Chapter 9

Masked Second-position Effects and the Linearization of Functional Features

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There is a striking word order pattern that has typically been treated as two independent phenomena in the generative literature. Some languages, including all Germanic languages except English, require finite verbs to appear in second position (at least in main clauses). Other languages, including many South Slavic languages, require their pronominal, auxiliary, and other clitics to cluster in second position.

The standard analysis of the verb-second phenomenon, due originally to den Besten (1983), relies on local head movement—that is, a finite verb moving from I to C at some point in the derivation (see Vikner 1995:51–64 for a summary of various implementations of this basic idea). On the other hand, analyses of second-position clitics have typically relied on syntactic mechanisms like right adjunction to some head for pronominal clitics (Prodovac 1996) and nonlocal head movement across clitic auxiliaries (Rivero 1994), and/or postsyntactic linearization mechanisms like Prosodic Inversion (Halpern 1995) or Morphological Merger (Marantz 1988).1 In general terms, these analyses all exploit the idea that clitics share the syntactic properties of their nonclitic counterparts and are special only to the extent that they are subject to additional prosodically based constraints. In other words, all types of elements subject to second-position requirements are syntactically independent elements, but the mechanisms invoked to handle their exact positioning are, to a large extent, different.

The syntactic approach to clitics has long been challenged by morphologists, including Klavans (1985), Anderson (1992), and others, on the grounds that clitics share fundamental properties with affixes that are not easily captured within the syntactic approach (see Anderson, 1992, 1993 for an extensive discussion). The latter view has received renewed interest from an Optimality-Theoretic (OT) perspective in the works of Anderson (1996, forthcoming) and Legendre (1996, 1998a, 1999a, forthcoming b, c). This work, which includes detailed analyses of the clitic systems of a number of related and unrelated languages with and without second-position effects, builds on the original claims made in Klavans 1985 and Anderson 1992 but makes crucial use of constraint conflicts and their OT resolution to explain the
diverse patterns observed. Ignoring some differences in terminology and technical details of analysis, Anderson and I have both argued that clitics are the phonetic form (PF) spell-out of morphosyntactic features. That is, clitics are not independent lexical items inserted in phrase structure and moved around on a par with syntactic categories. In Anderson’s terms, they are phrasal affixes—affixes that take phrases rather than stems as their hosts. (See the references above for details.)

From this perspective, a promising approach to the positioning of clitics exploits the existing alignment-based theory of (word-level) morphology in OT (Prince and Smolensky 1993; McCarthy and Prince 1993b). In this view, the edge-alignment constraints responsible for clitic placement are instantiations of McCarthy and Prince’s general schema ALIGN(Category₁, Edge₁; Category₂, Edge₂). For example, edge-alignment constraints like EDGEMOST (Anderson 1996, forthcoming; Legendre 1996, 1998b, 1999a, forthcoming b,c) immediately explain clustering effects. Clitics cluster because they compete for a single position. Clearly, only one clitic may be realized at the very edge of a given domain; others will follow, striving to be as close as possible to that edge. This approach entails (gradiently) violable constraints, since noninitial clitics in the cluster will violate their respective EDGEMOST constraint. Second-position effects also receive a natural explanation: they result from the interaction of violable EDGEMOST(LEFT) with another alignment constraint NONINITIAL, where NONINITIAL outranks EDGEMOST(LEFT). These interactions will be exemplified below.²

Alignment constraints also figure prominently in Grimshaw’s analysis of possible and impossible combinations of Romance pronominal clitics (Grimshaw, chap. 8, this volume) where they interact with faithfulness to featural specification. For example, positional constraints like DATIVERIGHT, ACCUSATIVLEFT, and so on determine possible French combinations. Grimshaw assumes that the overall positioning of clitics in a clause is subject to alignment with the edge of IP in the syntactic component, but nothing in her core analysis hinges on that assumption.

For Anderson and myself, the striking parallelism between the positioning of finite verbs and clitics in second position cannot fail to raise the issue of a common morphologically based approach. Anderson sketches one in his own terms in Anderson (forthcoming). The present chapter takes the hypothesis one step further by arguing that extending the alignment-based analysis of clitics to verb-second phenomena is in fact empirically well motivated, based on a detailed study of constraint interaction in two unrelated non-Germanic languages with distinct word order strategies:³ Breton (VSO) and Macedonian (SVO).

The particular proposal made in this chapter is the following. Features traditionally subsumed under finiteness are universally positioned by violable PF alignment constraints rather than by syntactic movement to a particular functional head position (as is generally assumed for verb-second phenomena since den Besten 1983; see
also Vikner, chap. 14, this volume). Finiteness here refers to the overt morphological marking of distinctions pertaining to the temporal (tense and aspect) and/or person/number specifications of a given predication. Henceforth, finiteness is referred to as [F]. In this preliminary study, [F] subsumes all component features of finiteness and does not distinguish tensed verbs from agreeing verbs. In fact, all finite verbs discussed in the chapter are both tensed and agreeing.

