Predicate movement
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Abstract: This article reformulates Hoekstra and Mulder's (1990) analysis of Locative Inversion in more current terms, while extending the empirical scope of their proposal to a larger set of constructions involving displacement of small clause predicates and VPs. The new proposal will stress H&M's basic claim that Locative Inversion in examples like *Down the hill rolled the baby carriage* is possible due to the fact that the predicative PP and the subject DP are in an agreement relation. We will adopt as an axiom that this agreement relation holds cross-categorially and resembles object agreement in that it involves agreement in φ-features. If so, Hoekstra and Mulder's (1990) basic insight can be rephrased in more current terms as the following hypothesis: if A and B agree in φ-features, both A and B can be the goal of some higher head H with unvalued φ-features, and, consequently, be a candidate for internal merge with H. From this it follows as a corollary that in principle predicates may target any checking position that is normally targeted by the subject of the predicative phrase. This article will test this prediction by considering certain instances of predicate inversion in English, Dutch and Hungarian.

1. Introduction

This article will discuss a number of phenomena that have been argued to involve movement of a predicative phrase, and provides a uniform analysis for them by claiming that these movements are triggered by the unvalued φ-features on the verb or the inflectional head I. The phenomena to be discussed are English locative inversion (section 2), placement of small clause predicates in the position preceding the verbs in clause-final position in Dutch (section 3), and movement of the so-called verbal modifiers in Hungarian (section 4). This introduction will briefly discuss the background assumptions of this study: we will adopt the so-called derivation-and-evaluation model as our point of departure, and section 1.1 will briefly review those aspects of the model that are relevant for the present study; subsequently section 1.2 will more extensively introduce the topic of this article, and present and motivate the hypothesis underlying the analyses presented in sections 2 to 4, namely that predicates and their subjects agree, and that, as a result, predicative phrases are a potential goal for the unvalued φ-features on the verb and the inflectional head I.

1.1. The derivation and evaluation model

This study will adopt the derivation-and-evaluation (D&E) framework first proposed by Broekhuis and Dekkers (2000). The core idea of this framework is that developing an explanatorily and descriptively adequate theory of syntax requires that restrictions be formulated on both the syntactic derivations and the resulting syntactic representations. This

is obtained by assuming that representations created by some version of the computational system of human language C_{HL} from the minimalist program are evaluated in an optimality-theoretic fashion, as indicated in Figure 1.

Figure 1: The derivation-and-evaluation model

Broekhuis (2000/2007/to appear) has argued that adopting this model enables us to assume that C_{HL} is truly universal in the sense that it is not sensitive to feature strength or epp-features. Instead, C_{HL} can be seen as a generative devise that produces a candidate set consisting of all converging derivations that can be formed on the basis of a given input, and the optimal candidates for a given language L are selected from this set by means of an optimality-theoretic evaluation. Given that the candidate set generated by C_{HL} is finite and that the candidates in this set differ in predictable ways only, the set of constraints involved in the evaluation is also relatively small. The constraints proposed in Broekhuis' earlier work fall into the three subgroups in (1a-c); the constraints in bold will also play an important role in this study, and we will therefore briefly introduce them below.

(1)   a.   Economy constraints:
              (i) ***MOVE**: *t (do not move)
              (ii) NOLEXM: don't move lexical (θ-role assigning) verbs.
              (iii)etc.
        b.   EPP-constraints:
              (i) **EPP(φ)**: an unvalued φ-feature attracts its goal.
              (ii) **EPP(case)**: an unvalued case-feature attracts its goal.
              (iii)etc.
        c.   Interface constraints
              (i) **ALIGNFOCUS**: the prosodically unmarked focus is the rightmost constituent in its
                  clause.
              (ii) D-PRONOUN: A definite pronoun must be VP-external.
              (iii)HEAD-COMPL: a head precedes all terminals dominated by its complement (do not
                  change the underlying base order of heads and complement).
              (iv)etc.

The economy constraint *MOVE in (1a) is uncontroversial as both the minimalist program (MP) and optimality theory (OT) assume that movement is costly. The EPP-constraints in (1b) can be considered the counterpart of the epp-features in the MP. Constraint ranking (2a) expresses that probe F (normally) does not trigger movement due to the fact that EPP(F) is outranked by the economy constraint *MOVE: this ranking can be called *weak*, since it is more or less equivalent to assuming that probe F is weak or has no epp-feature associated with it. Constraint ranking (2b), on the other hand, expresses that probe F (normally) does trigger movement due to the fact that that the EPP(F) outranks the economy constraint *MOVE: this ranking will be called *strong*, since it is more or less equivalent to assuming that probe F is strong or has an epp-feature associated with it.

(2)   a.   weak ranking: *MOVE >> EPP(F)
        b.   strong ranking: EPP(F) >> *MOVE

One of the advantages of replacing the epp-features by the EPP-constraints in (1b) is that expressing the strength property in an optimality-theoretic way intrinsically gives rise to a more flexible system. Although movement is normally blocked under the weak ranking in (2a), movement can be forced provided that there is some higher ranked constraint A that favors this movement (cf. (3a)); in the terminology of Chomsky (1995:ch.3), one might say that constraint A overrules 'Procrastinate'. Similarly, although movement is normally forced under the strong ranking in (2b), it can be blocked if there is some higher ranked constraint B that disfavors it (cf. (3b)); in other words, constraint B overrules 'Strength'.

(3)   a.   A >> *MOVE >> EPP(F): if A favors movement, 'Procrastinate' is overruled.
        b.   B >> EPP(F) >> *MOVE: if B disfavors movement, 'Strength' is overruled.

Broekhuis (2000/to appear) has shown that the interface constraints in (1c) are typically used to override the weak/strong rankings of the EPP-constraints. ALIGNFOCUS, for example, prefers constituents that are part of the focus ('new' information) of the clause to be placed as much to the right as possible, and may therefore overrule the strong ranking of EPP(F). Let us illustrate this. Assume that the internal argument of the verb is cross-linguistically base generated in position Obj_1 in (4), and that the object can be attracted into the positions Obj_2 and Obj_3 by, respectively, the unvalued φ-features on the verbal root V and the case features on the light verb v (cf. also Chomsky 2005). Since the notion of object shift is normally used to refer to object movement into position Obj_3, we will henceforth refer to the object movements into Obj_2 and Obj_3 as respectively short and regular object shift. Now assume that the Dutch constraint ranking is as given in (4b).

(4)   a. $[Obj_3 \, (Adv_{sentence}) \, v \, [\, Obj_2 \, (Adv_{manner}) \, V \, Obj_1]]$
        b.   Dutch: EPP(φ) >> ALIGNFOCUS >> EPP(case) >> *MOVE

The subranking EPP(φ) >> ALIGNFOCUS >> *MOVE predicts that short object shift is obligatory: it cannot be blocked by considerations of information structure due to the fact that EPP(φ) outranks ALIGNFOCUS. However, the subranking ALIGNFOCUS >> EPP(case) >> *MOVE predicts that regular object shift is sensitive to the information structure of the clause: when the internal argument is part of the information focus of the clause, this movement will be blocked. This is shown in Tableaux 1 and 2. Note that ALIGNFOCUS is a so-called gradient constraint, which means that it is interpreted such that each constituent following the focus of the clause results in a violation of this constraint. The second and third candidate in Tableau 2 differ in the number of violations of ALIGNFOCUS, because the object is only followed by one constituent (the verb) in the former, but by two constituents (the adverb and the verb) in the latter.

Tableau 1: Dutch object movement (object not part of focus)

	EPP(φ)	AF	EPP(case)	*MOVE
a. [... Adv v [... V Obj]]	*!		*	
b. [... Adv v [Obj ... V t_{Obj}]]			*!	*
c. [... Obj Adv v [t_{Obj} ... V t_{Obj}]] ☞				**

Tableau 2: Dutch object movement (object part of focus)

	EPP(φ)	AF	EPP(case)	*MOVE
a. [... Adv v [... V Obj]]	*!		*	
b. [... Adv v [Obj ... V t_{Obj}]] ☞		*	*	*
c. [... Obj Adv v [t_{Obj} ... V t_{Obj}]]		**!		**

The evaluations in Tableaux 1 and 2 correctly predict that in Dutch the object obligatorily precedes the verb in clause-final position, but only precedes the sentential adverbs when it is part of the presupposition ('old' information) of the clause, as is shown in (5).

(5)   a.   *dat   Jan waarschijnlijk   koopt   het boek.
              that   Jan probably   buys   the book
       b.   dat   Jan waarschijnlijk   het boek   koopt $t_{\text{het boek}}$ (*het boek*: focus)
              that   Jan probably   the book   buys
       c.   dat   Jan het boek   waarschijnlijk $t_{\text{het boek}}$ koopt $t_{\text{het boek}}$ (*het boek*: presupposition)
              that   Jan the book   probably   buys

     The discussion above has shown that the D&E framework is able to account in a principled way for the fact that the 'strength' properties of the unvalued features depend on properties of the LF/PF component.[1] In order to pave the way for the discussion to come, we want to make three additional comments on the specifics of our analysis of object shift. First, we want to point out that it is crucial to assume that short object shift is triggered by the φ-features on the verbal root V, and not by the case-features on the light verb *v*. This is clear from e.g. the fact that this movement also applies in passive constructions like (6b); given that it is normally assumed that passive participles do not assign case, this movement can only be triggered by the φ-features on the participle. Note in passing that the nominative phrase *de boeken* need not be moved into the regular subject position, SpecIP; we will return to this issue in section 3.1.

(6)   a.   Ik heb gisteren Marie de boeken aangeboden $t_{\text{de boeken}}$
              I   have yesterday Marie the books   offered
              'Yesterday I offered Marie the book.'
       b.   Gisteren   werden Marie   de boeken aangeboden $t_{\text{de boeken}}$
              yesterday   were Marie   the books   offered
              'Yesterday, the book was offered to Marie.'

Secondly, it must be noted that in embedded clauses like (7a) the object does not only precede the main verb but also the auxiliary verb. This suggests that also the auxiliary triggers movement of the object, as shown in (7b), and is therefore endowed with unvalued φ-features; cf. section 3.3 for a slightly more sophisticated analysis of (7a).

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[1] Chomsky (2001) has shown in his discussion of Icelandic object shift that MP can also account for this dependency by adopting certain language specific statements. A drawback of these statements is, however, that they function more or less as *ad hoc* output filters — they are designed to solve a specific empirical problem, and can in principle be formulated in arbitrary ways; cf. Broekhuis (2006a/to appear) for a more detailed discussion of the question why the proposal in the main text is to be preferred to proposals along Chomsky's line.

