is chosen. In sum, the Last Resort principle ensures that when computational Move applies, the resulting phrase structure is the one where the target projects.

If the output in (3) is now examined from this new perspective, it can be viewed as the case where the moving item keeps projecting while the target does not further project. That is, the raised V attracted by the functional head F in PF is the category that keeps projecting in the structure obtained once movement occurs; the target F as trigger or attractor does not project any further. According to Chomsky's assumptions, when the moved category keeps projecting and the target of the movement fails to project, the last is then interpreted as the equivalent of a maximal projection sister or complement of the moved item. In our case the target F in (3) is equivalent to FP. The affected category, which in our case is V, must then project to the equivalent of a maximal phrase, hence XP in the structure in (3). Here, then, there seems to be a structural difference between the output of stylistic Move and the output of syntactic Move due to the Last Resort Principle. I repeat, the output in (3) is illicit for syntactic Move since the raised V is not in the checking domain of the attractor F, so the features of V cannot be checked against those in F. However, the Last Resort Principle does not exclude the output in (3) in the case of stylistic V-Movement, which by assumption applies to satisfy a PF condition of F, and not to check a formal feature in that item.

In brief, Stylistic V-Movement satisfies external requirements of F as attractor, and can establish through its output two different configurations. One is the Checking structure in (2), which we later see is for Yes-no questions in Bulgarian, and the other is the Complement structure in (3), which is for Yes-no questions in Breton, and declaratives in Breton and Bulgarian. The Last Resort Principle may eliminate (3) as a licit output for computational Move, but is not applicable to stylistic Move.

An interesting question is why V-movement displays in PF the outputs in (2) and (3). I suggest that the source of this duality is that PF processes satisfy external conditions that may bear a structural resemblance to internal conditions. Internal conditions are of two alternative types which in the minimalist program are deemed to be satisfied in two different configurations: Theta /selection vs. Feature-checking requirements. On the one hand, Theta / selection conditions require the Head-Complement configuration that is the output of Merge. For instance, the assumption is that a Verb and a complement concatenated by Merge must be compatible as to Selection/Theta role characteristics. From this perspective, the output of stylistic Move in (3) shows that some functional categories impose external conditions that are satisfied in the type of configuration used for selection in the computational system. On the other hand, a core assumption is that Feature-checking occurs in Checking Configurations, and not in Complement Configurations: an appropriate item must be in the checking domain of a functional item for checking to be successful. From this perspective, the output of stylistic Move in (2) shows that some functional categories impose external conditions that can be satisfied in the configuration used for computational checking.

In sum, Verb Movement in PF satisfies external conditions, which may resemble internal conditions as to structure or form, and not as to feature content. PF Move can resemble either one of the transformational operations internal to the system. It resembles syntactic Move when it establishes a Checking Configuration, and syntactic Merge when it establishes a Complement configuration.

(D) Another property of PF or Stylistic movement is that it is regulated by the same economy principles as the computational rules, and may violate them but only at a cost, under the logic of markedness.

More precisely, the three major economy principles of the Minimalist program (Chomsky 1995) are the Minimal Link Condition, the Procrastinate Principle, and the Last Resort Principle. PF Verb Movement is local or complies with the Minimal Link Condition (Rivero in prep.), is overt or violates Procrastinate, and violates the Last Resort principle (i.e. does not check formal features). This last characteristic explored later in this paper for Breton and Bulgarian is the most important difference with the syntactic rules.

As to the cost of stylistic rules and the logic of markedness, the idea is that a rule that violates Last Resort is more costly than a rule that checks formal features. This is best motivated via diachronic evolution (Rivero in prep.), but can also be briefly illustrated in synchrony. In this paper I see V-Movement in Yes-No questions in Bulgarian as a process that violates Last Resort, and suggest that the closely related process in now literary Czech checks features. It seems that earlier Czech resembled present Bulgarian. If this difference is interpreted diachronically, it shows a change from the stylistic or more costly towards the syntactic or less costly rule in view of Last Resort.