The proposal is grounded in a three-way empirical generalization: (1) clitic auxiliaries are syntactically inert phrasal affixes positioned at PF, (2) other verbal categories are syntactically active heads positioned in the syntax, (3) yet the positioning of [F]—in second position—is oblivious to that distinction. A unified analysis of the positioning of all finite verbal categories is only possible in PF terms.

Verb-second languages allow positional effects of [F] to be easily recovered. The focus here is on masked verb-second effects because they most clearly reveal how surface position results from the interaction of different constraint families. Because verb-second phenomena are found in verb-initial languages (e.g., Breton), the traditional label V2 is not particularly useful. I will henceforth use the neutral term F2 to refer to "finiteness in second position."

The chapter is organized as follows. Section 9.1 presents F2 effects in Breton and Macedonian. Section 9.2 compares possible hosts of [F] in root clauses. Section 9.3 is devoted to the technical details of linearization and a comparative analysis of Breton and Macedonian. Section 9.4 summarizes the proposal.

9.1 Masked F2 Effects

The traditional characterization of a given language's basic word order inherited from typological studies (e.g., Greenberg 1966) pertains to lexical categories: S, V, O. As is well known, a considerable number of languages exhibit both relatively free word order and a so-called basic word order. The latter is often characterized as the pragmatically unmarked and statistically most frequent word order in a given language. Despite the fact that these languages have a basic word order, many different permutations of arguments and V are possible, subject only to discourse considerations. In our terms, this means that constraints pertaining to the linearization of arguments are outranked by discourse constraints pertaining to focus, topics, and so on.

The positioning of functional categories like the ones traditionally subsumed under finiteness is of particular interest because the positioning is typically not governed by discourse considerations. On the other hand, the positioning of functional categories does not necessarily correlate with the basic word order of a language, as we will see shortly.

Breton has the characteristic VSO word order of Celtic languages, as exemplified in (1). An auxiliary encodes tense, person, and number (en 'third-person masculine
singular', *en* 'first-person singular', and so forth). The present tense auxiliary root in the third person is *deus* (indefinite *endevout* 'have'). Note that *en deus* is pronounced as [nøys] (and optionally spelled as *neus*), evidence that it constitutes a phonological unit. Note further that the auxiliary (complex) surfaces in second position, immediately after the nonfinite lexical verb. The reverse order aux-V is ungrammatical, despite the fact that VSO word order is maintained. (Some inflected verbs look exactly like their noninflected counterparts—see the comment on *lenn* 'read' below. Hence, the finite verbal category will be italicized—and in some cases also underscored, when necessary for clarity—in the examples.)

(1) **Breton**
   a. Lennet *en deus* Yann al lev'r.
      read 3 have Yann the book
      'Yann has read the book.'
   b. *En deus* lennet Yann al lev'r.
   c. Kavet *em eus* bet al lev'r.
      found 1 have been the book
      '(I) have found the book'
   d. *Em eus* bet kavet al lev'r.

In the absence of a finite auxiliary, Breton opts for two strategies. One involves an expletive auxiliary form—*ra* in (2a)—preceded by the infinitive (or verbal noun) form of the lexical verb. The resulting word order, again, is VSO. The second strategy involves topicalizing an argument, resulting in SVO or OVS word order, as in (2b) and (2c). Breton has an affirmative particle *a* or *e*, depending on the grammatical function of the DP preceding it (Stump 1989). The verbal form *lenn* is nonfinite in (2a) but finite in (2b) and (2c).

(2) **Breton**
   a. Lenn a *ra* Anna al lev'r.
      read-inf part do-3 Anna the book
      'Anna reads the book.'
   b. Anna a *lenn* a lev'r.
      A part read-3 the book
      'ANNA reads the book.'
   c. Al lev'r a *lenn* Anna.
      the book part read-3 A
      'Anna reads THE BOOK.'

The generalization that emerges from (1) and (2) is that Breton simply requires the finite verbal category to appear in second position (Ortiz de Urbina 1994; Schafer 1995), a constraint independent of its basic VSO word order. Breton deploys various strategies to ensure that this requirement is met: past participle fronting in (1), an
expletive auxiliary in (2a), and fronting of an argument in (2b) and (2c). A negative particle can also be drafted into securing the second position of an inflected auxiliary, as shown in (3). Clausal negation is expressed by means of two negative particles, ne and ket, surrounding the finite verbal category (much like French ne . . . pas).

(3) Breton
   a. N' en deus ket lennet Yann al levr.
      neg 3 have neg read Yann the book
      'Yann has not read the book.'
   b. Ne lenn ket Yann al levr
      neg read neg Yann the book
      'Yann did not read the book.'

