TWO HEADS AREN'T ALWAYS BETTER THAN ONE
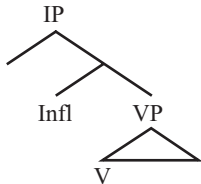
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Abstract. We propose a novel theory of verb raising in which different surface positions of the finite verb across languages reflect differences in phrase structure in a principled manner. Assuming that the inventory of functional projections dominating VP is not universal (e.g., the presence of Agr-Phrases is a point of parametric variation) current assumptions about locality predict obligatory verb raising in a language with Agr-Phrases, but obligatory V in situ in a simple IP-VP configuration. We predict a correlation with other morpho-syntactic phenomena reflecting the presence/absence of AgrPs: "extra" subject and object positions, transitive expletive constructions, multiple infelectional affixes, etc. This prediction is borne out for the VO Germanic languages; for the OV languages we predict the existence of head-final Infl projections.
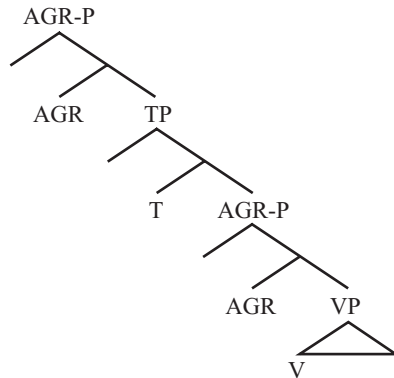
1. Introduction

Recent literature within G.B./Principles and Parameters frameworks has contained numerous proposals concerning the architecture of the inflectional system, in particular the inventory and order of functional projections dominating VP*. Two common structures are illustrated in (1a–b).

(1) a.   b.

The traditional X'-theoretic approach maintains a single inflectional phrase (IP) dominating the VP in a simple finite clause, as in (1a). The head of this phrase is I(nfl) – a collection of inflectional features including Tense and Agreement features, the descendant of the pre-X'-theoretic node AUX. An alternative, quite common over the past half-decade, is (1b), Chomsky's (1991) adaptation of Pollock's (1989) proposal. On this view, inflectional features project independent phrases, with a Tense-Phrase sandwiched between subject and object Agreement Phrases. For want of a better term, we will call the collection of inflectional heads and their phrases that together make up the articulated IP in (1b) the "IP complex."

Much recent work on the IP complex has been concerned with defending the universal validity of (1b) over (1a), and/or with investigating the inventory of inflectional phrases making up an articulated structure similar to (1b). A separate line of thought is exemplified by Iatridou (1990), Speas (1991), Ouhalla (1991), Bobaljik (1995), and Thráinsson (1996). These authors suggest that the difference between (1a) and (something like) (1b) is not a matter of the correct theory of UG, but is rather itself a point of parametric variation. For instance, Thráinsson (1996) proposes the *Split IP Parameter* (SIP), given in (2):

(2)   Languages that have a positive value for the SIP have AgrS-P and TP as separate functional projections [(1b)]. Languages with a negative value of the SIP are characterized by an unsplit IP [(1a)].
      (see Thráinsson 1996:262)

In this article, we outline a theory of verb raising based on the SIP. The interaction of three assumptions entails, effectively, that in languages with a simple, unsplit IP (1a), the finite verb may not raise to Infl but must remain in the VP throughout the derivation. Furthermore, in languages with a split IP (1b), the verb must raise out of the VP and into the IP complex. After discussing the assumptions and sketching the theory (section 1), we examine a split in verb raising in the VO Germanic languages (section 2). When the verb second (V2) effect is controlled for, we find that the verb remains in VP in English and the Mainland Scandinavian (MSc) languages (Danish, Norwegian, Swedish), while the verb raises into the IP complex in Icelandic. We adopt Jonas's (1996a,b) proposal of a dialect split in Faroese, noting that one dialect (Fa1) patterns with Icelandic while the other (Fa2) patterns with the MSc languages and English. Under the theory of verb raising put forth here, these facts entail that the first group of languages (English, MSc, Fa2) have a simple IP, while the IP is split in Icelandic and Faroese 1. In section 3, we discuss previous work on parametric variation in Germanic, and show that this

grouping correlates neatly with independently established morphological and syntactic tests for the SIP, dividing the languages into the same two groups. We take this as strong support for the theory presented here, and less directly for its underlying assumptions. In section 4, we focus on some unresolved problems of Icelandic verb raising, suggesting how the current theory may shed light on them. Presenting our conclusions in section 5, we speculate on the implications of the present paper beyond the languages considered here, with particular reference to the OV Germanic languages and the Romance languages.

2. Verb Raising – Prolegomena to a Theory

We take, as a point of departure, the three assumptions given in (3).

(3)   a. The features of a projection are those of its head.
      b. Movement occurs solely for the purposes of feature checking.
      c. Features are checked in all and only local relations to a head (viz., head-specifier, head-complement, head-head (adjoined heads)).

These assumptions are not novel within the framework roughly as laid out in the essays in Chomsky (1995c), but we will nonetheless make a few observations about them before proceeding to the main point of this section.

The first assumption is one of the basic assumptions of X'-theory (see, e.g., Jackendoff 1977), and is maintained into the current framework essentially unchanged (see Chomsky 1995a, 1995c:244fn). The necessity of feature projection in this framework can be seen by considering a simple instance of "spec-head" agreement, as in (4).

(4)
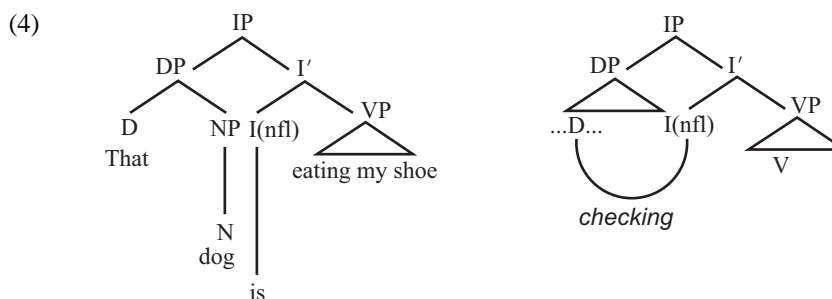
It is generally assumed that the (ϕ)-features (person, number, gender ...) are situated in D°, and that these features must be checked against corresponding features in Infl, for reasons of Case, agreement, and perhaps the EPP (see, e.g., Chomsky 1995a:396fn). The configuration in (4) represents a standard instance of "spec-head" agreement, where the DP [*that dog*] occupies the specifier of IP, and feature-checking requirements are thus satisfied. Since the features involved originate on the head D°, but it is the maximal projection of this head, DP, that is in the specifier of IP, we see the necessity of assumption (3a); the relation of Spec-Head is only a meaningful

relation if the features of the head of the XP in the Spec position project to the maximal projection.[1]

The second assumption in (3) has generated a fair amount of discussion within the framework adopted here. However, much of the discussion has centered on exactly what types of feature checking may motivate movement, e.g., whether the triggers for movement are only the features of the moved element (Chomsky's 1995c *Greed*), or of the target (Murasugi's 1992, Chomsky's 1995c *Attract*) or of either (Lasnik's 1995 *Enlightened Self-Interest*). For our purposes, any of these suffices: if a movement operation does not result in the checking of features either of the moved element, of the target, or of both, then that movement operation is disallowed. Though the assumption may ultimately be too strong, we will maintain it here without further discussion.

In the third assumption in (3), we differ somewhat from the proposals given in Chomsky (1993) and (1995c). For us, all local relations to a head are (potential) checking relations with that head. In Chomsky (1993), the relationship of head-complement (the ''internal domain'') was excluded from the checking domain (leaving only specifier-head and head-head). In Chomsky (1995c), the characterization of checking relations is different still, admitting some head-complement relations (e.g., inherently case-marked objects [Chomsky 1995c]) but not others. Here, then, we do not follow Chomsky to the letter, but rather follow Bobaljik (1995), Epstein, Groat, Kawashima & Kitahara (to appear), Groat (1997) in maintaining that all local relations are checking relations.[2]

This concludes our brief discussion of our underlying assumptions. At this point, we illustrate their combined consequences in the realm of clause internal verb raising. Consider first the relation that obtains between Infl and V(P) in a phrase structure with an unsplit IP (as in (1a)). This is illustrated again in (5):

(5)

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                    IP
                    |
        Infl  -  checking  -  VP
                             /  \
                            V    ...
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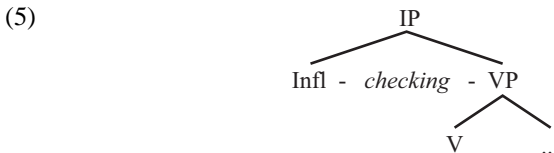
[1] As a number of people have pointed out, it is thus possible to reduce the specifier-head relationship to sisterhood between projections, in this instance between I' (a projection of I) and DP (a projection of D). While this would allow a non-disjunctive statement of local relations in (3c), it is not relevant for current purposes. For some discussion, see Bobaljik (1995), Epstein et al. (to appear), Groat (1997).

[2] Note in particular that the relation of head-complement must be a checking relation if one wishes to maintain anything like (1a) for a language like English; if the object never raises out of the VP, then its features must be checked in situ, in the relation of head-complement with the verb. See also Thráinsson (1996:278).