(7)   a.   dat   ik   het boek   heb   gekocht
          that   I   the book   have   bought
          'that I have bought the book.'
      b.   dat ik het boek heb $t_{\text{het boek}}$ gekocht $t_{\text{het boek}}$

Finally, we want to point out that the fact that the object follows the verb in English does not necessarily imply that the object remains in its base position following the verbal root V. Actually, there is ample evidence that short object shift does take place in English as well (see e.g. the data put forth in Johnson 1991, Lasnik 1999 and Hornstein 1995 in favor of object shift). This can be readily accommodated in the present proposal by assuming the English constraint ranking in (8): Tableaux 3 and 4 show that this ranking excludes regular object shift, while forcing short object shift. Note that the curly brackets and the dashed line in the tableaux indicate that the ranking of ALIGNFOCUS and *MOVE is immaterial (= cannot be established on the basis of the data under consideration).

(8)   English: EPP(φ) >> {AF, *MOVE} >> EPP(case)

Tableau 3: English object movement (object not part of focus)

	EPP(φ)	AF	*MOVE	EPP(case)
a. [... Adv v [... V Obj]] ☞	*!			*
b. [... Adv v [Obj ... V t_{Obj}]]			*	*
c. [... Obj Adv v [t_{Obj} ... V t_{Obj}]]			**!	

Tableau 4: English object movement (object part of focus)

	EPP(φ)	AF	*MOVE	EPP(case)
a. [... Adv v [... V Obj]]	*!			*
b. [... Adv v [Obj ... V t_{Obj}]] ☞		*	*	*
c. [... Obj Adv v [t_{Obj} ... V t_{Obj}]]		**!	**	

The difference between Dutch and English can be attributed to movement of V: Broekhuis (2000/to appear) has extensively argued that the Germanic OV- and VO-languages differ in that the inversion that results from short object shift is undone by V-to-v/Asp in the latter but not in the former (Asp is the functional head associated to past/passive participles; cf. section 3.3).[2]

(9)   OV- versus VO-languages
      a.   [... v [OBJ ...adv V t_{OBJ}]]   (Germanic OV-languages)
      b.   [...V+v [OBJ ... adv t_V t_{OBJ}]]   (Germanic VO-languages)

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[2] Cf. Haider (2000) and Barbiers (2000), who derive the distinction between VO- and OV-languages in a similar way from an underlying OV-order; Broekhuis (2006b/to appear) provides an extensive comparison of the proposal by Haider/Barbiers and the proposal adopted here. The claim that the Germanic VO-languages have a strong ranking of EPP(φ) combined with the earlier claim that auxiliaries have unvalued φ-features at first sight predicts that the object will also be attracted by the auxiliary and therefore must precede the main verb. Broekhuis (to appear) argues, however, that the strong ranking of EPP(φ) is overruled by the structure preservation constraint HEAD-COMPL in (1c), which requires that the original order of the verb and its complement be preserved in the output representation.

Since the above discussion has provided us with the necessary theoretical background information, we can now continue with introducing the hypothesis that will enable us to derive predicate movement.

1.2. The hypothesis

This article takes Hoekstra and Mulder's (1990) analysis of the locative inversion construction in (10b) as its point of departure and aims at reformulating it in more current terms, while extending the empirical scope of the original proposal to a larger set of constructions involving displacement of small clause predicates and VPs in English, Dutch, and Hungarian.

(10)   a.   The baby carriage rolled down the hill.
       b.   Down the hill rolled the baby carriage.

The new proposal will stress Hoekstra and Mulder's basic insight (based on earlier work by Moro 1997) that locative inversion in (10b) is licensed on account of the fact that the predicative phrase *down the hill* and the DP *the baby carriage* are in an agreement relation; cf. section 2.1 for the details. This agreement relation between a predicate and its argument is sometimes morphologically reflected, as in the case of adjectival agreement in the Italian copular construction in (11a). Furthermore, it is formally identical to object agreement in (11b) in the sense that it involves agreement in gender and number. The examples in (11) are taken from Burzio (1986).

(11)   a.   Maria è   malata.
            Maria is ill$_{3sg.fem}$
       b.   Maria è   arrivata.
            Maria has arrived$_{3sg.fem}$

This article assumes that the predicative agreement relation is not restricted to APs but holds cross-categorially. This means that also the predicative PP in (10) agrees with the DP in φ-features, even though in this case the agreement relation is not morphologically expressed. Further, it is assumed that the predicative agreement relation as well as the object agreement relation is present cross-linguistically, despite the fact that this agreement relation has a morphological reflex in a limited number of languages only. In short, we will adopt the statements in (12) as axioms.

(12)   a.   **Axiom I**: A predicate agrees in φ-features with the DP it is predicated of.
       b.   **Axiom II**: V agrees in φ-features with its internal argument or the subject of its internal argument (when this is a small clause or an infinitival complement).

When we adopt the axioms in (12), Hoekstra and Mulder's (1990) basic insight can be rephrased in more current terms as in (13), which obviously constitutes the null hypothesis from the perspective of the Last Resort Condition on movement. Given axiom (12a) and hypothesis (13), it is now correctly predicted that in (10) either the DP *the baby carriage* or the predicative PP *down the hill* can value, and hence be attracted by, the unvalued φ-features on I.

(13)   **Null hypothesis**: If A and B agree in φ-features, both A and B can be the goal of the
           unvalued φ-features on some higher head H, and, consequently, be a candidate for
           internal merge with H

The status of the two axioms in (12) differs considerably in the present day versions of the *principles-and-parameters* framework. Axiom II seems widely accepted, and constitutes the core of most discussions that take recourse to object movement. Axiom I is generally accepted as far as predicative adjectives are concerned (see e.g. Baker, to appear, who suggests that this is a universal property of languages), but this is much less so in the case of prepositional or nominal predicates: the former, for example, never exhibit morphological agreement, and (as is of course expected) the latter only exhibit agreement in as far as the predicative noun phrase is not inherently marked for φ-features. The examples in (14), for example, show that although the nominal predicate does agree in number with the subject, the two do not agree in person.

(14)   a.   Jij   bent   de beste kandidaat.
             $you_{sg.}$ are   the best candidate
        b.   Jullie zijn   de beste kandidaten.
             $you_{pl.}$ are   the best candidates

It is not clear whether this type of disagreement matters much for what will follow: the intended result of Axiom I is to ensure that a predicate is endowed with φ-features which can subsequently be probed by unvalued features on the higher functional heads; cf. (13). If nominal predicates do have φ-features of their own, they will be potential goals for these features by definition, and nothing more needs to be said. This means that especially our claim that predicative PPs are endowed with φ-features is controversial, and can only be indirectly supported. This is what we intend to do in this article.[3]

From axiom (12a) and hypothesis (13), the two statements in (15) follow as a corollary. Since the predicate is predicated of the subject of an unaccusative construction, and the subject can be a goal of the φ-features on both the verbal root V and I, the predicate can be a goal of these heads as well; as a result, movement may involve either the subject or the predicate, as stated in (15a). Similarly, since the predicate is predicated of the object of a transitive construction, and since the object can be the goal of the φ-features on the verbal root V, the predicate can be a goal of the verbal root as well; as a result, movement may involve either the object or the predicate, as stated in (15b). The formulation in (15) leaves open the question under which conditions predicate movement applies instead of DP movement, but this will be extensively discussed later in this article.

(15)   Predicate movement may target any position in the local domain of a head H with unvalued φ-features that is normally targeted by:
       a.   the nominative DP in an unaccusative construction (SpecVP or SpecIP);
       b.   the accusative DP in a transitive construction (SpecVP).

Given axiom (12b) and hypothesis (13), we may conclude that a verb phrase may target the same positions as its internal argument, unless the pertinent position is locally related to the head of the VP itself, since, of course, a VP cannot value the features on its own head. This means that if we phrase the corollaries from the perspective of the attracting head, we get the corollaries in (16): (16a) is the standard assumption, (16b) is a reformulation of the two corollaries in (15), and (16c) is the corollary that follows from (12b) and (13).

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[3] Recall that Axiom I replaces the implicit claim in Hoekstra and Mulder (1990) that predicative PPs are assigned case, which is equally hard to prove. The claim that predicates are assigned case also prominently features in Koster's (1994) analysis of predicate movement in Dutch; cf. section 3.1. Also Den Dikken (2006:section 3.4.2) assumes that predicate inversion is triggered by some morpho-syntactic feature but he remains agnostic about the nature of this feature.

(16)   Unvalued φ-features on H may attract:
   a.   argument DPs
   b.   small clauses
   c.   verb phrases

   The corollaries (16b&c) show that adopting the axioms in (12) and hypothesis (13) extends the empirical scope of Hoekstra and Mulder's original insight considerably. This article argues that the constructions in (17) behave in accordance with the corollaries in (15)/(16b&c) and thus provide indirect support for the axioms in (12) and hypothesis (13).

(17)   a.   English: Locative inversion and Preposing around *Be* (Hoekstra & Mulder 1990; Rochemont and Culicover 1990; Den Dikken & Næss 1993)
       b.   Dutch: Predicative movement (Zwart 1993/1997; Koster 1994)
       c.   Hungarian: Movement of verbal modifiers (Brody 1990; É. Kiss 2002/2006a)

2.   Locative inversion in English

This section develops an alternative for Hoekstra and Mulder's (1990) influential analysis of locative inversion that will be based on hypothesis (13). Section 2.1 starts with a brief review of Hoekstra and Mulder's proposal, continues with arguing that adoption of the operation Agree requires an alternative formulation of their proposal, and concludes with providing a sketch of what the analysis might look like in the Minimalist Inquiry framework. Section 2.2 and 2.3 provide our own proposal within the D&E framework.

2.1.   Hoekstra and Mulder's analysis from an MP perspective

Hoekstra and Mulder (1990) have argued that in the locative inversion construction in (18b) the prepositional phrase *down the hill* occupies the same position as the subject in (18a). They claim that the motivation for the movement into SpecIP is the same in both cases: this movement is needed to satisfy the Case Filter, that is, to assign nominative case to the subject.[4]

(18)   a.   The baby carriage rolled down the hill.
       b.   Down the hill rolled the baby carriage.