   It is interesting to note that the F2 effect does not always hold in Breton, however. Consider (4), one of several patterns to be analyzed in which F2 is masked.

(4) Breton
   a. E c'halvet en deus Yann.
      him called 3 have Yann
      'Yann has called him.'
   b. *E c'halvas Yann.
      him called Yann
      'Yann called him.'

Pronominal clitics like e 'him’ appear in initial position with the result that the finite auxiliary complex is in third position in (4a), counting every terminal element that separates it from the clausal edge. Note also that F2 is satisfied in (4b), yet the result is ungrammatical. Such masking effects, I will argue, simply emerge from constraint interaction. See section 9.3.3 for details.

In Macedonian, an F2 effect is found with n/t-participles (also known as verbal adjectives) and adjectival or nominal predicates. In null-subject contexts, the lexical (nonfinite) predicate must precede the auxiliary, as shown in (5). The reverse order is ungrammatical. Italicized items are clitics, including present perfect auxiliary sum and copula si, both inflected forms of ‘be’.

(5) Macedonian
   a. Dojen sum. (n/t-participle)
      come be-1
      '(I) have come.'
   b. *Sum dojden.
   c. Mil si mi. (adjectival predicate)
      dear be-2 me-dat
      '(You) are dear to me.'
   d. *Si mi mil.
In Macedonian, the F2 effect disappears with a class of nonfinite verbal forms called l-participle (because of their l-ending, as in zel ‘taken’). In (6a), the clitic auxiliary sum appears in initial position (in null-subject contexts); it is separated from the l-participle by pronominal clitics with which it forms a cluster. The suffix -l is a modality marker that, in conjunction with the auxiliary ‘be’, conveys secondhand or hearsay knowledge of an event.

(6) Macedonian

a. \textit{Sum mu gi zel parite.} (l-participle)
   be-1 him-dat it-acc taken money
   ‘(I) have taken the money from him.’

b. *Zel \textit{sum mu gi parite}.

Summing up, despite their obvious basic word order differences, Breton and Macedonian have in common that (1) they are F2 systems and (2) they are not perfect F2 systems. The F2 effect, to some extent, is invisible on the surface—that is, masked. Masked F2 effects will be argued below to be the direct consequence of constraint interaction.

The two languages differ, however, with respect to which constraints interact to make them not perfect. In Breton, masked F2 results from the interaction of alignment constraints with information structure constraints or across distinct features. The Macedonian F2 effect results from a competition for second position among distinct features.

Note that masked F2 effects are in fact to be expected if violable constraints are involved. That is, a (set of) constraint(s) that results in second position of a finite verbal category may be violated to satisfy a higher-ranked constraint whose effect is, for example, to front a focused argument, thereby affecting the surface position of the finite verbal category. This, and other formally similar interactions, will be illustrated below.

9.2 The Status of Finite Verbal Categories

The common F2 pattern is all the more interesting because the status of the aspectual auxiliary (‘have’ in Breton; ‘be’ in Macedonian) differs in the two languages. In Macedonian, ‘be’ has the status of clitic (Tomić 1996). In Breton, ‘have’ has the status of head of a syntactic projection. Evidence that an auxiliary is a (morphological) clitic rather than a syntactic head in a given language comes from the lack of syntactic properties characteristic of syntactic heads as well as typical lack of prosodic stress. I illustrate the first property with two diagnostic tests below—that is, the absence of subject-auxiliary inversion and the positioning of adverbs. Further tests—including the possibility of discourse-neutral long head movement across clitic aux-
iliaries (Rivero 1994) but not other verbal forms, as well as coordination patterns—are discussed in Legendre (forthcoming b,c).

In languages in which an auxiliary heads a syntactic projection, the auxiliary permits syntactic movement. This is the case in Breton and German. As (7) shows, (wh- and yes-no) questions involve subject-aux inversion in both Breton and German.

(7) Breton
   a. Piv en deus Yann gwelet dec’h?
      who 3 have Yann seen yesterday
      ‘Who did Yann see yesterday?’

   German
   b. Wen hat Peter gestern gesehen?
      who has-3 Peter yesterday seen
      ‘Who did Peter see yesterday?’

In (7a), for example, the subject Yann intervenes between the auxiliary en deus and the lexical verb gwelet (as in English).

Auxiliaries that are clitics, however, systematically fail to undergo subject-aux inversion in (wh- and yes-no) questions. The pattern is not specific to Macedonian; it extends to other languages known to have clitic auxiliaries, including Bulgarian, Romanian (Legendre, forthcoming c), and Basque (Legendre, forthcoming a).

(8) Macedonian
   a. Če ti ja dade li Penka knigata?
      will you-dat it-acc gave-3 Q Penka book-the
      ‘Will Penka give you the book?’

   Basque
   b. Hil da aita?
      died aux-3 father
      ‘Has father died?’