We assume, without question, that Infl and V have formal features that require checking against one another. In the structure in (5), Infl and the VP stand in a local relation: the relation of head-complement. Since local relations are checking relations (3c), feature checking between Infl and the VP is permitted in (5). Moreover, since the features of VP are those of V ((3a)), the local feature checking in (5) is sufficient to check the relevant features of both Infl and V. The reasoning parallels the discussion of (4); feature-checking is possible between D and Infl in (4), since DP is in a local relation to Infl, and likewise feature-checking between V and Infl is possible in (5), since VP is in a local relation to Infl.
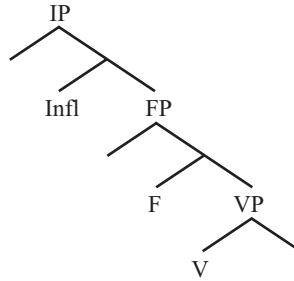
The combination of (3a) and (3c) entails that feature-checking between the verb and Infl may occur without movement in a configuration where the VP is the complement of Infl. Since verb raising is thus not necessary for feature checking in (5), it follows from the economy condition (3b) that such verb raising *may not* occur. Our first conclusion from the assumptions in (3) is that there is no motivation for verb raising to Infl in a simple IP-VP structure as in (5).

Note in particular that the overt versus covert (S-structure v. LF) distinction is not at issue here. There is no motivation for subsequent (i.e., LF) movement of the verb to Infl, as in Chomsky (1991). The relevant features of both Infl and V are satisfied in situ; movement would therefore be superfluous and is thus disallowed at any stage of the derivation.

A side issue that arises at this point is how the verb comes to bear inflectional morphology, since, in the syntax, the verb and Infl never form a discrete unit. There are two promising possibilities in the current literature, and we do not take a stand here. Chomsky's (1991, 1993) lexicalist approach maintains that the verb is inserted into the structure fully inflected and must only check its features against Infl to ensure compatibility. Since this requirement is met in (5) without movement, the inflectional features of the verb are licensed by an appropriate local (i.e., checking) relation to Infl and the two heads need never combine (see Thráinsson 1996 for discussion in the present context). The second approach dates from Chomsky (1955) and has recently been reconsidered by Halle & Marantz (1993), and Bobaljik (1995). On this approach, the combination of the inflectional affix in Infl and the verb stem in V takes place post-syntactically in a morphological component. The inflectional affix *merges* with the stem under a specific condition of *adjacency*. Either of these approaches will suffice for the purposes of the present article.

Returning to the main thread of this section, we have thus far considered the consequences of the assumptions in (3) for a structure with an unsplit IP as in (1a). Consider now the effects of introducing additional functional projections. Consider first the effect of introducing a functional projection between IP and VP. In (6), we label this FP, since the features of this FP are irrelevant for the moment.

(6)

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                          IP
                         /  \
                        /    \
                      Infl    FP
                             /  \
                            /    \
                           F     VP
                                /  \
                               V
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We continue to assume, as above, that the features of Infl and V are such that they must enter into a checking relationship at some point in the derivation. In (5), feature checking was possible without movement, since the features of Infl and V were in a local (hence checking) relation. In (6), though, VP is not in a local relation with Infl. In this configuration, then, feature checking between the two can only be satisfied by movement. Our second conclusion, then, is that the presence of a phrase or phrases between IP and VP will exclude the possibility of feature checking between I and V in situ, thereby forcing the verb to raise to Infl.[3]

Putting the two conclusions together gives us a statement of entailment concerning the position of the verb and the structure of IP. Specifically, since the verb can never raise to Infl when the IP is simple (as in (5), (1a)), a structure in which the verb has raised to an Infl head entails the presence of an additional head intervening between Infl and V. At this point, the entailment is weak in the sense that we learn something only from examining those structures in which the verb has overtly raised to Infl. In structures in which the verb remains in VP, two possibilities remain, in theory: either there is an unsplit IP and the verb never raises, or there is a split IP and verb raising takes place at LF. Let us (arbitrarily) discard the second possibility and assume that there is no LF verb raising to Infl. This move, we hope, is justified by the predictive power it buys us later in the paper. Discounting the LF movement option gives us the second half of the diagnostic: if the verb is in VP overtly, then it is always in VP and thus is indicative of an unsplit IP structure. Thus, the considerations and assumptions above motivate the following diagnostic, predicting a strong correlation between the position of the finite verb and the internal make-up of the IP complex.

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[3] Or forcing Infl to lower to the verb, a possibility we assume is excluded generally in the syntax by the ECP or its descendant in subsequent versions of the theory. In the framework adopted here, checking of formal features is a property of the syntax; subsequent PF-lowering or morphological merger of Infl and the V is too late for the purposes of feature checking in the syntactic component. See Bobaljik (1995: chapter 5) for discussion.

(7)   *Verb Position Diagnostic*.

   a.   If the finite verb is in VP in simple non-V2, finite environments, then no functional heads intervene between IP and VP; moreover, there is no functional head dominating IP that has features to check with V(P).

   b.   If the finite verb raises out of the VP in simple non-V2, finite environments, then there must be at least two heads in the IP complex, the higher of that, at least, must have features to check with V(P).

The strong version of this diagnostic is potentially easier to falsify, and we thus explore it in the remainder of this paper. To the extent that this direction proves fruitful, we are committed to the claim that feature checking between Infl and the VP is always overt, at least in the languages under consideration. A retreat to the weaker position – i.e., the one-way implicature from overt verb raising to a split Infl – is, to be sure, consistent with the theory, but it is less interesting.

By way of a brief aside, which becomes important in terms of empirical verification of (7) in the Germanic languages, we consider the case in which there are two (or more) heads c-commanding VP that must check features with the verb. Recall that in the case of a split IP in (6), we did not consider the features of the intervening head F; its presence alone is sufficient to trigger verb raising. To see why this is so, consider the same complex IP (6), but under the assumption that both Infl and F have features to check with the verb. In this case, feature checking between the head F and the verb will occur in situ, since VP is the complement of F. This is exactly parallel to the situation with Infl and the verb in (5). Nevertheless, VP and Infl in (6) are not in a local relationship, and the verb thus must raise to Infl to check features. It follows that the features of the head F are irrelevant for determining whether or not the verb raises.

Of course, we have been using the labels of the heads and phrases solely for expository convenience. The reasoning of the previous paragraph applies equally if Infl is the lower head, taking VP as its complement, and is in turn c-commanded by some other functional projection with V-features to check. Such a configuration could be exemplified by the verb-second (V2) construction in Germanic, as in (8).[4]

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[4] We are not concerned here with what, exactly, the category of the V2-triggering head is. For the sake of convenience, we label it C_{V2}, which is intended to suggest that it is complementizer-like, but that it is not the normal $C°$. There is a wealth of literature on V2 in Germanic, and most accounts are straightforwardly compatible with the approach outlined here. Indeed, most accounts assume something along the following lines: some head above IP has an arbitrary feature that requires raising of the verb to its head position and of an XP to its specifier position. This head is an obligatory element of matrix clauses in the V2 languages.

(8)
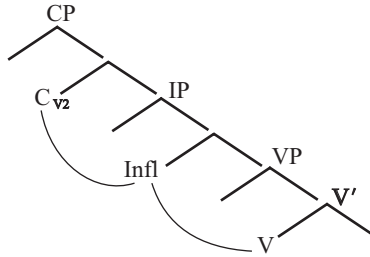
What is important to note about (8) is that the verb will be forced to raise to the highest head with V-features regardless of the number of intervening heads. The verb can only stay in situ when it checks features with only the immediately c-commanding head. Importantly, then, the presence of C_{V2} in (8) will obscure the effects of the SIP; whether IP in (8) is simple or is more complex, the verb will always have to raise to C_{V2}. Thus, the Verb Position Diagnostic (7) is only relevant in non-V2 environments. As we will see below, this requires some subtlety in the investigation of the position of finite verbs in Germanic.

At this point, a host of technical questions arise concerning the path of head-movement. Presumably, some version of the Head-Movement Constraint (HMC, Travis 1984) or Relativized Minimality (Rizzi 1990) will force the verb to raise through Infl in (8) on its way to C (likewise through F in (6)). Restatement of the HMC in current terms is not trivial, though. A number of options that more or less lead to the appropriate conclusion are considered in Bobaljik (1995), and we refer the reader to that work.[5] Once again, the specific implementation of the idea need not delay us here, though it must ultimately be worked out. What is important for now is only the conclusion that the presence of an intermediate head between Infl and the VP, or of more than one functional head with V-features, forces raising of the finite verb to the higher heads. This conclusion follows from the assumptions in (3). The combination of the SIP (2) and the assumptions in (3) makes a clear empirical prediction: in an unsplit IP language we predict that the verb will remain in VP throughout the derivation (all else being equal) while in a language with a split IP, we predict that the verb should always raise out of the VP (as in (6)), essentially regardless of the inventory of functional projections that make up

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[5] For example, Bobaljik (1995) assumes a bottom-up approach to structure building (i.e., Generalized Transformations) and an attraction theory of the impetus for movement (as in Murasugi 1992, Chomsky 1995c). In a nutshell, Infl seeks to attract the (features of the) verb in (6). The Murasugi-Chomsky reformulation of Relativized Minimality as "attract closest" will, on certain assumptions, force Infl to attract $F°$ first, rendering the trace of $F°$ invisible. Since the V-features of Infl are still unsatisfied, Infl will next attract the V. Though Bobaljik's account has significant technical shortcomings, it parallels the account of multiple *wh*-attraction given in Chomsky (1995c), whereby attraction of the closest *wh*-element renders the trace of that element invisible for subsequent attractions, suggesting that the two processes are not unrelated. Again, the purpose of this section is to sketch the broad outlines of a theory of verb raising, pointing out the pieces of the theory that follow from the assumptions in (3). The finer details remain to be worked out in future work.

the IP complex.[6] With the additional (and yet-to-be-motivated) assumption that verb raising, when necessary, must be overt, the prediction becomes much stronger, and thus that much more interesting, yielding the verb position diagnostic in (7). In the remainder of the paper, we will give evidence that the stronger predictions, where testable, are corroborated by independent evidence for the SIP. First, we will show that there is a clear split within the VO Germanic languages concerning the position of the finite verb (section 2). We then show that this correlates with other properties that have been taken to indicate the SIP (section 3). We take the correctness of the predictions based on (7) for the languages considered to thus support (7), and thus to indirectly support the theory and assumptions that underlie it.