Since the PP is predicated of the subject *the baby carriage*, Hoekstra and Mulder claim that the two are generated as part of a small clause. This implies that we are actually dealing with an unaccusative construction, so that the surface structure of the two examples in (18) is

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[4] In the discussion below we have ignored Den Dikken and Næss' (1993) claim that locative inversion in English and Norwegian is obligatorily followed by A′-movement of the fronted predicate. Their claim is based on the contrast in the examples (ia&b), which are taken from Bresnan (1994:p.108-9): example (ia) is unacceptable because the fronted PP remains in the SpecTP of the embedded clause; (ib) is acceptable because the PP is A′-moved into the initial position of the main clause. However, if the expletive construction is also a locative inversion construction, as claimed by Moro (1997), examples like (ic) constitute counterexamples to Den Dikken and Næss' claim. This exception might be related to the fact that the expletive *there* actually does not have the proper semantic make-up that would allow it to undergo further A′-movement. Therefore, this movement of *there* is purely altruistic: it occurs only in order to allow the subject to remain in its base position (to avoid a violation of ALIGNFOCUS) by satisfying the EPP (= the constraint EPP(φ)). We leave Den Dikken and Næss' claim for future research, while noting that it can be incorporated in the analysis by adopting a constraint that prohibits non-nominal phrases in SpecIP.

(i)   a.   *I expect on this wall to be hung a portrait of our founder.
       b.   On this wall I expect to be hung a portrait of our founder.
       c.   We expect [IP there to be awarded several prizes]

approximately as given in (19a) and (19b), respectively. That the subject is marked with nominative case in (19a) is obvious as it is situated in the position where, under the assumptions of the 80's, this case is assigned. That the subject can be assigned nominative case in (19b) is not so obvious, however.

(19)   a. $[_{IP}$ DP I $[_{VP}$ V $[_{SC}$ t_{DP} Pred $]]]$
       b. $[_{IP}$ Pred I $[_{VP}$ V $[_{SC}$ DP t_{Pred} $]]]$

Hoekstra and Mulder propose that the movement of the predicative PP into SpecIP makes it possible to transfer nominative case to the subject in its base position. Their account rests on the three assumptions in (20). They also assume that each element has a unique index, from which it follows that co-indexing is transitive: if A is co-indexed with B and B with C, then A is also co-indexed with C.

(20)   a.   A moved phrase is co-indexed with its trace.
       b.   Finite I assigns nominative case to its specifier; nominative case assignment involves co-indexing of I and the element receiving case.
       c.   Predication relations involve co-indexing of the predicate and the DP it is predicated of.

According to the assumptions in (20), the co-indexing in example (18a) is as given in (21a). Given that the DP is assigned the indices i and j under (20a) and (20b), and the DP trace is assigned the indices i and k under (20a) and (20c), we can conclude from the unique index requirement that $i = j = k$. For this reason (21a) is equivalent to (21a′). As the reader can verify him/herself co-indexing of the phrases in (18b) is as given in (21b), which is equivalent to (21b′).

(21)   a. $[_{IP}$ DP$_{i/j}$ I$_j$ $[_{VP}$ V $[_{SC}$ $t_{i/k}$ Pred$_k$ $]]]$ $\Rightarrow$
       a′. $[_{IP}$ DP$_i$ I$_i$ $[_{VP}$ V $[_{SC}$ t_i Pred$_i$ $]]]$
       b. $[_{IP}$ Pred$_{j/k}$ I$_j$ $[_{VP}$ V $[_{SC}$ DP$_i$ $t_{k/i}$ $]]]$ $\Rightarrow$
       b′. $[_{IP}$ Pred$_i$ I$_i$ $[_{VP}$ V $[_{SC}$ DP$_i$ t_i $]]]$

In (21a) nominative case is assigned directly to the DP in SpecIP, but in (21b) this case is, in a sense, transferred to the DP in its base position via the chain of indices. Since I is co-indexed with the predicative PP in SpecIP under (20b), the PP is co-indexed with its trace under (20a), and the PP trace is co-indexed with the predicative DP under (20c), it follows from the transitivity of co-indexing that I is also co-indexed with the postverbal DP, and, as a result, assigns nominative case to it.

     Hoekstra and Mulder's proposal predates the minimalist program. Among other things, this is clear from the fact that their analysis crucially relies on co-indexing, which violates Chomsky's (1995:ch.3) inclusiveness condition. If this condition is to be respected, a reformulation of the proposal is called for. Their proposal *is* in accordance with the Last Resort Condition on movement, since it claims that the movement of the subject/predicative PP is motivated by the Case Filter. However, this proposal cannot be maintained in the current minimalist inquiry framework, given the assumption that the case feature of the subject can be valued under Agree. The obligatory movement of the subject/PP should therefore follow from an epp-feature on I. Note that assuming this also voids the problem that Hoekstra and Mulder's proposal poses for the inclusiveness condition; since there is no "transfer" of nominative case to the subject via a chain, the indices in (21) are not needed.
     However, this still leaves two questions to answer. First, postulating an epp-feature on I is not sufficient to trigger movement of the predicative PP as the Last Resort Condition allows this only when the PP is probed by I. This leads to the question in (22a), which asks

what unvalued feature on I triggers the movement of the predicative PP. Secondly, we want to know what determines the choice between the examples in (18a) and (18b). Rochemont and Culicover (1990) have extensively argued that the choice between the two examples is related to the information structure of the clause: example (18b) is possible only if the subject belongs to the focus (new information) of the clause. So this observation leads to the question in (22b).

(22)   a.   Which unvalued feature on I probes the predicative PP?
        b.   How can we account for the focus restriction on locative inversion?

Let us start with question (22a) concerning the trigger for the movement of the predicative PP. The answer to this question seems implicitly given by the intuition underlying Hoekstra and Mulder's proposal, namely that the predicate and the DP it is predicated of agree, which in current terms means that that they have the same φ-features. Given that I has unvalued φ-features, we may assume that the φ-features on the predicate make locative inversion possible. If this is on the right track, this gives rise to hypothesis (13): if A and B agree in φ-features, both A and B can be the goal of some higher head H with unvalued φ-features, and, consequently, be a candidate for internal merge with H. It is this hypothesis that we want to investigate in the remainder of this article.

        Note that capturing Hoekstra and Mulder's intuition in terms of φ-feature agreement rather than in terms of case may be preferable for empirical reasons, since in some languages predicates can be assigned a case different from the case assigned to the DP they are predicated of. This is illustrated by means of the Hungarian example in (23), where the predicate is dative, whereas the DP it is predicated of is accusative.

(23)   János-t okos-nak tartott-ák.
            John$_{acc}$ clever$_{dat}$ regarded$_{3pl}$
            'They regarded John clever.'

Now consider the question in (22b) concerning the focus restriction on locative inversion: why is locative inversion only possible when the subject is part of the focus (new information) of the clause? In the minimalist inquiry framework, this should be attributed to the interpretive complex postulated in Chomsky (2001:31), by e.g. requiring that the focus of the clause remain vP-internal; cf. the Nuclear Stress Rule in Chomsky and Halle (1968). However, this should only be the case when movement of the predicative PP can be used as an alternative to satisfy the epp-feature of I, since otherwise we would wrongly predict example (24b) to be grammatical when the DP John is part of the focus of the clause.

(24)   a.   John/JOHN died.
        b.   *died JOHN.

2.2.   Locative inversion in the D&E framework

The formulation of the focus restriction needed in the MP seems to be of a rather *ad hoc* nature. This section will show that the D&E framework fares much better in this respect because the restriction follows immediately from the independently motivated English constraint ranking in (8), repeated here as (25).

(25)   English: EPP(φ) >> {AF, *MOVE} >> EPP(case)

First note that the ranking in (25) does not only give us the right result with respect to object shift but also correctly predicts that English is an EPP-language in the sense that its subject

position must be filled. Since this is due to the fact that EPP(φ) outranks both ALIGNFOCUS and *MOVE, this indirectly supports our hypothesis in (13) that movement of the predicative PP into the local domain of I is triggered by the φ-features on I: the unvalued case feature on I could not perform this function because the subranking *MOVE >> EPP(case) expresses that the movement triggered by the case feature on I is blocked for reasons of economy. Even more interesting is, as was noted above, that the ranking in (25) immediately provides us with an analysis of the locative inversion constructions in (18), repeated here as (26).

(26)   a.   The baby carriage rolled down the hill.
        b.   Down the hill rolled the baby carriage.

Let us first investigate what (25) predicts when the subject is part of the presupposition of the clause, that is, for examples like (26a). Consider the three candidates in Tableau 5. Given that the subject is not part of the focus of the clause, the constraint ALIGNFOCUS is not relevant here. Leaving SpecIP empty is excluded since it leads to a fatal violation of the highest ranked constraint EPP(φ): this blocks the third candidate. Since the first and second candidate score equally well with respect to *MOVE, EPP(case) gets the last say. Since movement of the PP violates both *MOVE and EPP(case), whereas movement of the subject violates *MOVE only, the latter is preferred. We therefore correctly predict that the first candidate in Tableau 5 is the optimal one.

Tableau 5: DP is part of the presupposition of the clause

example (26a)	EPP(φ)	AF	*MOVE	EPP(case)
DP I ... V t_{DP} Pred ☞			*	
Pred I ... V DP t_{Pred}			*	*!
e I ... V DP Pred	*!			*

If the subject is part of the focus of the clause, as in (26b), the evaluation proceeds as indicated in Tableau 6, where the focused phrase is given in italics. As in Tableau 5, leaving SpecIP empty leads to a fatal violation of EPP(φ). Moving the subject into SpecIP results in a structure violating ALIGNFOCUS, which can be avoided by moving the predicative PP instead. The construction with locative inversion is therefore the optimal one.

Tableau 6: DP is part of the focus of the clause

example (26b)	EPP(φ)	AF	*MOVE	EPP(case)
DP I ... V t_{DP} Pred		*!*	*	
Pred I ... V *DP* t_{Pred} ☞			*	*
e I ... V *DP* Pred	*!	*		*

When both the DP and the predicative phrase are part of the focus of the clause (which is, for example, the case when the sentence is uttered as an answer to *What happened*?), it is again the DP that must be moved into SpecIP. This is shown in Tableau 7; as in Tableau 5 the constraint EPP(case) is decisive. For obvious reasons, movement of the subject DP is also forced when only the predicative phrase is part of the focus of the clause; for completeness' sake, this is shown by the evaluation in Tableau 8.

Tableau 7: DP *and* Pred are part of the focus of the clause

example (26a)	EPP(φ)	AF	*MOVE	EPP(case)
DP I ... V t_{DP} *Pred* ☞		**	*	
Pred I ... V *DP* t_{Pred}		**	*	*!
e I ... V *DP Pred*	*!	*		*

Tableau 8: Pred is part of the focus of the clause

example (26a)	EPP(φ)	AF	*MOVE	EPP(case)
DP I ... V t_{DP} *Pred* ☞			*	
Pred I ... V DP t_{Pred}		*!*	*	*
e I ... V DP *Pred*	*!			*

The discussion above has shown that the English ranking in (25) solves the problem that we formulated in (22b) without any further ado. It straightforwardly accounts for the fact that movement of the subject into SpecIP is blocked only when (i) the subject is part of the focus of the clause, and (ii) a predicative phrase is present. From the proposal it further follows that a third condition must be satisfied, namely that the predicative phrase is part of the presupposition of the clause: when the predicate is also part of the focus of the clause, it is again the subject that must move (see Tableau 7); see fn.4 for a possible fourth condition on locative inversion, the discussion of which we have put aside for the moment.