As (8a) shows, the inverted subject Penka follows the aux-verb complex Če dade (and pronominal clitics in between) rather than simply the auxiliary Če. In other words, head movement (to a projection higher than VP) operates as if the auxiliary were not present in the structure. The absence of subject-aux inversion does not make sense if Basque da and Macedonian Če head functional projections of their own, as their counterparts presumably do in Breton and German. Head movement would have to involve two verbal heads and move them in the right order. But if Če and da are phrasal affixes—that is, PF exponents of functional features—they are irrelevant to verb movement motivated by the presence of a syntactic operator, OpSPEC and OBLIGATORYHEADS (Grimshaw 1997). One could stipulate the existence of a dominating syntactic constraint requiring all verbal elements to appear together when a
clitic auxiliary is present, but that would only recapitulate the empirical generalization and would hardly constitute a genuine explanation.

For it should be noted that the absence of subject-aux inversion in Macedonian, Bulgarian, Romanian, Basque, and so on is not a general property of all auxiliaries but a property that distinguishes clitic auxiliaries from their non-clitic counterparts within each language. This will be exemplified in Macedonian in (12); see the references given earlier for the other languages.

There is substantial independent evidence for the clitic status of (certain) Macedonian auxiliaries. Other clitics (e.g., accusative and dative pronouns) may intervene between the auxiliary and the main verb, but lexical elements may not.

(9) Macedonian
   a. Jas sum mu gi zel parite.
      I be-1 him-dat it-acc taken money
      ‘I have taken the money from him.’
   b. *Jas sum mu gi parite zel.

Macedonian pronominal clitics are best analyzed as agreement markers—that is, morphological categories. Macedonian has obligatory clitic doubling with definite direct and indirect objects (Tomić 1996). Note that there is no preposition to assign case to the object DP, yet the result is grammatical.

(10) Macedonian
    Goi imam viden Petroi.
    him have-1 seen Peter
    ‘(I) have seen Peter.’

If these pronominal clitics were active in the syntax, one would expect blocking effects such as strong crossover effects. No such effects, however, are found in Macedonian, as shown in (11).9

(11) Macedonian
    Cuvokot kogo sto goi vidov toi
    man whom that him-acc saw-1
    ‘The man whom I saw.’

This confirms the agreement marker status of Macedonian pronominal clitics. Henceforth, I take them to be the PF spell-out of agreement, a proposal reminiscent of the one made in Borer 1984 and Suñer 1988 on the basis of other languages. See Legendre 1998a for an OT analysis of clitic doubling.

Macedonian has two series of perfects, the Proto-Slavonic sum ‘be’ series exemplified above and the ina ‘have’ series unique to Macedonian. While sum has the status of clitic, ina has the status of syntactic head of a projection. Evidence comes from
subject-aux inversion in interrogative contexts, as in (12a), and from the fact that adverbs may intervene between ima and the n/t participle, as in (12b).

(12) Macedonian
a. Go ima li Ivan svrseno?
   it-acc have-3 Q Ivan solved
   ‘Has Ivan solved it?’

b. Go imaše sam napraveno.
   it-acc have-3 himself done
   ‘(He) has done it himself.’

Interestingly, pronominal proclitics ensure that finite ima is in second position in (12a), just as they do with a simple finite lexical verb like vide in (13a). Note that a single clitic is sufficient to ensure the second position of the element carrying [F].

If pronominal clitics are the PF spell-out of agreement, as argued above, then the pattern in (12) and (13) is evidence that F2 is a requirement that holds at PF, but not in the syntax.

(13) Macedonian
a. Go vide.
   him-acc gave-3
   ‘(She) saw him.’

b. Dojden sum.
   come be-1
   ‘(I) have come’

c. Mil si mi.
   dear be-2 me-dat
   ‘(You) are dear to me.’

Consider the F2 generalization further, on the basis of (12) and (13). Finiteness is systematically realized in second position, whether its host is a phrasal affix—as in (12a) and (12b) as well as (13a)—or a syntactic head, as in (13b) and (13c). The status of the auxiliary, either as a PF or a syntactically independent element, is irrelevant to the linearization of finiteness features. This stands in clear contrast to the fact that the status of the auxiliary is clearly relevant to syntactic movement (e.g., subject-aux inversion in questions) and to the positioning of adverbs. Because F2 applies to auxiliaries that are the PF spell-out of functional features, linearization of [F] must take place at PF.

In contrast to the situation in Macedonian, adverbs may separate V from the auxiliary in Breton (Borsley 1990) and German, evidence that confirms the head status of the auxiliary in these two languages.
(14) Breton
   a. Debret mat en deus d' he goan.
       eaten well 3 have to his supper
       'He has eaten well for supper.'

   German
   b. Er ist schon gegangen.
       'He has already left.'