3. Verb Raising in the VO Germanic Languages

The previous section presented the broad outlines of a novel theory of verb raising. A consequence of a certain constellation of assumptions is that the architecture of the IP complex (i.e., split or unsplit) unambiguously correlates with the position of the finite verb in non-V2 environments. From this we derived the diagnostic given in (7): the position of the finite verb in a non-V2 clause unambiguously indicates the setting of the SIP for that language. In this section, we apply the diagnostic to data drawn from the Germanic languages, drawing especially on work reported in Vikner (1994, 1995b) and Jonas (1996b). Once the complicating factors of the V2 effect are controlled for, we find that the VO Germanic languages split neatly into the two groups proposed in the introduction. In English, the (standard) Mainland Scandinavian languages, and one dialect of Faroese, the finite verb remains in the VP, and thus these languages must have a simple, unsplit IP (1a). In Icelandic and the other dialect of Faroese, the finite verb always raises out of the VP; this raising must be the result of a more complex IP, i.e., that in (1b). As it turns out, it is apparently impossible to construct the relevant test cases in Yiddish – the verb clearly raises out of the VP, but it is difficult to reliably exclude the possibility of embedded V2. We postpone discussion of the SOV languages (Afrikaans, Dutch, German) until a later section, as reliable tests for the position of the clause-final finite verb are notoriously lacking in these languages.

3.1 *English*

Among the Germanic languages, English is alone in lacking V2 effects in simple matrix clauses. Thus, the position of the finite verb can be tested directly in main clauses. Restricting the discussion to main (i.e., as opposed

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[6] Technically speaking, there is one exception to this. In an arbitrarily complex split IP in which no head higher than the lowest head needs to check features with the verb, the theory outlined here predicts that there will be no verb raising.

to auxiliary) verbs, it is well known that a finite verb obligatorily follows elements which surface near the left periphery of the VP (such as negation and certain adverbs).[7] Moreover, the finite verb must be strictly adjacent to its (non-extraposed) direct object, if there is one. This is illustrated in (9):

(9)   *The position of the finite verb in English*

a.	I		often	eat	cuttlefish.
b.	*I	eat	often	v	cuttlefish.
$[_{IP}$	subject	Infl	$[_{VP}$ adverb $[_{VP}$	V	object $]]]$

As can be seen from (9), the finite verb remains internal to the VP in English.[8] By (7) then, the conclusion is that English has a simple, unsplit IP. In section 3, we will argue that this is exactly what is expected for English on independent grounds, especially on the basis of English verbal morphology and the syntax of argument positions.

3.2 *Mainland Scandinavian*

Turning to the Mainland Scandinavian languages, Danish, Norwegian, and Swedish,[9] the situation is only slightly more complex than for English. As noted above, main clauses in these languages display V2 effects – the verb immediately follows an initial XP constituent. If the subject is not the initial constituent, then the verb precedes the subject. A typical Swedish V2 clause with an initial non-subject is given in (10):

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[7] English auxiliary verbs constitute a prima facie problem for our analysis and we have little to say on the matter at this point. Bobaljik (1995: chapter 5) points out that there are a host of problems concerning auxiliaries in the Germanic languages generally, especially in the realms of acquisition and aphasia. Thus, even in languages like German, Icelandic, and Swedish that do not show word order differences between auxiliaries and main verbs in the language of normal adults, there is evidence that the speech of children and aphasics does show exactly such distinctions (see Magnúsdóttir & Thráinsson 1991, Platzack 1994, and references in Bobaljik 1995). In this, the problem of English auxiliaries is perhaps a facet of a much larger problem of the auxiliary versus main verb distinction generally.

The mechanics of the theory sketched in the previous section require that VP is the complement of Ì in English. In addition to lacking Agr-OP, English also cannot have any NegP or AdverbP or the like intervening between IP and VP. This is an issue we will lay aside for the moment.

[8] Though this is a common position in the literature, we do note, without discussing, dissenting views which posit a somewhat richer structure for the English clause. Representative of a growing body of Split-VP Hypotheses for English are: Pesetsky (1989), Johnson (1991), Travis (1992), Hale & Keyser (1993), Bobaljik (1995: chapter 3), and Koizumi (1995).

[9] We consider in this paper only the standard dialects of these languages. Certain nuances arise when one considers certain regional dialects, such as that of Hallingdalen (Norway), Älvdalsmålet (Sweden), the Kronoby dialect (Finland Swedish), and the Tromsø dialect (Norway) discussed by Vikner and others (see e.g., Vikner 1995a, 1995b:134, Holmberg & Platzack 1995, Trosterud 1989, and references cited by these authors).

(10) Main clauses are V2 (Swedish)
    Som utrikesminister förbjöd han kommunister att
    as   foreign minister forbade he   communists   to
    resa   in i landet.
    travel   into country the
    'As the foreign minister he forbade communists to enter the country.'
    (Chomsky 1995b:50)

As noted in the previous section, V2 clauses are unenlightening for our current interests. The verb is as high as it can be, i.e., in C_{V2}, and hence nothing can be gleaned about the internal make-up of the IP-complex.[10] However, declaratives embedded under non-"bridge" verbs are not V2 environments in these languages (cf., e.g., Vikner 1994, Holmberg & Platzack 1995, Platzack & Holmberg 1989). For instance, verbs of doubting and regretting, such as Swedish *tvivla på* 'doubt,' do not permit embedded V2. Swedish examples, representative of Mainland Scandinavian generally, are given in (11).

(11) *Non-V2 environment. Swedish.*
a.   Jag tvivlar på [$_{CP}$ att [$_{IP}$ han [$_{VP}$ verkligen läste boken]]]
        I   doubt on   that   he   really   read book-the
        'I doubt that he really read the book.'
b.   *Jag tvivlar på [$_{CP}$ att [$_{IP}$ han läste [$_{VP}$ verkligen   boken]]]
        I   doubt on   that   he   read   really   book-the
        'I doubt that he really read the book.'

In such environments, the word order is as in English – the verb follows not only the subject, but also follows those elements that are standardly taken to demarcate the left edge of the VP. In (11), the marker of negation *inte* marks the left edge of the VP (see, among others, Vikner 1995b, Rohrbacher 1994, Bobaljik & Jonas 1996), though the same paradigm can be constructed with other adverbs.[11] Since the verb obligatorily remains in the VP in non-V2 environments, IP must be unsplit in the Mainland Scandinavian languages, as in English. Below, we will argue that this is exactly what is expected for these languages on independent grounds, especially on the basis of verbal morphology and the syntax of argument positions.

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[10] Note that contra, e.g., Travis (1984), our analysis commits us to the view that subject-initial clauses involve raising of the subject to Spec,CP and raising of the finite verb to Č, at least in those languages with an unsplit IP.
[11] Note that auxiliary and main verbs do not differ from each other in this respect in the Scandinavian languages. The problem of auxiliaries is limited to English in this regard. This is illustrated in (i), where the auxiliary *har* 'has' also follows VP-adjoined negation:

    (i) Jag tvivlar på [$_{CP}$ att [$_{IP}$ han [$_{VP}$ verkligen har   läst   boken]]]
        I   doubt   on   that   he   really   has   read   book-the
        'I doubt that he has really read the book.'

3.3 *Icelandic*

Vikner (1994, 1995b) shows that Icelandic (and Yiddish) permits V2-like topicalization relatively freely in embedded clauses; while embedded V2 is quite limited in other Germanic languages, dependent in large part upon properties of the matrix verb, such restrictions apparently do not obtain to the same extent in Icelandic and Yiddish. The complication that this poses for current concerns is that the class of environments that disallow embedded topicalization, relevant for the verb position diagnostic (7) is that much smaller. Nevertheless, Vikner has shown that there is at least one environment in Icelandic in that embedded topicalization is generally excluded, namely embedded questions. Vikner's examples (1995b:74) illustrating that embedded topicalization is not possible in embedded questions include examples of the following type.[12]

(12) *Topicalization in Icelandic embedded questions*
a.   Ég   veit   ekki   hvar   kýrin   hefur   staðið   í   gær.
     I   know   not   where cow-the has   stood   yesterday
     'I don't know where the cow has stood yesterday.'
b.   *Ég veit   ekki hvar   í gær   hefur kýrin   staðið.
      I   know   not where yesterday has   cow-the   stood

Since embedded questions are not V2 environments in Icelandic, they therefore provide the necessary environment for applying the diagnostic in (7). As Vikner has demonstrated, the following examples show that the verb must raise out of the VP in non-V2 environments.

(13) Ég spurði ...
     I asked

a.   ... [$_{CP}$ af hverju [$_{IPx}$ Helgi **hefði** [$_{VP}$ oft   lesið þessa bók]]]
              why   H.   had   often read this book
b.   *... [$_{CP}$ af hverju [$_{IPx}$ Helgi [$_{VP}$ oft   **hefði** lesið þessa bók]]]
              why   H.   often had   read this   book
c.   *... [$_{CP}$ af hverju **hefði** [$_{IPx}$ Helgi [$_{VP}$ oft   lesið þessa bók]]]
              why   had   H.   often read this book
     'I asked why Helgi had often read this book.'
       (cf. Vikner 1994, 1995b:139)

Example (13b), in which the verb follows a VP-adverb and thus presumably remains internal to the VP is ungrammatical. The verb must raise out

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[12] Note that no Germanic language generally displays inversion in embedded questions, though Afrikaans may do so optionally (see Diesing 1990b, fn.10). For instance, while English requires inversion in matrix (non-subject) questions, inversion is rigidly blocked in embedded questions:

     (i) Why has Helga often read this book?
     (ii) *I asked [why has Helga often read this book.]

of the VP. The ungrammaticality of (13c) shows, moreover, that the verb cannot raise across the subject. That is, the verb raises out of the VP, but only as far as (some head in) the IP complex. The logic of our diagnostic (7) thus leads to the conclusion that IPx in Icelandic is internally complex, a sequence of functional projections as in (1b). The question of which of the two higher Infl heads the verb occupies in these examples does arise, but it is not of direct importance for purposes of the SIP and the diagnostic in (7). There is evidence that the verb occupies T and not AgrS as proposed in previous work, however, since this forms somewhat of a digression, we postpone discussion of this until section 4.