(E) The last characteristic of PF V-Movement of interest to this paper is that it does not have an effect on LF. This is a traditional property of stylistic rules in generative grammar which in our case means that the affected V is not foregrounded. PF V-Movement always results in unfocused declarative or interrogative sentences. By contrast, Topicalization is a syntactic rule that feeds LF and hence foregrounds or focalizes the constituent it affects.

The above properties of stylistic V-Movement contribute in at least four ways to the understanding of PF interface conditions, and their similarities and differences with the internal conditions. One, they suggest that Interface conditions on functional categories can be configurational or structural, which makes them resemble the internal conditions. Two, they suggest that similarities between internal and external conditions depend on structure and not content. That is, the two types of conditions exploit similar configurations, but only the internal conditions allude to the precise content of certain features. Third, they suggest that processes in PF can resemble computational rules. Our PF V-movements resemble either computational Move or computational Merge, which are the two transformational operations for internal conditions. Finally, these properties suggest that parametric variation in the PF branch can resemble variation in the computation. Variation in PF is located in the lexicon and its functional categories. In the case of our V-Movement it reduces to (a) the precise inventory of functional categories (with interface conditions) in each language, and (b) the specific configuration those conditions mention. These factors are very similar to the ones traditionally associated with variation in computational Move.

2. *Varieties of PF=stylistic V-Movement*

Verb frontings with properties as in section 1 include the following four varieties, with the first two discussed in more detail in section 3.

2.1. *Long Movement*.

Long Head Movement (LHM) is illustrated in (4), fronts a nonfinite head shown in bold, and is found in several Celtic, Romance, and Slavic languages.

- | | | | | |
|--------|--------------------|----------------|-----------------|-----------|
| (4) a. | Chel | <i>e</i> | <i>knigata.</i> | Bulgarian |
| | read | PF.3S | book.the | |
| | “He read the book” | | | |
| b. | Lennet | <i>en deus</i> | <i>al levr.</i> | Breton |
| | read | 3S. PF | the book | |
| | “He read the book” | | | |

This process first proposed as a syntactic rule in the 1988 version of (Rivero 1994) has attracted continuous attention (Rivero 1996, 1997 for references). In this paper, I give reasons to consider it stylistic (see also Schafer 1997).

It is of particular interest that in Bulgarian and Breton this process has the same external syntax but a different internal syntax in Yes-no questions, which the PF hypothesis I develop here can account for. The process may apply in non-focused main

declaratives as in (4), and as I show later in non-focused main and embedded Yes-no questions, with a difference as to landing site between Bulgarian and Breton. Non-focused embedded declaratives display the verb shown in bold after the auxiliary, as in (5).

- (5) a. *Znam* [che e **chel** knigata.] Bulgarian
 I.know [that PF.3S read book.the]
 “I know that he read the book”
- b. *Gouzout a ran [en deus **lennet** al levr].* Breton
 I.know PRT I.do [3S PF read the book]
 “I know that he read the book”

Unlike Breton, Bulgarian has a rule that inverts participle and auxiliary in nonroot noninterrogative sentences such as the conditional clause *Ako **chel** e knigata ...* “If he has read the book...” (for some, this order is literary or archaic). Embick and Izvorski (1994, 1995) dub this Bulgarian process Stylistic Fronting (see Lema and Rivero (1991) for the counterpart in Old Spanish). Stylistic Fronting and LHM contrast in several respects (Rivero 1997), so I consider them distinct processes. One reason for this in Bulgarian is that the V fronted by LHM is not focused (property (E) in section 1), while the V affected by Stylistic Fronting is somehow emphasized or foregrounded.

A prominent alternative to LHM is a phonological / morphological rule of the PF branch sensitive to linear and not to hierarchical relations such as Prosodic Inversion (Halpern 1995, King 1996) or Morphological Merger (Embick and Izvorski 1994, 1995). I recall two arguments against this type of rule and in favor of LHM. One, the fronted coordinated Vs in (6) serve to illustrate that the auxiliary does not simply follow the first prosodic word (but a syntactic constituent), and that the V+ Conj + V + Aux sequence is not a morphological compound. In my view, Vs and conjunction do not adjoin and hence do not attach to the finite auxiliary as attractor, as PF movement has in this type of derivation the Complement output in (3).