Summing up section 9.2, there is substantial crosslinguistic evidence that clitic auxiliaries, contrary to their nonclitic counterparts, are not independent lexical items undergoing movement in the syntax. Like the pronominal clitics discussed above, they are in fact syntactically inert—which I interpret as evidence that they do not have the status of syntactic head. Rather, clitic auxiliaries are exponents of functional features linearized at PF on the basis of alignment constraints familiar from morphophonological studies (McCarthy and Prince 1993b). Crosslinguistically and language internally, the F2 effect is oblivious to status differences among auxiliaries. The fact that it is found with auxiliaries that are not syntactic objects indicates, however, that the F2 effect must be construed primarily as a PF effect. An important generalization would otherwise be missed.

9.3 Linearization of [F]

This section focuses on the OT analysis itself. It opens with some general considerations.

9.3.1 The General Hypothesis
The general hypothesis examined in this chapter is that, in terms of its linearization, [F] is subject to the same linearization constraints as clitics.

The proposed theory of features relies on two proposals, the first of which is not further explored in the present chapter. The first proposal pertains to the category status of the element bearing a feature. That is, a functional feature may be realized as a (word- or phrase-level) affix or as a syntactic head. Features are assumed to be listed in the lexicon (Everett 1996). Their category status is derived from a competition between a constraint on realizing features on syntactic heads and other constraints that favor a different realization. This approach to the lexicon, whereby its grammatical properties are derived from the interaction of constraints rather than simply stipulated, is defended in a number of previous OT studies, including Legendre et al. 1995; Legendre, Smolensky, and Wilson 1998; Grimshaw 1997 as well as chap. 8, this volume; and Grimshaw and Samek-Lodovici 1998. In the interest of space, the present chapter takes a shortcut, however, by simply assuming that the
category status of particular functional features is predetermined (i.e., the relevant competitions are left out).

The second proposal is that all morphosyntactic features, including \([F]\), are subject to violable alignment constraints, the precise nature of which is the topic of the next section. Drawn from the lexicon, \([F]\) is present in the input as a property of \(V\) (which I interpret as the head of the clause). The positioning of the category that instantiates \([F]\), however, is largely regulated by PF alignment, independently of its category status.

In the present analysis, clitics are “interface phenomena.” Note that the parallel, rather than sequential, approach to constraint interaction in OT originally formulated in Prince and Smolensky 1993 entails a concept of the interface that pertains to the range of the constraint hierarchy involving the interaction of constraints on different parts of the linguistic representation. The two parts of the representation are interdependent: syntax (by virtue of encoding important aspects of word order) partially determines the PF representation. However, constraints on hierarchical structure only see items that are present in the syntactic tree. Constraints on the PF part of the representation—in particular (and possibly only) alignment constraints—only see the morphophonological representation of lexical items; hence they treat heads, word-level affixes, and clitics alike.

9.3.2 Alignment Constraints

Previous work on linearization of clitics in OT (Legendre 1996, 1998b, 1999a, forthcoming b,c; Anderson 1996, forthcoming) has relied on the alignment-based theory of morphology (Prince and Smolensky 1993; McCarthy and Prince 1993b). In particular, second-position effects result from a particular interaction of two conflicting constraints within a particular domain, NONINITIAL(\(X\)) and EDGEMOST(\(X,\) LEFT), which I have stated in previous work as follows.

(15) a. NONINITIAL(\(X\)): At PF a feature \([X]\) is not realized in intonational phrase-initial position.

        b. EDGEMOST(\(X,\) LEFT): At PF a feature \([X]\) is left-aligned with the edge of the nearest projection of the head \([X]\) is associated with.

Assuming for the moment a simple null-subject context—that is, a situation where the domains of both constraints completely overlap—constraint ranking works as follows. If EDGEMOST(\(X\)) outranks NONINITIAL(\(X\)), a feature \([X]\) violates NONINITIAL(\(X\)) to satisfy EDGEMOST(\(X\)), and \([X]\) is linearized in domain-initial position. Such a ranking yields, for example, the Romanian cliticization pattern (Legendre, forthcoming c) as well as a subset of Bulgarian and Macedonian clitics (Legendre 1998b, 1999a, forthcoming b). If, however, NONINITIAL(\(X\)) outranks EDGEMOST(\(X\)), the latter is violated to ensure satisfaction of the former. Second-position clitics are
born out of that conflict, so to speak. They are as close to the domain’s left edge as they can be without being on the very edge. This ranking applies to particular instantiations of [X], including [F]—NONINITIAL(F) ⇒ EDGEMOST(F)—yielding F2 effects.

These alignment constraints map the PF realization of features onto a domain that, in principle, could be syntactic or prosodic in nature. As argued in Legendre (forthcoming b), there is substantial crosslinguistic evidence that the domain of NONINITIAL is prosodic, while that of EDGEMOST is syntactic.