2.3.   Fine-tuning the analysis

The analysis of locative inversion given in the previous section was slightly simplified by ignoring the fact that the constraint ranking in (25) requires that locative inversion be preceded by short 'object shift' of the subject of the small clause into the local domain of V. This obligatory movement has consequences for the analysis of locative inversion that will be spelled out in detail in this section. Consider again the examples (26), repeated here as (27).

(27)   a.   The baby carriage rolled down the hill.
       b.   Down the hill rolled the baby carriage.

We will start with discussing the regular construction in (27a). The earlier discussion assumed that the subject moves into SpecIP in one fell swoop; cf. (19a). However, the constraint ranking in (25) forces the subject of the small clause to move successive cyclically via the local domain of V, so that we need the additional movement in (28b).

(28)   a.   [$_{VP}$ V [$_{SC}$ DP Pred]]
       b.   [$_{VP}$ DP V [$_{SC}$ t_{DP} Pred]]   short 'object shift'
       c.   [$_{vP}$ v+V [$_{VP}$ DP t_V [$_{SC}$ t_{DP} Pred]]]   merging of v and V-to-v
       d.   [$_{IP}$ DP I [$_{vP}$ v+V [$_{VP}$ t_{DP} t_V [$_{SC}$ t_{DP} Pred]]]]   merging of I and DP movement

Since the three steps in (28a-c) are also part of the derivation of the locative inversion construction in (27b), it is clear that there are in principle two ways in which the surface order in (27b) could be derived from the structure in (28c). This is illustrated in (29): (29a) is derived by only moving the predicate into SpecIP, whereas (29b) is derived by moving the complete small clause into this position.

(29)   a.   [$_{IP}$ Pred I [$_{vP}$ v+V [$_{VP}$ DP t_V [$_{SC}$ t_{DP} t_{Pred}]]]]
       b.   [$_{IP}$ [$_{SC}$ t_{DP} Pred] I [$_{vP}$ v+V [$_{VP}$ DP t_V t_{SC}]]]

The structure in (29a) remains closest to the one adopted by Hoekstra and Mulder (1990). However, given that the predicate heads the small clause, it cannot be ruled out that attraction of the features of the predicate requires pied piping of the remainder of the small clause, as in (29b). Actually, there are reasons to assume that the structure in (29a) is not well-formed, and that the derivation must proceed as indicated in (29b). First recall that, since we have seen that the φ-features on V attract the subject of the small clause, hypothesis (13) implies that V can also attract the small clause itself; cf. (16b). The resultative constructions in (30) suggest that this prediction is indeed correct.

(30)   a.   *The jeweler put carefully the diamonds into the box.
        b.   The jeweler put the diamonds carefully into the box.
        c.   The jeweler put the diamonds into the box carefully.
        d.   *The jeweler put into the box carefully the diamonds.

Example (30a) is unacceptable because the strong ranking of EPP(φ) requires that the goal of the φ-features on V is moved into the local domain of V: this requirement is not met since both the DP *the diamonds* and the predicate *into the box* are in their base-position following the VP-adverb *carefully*, as is shown in (31a). The requirement can be satisfied by movement of the DP in (30b), with the representation in (31b).

(31)   a.   *[$_{vP}$ S v+V [adv t_V [$_{SC}$ DP Pred]]]
        b.   [$_{vP}$ S v+V [$_{VP}$ DP adv t_V [$_{SC}$ t_{DP} Pred]]]

The examples in (30c&d) show that also the predicate can precede the VP-adverb, but not when the DP is stranded. Given that inversion of the predicate and the argument it is predicated of *is* possible in the locative inversion construction, this is perhaps somewhat surprising. What we want to propose here is that the contrast between (30c) and (30d) shows that movement of the predicate obligatorily pied pipes the remainder of the small clause, as in (31c); independent movement of the predicate, as in (31d), is excluded.

(31)   c.   [$_{vP}$ S v+V [$_{VP}$ [$_{SC}$ DP Pred] adv t_V t_{SC}]]
        d.   *[$_{vP}$ S v+V [$_{VP}$ Pred [adv t_V [$_{SC}$ DP t_{Pred}]]]]

Now that we have established that the movement of the predicate obligatorily pied pipes the remainder of the small clause, we have no choice but to conclude that also locative inversion is derived by movement of the full small clause. This means that representation (29a) is ungrammatical, which leaves us with the representation in (29b). Note that this conclusion implies that locative inversion always involves remnant movement: first the DP is moved out of the small clause into the local domain of the verbal root V, and, subsequently, the full small clause containing the trace of the DP is moved into SpecIP across the landing site of the DP.

3.   Predicate movement in Dutch

Although Dutch does not seem to have locative inversion (Broekhuis to appear), this section will argue that Dutch has predicate movement triggered by the φ-features on the verbal root V.[5] Adopting the analysis in this section will enable us to solve several problems that Dutch

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[5] Broekhuis (2007/to appear) has argued that it is actually the gender feature on the verb that triggers predicate movement in Dutch. He formally accounts for this by assuming (i) that EPP(φ) must be split into EPP(person), EPP(gender) and EPP(number), and (ii) that Dutch has the constraint ranking EPP(gender) >> Alignfocus >>

poses for Kayne's universal base hypothesis, according to which all languages have the underlying linear order specifier-head-complement.

3.1.   The placement of small clause predicates

Small clause predicates constitute a similar problem for Kayne's universal base hypothesis as objects: they are base-generated in complement position, that is, in a position to the right of the verb, but obligatorily precede the clause-final verb(s) in Dutch. This is illustrated in (32), where the angled brackets indicate alternative placements of the predicative PP *uit bed* 'out of bed'.

(32)   a.   dat   de baby   <uit bed>   viel <*uit bed>.
            that   the baby   out of bed   fell
       b.   dat   Jan de baby   <uit bed>   duwde <*uit bed>.
            that   Jan the baby   out of bed   pushed

In order to account for the placement of the predicate, Zwart (1993) proposed that the clause contains a PredP between V and AGR_O, and that the small clause obligatorily moves into the specifier of this projection in Dutch. According to Koster (1994), SpecPredP may contain either predicative phrases or DPs. With respect to DPs, Koster follows De Hoop (1992) in claiming that DPs occupying SpecPredP must be part of a complex predicate: *de afwas doen* 'to do the dishes', *een klap geven* 'to give a blow/to hit', etc. In order to make the proposal in accordance with Last Resort, Koster further claims that "small clause predicates have Case-like N-features that can only be checked by overt movement to [Spec, PredP]".

If Kayne's universal base hypothesis is correct, a proposal along the line of Zwart and Koster seems unavoidable. We therefore adopt the proposal with only two alterations. The first alteration is that we do not assume that the movement of small clauses is triggered by case-like N-features; instead, we assume in accordance with hypothesis (13) that this movement is triggered by the unvalued φ-features on V. An important empirical reason for making this revision is the fact that small clauses also move in unaccusative constructions like (32a); unaccusative verbs like *vallen* are normally assumed not to assign case, and we would therefore have no trigger for the obligatory movement of the predicative PP. A more theory-internal reason for making this revision is that we are adopting here our earlier assumption that the case features are situated on the light verb *v*, and therefore situated too high in the structure. The second alteration is directly related to the previous one: the idea that predicate movement is triggered by the agreement features on V of course voids the need of postulating the functional head Pred.

Let us now start by considering the question what the derivation of a transitive construction like (32b) might look like. Assume that the verbal root V takes a small clause complement as in (33a). Since we have seen that the unvalued φ-features on V can probe either the DP or the small clause predicate, the strong ranking of EPP(φ) requires that the DP or the small clause move into the local domain of V. Given the fact the small clause must precede V, apparently only the option of moving the small clause is available, as in (33b). The next step is to add *v* and the external argument, as in (33c), and from this point onwards the derivation may proceed in the same fashion as regular transitive constructions: the case features on *v* attract the DP (provided, at least, that the latter is part of the presupposition of the clause), after which I is merged and the subject is moved into SpecIP. Recall that the OV

{EPP(person), EPP(CASE)} >> *MOVE. This correctly predicts that Dutch has obligatory short object shift, whereas regular object shift and movement of the subject into SpecIP depends on the information structure of the clause. In what follows we will ignore this in order to simplify the discussion.

order in Dutch follows from the fact that V-to-v does not apply in embedded clauses; cf. section 1.1.

(33) a. [$_{VP}$ V [$_{SC}$ DP Pred]]
      b. [$_{VP}$ [$_{SC}$ DP Pred] V [$_{VP}$ t_V t_{SC}]]]
      c. [$_{vP}$ S v [$_{VP}$ [$_{SC}$ DP Pred] V [$_{VP}$ t_V t_{SC}]]]

The first two steps in the derivation of the unaccusative example in (32a) are identical to those of the transitive construction in (33a-b), and are given as (34a-b). From this point the two derivations diverge: in the transitive case the vP contains an external argument (cf. (33c)), whereas in the unaccusative case there is no external argument (cf. (34c)). After this stage, the derivation of the unaccusative example is rather straightforward: I is added and the DP moves on to SpecIP in order to satisfy EPP(case), as in (34d).

(34) a. [$_{VP}$ V [$_{SC}$ DP Pred]]
      b. [$_{VP}$ [$_{SC}$ DP Pred] V [$_{VP}$ t_V t_{SC}]]]
      c. [$_{vP}$ v [$_{VP}$ [$_{SC}$ DP Pred] V [$_{VP}$ t_V t_{SC}]]]
      d. [$_{IP}$ DP I [$_{vP}$ v [$_{VP}$ [$_{SC}$ t_{DP} Pred] V [$_{VP}$ t_V t_{SC}]]]]

Again, the movement of the subject into SpecIP only takes place when the subject is part of the presupposition of the clause, since otherwise ALIGNFOCUS would block this movement. Observe that in (34d), it is the DP that must move into SpecIP and not the entire small clause; this follows from the fact that movement of the DP results in satisfaction of both EPP(case) and EPP(φ), whereas movement of the small clause will result in satisfaction of EPP(φ) only.

3.2.   The constraint A-OVER-A

When we compare the first two steps of the derivations of the Dutch (transitive/unaccusative) examples in (33/34) to those of the English (unaccusative) locative inversion construction in (35), we see that the main difference is that whereas in Dutch the full small clause must be moved, in English it is only the DP that is moved.