- (6) a. *Vidjal i **kupil** sîm knigata.* Bulgarian
 seen and bought PF.1S book.the
 “I have seen and bought the book”
- b. *Lennet ha **komprenet** en deus Yann al levr.* Breton
 read and understood 3S PF Yann the book
 “Yann has read and understood the book”

Two, instances of ‘long’ LHM with V before a finite and a nonfinite auxiliary as in (7) are also problematic for Prosodic Inversion / Morphological Merger analyses.

- (7) a. *Chetjal sîm bil knigata.* Bulgarian
 read PF.1S PF.PTCP book.the
 “According to someone, I am reading the book”

- (10) a. *Znam [che ti kazaxa.]* Bulgarian
 I.know [that you they.told]
 “I know that they told you.”
- b. **Znam [che kazaxa ti.]*

I later argue that this process has two outputs, depending on the functional head that serves as trigger or attractor for V. In Yes-no questions, Finite Movement is like LHM in that it establishes the Checking Configuration in (2), with V adjoined to the attractor F. In declarative sentences, the output is the Complement structure in (3). That is, in cases like (9), the finite V raises to head XP, and the pronominal clitic as attractor heads FP, which is rather similar to the situation in (4), where the nonfinite V raises to XP and Aux heads FP.

In sum, Bulgarian Finite Movement displays the same syntactic and information properties as LHM. This motivates the hypothesis that the two are hierarchical operations of the PF branch, with the other characteristics listed in section 1.

2. 3. Imperative Movement.

Another stylistic fronting is the Imperative Movement illustrated in (11a), with clitic pronoun as attractor. This is also found in other Slavic languages, earlier Greek up to the Renaissance, and Old Romance.

- (11) a. *Cheti ja!* Bulgarian
 read.IMP.2S it
 “Read it!”
- b. *Ela i ja cheti!*
 come.IMP.2S and it read.IMP.2S
 “Come and read it!”

Modern Greek and Castilian Spanish exhibit an Imperative process illustrated in (12a-b) that checks formal features of V against features of a functional head standing for logical mood or force (Rivero 1997b for references). On this view, the Modern Greek and Spanish rule applies before Spell Out, in contrast with the rule of Bulgarian, which as stated, applies in PF.

- (12) a. *Leed - lo!* (Castilian) Spanish
 read.IMP.2S it
 “Read it!”
- b. *Venid y leed- lo!*
 come.IMP.2S and read.IMP.2S it
 “Come and read it!”

b. *N' ouzon ket [ha lennet en deus al levr.]*
 Neg I.know Neg [Q read 3S PF the book]
 "I do not know if he read the book"

(16) *Nevime [mají- li dnes medovínu.] Czech*
 we.not.know [they.have. - Q today mead]
 "We do not know if they have mead today"

3.1. General hypotheses.

The general hypotheses that underly the analysis of questions and declaratives in Bulgarian and Breton are as follows.

One, Bulgarian and Breton V frontings in Yes-no questions, as in (14-15), and declaratives, as in (4) and (8), are PF processes with the properties listed in A through E in section 1. One important characteristic is that they do not check formal features, and hence disobey the Last Resort Principle.

Two, PF Verb Movement in Bulgarian and Breton is in all cases triggered by an interface condition on a functional category (properties A and B in section 1).

Three, parametric variation between Bulgarian and Breton is due to two factors attributable to the functional categories. One is the inventory of functional entries serving as triggers. The other is the configuration mentioned by each entry as trigger. Variation in the PF branch, then, is like variation in the computation: it ultimately resides in the functional entries of the lexicon, and the conditions those impose. The difference between computational and PF variation seems to be that internal conditions are based both on specific structures and the content of features, while the external conditions are based just on specific structures, not on features and their content.