The precise X’-theory characterization of the syntactic domain of EDGEMOST largely depends on one’s assumptions about clausal structure. Under the VP-internal subject hypothesis (e.g., Koopman and Sportiche 1991 and others) and the present “morphological” analysis of finiteness, this means that a simple clause containing a simple verb form needs not involve more than a VP (i.e., an alternative IP candidate involves an additional violation of MINIMALPROJECTION (MinProj, Grimshaw 1993). Only as much structure is built as required by the input (see also Grimshaw 1997). If null subjects do not exist but result from a syntactic constraint dropping a topic as proposed in Grimshaw and Samek-Lodovici 1998, then a null subject clause is simply a V’. This is the hypothesis I adopt below.

Consider Macedonian l-participle constructions that permit domain-initial clitics in null-subject contexts. In the presence of an overt subject—(nonclitic) jas ‘I’ in (16b)—sum follows the subject rather than preceding it. This is indicative of alignment with a V’ domain: EDGEMOST(F) is satisfied in both (16a) and (16b). As the formal competitions displayed as OT tableaux will make clear, violations of EDGEMOST(F) are measured by the number of morphemes that separate a given clitic from the left edge of V’.

(16) Macedonian
a. [v’ sum mu gi zel parite].
   ‘(I) have taken the money from him.’

b. [vp Jas [v’ sum mu gi zel parite]].
   ‘I have the money from him.’

As is well known, V’ is not an active level with respect to syntactic movement though it is relevant to coordination and other constituency phenomena. Because phrasal affixation is not syntactic, the usual syntactic objection to making use of V’ for PF alignment does not hold. Clitics, in fact, provide evidence for the existence of V’, independently of constituency phenomena.

Second-position elements, on the other hand, are necessary to recover the domain of NONINITIAL(F). A V’ domain specification predicts that auxiliary clitics would appear in second position in a null-subject context but in third position in an overt subject context. The Macedonian F2 pattern with n/t-participles provides evidence that this is not the case.
(17) Macedonian
   a. \( [\_V' \text{ dojden } \text{ sum}]. \)
      come be-1
      'I have come.'
   b. \([\_VP \text{ Jas } [\_V' \text{ sum} \text{ dojden}]]. \)
      I be-1 come
      'I have come.'

The position of \( \text{ sum} \) changes, depending on the presence of an overt subject. What remains constant, however, is \( \text{ sum} \)'s second position overall in the clause. Hence the domain cannot be \( V' \). As shown in (18), parentheticals and dislocations affect the positioning of second-position elements. The following examples from a strict second-position clitic language, Serbo-Croatian, indicate that second position is counted from the prosodic boundary following the parenthetical.

(18) Serbo-Croatian
   a. \([\_\text{IntP/VP } \text{ Ja } [\_V' \text{ sam ti obećala igračku}]]. \)
      I be-1 to-you promised toy
      'I promised you a toy.'
   b. \([\_VP \text{ Ja, tvoja mama, [\_\text{IntP/V'} obećala sam ti igračku}]]. \)
      I your mom promised be-1 you-dat toy
      'I, your mom, promised you a toy.'

The parenthetical in (18b) separates the subject pronoun \( \text{ ja} \) from the rest of the clause. If the prosodic boundary immediately following the parenthetical were irrelevant to the positioning of clitics, they would be expected to appear right after the pause, so as to best satisfy EDGEMOST (within \( V' \)). Instead, they appear second after the pause, suggesting that the domain is prosodically defined (contra Anderson 1996, forthcoming). See Radačnović-Kocić (1996) for further discussion of the relevance of prosodic domains to the positioning of Serbo-Croatian clitics.

Going back to the Macedonian pattern, (17) follows under a prosodic characterization of the domain of NONINITIAL(\( F \)). There is only one intonational phrase and \( \text{ sum} \) is second in it in both (17a) and (17b). Based on (17) and (18), I conclude that the domain of NONINITIAL(\( X \)) is the intonational phrase. Ortiz de Urbina (1994) provides additional evidence in Breton suggesting that the prosodic characterization of the domain of NONINITIAL(\( F \)) may in fact be universal.

(19) Breton
   a. *Yann, \( \text{ meus } \) roet al levr deshan.
      Yann have-1 given the book to him
      'As for Yann, I've given the book to him.'
   b. Yann, roet \( \text{ meus } \) al levr deshan.
As (19) shows, dislocated constituents that belong to a separate intonational phrase do not count as first elements. Past participle fronting is still required to ensure the second position of [F].