Diesing (1990b) and Vikner (1994,1995a) both argue that Yiddish behaves like Icelandic in having verb raising to I° in environments where the verb does not raise to C°. Taken at face value, this would, by (7), indicate that Yiddish, like Icelandic, is a split IP language. However, there are complicating factors in adopting these conclusions within our framework. Thus, Vikner's (1995a) conclusion is premised on Yiddish data parallel to (12), showing that topicalization is impossible in embedded questions (see also Travis 1984). By contrast, Molly Diesing (1990b, and p.c.) and Ellen Prince (p.c.) point out that many speakers produce and accept exactly such sentences. Examples are given in (14):[13]

(14) a. Ikh veys   nit far   vos in tsimer shteyt di ku.
        I   know not for   what in room   stands the cow
        'I don't know why the cow is standing in the room.'
        (Diesing 1990b:66)
     b. Zol ikh azoy visn fun beyz, vi   ikh veys,   **vos   bay mir**
        shall I   so   know of evil how I   know [what by me
                                                     tut   zikh!
                                                      does REFL]
        'May I know from evil the way I know what's happening with/to me!'
        [i.e. 'I have no idea what's happening with/to me.']
                                        (Olsvanger (ed) 1947, anecdote #92)

The order in (13b) is indeed ungrammatical in Yiddish, showing that the verb raises out of VP in embedded clauses in Yiddish. However, the possibility of (14) and similar examples means that it simply cannot be shown whether this verb raising is being forced by the structure of IP (as in Icelandic) or by the head of the topicalization projection.

Diesing (1990b) argues that the projection to which a topic XP moves is

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[13] Our thanks to Molly Diesing and Ellen Prince for bringing these facts to our attention and for enlightening discussion of the Yiddish data. Note that (14b) requires some kind of contrastive emphasis on the topicalized PP, thus Diesing reports (1990b:66) that it may be judged anomalous in isolation, but is fine in the discourse context in which she presents the example. Further examples and discussion of some of the constraints surrounding such constructions, and suggestions as to the discrepancies in reported judgments, are to be found in Diesing (1990b: section 4).

not CP but rather IP. Thus, instead of a recursive CP structure for examples such as (14), her analysis is that the *wh*-words occupy a unique Spec,CP, the topicalized PPs occupy Spec,IP, and the verb is in I°. Diesing's analysis may translate into our terms if one admits of the possibility that something other than a subject may occupy Spec,AgrS-P or Spec,TP, a direction which is promising for the analysis of stylistic fronting in Icelandic (see Thráinsson, to appear). For the purposes of this paper, though, we cannot exclude the possibility of CP-recursion, and thus any conclusions about Yiddish remain speculative.

With the exception of Yiddish, then, the languages considered thus far split neatly into two groups with respect to the position of the finite verb in non-V2 environments. In English and Mainland Scandinavian, the verb remains in the VP in such environments, while in Icelandic the verb always raises. The evidence from Yiddish is not problematic, merely inconclusive. At this point, we turn to Faroese, a language which has proved somewhat problematic in earlier accounts, but which is perhaps best understood in terms of a dialect split, identified by Jonas (1994, 1996b).

3.4 *Faroese*

The situation of Faroese has been difficult for many analyses, not solely due to the paucity of published data, but also because of inconsistency in the data that is available. Thus, Faroese is alternately reported as permitting verb raising in non-V2 environments (Barnes 1992:27,29, Barnes & Weyhe 1994: 215, and see also Sandqvist 1981:29–31), and as not permitting such raising (Vikner 1995b:148, Rohrbacher 1994:69).[14] Consider, for instance, the following sets of examples (the judgments are those reported by the authors cited):

(15)   a.   Hann spyr, hví tað **eru ikki** fleiri tílíkar samkomur.
           he   asks why there are not   more such   gatherings
       b.   Hann spyr, hví tað **ikki eru** fleiri tílíkar samkomur.
           he   asks why there   not are more such   gatherings
       'He asks why there aren't more such gatherings.' (Barnes 1992:27)

(16)   a. . . .hóast   fólk   **ongantíð hevur** fingið fisk her.
           although people   never   have   gotten fish here
       b. . . . hóast   fólk **hevur ongantíð**   fingið fisk her.
           although people have never   gotten fish here
       '. . . although people never have caught fish here.'

                                                    (Barnes & Weyhe 1994:215)

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[14] Note, however, that Rohrbacher (1994:130fn.) discusses what he refers to as "residual V-to-I" in Faroese, arguing that it is basically a reflection of a bidialectal situation consistent with the "double-base hypothesis" advocated by Kroch (1990), Santorini (1989), and Pintzuk (1991), for instance. We will return to this question below.

(17) a. *Tað var óvæntað   at dreingirnir **vóru als ikki** ósamdir.
      it was unexpected that boys-the   were at-all not disagreed
   b. Tað var óvæntað   at dreingirnir   **als ikki vóru**
                                                         ósamdir.
      it was unexpected that boys-the   at-all not were
                                                         disagreed
   'It was unexpected that the boys didn't disagree at all.'
   (Vikner 1995b:148)

   While on the face of it this state of affairs looks quite puzzling, a more careful investigation of this variation reported in recent work by Jonas (1994, 1996b) has led to a better understanding of it. For instance, as Jonas (1996b) shows, there is some evidence that there was a regional dialectal difference with respect to verb movement in 19th century Faroese. Moreover, she was the first to delineate two such dialects in Modern Faroese and has shown that the dialects covary with respect to a cluster of properties (to which we return in section 4.1). She argues that one dialect, which she labels Faroese 2, patterns with English and the Mainland Scandinavian languages in requiring that the finite verb remain in the VP in non-V2 environments. In the other dialect, the verb may or must raise into IP in the same contexts. The examples in (18)–(19) illustrate this for main and auxiliary verbs, respectively. (Examples marked Fa 1/*2 are judged grammatical in Faroese 1, and ungrammatical in Faroese 2).[15]

(18) a. Tað kom óvart,   at Maria   **ikki lesur** bøkur. Fa 1/ 2
      It was unexpected, that M.   not reads books
   b. Tað kom óvart,   at Maria **lesur ikki**   bøkur. Fa 1/*2
      It was unexpected, that M.   reads not   books

(19) a. Eg spurdi hví Jógvan   **ikki hevði** lisið bókina. Fa 1/ 2
      I asked why Jogvan   not had   read book-the
   b. Eg spurdi hví Jógvan **hevði ikki**   lisið bókina. Fa 1/*2
      I asked why Jogvan   had not read book-the
      'I asked why Jogvan hadn't read the book.'
      (Jonas 1996a:174, 1996b)

   By (7), we must conclude that Faroese 2 is an unsplit IP language (since the verb remains in VP) and by the same token, that Faroese 1 (since the verb raises in non-V2 environments) must have additional functional projections in the IP

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[15] Jonas (1996b) also gives examples from written Faroese and confirms the claim already made by Sandqvist (1981) and Barnes (1992) that the author Heðin Brú (born 1901 on Sandoy) consistently uses the order verb-adverb in non-bridge verb complements in his prose and shows also that the author Lydia Didriksen (born 1957 in Tórshavn) typically uses the order adverb-verb in corresponding clause types. This could point to a regional or generational dialect difference. As shown by Petersen, Jacobsen, Hansen & Thráinsson (1997) and Thráinsson (1997), on the other hand, many modern writers use both orders in their prose, although they vary considerably with respect to the frequency of the verb-adverb order found in their work. This is perhaps not surprising if the society is bi-dialectal, as Jonas argues, and this is somewhat reminiscent of the situation reported by Pintzuk (1991), for instance, for word order changes in the history of English. See also the discussion in section 5 below including fn. 33.

complex – it is a split IP language. Again, the positing of two dialects of Faroese is motivated not only by the apparent variability in judgments concerning the position of the finite verb, but by a clustering of properties that Jonas has shown to covary (i.e., the availability of Transitive Expletive Constructions and "extra" subject positions in general, though see fn. 18); essentially the set of properties that we argue below correlate with the SIP (and analogously to Jonas's Spec,TP parameter). To the extent that they can be delineated then, neither Faroese 1 nor Faroese 2 is independently problematic on the analysis sketched here.

In sections 3.1 through 3.4, we have delineated the position occupied by the finite verb in non-V2 clauses in the VO Germanic languages. We have shown that in English, Mainland Scandinavian, and Faroese 2, the verb remains in the VP. The diagnostic motivated in the first section leads to the conclusion that these languages have a simple, unsplit IP which takes VP as its complement. We have also shown that in Icelandic and Faroese I, the finite verb raises out of the VP into the IP complex in non-V2 environments. Applying the same diagnostic, we are led to the conclusion that these languages have a complex, split IP. The next stage in the investigation then is to look for corroborating evidence that the one group of languages has an unsplit IP and the other a split IP. We present just such evidence in the next section.

4. The Split-Infl Parameter

Our aim in this section is to show that there is independent evidence for the SIP, and in particular that this evidence splits the Germanic languages into the two groups distinguished by the verb raising data. To a large degree, this discussion is a reanalysis of the generalizations subsumed under the Spec,TP Parameter of Bures (1993), Bobaljik & Jonas (1996), Jonas (1996b), and related work, along the lines suggested in Thráinsson (1996). We will therefore pass rather superficially over the arguments and data here, referring the reader to other work for more complete analyses.