As to the inventory of functional categories that serve as triggers, Bulgarian offers a choice absent from Breton. It has two sets of categories that serve as triggers but impose different conditions: the question particle (Q) on the one hand, and the auxiliaries/clitic pronouns on the other. When the question particle (Q) is present as in (14), it ipso facto serves as trigger, but if it is absent as in the declaratives in (4a) and (8), then auxiliary or clitic pronoun serve as triggers. The interface condition on Q and the one on auxiliaries/clitic pronouns differ, and we later see how this determines the syntactic distribution of PF movement in Bulgarian. By contrast, Breton does not offer any such choice, and the functional category that triggers PF Verb movement both in declaratives as in (4b), and in interrogatives as in (15) is the auxiliary.

The structure mentioned by the interface conditions studied here can vary between the Checking Configuration and the Complement Configuration. We see next that in Bulgarian, the question particle mentions the Checking Configuration and the auxiliaries/clitic pronouns mention the Complement Configuration. A consequence of this duality is that PF V-Movement has one structural output and a different distribution

when triggered by Q and another one when triggered by auxiliaries/ pronouns. In Breton, PF Verb Movement is triggered by finite auxiliaries, which like in Bulgarian mention the Complement Configuration in their interface condition. In sum, one source of variation is the functional entries that may trigger PF V-movement, which in Bulgarian is Q, T, and Agr, and in Breton just T. Another source is the configuration mentioned by each of these entries, which can be of two types. Bulgarian Q uses the Checking Configuration and Bulgarian T / Agr (for clitic pronouns) and Breton T use the Complement Configuration.

Let us now apply these general hypotheses first to Bulgarian, and later to Breton.

3.2. Bulgarian.

Consider the Yes-no questions in (14). There are three major assumptions involved in their analysis, which are listed under (17).

- (17) a. The question particle *li* (Q) is a functional head in C as in (Rivero 1993).
- b. It imposes an interface condition, which is that it requires in PF an overt constituent, regardless of type, in its checking domain.
- c. No features on *li* and on the constituent in its checking domain are checked against each other.
 Alternatively, *li* has no formal feature that needs checking. This idea is developed in (Rivero 1997b) and adopted here.

Recall that for Chomsky (1995), the checking domain of a head comprises its specifier, and another head adjoined to it. The interface condition in (17b) then is that *li* must have an overt Spec or an overt head adjoined to it. The two varieties of V-movement in Yes-no questions are triggered by this condition.

Three types of procedures in the overall grammar may establish via their output the configuration required to satisfy the PF interface condition of Q in (17b). A first one is Merge in the computation. *Da* is chosen from the lexicon and, as illustrated in (18), is merged in the checking domain of *li* in main and subordinate clauses. In this case, V remains in situ. It could be that *da* is concatenated as the Spec of C or as a head adjoined to *li*, which is irrelevant for our purposes.

- (18) a. (*Ne znam*) [*da-li e chel knigata.*] Bulgarian
 Neg I.know [da-Q PF.3S read book.the]
 “Did he read the book?” (direct question)
 “I do not know if he read the book” (indirect question)
- b. (*Ne znam*) [*da-li ti kazaxa .*]
 Neg I.know [da-Q you they.told]
 “Did they tell you?” (direct question)
 “I do not know if they told you.” (indirect question)

Da satisfies the PF interface condition on *li*, which makes it reminiscent of a pure expletive. However, the function of *da* is not simply to satisfy this PF condition, as this item is not semantically inert in the sense more familiar expletives of the NP type are. As often pointed out in the literature, sentences with *dali* are not totally synonymous to those with *li.*, which suggests that *da* has interpretable features that contribute to LF. While its semantic contribution awaits study, it is often noted that in main clauses *da* adds a clefting effect, as in *Is it the case that he read the book?*

A second procedure both in main and embedded questions is overt Move in the computation, hence before Spell Out. To illustrate, in (19) Topicalization fills Spec-CP, and thus satisfies the interface condition on *li* (Wh-movement is possible as well).