Note that a clitic may satisfy the second-position requirement by following another prosodically weak element (i.e., another clitic) in some languages. For example, the Bulgarian perfect auxiliary clitic sîm ‘be’ can be separated from the left edge of the intonational phrase by clitics like the future auxiliary or the negative particle.

\[(20) \text{Bulgarian} \]
\[\text{Štejne sîm pročel knigata.}\]
\[\text{fut/neg be-1 read book-the}\]
\[\text{‘(I) will have/have not read the book.’}\]

In a similar fashion, [F] may satisfy NONINITIAL by following pronominal clitics in Macedonian and the negative particle in Breton. Relevant examples are repeated in (21).

\[(21) \text{Macedonian}\]
\[a. \text{Ti go dade.}\]
\[\text{‘(He) gave it to you.’}\]

\[\text{Breton}\]
\[b. \text{N’ en deus kêt lennet Yann al levr.}\]
\[\text{‘Yann has not read the book.’}\]

9.3.3 Breton F2 Effects
Recall the basic pattern of Breton. Despite its VSO word order, finite verbs may not appear in sentence-initial position. In a periphrastic verb construction, the past participle is fronted (so that [F] may satisfy NONINITIAL).

\[(22) \text{Breton}\]
\[\text{Lennet en deus Yann al levr.}\]
\[\text{read 3 have Yann the book}\]
\[\text{‘Yann has read the book.’}\]

In the absence of a finite auxiliary, Breton opts for two strategies. One involves an expletive auxiliary form—ra in (23a)—preceded by the infinitive (or verbal noun) form of the lexical verb. The second strategy involves fronting an argument, resulting in SVO or OVS word order, as in (23b) and (23c).

\[(23) \text{Breton}\]
\[a. \text{Lenn a ra Anna al levr.}\]
\[\text{read-inf part do-3 Anna the book}\]
\[\text{‘Anna reads the book.’}\]
b. Anna a *lenn* a levr. 
Anna part read-3 the book
‘ANNA reads the book.’
c. Al levr a *lenn* Anna. 
the book part read-3 Anna
‘Anna reads THE BOOK.’

Interestingly enough, the two strategies lead to different interpretations. Press (1986) emphasizes the neutral discourse status of (23a), while he and Schafer (1995) emphasize the nonneutral status of (23b) and (23c). In the latter but not the former, the fronted argument is focalized by virtue of encoding new information (a case of what Kiss (1998) calls “information focus”; see also the contributions by Choi, Costa, and Samek-Lodovici—chaps. 6, 7, and 11, respectively—in the present volume). In Schafer’s words, a “subject-initial sentence is a classic answer to a question asking who did something” (1995:151n.). This is an important clue that the input specifications underlying (23a) on the one hand and (23b) and (23c) on the other are different. The inputs to (23b) and (23c) include different constituents marked with the discourse feature [focus]; the input to (23a) includes no such information.

As I will demonstrate below, past participle fronting in Breton has the dual function of enforcing the second-position requirement on [F] and matching the information structure of the output with the specifications of the input. That is, past participle fronting also ensures that no argument is interpreted as new information if the input does not contain a [focus] feature. Previous analyses have recognized the first motivation—that is, F2 (Ortiz de Urbina 1994; Schafer 1995; Borsley, Rivero, and Stephens 1996)—but not the second.

Consider first the formal optimization underlying the discourse-neutral auxiliary structure in (22). The auxiliary *en deus* is not a clitic; hence it is base generated in the head position of an extended projection of V (Grimshaw 1991). Incorporating Grimshaw and Samek-Lodovici’s 1998 claim that null subjects do not exist, I assume that projections of V are simply V’s in the absence of an overt specifier. (Nothing hinges on this assumption, however.)

The least costly way of achieving F2 is by fronting the nonfinite verb, in violation of economy of structure and movement. As formally expressed in tableau T9.1, alternative options are more costly (including an expletive auxiliary for reasons that will be become clear with the next competition, tableau T9.2). In the interest of clarity and space, the candidate set in tableau T9.1 includes only the best of the lot: (a) fronting V, (b) not fronting V, and (c) fronting an argument, say O. The main constraints that interact to produce the basic Breton pattern are NONINITIAL(F) and EDGEMOST(F)—NI(F) and E(F) for short—and FAITH, to be discussed shortly. (Finiteness is indicated by a subscript for easy identification.) Candidate (b) is elimi-
Tableau T9.1
Breton VauxSO

<table>
<thead>
<tr>
<th>Input: V(S, O), [perf], [F]</th>
<th>FAITH</th>
<th>NI(F)</th>
<th>E(F)</th>
<th>E(ASP)</th>
<th>*t</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [V’ V_i [V’ auxF [VP S [V’ t_i O]]]]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [V’ auxF [VP S [V’ V O]]]</td>
<td></td>
<td></td>
<td>!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. [VP O_i [V’ auxF [VP S [V’ V t_i]]]]</td>
<td>!</td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

nated by NONINITIAL(F). In each candidate, the finite auxiliary is leftmost in its V’, hence EDGEMOST(F) is satisfied. The auxiliary also encodes [aspect], here perfective, hence the constraint EDGEMOST(ASP). Its violations are parallel to those of EDGEMOST(F); they will be omitted in other competitions. Fronting V (candidate (a)) requires an additional projection whose head is the landing site of V-movement. V-movement (candidate (a)) and fronting of O (candidate (c)) entail violations of *t/STAY (Legendre et al. 1995; Legendre, Smolensky, and Wilson 1998; Grimshaw 1997), but these violations of economy of structure and movement are compensated for by the fact that higher-ranked constraints are satisfied.