(35) a. [$_{VP}$ V [$_{SC}$ DP Pred]]
      b. [$_{VP}$ DP V [$_{VP}$ t_V [$_{SC}$ t_{DP} Pred]]]
      c. [$_{vP}$ v+V [$_{VP}$ DP t_V [$_{VP}$ t_V [$_{SC}$ t_{DP} Pred]]]]
      d. [$_{IP}$ [$_{SC}$ t_{DP} Pred] I [$_{vP}$ v+V [$_{VP}$ DP t_V [$_{VP}$ t_V t_{SC}]]]]

In order to account for the difference between Dutch and English we must provide some account for the following generalization.

(36)   **Observational Generalization**: In the structure [$_{VP}$ V [$_{SC}$ DP Pred]], the unvalued
           φ-features on V attract the small clause in Dutch; in the English locative inversion
           construction these features attract the DP.

It is not too hard to formulate a constraint that accounts for the attraction of the full small clause in Dutch. Let us therefore provisionally assume that there is a constraint A-OVER-A that favors movement of the highest category that can in principle satisfy EPP(φ). Since this constraint reduces the length of the movement path, we may consider it an economy constraint. Note that it is crucial to consider A-OVER-A a constraint; therefore it cannot be equated with the inviolable MLC on movement, as this would wrongly predict that A-OVER-A is inviolable so that the subject of a small clause is never attracted by V, and, consequently,

(English) locative inversion would be excluded. Now assume that in Dutch A-OVER-A is ranked higher than ALIGNFOCUS, as in (37b).

(37)   a.   A-OVER-A: *[$_{FP}$ X(P) F ... [$_{YP}$ ... t_{XP} ...]] if YP and XP are potential goals of F.
        b.   Dutch ranking:
             {A-OVER-A, EPP(φ)} >> ALIGNFOCUS >> EPP(case) >> *MOVE

The claim that A-OVER-A outranks ALIGNFOCUS predicts that the small clause will be moved, irrespective the information structure of the clause. This is illustrated by the evaluations in Tableaux 9 to 11. These tableaux only contain the relevant VP-structures; the constraint EPP(case) is of course not relevant for this part of the representation, for which reason we filled this column with diagonal lines.

Tableau 9: Object/predicate movement in Dutch (DP and Pred not in focus)

	A-OVER-A	EPP (φ)	AF	EPP(case)	*MOVE
[$_{VP}$ V [$_{SC}$ DP Pred]]]		*!			
[$_{VP}$ DP V [$_{VP}$ t_V [$_{SC}$ t_{DP} Pred]]]	*!				**
[$_{VP}$ [$_{SC}$ DP Pred] V [$_{VP}$ t_V t_{SC}]] ☞					**

Tableau 10: Object/predicate movement in Dutch (DP in focus; Pred not in focus)

	A-OVER-A	EPP(φ)	AF	EPP(case)	*MOVE
[$_{VP}$ V [$_{SC}$ *DP* Pred]]]		*!	*		
[$_{VP}$ *DP* V [$_{VP}$ t_V [$_{SC}$ t_{DP} Pred]]]	*!		**		**
[$_{VP}$ [$_{SC}$ *DP* Pred] V [$_{VP}$ t_V t_{SC}]] ☞			**		**

Tableau 11: Object/predicate movement in Dutch (DP not in focus; Pred in focus)

	A-OVER-A	EPP(φ)	AF	EPP(case)	*MOVE
[$_{VP}$ V [$_{SC}$ DP *Pred*]]]		*!			
[$_{VP}$ DP V [$_{VP}$ t_V [$_{SC}$ t_{DP} *Pred*]]]	*!				**
[$_{VP}$ [$_{SC}$ DP *Pred*] V [$_{VP}$ t_V t_{SC}]] ☞			*		**

After the derivational stage depicted in the tableaux above is reached, the full small clause cannot undergo any other A-movement: since the case features on *v* and I cannot be valued by the predicate of the small clause, the derivation can only be continued by A-movement of the DP (A′-movement of the small clause of course remains possible).

        In the English locative inversion construction, satisfaction of the constraint A-OVER-A must be blocked by some higher ranked constraint. The reason why it is the DP that is moved into the local domain of V is that only in this way can the locative inversion construction contribute to satisfying ALIGNFOCUS; when the subject does not leave the small clause, movement of the small clause into SpecIP would pied pipe the DP, so that ALIGNFOCUS would still be violated (actually, it would be violated twice instead of once). By ranking ALIGNFOCUS higher than A-OVER-A in English, the desired distinction is derived.

(38)   English ranking: EPP(φ) >> {ALIGNFOCUS, *MOVE} >> {A-OVER-A, EPP(case)}

Now let us consider the predictions that follow from (38) in more detail. In transitive constructions, (38) predicts movement of the full small clause to be blocked by ALIGNFOCUS when the predicative phrase is part of the focus of the clause, so that the DP must move in isolation. In other cases, movement of the small clause is preferred. Of course, since English

has obligatory V-to-*v*, which moves V across the preposed phrase, the difference between the two representations can only be observed by considering the relative position of the DP and the predicate, on the one hand, and VP-adverbs, on the other. The structures we have to consider are given in (39).

(39) a. *[$_{IP}$ Subj I [$_{vP}$ t_{Subj} *v*+V [Adv [$_{VP}$ t_V [$_{SC}$ DP Pred]]]]]]
      b.   [$_{IP}$ Subj I [$_{vP}$ t_{Subj} *v*+V [DP Adv [$_{VP}$ t_V [$_{SC}$ t_{DP} Pred]]]]]]
      c.   [$_{IP}$ Subj I [$_{vP}$ t_{Subj} *v*+V [[$_{SC}$ DP Pred] Adv [$_{VP}$ t_V t_{SC}]]]]]

The evaluations in Tableaux 12 and 13 show that (39a) is excluded since it violates the high-ranked constraint EPP(φ), and that both (39b) and (39c) can be realized depending on the information structure of the clause. Tableaux 12 and 13 do not include the candidates in which the subject does not move into the local domain of I and V-to-*v* does not apply, and the constraint violations that are the result of these movements are therefore not included in the tableau. When the object DP is part of the focus of the clause the stars in the column ALIGNFOCUS must be added.

Tableau 12: Transitive predicative constructions in English (Pred not in focus)

	EPP(φ)	AF	*MOVE	A-OVER-A	EPP(case)
structure (39a)	*!	(*)			
structure (39b)		(**)	**	*!	
structure (39c) ☞		(**)	**		

Tableau 13: Transitive predicative constructions in English (Pred in focus)

	EPP(φ)	AF	*MOVE	A-OVER-A	EPP(case)
structure (39a)	*!	(**)			
structure (39b) ☞		(**)	**	*	
structure (39c)		(**)*!	**		

The crucial examples were actually already discussed in section 2.3, where it was shown that the difference between examples (30b) and (30c), repeated here as (40a&b), can be accounted for by assuming that in the first case the unvalued φ-features on V attract the object, and in the latter case the full small clause. According to our US-informant, the semantic difference between the two examples is subtle but goes into the expected direction: (40a) is used in neutral contexts (e.g. as an answer to *What did the jeweler do?*), whereas (40b) is marked in that it is most natural when the adverb (and not the predicative PP) is part of the focus of the clause.

(40) a.   The jeweler put the diamonds carefully into the box.
      a′. The jeweler put [$_{VP}$ [$_{DP}$ the diamonds] $t′_{put}$ [carefully [$_{VP}$ t_{put} [$_{SC}$ t_{DP} into the box]]]]
      b.   The jeweler put the diamonds into the box carefully.
      b′. The jeweler put [$_{VP}$ [$_{SC}$ the diamonds into the box] $t′_{put}$ [carefully [$_{VP}$ t_{put} t_{SC}]]]

    When we are dealing with an unaccusative example, the situation is slightly more complicated, since then not only the status of the predicate but also the status of the DP becomes relevant. First consider the representations in (41): representation (41a) results from subsequently moving the DP into the local domain of V and I; (41b) is the result of movement of the small clause into the local domain of V followed by movement of the DP into the local domain of I; (41c), finally, is the locative inversion construction, which is

derived by first moving the DP into the local domain of V, and subsequent remnant movement of the small clause into the local domain of I (cf. the derivation in (35)).

(41) a. $[_{IP}$ DP I $[_{vP}$ v+V $[_{VP}$ t_{DP} Adv $[_{VP}$ t_V $[_{SC}$ t_{DP} Pred]]]]]
      b. $[_{IP}$ DP I $[_{vP}$ v+V $[_{VP}$ $[_{SC}$ t_{DP} Pred] Adv $[_{VP}$ t_V t_{SC}]]]]
      c. $[_{IP}$ $[_{SC}$ t_{DP} Pred] I $[_{vP}$ v+V $[_{VP}$ DP Adv $[_{VP}$ t_V t_{SC}]]]]

The three structures in (41) are the result of differences in the information structure of the clause. This is shown by the evaluations in Tableaux 14 to 17. In these tables we have ignored the derivations in which the movements into the local domains of V and I do not take place: these will all be excluded by the highly ranked constrain EPP(φ). In order to indicate this, we have filled the EPP(φ) column with diagonal lines. We have also ignored the two verb movements that take place in all examples.

Tableau 14: Unaccusative predicative constructions in English (DP and Pred *not* in focus)

		EPP(φ)	AF	*MOVE	A-OVER-A	EPP(case)
Structure (41a)				**	*!	
Structure (41b)	☞			**		
Structure (41c)				**	*!	*

Tableau 15: Unaccusative predicative constructions in English (Pred in focus)

		EPP(φ)	AF	*MOVE	A-OVER-A	EPP(case)
Structure (41a)	☞			**	*	
Structure (41b)			*!	**		
Structure (41c)			*!**	**	*	*

Tableau 16: Unaccusative predicative constructions in English (DP in focus)

		EPP(φ)	AF	*MOVE	A-OVER-A	EPP(case)
Structure (41a)			*!**	**	*	
Structure (41b)			*!**	**		
Structure (41c)	☞		*	**	*	*

Tableau 17: Unaccusative predicative constructions in English (DP and Pred in focus)

		EPP(φ)	AF	*MOVE	A-OVER-A	EPP(case)
Structure (41a)	☞		***	**	*	
Structure (41b)			****!	**		
Structure (41c)			****!	**	*	*

The differences between the structures in (41a) and (41b) can only be observed by taking the position of the adverbs into consideration. That they both occur is clear from the examples in (42). In (42a) the predicative part of the small clause follows the VP-adverb *gracefully*, which indicates that the derivation is given as in (42a′); it is the DP that is moved into the local domain of V to satisfy EPP(φ), after which the DP moves on into SpecIP. In (42b), on the other hand, the predicative part of the small clause precedes the VP-adverb. This suggests that the derivation is given as in (42b′); it is the whole small clause that is moved into the local domain of V, after which the DP is extracted from the small clause and moved into SpecIP. As predicted by the ranking in (38) the difference between (42a) and (42b) is again a

matter of information structure: in the former case the small clause predicate is part of the focus of the clause, in the latter it is rather the adverb that is part of the focus of the clause.