In the previous sections, we have argued that the languages with obligatory verb raising in non-V2 environments must have a split IP structure. Conversely, languages in which the verb remains in the VP must have a simple IP. These claims are corroborated by two types of empirical evidence. First, we present data showing that the split-IP languages have more specifier positions in the IP complex than languages with a simple IP. This is expected since the additional functional projections in the split IP languages provide additional specifiers. Second, we present data showing that the languages with only a simple IP are restricted to a single inflectional affix on the verb stem. This restriction follows from the SIP since the languages with a simple IP have thus only one inflectional head to host or check inflectional morphology, in contrast to split IP languages that have more heads.

4.1 *Specifiers*

Evidence for additional specifier positions in one group of Germanic languages as compared to the other group comes from the distribution of subject and object DP arguments, in particular, from systematic correlations between word-order variations and interpretation.

To begin with, much recent attention has been focused on the phenomenon of Object Shift, i.e., the leftwards displacement of an object across some element (certain adverbs, sentential negation, or floating quantifier) which is taken to mark the left edge of VP, as illustrated by the Icelandic pair in (20).[16]

(20) *Object Shift in Icelandic*
　　a. Ég las　**þrjár bækur$_i$ ekki** t$_i$
　　　 I　read　three　book-pl　not
　　　 'I didn't read three books.'
　　b. Ég las　　　　　　　 **ekki　þrjár bækur**
　　　 I　read　　　　　　　 not　　three　book-pl
　　　 'I didn't read three books.'

This data, and similar examples from other languages, has constituted one of the major empirical motivations for the existence of AgrO-P. Thus, Déprez (1989), Wyngaerd (1989), (and others subsequently) have argued that the VP-external DP object in (20a) occupies the specifier of this functional projection. We have argued above on the basis of verb raising phenomena that Icelandic has an AgrO-P intervening between TP and the VP, and thus the pattern in (20) supports this claim. Conversely, we argued that English, the Mainland Scandinavian languages, and Faroese 2 do not have a split IP. That is, for independent reasons we have claimed that these languages lack AgrO-P altogether. Now, if these languages lack AgrO-P, then they should lack the possibility of "shifting" a full DP object.[17] Our analysis thus predicts that anything like (20a) should be ungrammatical in English, Mainland Scandinavian, or Faroese.[18] This prediction is correct – the Swedish examples in (21) are representative of all of these languages.

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[16] Object Shift obeys various restrictions not considered here, conspicuous amongst which is the condition that in the VO languages, it is only possible if the finite verb has raised out of the VP (i.e., "Holmberg's Generalization"). For instance, Object Shift is impossible in auxiliary + participle constructions in Icelandic. There are a number of accounts of this restriction, and we refer the reader to Bures (1993), Bobaljik (1994), Zwart (1994), Bobaljik & Jonas (1996), and Holmberg (1997) for a representative sampling.

[17] All of the Germanic languages (except English) permit leftward movement of weak, unstressed pronouns, an observation due to Holmberg (1986) and Vikner (1995b). Thus, we follow other authors (e.g., Déprez 1989, see Cardinaletti & Starke 1996, Bobaljik & Jonas 1996, and especially Josefsson 1992) in treating pronoun shift as a distinct phenomenon from the shift of full DPs (including stressed, conjoined or modified pronouns).

[18] As far as we know, there is no dialect split in Faroese with respect to Object Shift of full DPs; in both dialects, only pronouns may shift. We have nothing to say about this fact at this point, though see the discussion at the end of section 4.2 below.

(21) *Swedish*
  a. *Jag läste **boken_i** inte t_i
     I   read book-the not
     'I have not read the book.'
  b. Jag läste   inte   boken
     I   read   not   book-the
     'I didn't read the book.'

Again, this distribution of DP object shift is what we expect if some of the languages under investigation have AgrO-P (providing a landing site for the shifted object), while others do not, as diagnosed initially by (7). (This position is articulated and defended in Thráinsson (1996), to which we refer the reader for further discussion.)

Now, in Chomsky's (1991) proposal, the specifiers of Agr-Phrases were the locus of Case-checking for subject and object, and thus movement to these positions was supposed to be obligatory. Adoption of the SIP forces us to abandon this conception of Agr-phrases, more or less in line with Chomsky (1995b). That is, in the languages with a simple IP, Case-checking between the verb and the object occurs in situ and does not require the object to raise to any IP-internal specifier position. If the case of a direct object may be checked in situ, i.e., without movement to Spec,AgrO-P, at least in some languages (cf., (21)) we must then ask what the motivation for object shift is in, for example, Icelandic.[19] In particular, we no longer have any theory-internal motivation for believing that movement to Spec,AgrO-P has anything to do with Case Theory.

As it turns out, this appears to be the correct move to make. While pairs such as in (20) have led some linguists to suggest that object shift is optional, more recent work has shown that the alternation between (20a) and (20b) depends on information structure, in particular something like the contrast between specific and non-specific, or given versus new information (see, among others, Bobaljik 1995, chapter 3, Diesing 1996, Jonas 1996b). Thus (20a) has only the interpretation that three specific books are such that I have not read them, while (20b) asserts only that the number of books that I did not read was three. Except when shift is independently impossible (e.g., in auxiliary + participle constructions in Icelandic), a DP object representing old information typically shifts to Spec,AgrO-P, while a DP object reflecting new information remains internal to the VP. Thus, we see that AgrO-P has to do with the mapping from syntax to semantics, and nothing to do with case (see Diesing 1990a for formulation of a Mapping Hypothesis, and Tsai 1994 and Percus 1995 for extensions of it).

Higher in the tree, the verb position diagnostic leads us to claim that Icelandic has two specifier positions between Spec,CP and Spec,AgrO-P –

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[19] Recall from (3) that the relation of head-complement is, for us, a local and hence checking relationship. It is thus expected that objects may check case in situ against the verb.

i.e., what we have labeled Spec,AgrS-P and Spec,TP. Conversely, Mainland Scandinavian and English should have just one specifier position, Spec,IP.

Initial evidence that this is an accurate characterization of the languages comes from the range of positions in which the associate DP (i.e., the logical subject) may surface in expletive constructions. In particular, our analysis will predict that the associate of an expletive in a split-IP language should be able to surface in a VP-external position, while this should be impossible in a language with a simple IP. This prediction arises on the assumption that the expletive in some sense blocks or uses up a subject position in the IP-complex.[20] If a language has only a simple IP, then the specifier of this projection will be occupied by the expletive, and the associate must remain VP-internal. On the other hand, if a language has a split IP, then one IP-complex specifier position (e.g., Spec,AgrS-P) may be used up by the expletive, but another (Spec,TP) is still available for the associate. Thus the contrast between Norwegian (22) and Icelandic (23) is predicted by our analysis (cf. Vangsnes 1995).

(22) *Norwegian*

a. Det	har		**en katt**	i kjøkenet.
b. *Det	har	**en katt**	vore		i kjøkenet.
EXPL	has	(a cat)	been	(a cat)	in kitchen-the

'There has been a cat in the kitchen.'

(23) *Icelandic*

a. Það	hefur		verið	**einhver köttur**	í eldhúsinu.
b. Það	hefur	**einhver köttur**	verið		í eldhúsinu.
EXPL	has	(some cat)	been	(some cat)	in kitchen-the

'There has been a cat in the kitchen.'

The verb raising facts considered above led us to posit a split IP for Icelandic, and a simple IP for Norwegian and the other MSc languages. One aspect of a split IP is the existence of extra specifier positions in the IP complex, and thus we account for the greater range of positions that the associate DP may occupy in Icelandic as compared to the MSc languages.

The availability of an "extra" subject position in IP has also been argued to be crucial for a language to allow Transitive Expletive Constructions (TECs). Current analyses (e.g., Bobaljik & Jonas 1996, Alexiadou & Anagnostopoulou 1997) assume that transitive subject DPs may not overtly remain VP-internal (see also Chomsky 1995c). In a language with a simple IP, then, an expletive is impossible with a transitive clause, since the subject/associate DP will have no position available: by assumption it must leave the VP, but Spec,IP is occupied by the expletive. However, in a language with a split IP, there is a position available to the associate DP that is not blocked by the expletive, and

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[20] It is not important here whether the expletive occupies the subject position, blocking DP movement, or whether instead the expletive checks some feature of a functional head, eliminating the motivation for DP movement. See Bobaljik & Jonas (1996), Thráinsson (1996), Jonas (1996b) for various proposals.

which is VP-external, namely Spec,TP. Thus, while transitive expletives are impossible in MSc and English generally (24), they are possible in Icelandic as long as the associate is VP-external (25) (see e.g. Vangsnes 1995).

(24) *Norwegian*
    a. *Det har **en katt**   ete   mysene.
    b. *Det har   ete   **en katt**   mysene.
       EXPL has (a cat)   eaten (a cat)   mice-the
       *'There has a cat eaten the mice.'

(25) *Icelandic*
    a. Það   hefur **einhver köttur** étið   mýsnar.
    b. *Það hefur   étið   **einhver köttur** mýsnar.
       EXPL has (some cat)   eaten (some cat) mice-the
       'A cat has eaten mice.'