- (19) (*Ne znam*) [*knigata li e chel.*] Bulgarian
 Neg I.know [book.the Q PF.3S read]
 “I do not know if he has read the book (as opposed to the magazine)”

Topicalization is a feature-checking rule that feeds LF, so the fronted phrase is interpreted as the focus. I argue in (Rivero 1997b) that *li* does not hold the focus feature that is checked in this case (the feature is present elsewhere). On this view, Topicalization has the same flavor as the merger of *da* in that it applies for reasons that are independent from the PF requirements of *li*, but has the added benefit of satisfying those requirements. In both cases, the operations have an effect on LF.

A third procedure is V-Movement in PF, if Merge, as with *da*, or Move, as with Topicalization, have not already established in the computation the configuration required to satisfy the interface condition on Q. In this case, Long or Finite Movement operate so as to adjoin V to *li* as in (14), hence they establish the Checking Configuration in (2). Since *li* is the attractor F, and V adjoins to the checking domain of this item to satisfy its interface condition, the process is reminiscent of syntactic Move. The difference is the assumed absence of checking.

LHM and Finite Movement as PF rules do not feed LF, and contrast in information status both with syntactic Merge and syntactic Topicalization, which do. When PF V-movement applies, the result is an ordinary or non-focused question with the fronted V not the focus, and no clefting flavor.

In sum, in Bulgarian Yes-no questions *li* (Q) can be preceded by a large variety of items such as *asda*, a focalized constituent, a wh-phrase (not shown), neutral nonfinite and finite Vs in main and embedded clauses alike because such items satisfy a structural interface condition of *li*, and do not check a formal feature of that particular item. The PF condition on *li* mentions the Checking Configuration in (2), so V is attracted to this item in PF in a way that is reminiscent of syntactic Head-movement.

Now let us briefly examine Bulgarian declaratives. These have no Q, and display auxiliaries/pronouns that in main clauses but not embedded clauses trigger the same type of PF movements that questions may exhibit. The core assumptions for the analysis of declaratives listed in (20a-b) account for this asymmetry in the otherwise shared movements, and are taken from my earlier work.

- (20) a. Auxiliaries and clitic pronouns are functional categories that occupy a position in the clause lower than C.
- b. The interface condition imposed on these two types of functional heads is the same: in PF, they must appear in the Internal Domain of a visible head.

Internal Domain is defined as in (Chomsky 1995): in the structure [X YP], YP is the Internal Domain of X. For the moment, a visible head is an overt one.

For concreteness, the auxiliary in (5a) *Znam [che e chel knigata]* ‘‘I know that he has read the book’’ heads T, and the pronoun in (9a) *Znam [che ti kazaxa]* ‘‘I know that they told you’’ is in the position lower than C and higher than T called the T(obler)-M(ussafia) node in (Rivero 1997a: 2.3; 3.2). Hence, the interface condition on auxiliaries / clitic pronouns in (20b) roughly means that in PF the TP holding the auxiliary or the projection holding the clitic must be the complement of a head that is filled overtly.

Let us see the effect of (20a-b) on V-movement in declaratives. In embedded clauses such as (5a) and (9a), *che* (=C) is the overt head that satisfies the PF-condition of the auxiliary or pronoun, and PF Movement does not apply. For (5a) the relevant structure is simply [C TP]. The derivation of (5a) and (9a) is then comparable to the derivation of the questions in (18): in both cases, the interface condition of the relevant functional head is satisfied via the output of Merge in the computation.

The main declaratives with V-Movement in (4a) *Chel e knigata* and (8) *Kazaxa ti* are comparable to the questions in (14) in the sense that the interface condition of the relevant functional head is in both cases satisfied in the PF branch, and not in the computation. In (4a) and (8), V-movement fills with overt content a position equivalent to C; this satisfies the interface condition of either the auxiliary or the pronoun, as they come to be in a projection that is the complement of a visible head. Neither LHM nor finite V-movement feeds LF, which means that the fronted V is not the focus in either sentence. The output of the two processes is also the same: they establish the Complement Configuration in (3), which is the output reminiscent of Merge in the computation.