(42) a. The queen walked gracefully down the stairs.
      a′. [$_{IP}$ The queen I [$_{vP}$ v+walked [$_{VP}$ t_{DP} t_V [gracefully [$_{VP}$ t_V [$_{SC}$ t_{DP} down the stairs]]]]]]
      b. The queen walked down the stairs gracefully.
      b′. [$_{IP}$ The queen I [$_{vP}$ v+walked [$_{VP}$ [$_{SC}$ t_{DP} down the stairs] t_V [gracefully [$_{VP}$ t_V t_{SC}]]]]]

As we have seen before, the locative inversion construction is derived by first moving the subject of the small clause into the local domain of V and subsequent remnant movement of the small clause into SpecIP. For reasons of space, we simplified the discussion of the locative inversion construction by not taking into consideration the possibility that the VP is moved into SpecIP, an option that is clearly available given the acceptability of (43a) below, taken from Rochemont and Culicover (1990), in which locative inversion pied pipes a VP-adverb. When we now compare the examples in (43a) and (43b) we see that pied piping of the adverb requires that the predicate follows the adverb. This fact can be used to support the conclusion that the locative inversion construction cannot involve movement of the complete small clause into the local domain of V. The order in (43a) can be derived by first moving the DP into the local domain of V followed by remnant movement of the lower VP with pied piping of the VP-adverb. The ungrammatical order in (43b), on the other hand, cannot be derived. The predicate can only precede the adverb if we move the complete small clause into the local domain of V. Consequently locative inversion with pied piping of the VP-adverb would now require that the higher VP is moved, but this would wrongly pied pipe the DP as well. [6]

(43) a. Gracefully down the stairs walked the queen.
      a′. [$_{vP}$ v+walked [$_{VP}$ the queen t_{walked} [gracefully [$_{VP}$ t_{walked} [$_{SC}$ $t_{the\ queen}$ down the stairs]]]]]
      b. *Down the stairs gracefully walked the queen.
      b′. [$_{vP}$ v+walked [$_{VP}$ [$_{SC}$ the queen down the stairs] t_{walked} [gracefully [$_{VP}$ t_{walked} t_{SC}]]]]

This section has established that in Dutch small clause constructions EPP(φ) can only be satisfied by moving the small clauses into preverbal position, because moving the external argument of the small clause in isolation is blocked by a constraint that we provisionally called A-OVER-A. In this way we account for the fact that small clause predicates, despite being base-generated in postverbal position, obligatorily precede the verbs in clause-final position. We have shown that in neutral contexts movement of the complete small clause is also preferred in English, but that this effect of A-OVER-A can be blocked due to the fact that this constraint is outranked by ALIGNFOCUS: when the predicate is part of the focus of the clause, ALIGNFOCUS blocks movement of the predicate so that movement of the DP in isolation is required. In the locative inversion construction ALIGNFOCUS forces movement of the DP that is part of the focus of the clause: this DP can only be placed in the right periphery of the clause when we first extract it from the small clause, and proceed by applying remnant movement of the small clause/VP into SpecIP across the DP.

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[6] Note that the present analysis of locative inversion reveals a very peculiar fact about the constraint ALIGNFOCUS. This constraint was originally introduced to block movement of (subject and object) DPs that are part of the focus of the clause. In the present analysis of locative inversion, things take an unexpected turn in that ALIGNFOCUS forces movement of the DP that is part of the focus, since only then is locative inversion possible. So depending on the syntactic context ALIGNFOCUS may either block or force movement of a DP that is part of the focus of the clause.

3.3.   Extending the analysis: VP-movement

The preverbal position in Dutch is not reserved to predicative PPs: all predicative complements must occupy this position, irrespective whether they are PPs, APs or NPs. We will assume without illustrating this any further that the examples in (44) can all be accounted for in essentially the same way.

(44)   a.   dat   Jan de baby   <uit bed>   duwde <*uit bed>.
              that   Jan de baby   out of bed   pushed
       b.   dat   Jan de muur   <geel> verfde <*geel>.
              that   Jan the wall   yellow   painted
       c.   dat   Jan Peter   <een goed taalkundige>   vindt <*een goed taalkundige>.
              that   Jan Peter a good linguist   considers

We have seen in section 3.2 that examples like (43a), repeated here as (45), in which locative inversion pied pipes a VP-adverb, can be analyzed as VP-fronting, provided that V is moved into some position external to VP by V-to-*v*. This proposal implies that English (main) verbs agree in φ-features with their internal argument, since otherwise movement of VP into SpecIP would violate the Last Resort Condition.

(45)   Gracefully down the stairs walked the queen.

In what follows we will discuss Dutch perfect tense constructions, and argue that also in this construction we (may) find VP-movement. Of course, VP-movement in Dutch is not triggered by the φ-features on I, but by those on V, and thus targets the position that is normally involved in short object shift. Consider the Dutch examples in (46). The placement of the direct object in (46a) follows from the subranking EPP(φ) >> ALIGNFOCUS >> *MOVE, which forces movement of the object into the local domain of both the participle and the auxiliary; cf. the discussion in section 1.1. What we did not discus so far, however, is that the grammatical order in (46a) alternates with the order in (46b), in which the participle also precedes the auxiliary. That example (46b) is possible follows from our assumption that the participle agrees in φ-features with its internal argument, and is consequently a potential probe for the unvalued φ-features of the auxiliary.

(46)   a.   dat Jan <het boek> heeft <*het boek>   gelezen   < *het boek>.
              that   Jan the boek   has   read
              'that Jan has read the book.'
       b.   dat Jan het boek gelezen heeft.

If this proposal is on the right track, the derivations of the examples in (46) are as indicated in (47). In both cases, the strong ranking of EPP(φ) forces the object to move into the local domain of the participle. The unvalued features on the auxiliary, on the other hand, may attract either the direct object or the VP, which gives rise to (47a) and (47b), respectively.

(47)   a.   dat Jan dat boek heeft [$_{VP}$ $t'_{dat\ boek}$ gelezen $t_{dat\ boek}$]
       b.   dat Jan [$_{VP}$ dat boek gelezen $t_{dat\ boek}$] heeft t_{VP}

Although the alternation between (46a) and (46b) follows straightforwardly from the proposal developed above, a problem seems to arise with the constraint A-OVER-A. In the remainder of this section we will suggest a tentative solution to this problem. Section 3.1 has argued that the constraint A-OVER-A can be held responsible for the fact that in Dutch small clause constructions, the complete small clause must be moved into the preverbal position.

However, this constraint leads us to expect that EPP(φ) always forces movement of the more encompassing phrase into the local domain of the auxiliary. We therefore would wrongly predict (47a) to be ungrammatical, because A-OVER-A requires that the unvalued φ-features on the auxiliary trigger movement of the VP. Example (48) shows that a similar problem arises in perfect constructions with a small clause complement. Postulating the constraint A-OVER-A again leads to the wrong prediction that only (48b) is acceptable.

(48) a. dat Jan de muur helblauw   heeft geschilderd.
          that Jan the wall   bright blue has   painted
      b. dat Jan de muur helblauw geschilderd heeft.

Let us consider the derivation of the *aux-participle* order in more detail. The derivation of the order in (48a) starts out with the VP structure in (49a). Since in Dutch the unvalued φ-features on V forces movement of their probe, either the small clause or its DP subject must move into the local domain of V; given the fact that the small clause precedes the main verb, the constraint A-OVER-A correctly predicts movement of the full small clause, as in (49b). In (49c) the auxiliary *heeft* is merged, whose φ-features likewise force movement of its probe. Now the option is between moving the DP, the small clause or the VP. It is clear that A-OVER-A favors movement of the VP, as in (49d), and example (48b) shows that this is indeed an acceptable option. However, example (48a) shows that it is also possible to subextract the small clause, as in (49d′), despite the fact that this is prohibited by A-OVER-A. Note that A-OVER-A does correctly predict that it is impossible to extract the DP from the VP and the small clause, as in (49d″): *dat Jan de muur heeft helblauw geschilderd.[7]

(49) a.   [$_{VP}$ geschilderd [$_{SC}$ de muur helblauw]]
      b.   [$_{VP}$ [$_{SC}$ de muur helblauw] geschilderd t_{SC}]
      c.   [$_{auxP}$ heeft [$_{VP}$ [$_{SC}$ de muur helblauw] geschilderd t_{SC}]]
      d.   [$_{auxP}$ [$_{VP}$ [$_{SC}$ de muur helblauw] geschilderd] heeft t_{VP}]]
      d′.   [$_{auxP}$ [$_{SC}$ de muur helblauw] heeft [$_{VP}$ t_{SC} geschilderd t_{SC}]]
      d″. *[$_{auxP}$ de muur heeft [$_{VP}$ [$_{SC}$ $t_{de\ muur}$ helblauw] geschilderd t_{SC}]]

There are several ways in which we could approach the unexpected acceptability of the examples in (46a) and (48a). One option would be to assume that this order is not part of core grammar. There are good reasons to take this position, as Standard Dutch seems to be the only Germanic language that allows this order. Furthermore, the order *aux-participle* was (and sometimes still is) promoted by the prescriptive grammarians, who condemn the order participle-aux as a "Germanism", that is, unwanted influence from German. If one takes this position that the *aux-participle* is part of the periphery in principle nothing more need be said.

      Nevertheless, we believe that the order in (46a) and (48a) is syntactically derived since it is simply too productive to assume that it is 'learned' on an item-to-item basis. What we want to suggest here is that, despite appearances, the derivation of (46a) and (48a) does involve VP-movement. One argument in favor of this claim concerns the position of the VP-adverbs. Since VP-adverbs modify the projection of the main verb, the null hypothesis is that they are generated in their vicinity; this means that they are generated as part of the complement of (and therefore to the right of) the auxiliary verb(s). In the surface realization of the Dutch clause, however, the VP-adverbs normally precede the auxiliary; the examples in (50) further show that their placement does not depend on the position of the main verb.

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[7] The order DP-aux-Adj-V$_{main}$ is sometimes found, but is subject to various additional restrictions: for example the adjective in this order must be mono-syllabic and cannot be accompanied by a modifier. For this reason, we will not discuss cases like this here.

(50)   a.   dat   Jan dat boek   nauwkeurig   gelezen   heeft.
             that   Jan that book meticulously read   has
       b.   dat Jan dat boek nauwkeurig heeft gelezen.