In the discussion of object shift, we were led to the conclusion that AgrO-P has nothing to do with Case Theory, but is rather linked to information structure, in particular, to the distinction between given/presuppositional and new/non-presuppositional information. Thus, the specifier of AgrO-P is a position to which objects representing given information shift when possible, while objects expressing new information remain in the lower, VP-internal position. The distribution of associate DPs in expletive constructions, especially the kind of variation in (23) suggests that Case Theory is likewise not at issue in determining which subject position the subject DP occupies. Indeed, there is a good deal of evidence that the role of AgrS-P is parallel to the role of AgrO-P, providing a direct syntactic encoding of the given versus new distinction (see Bobaljik 1995, Vangsnes 1995, Jonas 1996b, and references therein). In constructions not involving expletives, the two subject positions in Icelandic (Spec,AgrS-P and Spec,TP)[21] show exactly the same

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[21] There is evidence (contra Diesing 1990a) that the two subject positions are both in the IP complex, i.e., that neither is in the CP region (e.g., the V2-position) or VP-internal. It should be clear from (26) that the higher subject position is lower than the position associated with V2 effects, since that position is overtly occupied by the temporal *í fyrra* 'last year'. There are three arguments that the lower subject position is external to the VP, the first two from Bobaljik & Jonas (1996). First, (non-quantificational) DPs in the lower subject position must generally precede VP-adjoined material, such as sentential adverbs like *aldrei* 'never', floating quantifiers and sentential negation used as a diagnostic in the Object Shift examples. From this it follows that the lower subject position is to the left of (and higher than) the VP. Second, subjects in this lower position precede shifted objects. If shifted objects are in Spec,AgrO-P, it follows that the lower subject position must be higher than Spec,AgrO-P. Both of these arguments rely on a VP architecture in which the base position of the subject is lower than both shifted objects and VP adverbs. This architecture is currently the topic of some debate. Jonas (1996b) presents evidence in favor of the low base position of the subject from the positions of quantified subject NPs (see also Jonas & Bobaljik 1993). Other researchers (Travis 1992, Koizumi 1995, Bobaljik 1995 and others) have argued for a more richly articulated VP in which the base position of the subject is above AgrO-P. While the outcome of this debate is important for the two arguments from Bobaljik & Jonas (1996), there is a third argument that the lower subject position is not VP-internal, which comes from Jonas & Bobaljik (1993). This third argument is that, in a sentence with multiple modals or auxiliaries, the subject must precede all the non-finite elements, including the modals, which means it must be higher than the thematic VP which is presumably the base position of the subject.

interpretative contrasts as the two object positions (Spec,AgrO-P and complement of V°). This is illustrated in (26), where the contrast in interpretation of the quantifier *three* between the (a) and (b) sentences is the same as the contrast in (20).[22]

(26) *Icelandic*
  a. Í fyrra   luku   **þrír stúdentar** víst   öllum prófunum.
     last year finished three students   apparently all   exams-the
     'Three [specific] students apparently finished all the exams last year.'
  b. Í fyrra   luku   víst   **þrír stúdentar** öllum prófunum.
     last year finished apparently three students   all   exams-the
     'Last year, there were three students who finished all the exams.'
     [existential]

As with object shift, the semantic contrast here has been described in different terms, but it is clear that the higher position is associated with something presupposition-like, and the lower with something more existential-like. Thus, in addition to different readings for quantifiers, one finds also that bare indefinites prefer the lower position, while definite DPs do not. (See Diesing 1990a on parallel facts in German, and Vangsnes 1995, Jonas 1996b for more careful descriptions of the Icelandic facts.)

In sum, recent work by various authors has led to the conclusion that the Germanic languages divide into two groups with respect to a cluster of syntactic properties. Among these properties are the distribution of DP arguments. One group, consisting of Icelandic, Yiddish, Faroese 1, Dutch, and German, has "extra" specifier positions for subject and object DPs when compared to the other group – English, Faroese 2, and the Mainland Scandinavian languages.[23] While many of the analyses proposed have been in terms of the accessibility of some of these positions (e.g., the Spec,TP Parameter of Bures 1993, Bobaljik & Jonas 1996), another possibility is that the cross-linguistic variation is in the parametric presence or absence of certain functional projections (Thráinsson 1996). Among the VO Germanic languages, considered in section 3, the languages which show extra IP-internal specifier positions for subject and object DPs are the same languages which show obligatory verb-raising to IP in non-V2 environments. Thus, we

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[22] Holmberg (1993) gives examples from Swedish and Norwegian in which an adverb may either precede or follow a subject DP, and argues from these that MSc (except Danish) have the two subject positions claimed here (even though they show none of the phenomena associated with this position). Note that the interpretive correlations discussed here do not apparently surface in these examples (see Jonas 1994), though at least in Swedish, they require contrastive focus on the subject (Holmberg 1993:38). Moreover, the "extra position" claimed by Holmberg is consistently absent in expletive constructions, transitive or otherwise (see especially the ungrammaticality of (22b), also Vangsnes 1995, Peter Svenonius, pc). It appears to us that, rather than implicating an extra position (and projection), Holmberg's data (and similar Faroese 2 examples in Jonas 1994) suggest that adverb placement, and its interaction with focus, is less simple than suggested here and elsewhere in the literature. In this regard, see especially section 4, below.

[23] Indirect (Dative) objects may also shift under certain conditions. For discussion, we refer the reader to Collins & Thráinsson (1996), Bobaljik (1995) and references cited there.

find that the conclusions from our theory of verb-raising dovetail neatly with the first set of independent conclusions about clausal architecture.

4.2 *Morphology*

In the previous subsection, we provided one type of independent confirmation for the theory of verb raising proposed in section 1. The Verb Position Diagnostic (7) predicted that English, Mainland Scandinavian, and Faroese 2 have simple, unsplit IP structures, while Icelandic and Faroese I have split IPs. One characteristic of split IP languages should be the presence of specifier positions which are not found in languages with a simple IP (namely, the specifiers of the Agr-Phrases). Evidence from the distribution of arguments thus bore out the predictions based on (7). A second characteristic of split IP languages is that they should have more heads in the IP complex than languages with simple IPs. Independent evidence for these heads will be further support for the SIP, and thus for the proposals in section 2 of this paper.

Such evidence comes from the domain of inflectional morphology. For more than a decade, it has been recognized that there is a connection between verbal morphology and overt verb raising (in non-V2 environments) in the Scandinavian languages (see e.g., Vikner 1995a,b, Rohrbacher 1994, Holmberg & Platzack 1995). The most common approach has been to suggest that sufficiently "rich" agreement morphology will force verb raising. However, the appropriate definition of "rich" has been notoriously difficult to discover. An alternative is proposed in Bobaljik (to appear) and developed in Bobaljik & Jonas (1996), Thráinsson (1996), and elsewhere. On this approach, it is not the "richness" of agreement morphology that is important, but rather the more general structure of the verbal morphology. In particular, it is the (im)possibility of multiple inflectional morphemes on the finite verb that is important, and not the features that these morphemes express.

The SIP provides exactly one head in the IP complex for languages with a simple IP, and more for languages with a split IP. If we assume that inflectional morphemes correspond to inflectional heads in the syntax, then a clear prediction of the system is that languages with a simple IP will be restricted to having maximally one inflectional morpheme attached to the inflected verb. Only languages with a split IP will allow distinct markers of tense and agreement to co-occur on finite verbs.[24] As discussed by Thráinsson (1996), the generalizations in Bobaljik (to appear) and Vikner (1995a) show that this prediction is indeed borne out. In particular, comparing English and Icelandic, we find that only Icelandic – a split IP language by (7) – allows the expression of both tense and agreement by

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[24] Note that this holds whether the Mirror Principle (Baker 1985) is taken as reflecting assemblage of morphemes (as in Baker's theory) or whether the relevant generalization is the Lexicalist Mirror Principle (Thráinsson 1996, following Chomsky 1993:28) whereby the verb is inserted fully inflected and the morphemes represent discrete instances of feature checking.

discrete morphemes, while in English either tense or agreement may be expressed on a given (main) verb, but never both. The relevant inflectional paradigms are given in (27).[25]

(27)

Icelandic: *kasta* 'to throw'   English: *tremble'*

	Present	Past	Present	Past
1 psn sg	kasta	kasta **-ði**	tremble	tremble **-d**
2 psn sg	kasta **-r**	kasta **-ði -r**	tremble	tremble **-d**
3 psn sg	kasta **-r**	kasta **-ði**	tremble **-s**	tremble **-d**
				*tremble-d-s
1 psn pl	köst **-um**	köstu **-ðu-m**	tremble	tremble **-d**
2 psn pl	kast **-ið**	köstu **-ðu-ð**	tremble	tremble **-d**
3 psn pl	kast **-a**	köstu **-ðu**	tremble	tremble **-d**

While English has an extremely impoverished agreement paradigm, what is relevant here is the impossibility of the third person agreement marker *-s* following the past tense marker *-ed*, thus **tremble-d-s*. This contrasts sharply with Icelandic, in which agreement markers systematically follow the past tense marker, as in *köstu-ðu-m* [throw-past-1pl]. Again, this is exactly what the SIP predicts, in tandem with a theory in which syntactic heads correspond to morphemes.

The morphological facts are straightforward for English, Icelandic, and the (standard) Mainland Scandinavian languages. The case of the Faroese dialect split is slightly more complex and illustrates an aspect of the theory advocated here that differs from other approaches to these phenomena.[26] The two Faroese dialects, which contrast sharply in terms of their status with respect to the SIP on other diagnostics, appear not to be distinct in their verbal morphology. In particular, the past tense forms in both dialects are arguably in complementary distribution with the true agreement markers (as expected of a simple IP language), though the past tense marker shows the same allomorphy for number seen in Icelandic (which could be analyzed as impoverished agreement). The relevant paradigm is given in (28).

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[25] Here, we are analyzing the past tense marker in Icelandic as *-ði-/-ðu-*. Thus we are suggesting that the tense marker shows limited allomorphy for number. Another alternative is to assume that the tense marker is just *-ð-*, which would require positing that the agreement markers show more allomorphy for tense, e.g., 2 pl *-ið* (present), *uð* (past). The main point is that there is clear evidence for split tense and agreement morphology in Icelandic (see also the discussion in Rögnvaldsson 1990:105fn, who analyzes the past tense marker as *-ði-*). We return to this issue in the discussion of Faroese below.

[26] Note that once again Yiddish proves to be untestable. Since no Germanic language has overt tense marking in the present, the test case for determining whether tense and agreement morphemes are in competition or not comes from the simple past tense. However, Yiddish lacks a simple past tense paradigm, instead using exclusively auxiliary+participle constructions to express the past (Birnbaum 1979). Thus, there is no evidence either way concerning the morphological structure of the inflection.