The different interface conditions on Q in (17) and on auxiliaries/ pronouns in (20) account for the syntactic asymmetry of the two PF V-frontings of Bulgarian in questions vs. statements. On the one hand, the PF Checking configuration condition imposed by *li* ensures that Long and Finite Movement are found in both ordinary main and subordinate Yes-no questions. On the other hand, the PF Complement configuration condition on the auxiliary or the clitic pronoun ensures that the two processes are restricted to ordinary main declaratives or statements. Finally, the fact that the same type of movement is found in statements and questions can be seen as another indication that the processes are semantically vacuous, which I have attributed to the hypothesis that they apply in PF and fail to feed the LF branch.

3.3. Breton.

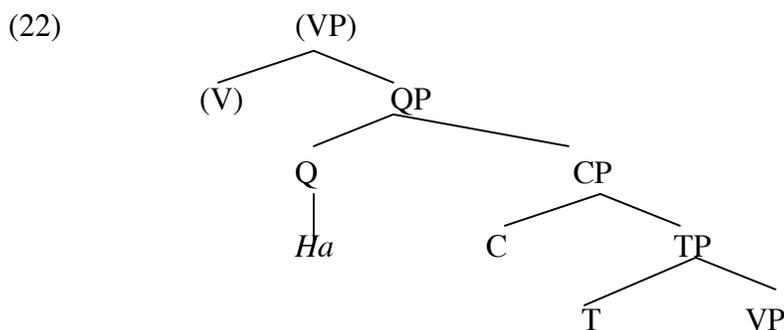
In Breton, PF V-movement exhibits the same general external distribution as in Bulgarian, but it has a different internal distribution in the case of Yes-no questions. In the past, these similarities and differences have not received a global account, and my

proposal is that they derive from the assumption that in Breton the finite auxiliary (T) is the only trigger for PF V-movement, which is in contrast with the situation described above for Bulgarian. One consequence of this explored in this paper is how PF V-movement in both questions and declaratives is triggered by the auxiliary in Breton, which interestingly imposes the same interface condition as the Bulgarian auxiliary. This condition is stated in (21).

- (21) a. Breton Auxiliaries are functional categories that occupy a position in the clause lower than C. Like in Bulgarian, they head TP.
- b. Like in Bulgarian, a structural PF interface condition is imposed on Breton auxiliaries.
In PF, they must appear in the Internal Domain of a visible head.

This essentially means that TP must be a complement in Breton. Let us see the effect of (21) on V-movement, beginning with declaratives where Breton is like Bulgarian: the process is restricted to main clauses. In main declaratives such as (4b) *Lennet en deus al levr* ‘‘He read the book’’, V raises in PF to the equivalent of C, which satisfies the PF-condition of Aux in TP. Subordinate clauses as in (5b) *Gouzout a ran [en deus lennet al levr]*. ‘‘I know that he read the book’’ do not exhibit V-movement because they are complements (for more details, Rivero 1998). This means that these sentences exhibit a configuration which results from Merge in the computation and satisfies the interface condition on the auxiliary *en deus*. In declaratives with the auxiliary as trigger, then, V-movement in PF operates along parallel lines in Breton and Bulgarian : i.e. Long Head Movement is found under rather similar conditions in the two languages (but Breton lacks PF Finite Movement).

The situation in Yes-no questions is more complex. On the one hand, V-movement has in Breton the same external syntax as in Bulgarian: it is found in both main and embedded clauses, as in (15a) *Ha lennet en deus al levr*. ‘‘Has he read the book?’’ and (15b) *N’ ouzon ket [ha lennet en deus al levr.]* ‘‘I do not know if he read the book’’. On the other hand, the internal syntax of these question is not the same in the two languages . The affected V lands in different positions: before Q in Bulgarian, as in *Chel li e* ‘‘Has he read?’’, and after Q in Breton, as in *ha lennet* above. To account for these similarities and differences, I adopt for Breton Yes-no questions the structure in (22) originally proposed by Borsley, Rivero, and Stephens (1996). The complement of *ha* (=Q) is a CP, which in turns takes TP as complement, and the auxiliary is in T.