Of course, example (50a) can readily be derived if the VP-adverb is pied piped by movement of the VP; cf. the derivation of the English example in (43a). If (50b) does not involve VP-movement, the word order in this example can only be derived by moving the adverb in isolation. This, however, seems to go against Last Resort, since there does not seem to be any trigger that would motivate this movement. This leads to the conclusion that (50b) is derived by VP-movement of a remnant VP, just like the locative inversion constructions in (45). The derivation of (50b) should be roughly as indicated in (51); we have ignored the subject for simplicity.

(51)   a.   [nauwkeurig gelezen dat boek]
       b.   [$_{VP}$ dat boek [nauwkeurig gelezen $t_{\text{dat boek}}$]]]
       c.   [$_{XP}$ gelezen [$_{VP}$ dat boek t_{gelezen} nauwkeurig t_{gelezen} $t_{\text{dat boek}}$]]
       d.   [$_{auxP}$ heeft [$_{XP}$ gelezen [$_{VP}$ dat boek t_{gelezen} nauwkeurig t_{gelezen} $t_{\text{dat boek}}$]]]
       e.   [$_{auxP}$ [$_{VP}$ dat boek nauwkeurig t_{gelezen} $t_{\text{dat boek}}$] heeft [$_{auxP}$ t_{heeft} [$_{XP}$ gelezen t_{VP}]]]

The fact that Standard Dutch is the only Germanic OV-language that allows for the order in (46a) and (48a) can now be accounted for by assuming that Standard Dutch is exceptional in allowing movement of the participle into the position X. The derivation in (51) of course raises the following urgent question: What does XP stand for? We want to suggest that XP is the functional projection AspP, which is responsible for the participle morphology and is comparable to the light verb *v* associated with finite verbs. What we want to suggest is that, although we have seen in section 1.1 that V-to-*v*/Asp normally does not take place in the Germanic OV-languages as this would lead to a VO order at the surface, it can exceptionally take place in Standard Dutch in examples like (46a) and (48a). We will leave to future research the question whether this can be accounted for by taking recourse to constraint interaction or whether we should attribute this to the periphery.

      This section has shown that the fact that participles tend to precede the auxiliary in the Germanic OV-languages can be considered a natural consequence of Axiom II in (12b), according to which the main verb agrees in φ-features with its internal argument: due to the constraint A-OVER-A the unvalued φ-features on the auxiliary will trigger movement of the verb phrase instead of short object shift. The *aux-participle* order that is found in Standard Dutch can be readily derived by assuming that VP-movement is preceded by V-to-Asp, although we still have to account for the fact that the latter movement, which is normally blocked in the Germanic OV-languages, can exceptionally take place in the derivation of this order.

4.   **Hungarian**

This section will argue that the analysis of the English and Dutch data in the previous sections can be extended to account for the distribution of the so-called verbal modifiers (VM) in Hungarian. Section 4.1 starts with a discussion of some of the core data and the analysis of these data provided by É. Kiss (2002/2006a). É. Kiss shows that there are two ways to account for the seemingly complementary distribution of VMs and focus in the preverbal position. One is to assume that the two target different functional projections on top of the VP, and their surface complementarity is the result of V-movement (É. Kiss 2002). The other line of analysis is built on the assumption that the VMs and focused phrases compete

for the same position (É. Kiss 2006a).[8] Section 4.2 argues that the latter position cannot be correct, and that the approach according to which the two types of movement are triggered by different features is more to the point. More precisely, we will argue that movement of the VM can be considered another illustration of hypothesis (13) in that it is triggered by the φ-features on V, which are no plausible triggers for movement of focused phrases. Section 4.3 will provide an account for the complementary distribution of VMs and focused phrases.

4.1. Core data and previous analysis

The data central to our discussion feature sentences that contain VMs or focused phrases. Example (52a) shows that in neutral sentences VMs, like the particle *el* 'away', must precede the finite verb. However, if one of the constituents in the clause is focused (or if the clause is negated, see the discussion below), that phrase must be placed immediately in front of the finite verb, whereas the VM must follow it. This is shown in (52b), where (identificational) focus is indicated by means of small capitals.

(52) a. János   <el> ment <*el>.
          János   away went
      b. JÁNOS <*el> ment <el>.

As mentioned earlier, one more or less standard way of accounting for the examples in (52), which É. Kiss (2002:§4.2) partly attributes to Brody (1990/1995), is to assume that on top of VP, (at least) two functional projections can be found: Asp(ect)P and FocusP. SpecAspP is considered the landing site for the VM, which is often aspectual in nature, and SpecFocusP is the landing site for constituents acting as identificational focus. The verb moves into the head positions of these phrases. The derivation of the examples in (52) should therefore be as indicated in (53).

(53) a. János [$_{AspP}$ el ment [$_{VP}$ ... t_{ment} ... t_{el} ...]]
      b. [$_{FocusP}$ JÁNOS ment [$_{AspP}$ el t$_{ment}$ [$_{VP}$ ... t_{ment} ... t_{el} ...]]]

É. Kiss (2006a) dismisses this type of analysis by pointing out — among other problems — that it wrongly predicts that the VM must be right-adjacent to the finite verb in the focus construction;[9] the examples in (54b&c) show that the VM *be* can be placed much more to the right. É. Kiss therefore suggests that the focused phrase and the VM compete for the same position.

(54) a. János *be* mutatta   Pétert Marinak.
          János VM   introduced Péter$_{acc}$ Mari$_{dat}$
          'János introduced Péter to Mari.'
      b. PÉTERT mutatta János *be* Marinak.
      c. $^{(?)}$PÉTERT mutatta János Marinak *be*.

É. Kiss (2006a) gives shape to this suggestion by assuming that both VMs and focused constituents target Koster's (1994) PredP, and, indeed, the presupposition that VMs are predicates does not seem to be too far-fetched. Firstly, it has often been argued that particles are actually small clause predicates (cf. e.g. Den Dikken 1995). Secondly, a cursory inspection of the other constituents that can be placed into the position preceding the finite

verb shows that this position is normally occupied by predicative elements. In (55) to (57), a number of representative examples are given, taken from Komlósy (1985). In (55) the element preceding the finite verb is a predicative locational phrase, in (56) a predicative adjective, and in (57) a nominal predicate.

(55)   a.   Péter *laposra*   verte Jánost.
            Péter flat-on   beat   János_{acc}
            'Péter beat János to pulp.'
       b.   János *az asztalra*   tette   a könyvet.
            János   the table-onto   put   the book_{acc}
            'János put the book on the table.'

(56)   a.   Mari tegnap   *beteg* volt.
            Mari yesterday ill   was
            'Mari was ill yesterday.'
       b.   János *okosnak* tartja   Pétert.
            János   clever_{dat} consider   Péter_{acc}
            'János considers Péter clever.'

(57)   János   tavaly   *katona* volt.
            János   last year   soldier was
            'János was a soldier last year.'

Furthermore, the fact that in some cases infinitival main verbs can also occupy the position preceding the finite verb is in line with the idea that this position is designated to predicative elements. This is illustrated in (58).

(59)   Mari   *venni*   akar   egy autót.
            Mary   buy_{inf}   want   a car_{acc.}
            'Mary wants to buy a car.'

The examples in (60), which are again taken from Komlósy (1985), show that also bare nouns may function as VMs, that is, target the same position as the predicative elements discussed above. This is a potential problem for É. Kiss' proposal if the notion of 'predicate' is to be taken in the syntactic sense: although from a semantic point of view bare nouns are indeed predicates, it is obvious that at the level of the clause they do not function as such syntactically — they rather function as regular (non-specific) arguments in the sense that they carry a thematic role. Consequently, it is not clear what would motivate their movement into the specifier of a PredP. Another drawback of claiming that bare nouns function as predicates at the level of the clause is that it blurs the distinction between arguments and predicates.

(60)   a.   János *újságot*   olvas a kertben.
            János   newspaper_{acc} read the garden-in
            'János is reading a newspaper/newspapers in the garden.'
       b.   Péternek *víz*   ment a szemébe.
            Péter_{dat}   water   went the eye-poss-into
            'Water got into Péter's eye(s).'

    The examples above have shown that the set of VMs (i.e. the set of elements that can occupy the position preceding the finite verb in neutral sentences) consists of the elements listed in (61). We have re-grouped the examples so that it helps us illustrate our point. The next section will argue that what these elements have in common is that they carry φ-features that can be probed by the unvalued features on the verbal root V.

(61) a. bare nouns (60)
      b. particles (52) and other predicative phrases (55) - (57)
      c. bare main verbs (59)

In this way, the Hungarian data discussed in this section will receive a similar account as the data from English and Dutch discussed earlier. However, before we show this, let us first complete our discussion of É. Kiss' (2006a) proposal. The assumption that focused constituents are also placed in SpecPredP leads É. Kiss to the conclusion that these elements are predicates as well, and much of her paper is devoted to providing a (semantic) motivation for this claim. Since *Wh*-phrases arguably occupy the focus position in Hungarian, É. Kiss correctly predicts that they also block movement of the VM, as can be seen in (62b).

(63) a. JÁNOS <*el> ment <el>.
          János away went
          'It was JÁNOS who went away.'
      b. Ki   <*el> ment <el>?
          who away went
          'Who went away?'

Example (64) shows that negation also blocks movement of the VM. É. Kiss accounts for this fact by claiming that in examples like these the verb must be interpreted as information focus (which we take to refer to the new information in the clause), and that this voids the need of moving the VM into SpecPredP.

(64)   János <*el> nem <*el> ment <el>.
          János away not   went

There are at least two objections to this account of (64). The first is that information focus on the verb does not void the need of VM movement in affirmative clauses; apparently the presence of negation is crucial for blocking movement of the VM. The second objection is related to the claim that VMs and focused constituents (including focused *wh*-phrases) are all predicative phrases. If this is indeed true, it becomes mysterious why information focus on the verb in negative clauses blocks movement of VMs into SpecPredP, while still allowing focus- and *wh*-movement in examples like (65).

(65) a. JÁNOS nem jött el.
          János not   come VM
          'It was János that didn't come.'
      b. Ki   nem jött el?
          who not   come VM
          'Who didn't come?'

Section 4.3 will show that it is not necessary to assume that focused constituents and *wh*-phrases are predicates by providing an analysis that straightforwardly accounts for the complementary distribution of these phrases and the VMs in the position preceding the finite verb. From this analysis the fact that negation blocks movement of the VM will follow as well. But before doing this, we first have to discuss the question what triggers the movement of the VMs in (61) in the first place.