(28)
Faroese: *kasta* 'throw'

	Present	Past
1 psn sg	kast **-i**	kasta **-ði**
2 psn sg	kasta **-r**	kasta **-ði**
3 psn sg	kasta **-r**	kasta **-ði**
1 psn pl	kast **-a**	kasta **-ðu**
2 psn pl	kast **-a**	kasta **-ðu**
3 psn pl	kast **-a**	kasta **-ðu**

The Faroese paradigms do not contradict the generalizations proposed here, rather they underdetermine the analysis in a specific way. Compare the Faroese past tense forms to the corresponding Icelandic forms in (27). As Bobaljik (1995, to appear) discusses, the Icelandic data shows that a certain amount of allomorphy is required in the tense suffix, sensitive to the number of the subject. Thus, in Icelandic, we have analysed the past tense marker, independent of the agreement markers, as -ð*i* or -ð*u*, with the vowel quality determined by number (see fn. 25, above). Such vowel changes are typical of stems as well in Icelandic, as in other Germanic languages. Halle & Marantz (1993) provide strong arguments from the distribution of stem changes in the past tense of English "strong" verbs that these are not to be treated as separate morphemes, but rather as the application of morphologically conditioned phonological rules. To the extent that vowel alternations as the result of such *readjustment rules* are a necessary part of any morphological analysis of Germanic, the Faroese data is thus indeterminate between an analysis under which tense and agreement do compete for a single position (with allomorphy of the tense marker), and an analysis in which the (weak) past tense marker is solely the dental -ð- and the following vowel is a discrete, impoverished agreement marker.

For approaches in that the key is "rich" versus "poor" morphology, such indeterminacy is potentially problematic. However, this type of under-determination is not unexpected on the SIP approach. If our analysis is correct, the correlation is not directly between verbal morphology and verb movement (as in earlier approaches) but rather between split IP and a cluster of potential properties, including verbal morphology, verb movement, and specifier positions. Regarding verbal morphology, the claim is that multiple inflectional morphemes are prohibited in language with a simple IP, while nothing is forced for languages with a split IP. They have the *potential* for multiple inflectional morphemes, but need not exploit this potential throughout the paradigm. On this view, exactly the type of underdeterminacy exemplified by Faroese (and Yiddish – see fn. 26) arises naturally.[27]

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[27] In principle, we do not rule out the possibility then of a language with a split IP (as diagnosed by, e.g., verb raising or argument positions) but with poor verbal inflection. The strong implication goes only from the presence of multiple inflectional morphemes to a split IP. This may be an aspect of the theory to be improved upon, or it may be that there are such languages, as

Note that with respect to acquisition, the view we advocate here implies that the child must be attentive to converging evidence from a number of different sources to determine the setting of a parameter such as the SIP. While the inflectional morphology of Icelandic unambiguously sets the parameter to a split IP, the inflectional morphology of Faroese or Yiddish is not sufficient to set the SIP and the child must listen for other evidence such as verb raising or transitive expletive constructions to set the parameter correctly.

In the broader context, the approach advocated here entails only that phenomena involving the specifiers of Agr phrases are *possible* in languages with a split IP and *impossible* in languages with a simple IP, without entailing that these processes necessarily apply in the former. Thus a split IP is a necessary, but not sufficient condition for phenomena such as object shift (cf., the discussion in Bobaljik & Jonas 1996:220). It is well known that object shift and expletive constructions are subject to additional, independent constraints.[28] The only point where the approach taken here makes a strong entailment is in the domain of verb movement. If the theory outlined in section 2 is correct, then the correlation between IP architecture and verb movement is much stronger than the other correlations; while the correlations discussed in sections 3 and 4 describe potentialities and impossibilities, the correlations with verb movement provide a strong, bi-directional diagnostic, the Verb Position Diagnostic, given in (7).[29]

5. Icelandic Verb Raising Revisited

Before concluding the paper, we will clean up a loose end from section 3, and offer some speculations about the finer details of Icelandic verb raising, tying the proposals here to other work.

In section 3, examples (13), (18), and (19) show that the finite verb in non-V2 constructions in Icelandic and Faroese I must raise out of the VP. The Icelandic examples are originally due to Vikner 1995b, who worked in

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has been suggested for e.g., the Tromsø dialect of Norwegian and Kronoby and Hallingdalen dialects of Swedish. However, there is scant data available on these dialects in the literature and they need to be investigated in much greater detail.

[28] Further support for our approach comes for example from Jonas (1996b: chapter 6). Jonas gives evidence that the use of *there* and *það* as expletives arose independently in the history of English and Icelandic (see also Falk 1993 on Swedish). Thus, if a language has expletives, the possibility or impossibility of these expletives in transitive constructions follows from the phrase structure as we have argued. However, Jonas's and Falk's work show that whether or not the language has expletives at all is an independent issue.

[29] The argument that evidence for multiple subject projections (AgrS-P, TP) leads to (7) relies on the assumption that if a language has AgrS-P, then it also has AgrO-P. This is implicit throughout the analysis here, wherein we are considering only two possibilities for IP architecture, as given in (1). If the inventory of possible functional categories, and their co-occurrence restrictions is expanded, the range of theoretical possibilities to consider quickly becomes much more complex. For the discussion at this point, we continue to consider only the choice between (1a) and (1b), though see fn. 34 below.

a framework with a simple IP. Work adopting a split IP model has accepted Vikner's conclusion that the verb is in IP, and has generally assumed without question that the position of the verb in such examples is AgrS°, the highest inflectional head (see, e.g., Bobaljik 1995, Jonas 1996b, Rohrbacher 1994, Watanabe 1994).[30] There is, however, evidence that this is incorrect, and that instead the verb occupies T°. Recall that we assume that the two subject positions discussed in section 4.1 are Spec,Agr-S (specific) and Spec,TP (non-specific). The head Agr-S° intervenes linearly between these two positions, while the head T° follows both of them, as diagrammed in (29).

(29)
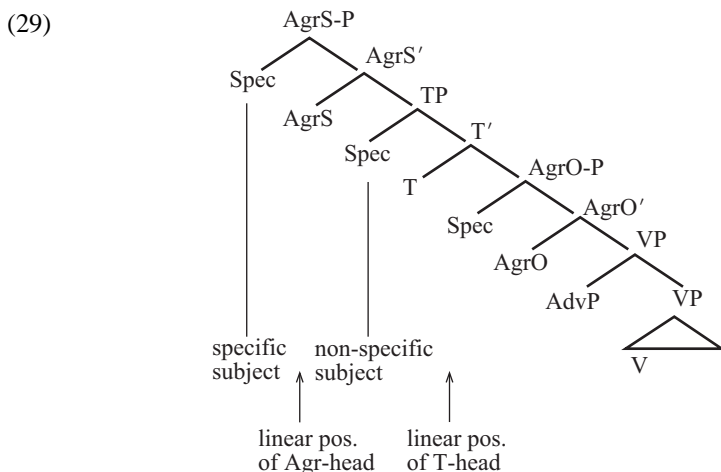
While the verb in V2 clauses will precede both specifier positions, the exact position of the verb (Agr-S° or T°) in non-V2 clauses should be directly testable (although this has escaped notice in the literature). Specifically, if the verb raises to Agr-S° in non-V2 environments in Icelandic, it should *follow* a [+specific] subject, but *precede* a [-specific] subject. However, if the verb raises only to T°, then it should follow both specific and non-specific subjects. The relevant examples are given in (30a-b).

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[30] Watanabe argues that the verb in Middle English raised to T° and not to AgrS°, but goes on to suggest (p.175) that "there should be no language where verb-second and verb raising to [T°] coexist." He does recognize immediately (fn.26) that Icelandic may pose a problem for his suggestion. This suggestion is based on the idea that only main clauses "plus a little bit" are available to the child for acquisition purposes (Lightfoot's 1991 "degree-0 learnability"), and Watanabe's proposal that the trigger for V-to-T movement is a certain word order pattern in non-V2 environments. Regardless of whether or not one accepts the "degree-0" hypothesis, Watanabe's prediction does not arise for us since we advocate a different "trigger" for V-to-T movement, namely the Split IP structure, for which there is ample evidence in main clauses in Icelandic.

(30) Hann spurfi...
     he asked...

  a. ?*af hverju **hefðu**   fáir bændur   flutt til Grænlands.
     for what   had   few farmers   moved to   Greenland
  b. af hverju   fáir bændur **hefðu** flutt til Grænlands.
     for what   few farmers had   moved to   Greenland
     'He asked why few farmers had moved to Greenland.'
  c. Til Grænlands **hafa**   sennilega fáir bændur flutt.
     to Greenland   have   probably few   farmers moved
     'To Greenland probably few farmers have moved.'

The non-specific subject in (30) occupies the lower subject position, e.g., it generally follows TP-adverbs such as *sennilega* 'probably' as seen in (30c). The position of the finite verb, then, appears to be T°. The movement of the V out of the VP in non-V2 environments in these languages is therefore not triggered by properties of Agr (contra, e.g., Holmberg & Platzack 1995, Bobaljik 1995, Jonas 1996b), but rather by the presence of a functional projection (AgrO-P) intervening between TP and VP, preventing the features of the heads of these two projections from being checked in situ.[31]

This approach to verb raising also makes it possible to explain the fact that Icelandic shows verb-raising even in certain infinitival complements. For instance, it has long been known that there is evidence for verb movement in Icelandic control infinitives (see e.g., Thráinsson 1984, 1986a, 1993, Sigurðsson 1989), as illustrated in (31) (taken from Sigurðsson 1989:50):

(31) a. María lofaði   að **lesa** ekki bókina.
        Mary promised to read not book-the
        'Mary promised not to read the book.'
     b. *María lofaði   að   ekki **lesa** bókina.
        Mary   promised to   read not book-the

Sentences like (31) contrast with parallel examples in, e.g., Swedish, as in (32):

(32) a. *Maria lovade   att   **läsa** inte boken.
        M.   promised to   read not book-the
     b. Maria lovade   att inte **läsa**   boken.
        M.   promised to not read   book-the
        'Mary promised not to read the book.'