The interface condition on the auxiliary in (21b) requires of C in the above structure to be visible in PF to satisfy the requirement of the auxiliary in T.

There are three types of procedures in the overall grammar to achieve this result, which can be compared with the ones that satisfy the PF condition on Bulgarian *li*.

A first procedure is Merge in the computation, as illustrated in (23).

- (23) *N' ouzon ket [hag-en en deus lennet al levr.]* Breton
 Neg I.know Neg [Q-en 3S PF read the book]
 “I do not know if he read the book”

En, whose historical origin is that of an expletive pronoun, is chosen from the lexicon and merged in the CP projection in the structure in (22), either as a Spec or a head. The auxiliary in TP then is in the complement of an overt and thus visible C, and V remains in situ. This sentence should be compared to Bulgarian (18) *Ne znam da-li e chel knigata*. “I do not know if he read the book”. In both (18) and (23), computational Merge adds a kind of expletive and establishes the configuration that satisfies the interface condition of a functional category: Q for Bulgarian, and Aux for Breton.

A second procedure is overt Move in the computation, hence before Spell Out. (24) illustrates that Topicalization can establish the structure to satisfy the relevant interface condition.

- (24) *N' ouzon ket [ha al levr en deus lennet.]* Breton
 Neg know Neg [Q the book 3S PF **read.**]
 “I do not know if he read the book”

Spec-CP is filled with overt material; this indicates that C is projected and thus visible. In (24), then, TP is the complement of a visible head, which satisfies the interface condition on *en deus*. Topicalization is a feature-checking rule that feeds LF, so the fronted phrase is interpreted as focus. Example (24) is comparable to Bulgarian (19) *Ne znam knigata li e chel* “I do not know if he has read the book”. In both (24) and (19) computational Move is used to satisfy the interface condition of a functional head, but not the same one.

The last procedure is Long Movement of V in PF, as illustrated in (15a-b). V fills C, so the TP projection is the complement of an overt and thus visible head, which satisfies the condition on the auxiliary. This PF rule does not feed LF, so these are ordinary Yes-no questions with the fronted V not the focus. (15a-b) are comparable to Bulgarian (14) where a PF process is used to satisfy the interface condition of a functional head: Q in Bulgarian, and Aux in Breton

In sum, Breton Aux can follow *en*, a focalized constituent, or a neutral nonfinite V in main and embedded clauses because these preceding items satisfy its interface condition. The auxiliary cannot check features with these constituents as they are not in its checking domain, but in a higher projection. V is attracted by Aux and establishes with this attractor a Complement Configuration as in (3), so the structural effect of stylistic movement is comparable to the output of Merge in the computation.

3.4. Differences between Bulgarian and Breton.

Now let us examine two differences between Bulgarian and Breton, which concern the internal syntax of Yes-No questions. The first difference is that an expletive may function as a companion to Q in both languages, but appears on opposite sides of Q: *da+Q* in Bulgarian as in (18a-b) and *Q+en* in Breton as in (23). These expletive companions are similar in being introduced by Merge, and in satisfying the PF interface condition of a functional head. The contrast arises because the requirements they satisfy are imposed by different functional heads. In Bulgarian the companion *da* satisfies the output condition *li* imposes, and is merged in its checking domain. The Breton expletive *en* satisfies the interface condition on the Aux, and is merged in C. This is then why the expletive companion precedes Q in Bulgarian and follows it in Breton.

The second difference is related to the first: fronted Vs land on opposite sides of the particle in the two languages. The *V+Q* word order of Bulgarian in (14) contrasts with the Breton *Q+V* order in (15). Fronted Vs satisfy the bare output condition of a functional head in all these cases. However, in Bulgarian, V satisfies the checking requirement of *Q=li* and hence adjoins to it or lands in a position that precedes it, while in Breton V satisfies the interface condition on Aux, and hence lands in the C-position that follows *Q=ha*.