4.2. What do the verbal modifiers have in common?

Section 2 has investigated the set of elements that can be attracted in English by the φ-features of I, and concluded that this set consists of the subject of the clause, small clause

predicates and VPs predicated of the subject. Section 3 has shown that the set of elements that can be attracted by the φ-features of V in Dutch are the object, small clause predicates predicated of the object, and verb phrases that agree with the object. Now, compare these two sets with the set of elements that can be used as VMs in (61). Again we are dealing with nominal phrases, small clause predicates and verb phrases. This suggests that the movement process that, in neutral sentences, leads to the placement of the VM in the position preceding the finite verb falls into the same class as the English and Dutch movement processes discussed in sections 2 and 3. In short, we should be able to handle the Hungarian data by taking recourse to hypothesis (13).

An important question is, of course, whether the Hungarian movement is of the English or of the Dutch type, that is, whether movement of the VM is triggered by the φ-features on I or by those on V. The fact that the VM can be a direct object unambiguously shows that the latter is the case. An example like (60a), repeated here as (66), illustrates this.

(66)   János   *újságot*   olvas a kertben.
            János   newspaper_{acc} read   the garden-in
            'János is reading a newspaper/newspapers in the garden.

The conclusion that it is the φ-features on V that trigger movement of the VM makes a straightforward prediction: a VM can also be the (bare noun) subject of the clause provided that it is an internal argument. In order words, the subject can be a VM when the verb is unaccusative, but not when the verb is unergative. This prediction is confirmed by the facts in (67). In (67a), which was given earlier as (60b), the verb is unaccusative and the nominative bare noun phrase *víz* 'water' can be placed in the position preceding the finite verb. In (67b), the verb is intransitive and the bare noun cannot precede the finite verb; the subject must be preceded by an article, and must either follow the finite verb, as in (67b′), or precede it as a topic, as in (67b″).

(67)   a.   Péternek *víz*   ment a szemébe.
             Péter_{dat}   water   went the eye-poss-into
             "Water got into Peter's eye(s)."
       b.   *Fiú* nevetett.
             boy   laughed
       b′.   Nevetett egy/a fiú.
             laughed   a/the boy
       b″.   Egy/A fiú nevetett.

The fact that verbal particles like *el* in (52a) and small clauses like those given in (55) to (57) can be placed into the same position as the nominal arguments follows from axiom (12a) according to which these elements have the same φ-features as the noun phrase they are predicated of. According to axiom (12b) the same holds for example (59) where a verb is placed in front of the finite verb.

There are still many questions to answer. For example, one may ask why only bare noun objects/subjects can act as a VM, that is, why only bare nouns can be moved into the position preceding the finite verb. If the unvalued φ-features on V trigger this movement, there must be some independent reason why (68b) is unacceptable under its neutral reading when the article is present.

(68)   a.   János   adott   Marinak *(egy) könyvet.
             János_{nom.} gave_{3sg} Mary_{dat.}   a   book_{acc.}
       b.   János (*egy) könyvet adott Marinak.

Similarly, we have to ask why only bare verbs can act as verbal modifiers (cf. (59)). Note that these two questions cannot be answered by saying that we are dealing with head movement, since it is clear that the pertinent position can be filled by complex phrases as well. This is illustrated in (69). In (69a) a full locational DP is placed in the position of the VM, so that this example shows that there is no general ban on having non-bare DPs in this position. That a more complex phrase can be used to fill this position is also shown by (69b&c) which involve a PP and a modified AP, respectively. [10]

(69) a. János *az asztalra*   tette   a könyvet.
          János the table-on put   the book-acc
          'János put the book on the table.'
      b. János *az asztal alá*   tette   a széket.
          János the table under put   the chair-acc
          'János put the chair under the table.'
      c. Mari tegnap   *nagyon beteg* volt.
          Mari yesterday very ill   was
          'Mari was ill yesterday.'

The fact that predicative DPs/PPs/APs can be used as VMs suggests that a bare verb functioning as VM must also be analyzed as a full VP. This, in its turn, implies that the complements of the verb are obligatorily removed from the VP before the phrase is moved into the position in front of the finite VP, a conclusion which was also reached by Koopman and Szabolcsi (2000: 39ff.). The fact that only bare verbs and, especially, bare nouns can function as VM, of course, remains in itself as mysterious as ever, for which we do not have any new insights to offer here. But this does not affect the conclusion that the Hungarian data can be fruitfully approached by taking recourse to hypothesis (13).

4.3.   The complementary distribution of the verb modifiers and focused phrases

One of the longstanding problems of Hungarian is the complementary distribution of VMs and focused phrases/*wh*-phrases/negation in the position preceding the finite verb. É. Kiss (2006a) tries to account for the complementary distribution of VMs and focused constituents by claiming that they both should be considered predicative elements which therefore compete for the same position, SpecPredP. According to this logic, *wh*-phrases should also count as predicative elements. This leads us to a definition of predication that is pretty remote from everyday scientific use and blurs the distinction between arguments and predicates. This, we think, is undesirable and should only be pursued as a last resort, that is, if there is really no other option. Here we will show that there is such an option and, hence, that stretching the definition of the notion of predication is not needed.

The proposal we will give here builds on earlier proposals by Komlósy (1989), Szendrői (2004) and Csirmaz (2004) that certain types of verbs, which they dub stress-avoiding verbs, normally do not take neutral, main sentential stress. The general idea is that since stress is assigned "to the leftmost phonological word in the leftmost phonological phrase of the intonational phrase", the finite verb will be assigned stress if it is not preceded by some other constituent in its intonational phrase (see Szendrői, 2004, for a more detailed discussion). Here, we will assume as a working hypothesis that *all* finite verbs are stress-

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[10] Of course, the examples in (69) can also be uttered with focus accent on the predicative phrase, in which case the predicates are in the designated focus position. According to one of the reviewers, this is the only option for (69c). However, we think that this example can be uttered without triggering the exhaustive focus reading. Even if the reviewer were right, the examples in (69a-b) prove our point.

avoiding. In other words, there is a constraint NO-STRESS-V$_{finite}$ that forbids the assignment of neutral, main sentential stress to finite verbs.

(70)   NO-STRESS-V$_{finite}$: do not assign neutral, main sentential stress to finite verbs.

This constraint favors placement of a VM, a focused constituent, a *wh*-phrase or the negation *nem* in front of the finite verb; if this does not happen the finite verb is in the position to which stress is assigned so that NO-STRESS-V$_{finite}$ would be violated. Note in passing that topic movement does not help to avoid a violation of NO-STRESS-V$_{finite}$ since the constituents in the Hungarian topic field are not part of the same intonational phrase as the verb. This is clear from the fact that topics can be followed by an intonation break.

      It is important to stress that assuming the constraint in (70), of course, does not imply that neutral, main sentential stress is never assigned to a finite verb; after all we are dealing with a violable constraint. When there is nothing that can be placed in the position preceding the finite verb, this verb *can* be assigned stress. This was already illustrated in (67), repeated here as (71); since the φ-features on the subject of an unergative verb cannot value the unvalued features on V, it cannot function as a VM and the verb *nevetett* must be assigned main sentential stress in this example, because it is the first element in its intonational phrase. Something similar arises with transitive verbs that cannot take bare nouns as a complement like *utál* 'hate' or *sajnál* 'regret' (cf. Komlósy's, 1989, class of stress requiring verbs).

(71)   a.   Nevetett egy/a fiú.
             laughed   a/the boy
       b.   *Fiú   nevetett.
             boy   laughed

(72)   a.   János utálja a spenótot.
             János hates the spinach$_{acc}$
             'János hates (the) spinach.'
       b.   *János spenótot utál.
             János spinach$_{acc}$ hates

In passing, note that the set of stress avoiding verbs discussed by Szendrői (2004) are only special in that they are not main verbs; this implies that these verbs are always accompanied by a VM, namely the infinitival main verb, so that it is never needed to assign main sentential stress to these verbs.

      The constraint NO-STRESS-V$_{finite}$ can be assumed to interact with the two other constraints that are relevant here: EPP(φ), which forces movement of the goal of the φ-features on V, and the economy constraint *MOVE. Since only bare noun objects undergo this movement, we can safely assume that we are dealing with a weak ranking of EPP(φ) for Hungarian. Suppose the ranking is as given in (73).[11]

(73)   NO-STRESS-V$_{finite}$ >> *MOVE >> EPP(φ)

      This ranking predicts that movement of the VMs (which can all value the φ-features on V) is only allowed when it is needed to avoid a violation of NO-STRESS-V$_{finite}$. This, in turn, is only the case when the finite verb is not preceded by a focused constituent, a *wh-*

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[11] What we do not account for yet is the fact that the VMs must precede the main verb. In this respect, Hungarian resembles the so-called Verb Projection languages like West-Flemish where objects and predicates may permeate the clause-final verb cluster. We leave this issue for future research.

constituent or negation. From this the complementarity in distribution between these elements and the VMs follows without further ado. What we still do need to account for, however, is the question why it is the focused or interrogative phrase that precedes the finite verb, and not the VM. A key observation in this respect is that the presence of negation does not block focus and *wh*-movement (cf. (65)), which unambiguously shows that these two movement types are independently needed and not solely motivated by satisfaction of the constraint NO-STRESS-V_{finite}. Focus and *wh*-movement are simply obligatory, which may follow from Broekhuis and Dekkers' (2000) claim that Full Interpretation forces application of all semantically motivated movements ($\approx$ A′-movement). That negation must precede the finite verb is of course due to the fact that the head of NegP has scope over the proposition.

Another question is, for example, why *Wh*-movement blocks focus movement of some other constituent. Here we will not discuss questions like these, but simply conclude that the ranking in (73) provides an adequate solution for the more limited problem we set out to solve, namely the fact that movement of the VM is possible only if the verb would otherwise end up as the first element in its intonational phrase.

4.4. Conclusion

This section has addressed a limited number of questions pertaining the distribution of the so-called VMs in Hungarian. We have argued that what these VMs have in common is that they are suitable goals of the φ-features on the verbal root V. The fact that the VMs can only appear in the position preceding the finite verb when this verb is not preceded by a focused constituent, a *wh*-phrase or negation follows from the constraint ranking in (73). Since we are dealing with the weak ranking *MOVE >> EPP(φ) movement of the VMs applies only when this avoids a violation of the constraint NO-STRESS-V_{finite}, which outranks *MOVE. This is the case when the clause does not contain a focused constituent, a *wh*-phrase or negation.

5. Conclusion

This article has discussed movement of predicates and VPs in English, Dutch and Hungarian, and argued that, as is stated in (16), these movements are triggered by the unvalued φ-features on the verb or the inflectional head I. Since (16) itself is a corollary of hypothesis (13) and the axioms in (12) from section 1.2, the findings in this paper provide indirect support for these as well.

(16)   Unvalued φ-features on H may attract:
  a.   argument DPs
  b.   small clauses
  c.   verb phrases

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