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[31] If we are correct that the verb in embedded questions is in T° and not AgrS°, then we predict that TP-adjoined adverbs should precede indefinite subjects, but not precede definite subjects. The following contrast seems to support this claim.

  (i) * Hann spurði [hvaða verkefnum *kannski* **stúdentarnir** mundu ljúka]
        He asked which assignments perhaps students-the would finish
        'He asked which assignments the students would perhaps finish.'
  (ii) Hann spurði [hvaða verkefnum *kannski* **einhverjir stúdentar** mundu ljúka]
        He asked which assignments perhaps some students would finish

Infinitive verbs in Icelandic and Swedish alike are morphologically simpler than finite verbs, in particular, infinitives lack agreement morphology. Now, if the verb movement difference in finite clauses between Icelandic and Mainland Scandinavian had something to do with the presence (or strength) of some sort of an Agr-feature (as argued for instance by Holmberg & Platzack 1990, 1995, Platzack 1996), or if rich morphology was the trigger for verb-raising (cf. e.g., Rohrbacher 1994, Vikner 1995a), then one would not expect verb movement in non-finite clauses in either language. On our theory the connection between morphology and movement is less direct: both follow from the simplicity or complexity of the phrase structure, i.e., the SIP. Thus, if control complements have essentially the same structure as finite complements in the two languages, the difference with respect to verb raising follows from the SIP.[32]

If we are right in claiming that in non-V2-environments the verb only moves to T in Icelandic and not to AgrS, as argued above, we have a possible explanation of one more puzzle that has not yet received a satisfactory explanation. As first pointed out by Maling (1980), it is possible to find examples of V3 order in embedded clauses in Icelandic. Some relevant examples are shown in (33) (see also Thráinsson 1986b and Sigurðsson 1986, 1989:44):

(33) a. María las   kvæðið   þegar hún (**loksins**) keypti (**loksins**)
                                                bókina.
     Mary read poem-the when she finally   bought finally
                                                book-the
     'Mary read the poem when she finally bought the book.'
   b. Það er nú [það sem ég **ekki** veit/veit   **ekki**.
      that is now it   that I   not   know/know **not**
      'That's exactly what I don't know.'

In (33) the adverb *loksins* 'finally' and the negation *ekki* 'not' can precede the finite verb, although they do not have to. As shown by Sigurðsson (1989), examples of this kind should not be confused with V3 type examples that can occur in main clauses and involve a different class of adverbs that feel "parenthetical." Adverbs like *loksins* 'finally' and the negation *ekki* 'not' cannot occur in such contexts. Thus we get the contrast between (34) and (35):

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[32] Note that control complements in Icelandic allow object shift (see Thráinsson 1993), which is further evidence for the functional complexity of these complements. Not all infinitive complements in Icelandic show verb raising, however. Sigurðsson (1989) argues that there is no verb raising in ECM and raising complements, suggesting that the structure of these infinitivals has fewer functional projections than the control complements (see also Thráinsson 1993, Johnson & Vikner 1994). One of the arguments in favor of a smaller structure for ECM and raising complements is that they lack infinitival *að*.

(34) a. Ég veit **bara/einfaldlega** ekkert um það.
     I know just/simply nothing about it
   b. Ég **bara/einfaldlega** veit ekkert um það.
     I just/simply know nothing about it
     'I just/simply know nothing about it.'

(35) a. Ég keypti **loksins/ekki** bókina.
     I bought finally/not book-the
     'I finally bought the book/I didn't buy the book.'
   b. *Ég **loksins/ekki** keypti bókina.
     I finally/not bought book-the

Now, one might think that the examples with the embedded order Adv-V in Icelandic, like the ones in (33), would have to be a case of V-in-situ, namely a failure of the verb to move out of the VP. It should be noted, however, that when the adverbs in question precede the finite verb in embedded clauses, they need to be stressed. In addition, it is quite puzzling that the examples with this order that are cited in the literature typically involve relative clauses or certain types of adverbial clauses, such as temporal 'when'-clauses (although this order is not strictly limited to embedded clauses of that kind). How could these particular clause types have anything to do with V-to-T (or V-to-I) movement? In particular, do they suggest a domain in which Icelandic might have optional verb raising?

We believe that the answer is that they don't. As shown by Magnússon (1990), these are exactly the types of clauses where embedded V2 (i.e., fronting of a non-subject) is next to impossible in Icelandic. This means that in these kinds of clauses the verb will not move any higher than to T, if we are right. A specific subject will, on the other hand, move all the way to [Spec,AgrS-P]. This means that there is a possible adjunction site for adverbs between the subject in [Spec,AgrS-P] and the verb in T, namely adjunction to TP. And while the adverbs in question typically adjoin to VP, they can under certain circumstances adjoin to TP. Hence we *can* get the order subject-adverb-verb in certain embedded clauses when the adverb is stressed, but that does not mean that the verb has remained in the VP, rather only that it has not moved further than to T. Importantly then, examples such as (33) cannot be taken as counter-evidence to the claim that generally the verb raises to T in Icelandic.[33]

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[33] It should be emphasized here that this order appears to be quite rare in Modern Icelandic. In a sample of 4275 embedded clauses recently collected from newspaper texts by Halldór Ármann Sigurðsson, there are no examples of this kind (although there are 19 examples of the order subject-adverb-verb where the adverb is one of the "parenthetical" adverbs that can intervene between the subject and the verb in main clauses, cf. (34) above). These are very different figures from what one gets in Modern Faroese texts, as pointed out in fn. 15 above.

6. Conclusions and Extensions

In this paper, we have considered only the VO Germanic languages in detail. There has also been a considerable body of work devoted to many of the topics discussed in section 4 in the OV Germanic languages. Thus, Vikner 1995b, Bobaljik & Jonas 1996, Thráinsson 1996 (and references therein) show that German, Dutch, Afrikaans, etc. display syntactic and/or morphological properties that we take as evidence for a split IP. On the approach we have developed here, we therefore predict (with Vikner 1995a and Jonas 1996a) that the OV languages have verb-raising to (at least) T° in non-V2 environments. If these languages have head-final VP and TP, then such verb raising would generally be string-vacuous, as illustrated in (36).

(36) $\dots$ [daß der Aussenminister   den Kommunisten   die Einreise
                                                                     t_v verbot$_v$]
          $\dots$ that the foreign minister$_{NOM}$ the communists$_{DAT}$ the entry$_{ACC}$
                                                                     forbade

   '$\dots$ that the foreign minister forbade entry to the communists.'

The question of the position of the finite verb in such examples has received a good deal of attention in the literature, with some linguists arguing that the verb raises to Infl (Grewendorf 1990, Vikner 1995b, Sabel 1996:12fn, among others), and others arguing that it remains in VP (Travis 1991, Haider 1993, Reuland 1990, Zwart 1997:70, among others). Arguments are notoriously inconclusive, for the most part hinging on assumptions about the possibility of right-adjunction to VP in these languages (see especially Vikner 1995b:152fn), and we do not attempt to resolve the issue here. Instead we reiterate the prediction that the verb must raise to some functional head in a Split IP language and thus resolution of the controversy surrounding the position of the clause-final finite verb in these languages will bear directly on whether or not our theory is correct.

Our theory obviously makes predictions well beyond Germanic. In particular, the Verb Position Diagnostic (7) as we have presented it is a two-way implicature: if a language shows overt verb raising, then (7) entails that the language must have a split IP. In addition, we have drawn a specific connection between morphology and the SIP: if a language has multiple inflectional morphemes on the finite verb, this can only be the result of (or consistent with) a split IP. The Romance languages have multiple inflectional morphemes on finite verbs, and show evidence that the finite verb raises out of the VP (see, among others, Pollock 1989, Belletti 1990, Rohrbacher 1994). Thus, we are committed to the claim that these languages have a split IP. Now, the kind of supporting evidence that we presented for a split IP in certain Germanic languages (two subject and object positions in the IP complex) is not so clearly available from the Romance languages, although this is a point of some debate (see, e.g., Belletti 1994, Alexiadou & Anagnostopoulou 1997). Further investigation of the Romance languages

from the perspective of the theory outlined here is therefore an obvious next step to take, that we must, for reasons of space, leave to future research.[34]

Five properties of the Germanic languages generally cluster together in terms of cross-linguistic variation. They are:

a. the possibility of Transitive Expletive Constructions
b. the availability of two subject positions
c. the availability of two object positions
d. the requirement that the verb raise out of the VP in non-V2-environments
e. the possibility of multiple inflectional morphemes on the verb stem, specifically the co-occurrence of discrete tense and agreement morphemes.
To the extent that the proposals in this paper may be sustained, the SIP and the theory of verb raising that we have argued follows from the SIP, together provide a unified account of all five phenomena. Previous accounts have been able to subsume two: d–e (Rohrbacher 1994, Vikner 1995a), three: a–c (e.g., Bures 1993, Bobaljik & Jonas 1996, Chomsky 1995c), or four: a–c and e (Bobaljik, to appear) or a–d (Jonas 1996b) of these phenomena, but we believe ours to be the first proposal that attempts to unify, perhaps incorrectly, all five.

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[34] One possibility is that the two alternatives in (1) do not exhaust the range of possible IP complexes available to languages. TP and AgrP(s) may be only some of a range of inflectional projections that languages may make use of. On our theory, as long as a language has multiple inflectional projections, of which any but that which takes the VP as its complement has features to check with the verb, it will require verb movement, even though not all functional projections might host subjects and objects in their specifiers. However, expanding the possibilities in this way must obviously be tightly constrained, in order not to lose any predictive power. See Nash and Rouveret (1997) for a theory along these lines, and Iatridou (1990) for relevant discussion.

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