3.5. Czech questions.

To conclude this section, let us briefly return to V-raising in Czech Yes-no questions as in (16) repeated now as (25):

- (25) *Nevíme [mají-li dnes medovínu.] Czech*
 we.not.know [they.have. - Q today mead]
 “We do not know if they have mead today”

Toman (1993) reports that this type of fronting now confined to literary style does not alternate with Topicalization; i.e. a phrase cannot precede *li* in Czech. Also, there is no expletive companion equivalent to *da* that can be merged with *li*. This means that in these questions the only item that can precede *li* in present Czech is the verb. This suggests that V-raising to *li* in Czech contrasts with the rather similar Bulgarian process in being a checking operation that matches a feature on V with a formal feature on *li*. Under this view, the Czech process complies with Last Resort, and applies before Spell-Out in the computation, in contrast with the V-fronting processes of Bulgarian and Breton Yes-no questions, which are PF operations.

I stated in the introduction that in an earlier stage, Czech resembled Bulgarian to a greater extent than it does today. This suggests that there has been a diachronic evolution in the syntax of questions in this language whereby a stylistic process has been reinterpreted as a syntactic process. It seems that the lexical item *li* is becoming obsolete in Czech; its disappearance would have as a consequence the loss of this syntactic V-movement in questions. As to declaratives, Czech seems to display the same type of PF V-movements as Bulgarian, namely LHM and Finite V-movement as discussed in this paper.

4. *Summary and conclusions.*

This paper has dealt with V-movement in the PF branch, which applies to satisfy a structural interface condition of a functional category, not to check its formal feature(s). The discussion has been based on Finite Movement in Bulgarian and Long Head Movement in Bulgarian and Breton, and their operation in declaratives and Yes-no questions. The argument is that these processes display two hierarchical outputs, one that makes them resemble Move in the computation and another that makes them resemble Merge. On the one hand, PF V-movement in Breton and Bulgarian declaratives and Breton Yes-no questions establishes a Complement Configuration as in (3), and hence resembles computational Merge. On the other hand, PF V-movement in Bulgarian Yes-no questions establishes a Checking Configuration as in (2), and hence resembles computational Move. This duality of output is connected to the functional categories that trigger the process, which constitutes the source of the variation found between Bulgarian and Breton in this area of syntax. Functional categories may impose interface conditions and those structurally resemble the internal conditions, which are of two types. One type of interface condition resembles in form checking conditions in the computation, and this is found in connection with Q (*li*) in Bulgarian. Another type of interface condition resembles in form the selection conditions of the computation, which is what happens in the case of Bulgarian clitic pronouns and Bulgarian and Breton auxiliaries.

The analysis developed in this paper offers a novel account of the similarities between Bulgarian and Breton, which are striking, and of word order differences between these two languages which are more subtle. It also helps in locating the difference between the fronting in Yes-no questions of Bulgarian and Breton, which is rather similar, and the one in literary Czech, which differs from them, and in suggesting that this synchronic contrast bears potential interest for the study of the diachronic evolution of questions.

Notes.

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¹ Philipps (1996:249) considers Breton auxiliaries clitics because they trigger LHM, which I think is circular.

² It is beyond the scope of this paper to examine the many alternatives to LHM now in the literature but here I specifically differ from King (1996), who on the other hand proposes to dispense with LHM through a combination of Prosodic Inversion and Stylistic Fronting, and on the other hand treats Finite Movement in *li*-questions as a feature-checking operation, as also suggested in (Rudin, King, and Izvorski 1996). In

my view, LHM and Finite Movement are formally identical so I treat both processes along the same lines.

Legendre (1996) develops an optimality account for some of the constructions discussed here, which preserves V-raising to *li*; on this analysis, questions involve V-movement and declaratives (just) constrains, which is another difference with the approach I develop here.

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