Consider the comparative cost of fronting an argument in discourse-neutral contexts, candidate (c) in tableau T9.1. I propose that candidate (c) is suboptimal because fronting either S or O entails nonrecoverability of the input (i.e., a violation of input-output faithfulness or FAITH). That is, given an input where both S and O are discourse neutral, the optimal output, with either fronting of S or O, entails an interpretation in which the fronted element is not discourse neutral. This is clear from Press 1986 and Schafer 1995, as reported above.

Their comments can easily be recast in OT terms, based on a constraint like ALIGNFOCUSLEFT that is satisfied when an element marked [focus] in the input is leftmost in the clause (Samek-Lodovici 1998). The focused XP presumably is also subject to a general constraint that places XPs in specifier position. In tableau T9.1, there is no focus feature in the input, hence ALIGNFOCUSLEFT is vacuously satisfied and left out of the competition. Note, however, that ALIGNFOCUSLEFT does not allow a listener to assign a focus feature to an element in specifier position. This is because the constraint has the form: if +[focus] then left-aligned. Rather, comprehension requires its converse. If a left specifier position is filled, the filler is interpreted as focalized: if left-aligned, then +[focus]. A FAITH violation results from a constraint motivated by requirements of comprehension. Candidate (c) is eliminated.

If this analysis is on the right track, then fronting both V and an argument should be ungrammatical in the presence of an auxiliary because a fatal violation of FAITH
arises. Indeed, various scholars have noticed the ungrammaticality of structures like (24).

(24) Breton

*Al levr lennet en deus Yann.
the book read 3 have Yann
‘Yann has read the book.’

When the second position of [F] is in peril, due to the fact that there is no aspectual auxiliary to carry [F], Breton resorts to an expletive auxiliary, as in (23a). In OT terms, expletive elements are costly because they violate FULLINTERPRETATION, which penalizes elements whose lexical conceptual structure is unparsed (Grimshaw 1997; Grimshaw and Samek-Lodovici 1998).18 The fact that Breton opts for an expletive auxiliary rather than fronting an argument shows that FAITH must outrank FULLINTERPRETATION (FI in tableau T9.2 for short).19 The relative ranking of FULLINTERPRETATION and EDGEMOST(F) and *t is indeterminate. Because no argument is marked with a [focus] feature in tableau T9.2, candidates (c) and (d) fare poorly with respect to FAITH. Note that candidate (c)’s violation of FAITH is crucial to the outcome of the competition: (c) better satisfies all other constraints. Yet the subject is in the top specifier position leading to its interpretation as focalized, in violation of input-output faithfulness. Candidate (d) is in fact harmonically bound by candidate (a) ((d) violates every constraint violated by (a) plus one more constraint), hence it can never win under any ranking (Prince and Smolensky 1993).

Candidate (b) is eliminated because the finite verb is in initial position. Expletive ober ‘do’ (candidate (a)) appears as a last resort, to prevent a fatal violation of NONINITIAL(F). This is, formally, very similar to do-support in English, though the violation that expletive do obviates is an OBLIGATORYHEADS (ObHd) violation (see Grimshaw 1997 for details).

In fact, Breton further uses expletive ober in the context of VP topicalization, arguably to obviate an ObHd violation.

### Tableau T9.2

Breton expletive auxiliary

<table>
<thead>
<tr>
<th>Input: V(S, O); [F]</th>
<th>FAITH</th>
<th>NI(F)</th>
<th>FI</th>
<th>E(F)</th>
<th>*t</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [v’, V_i [v’ expl_F [vp S [v’ t_i O]]]]</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>b. [v’ V_Fi [vp S [v’ t_i O]]]</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>c. [vp S [v’ V_F O]]</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>d. [vp S_j [v’ expl_F [vp t_j [v’ V O]]]]</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>
(25) Breton
   Lenn al levr a ra Yann.
   read the book part do-3 Yann
   ‘Read the book, Yann does.’

Assuming that the constituent lenn a levr has been topicalized to the specifier position of an extended projection of V (under compulsion from a dominating appropriate information structure constraint), there is a head that must be filled, otherwise ObHd is violated. Expletive ober comes to the rescue.

The present analysis of F2 makes the prediction that the focalization of an argument and an expletive auxiliary are incompatible with each other. Thus, the present analysis automatically accounts for the ungrammaticality of (26), noted in Borsley 1990 and Borsley, Rivero, and Stephens 1996.

(26) Breton
   a. *Al levr a ra lenn Anna.
      the book part do-3 read Anna
   b. *Anna a ra lenn al levr.

Consider why. If neither subject nor object is marked with the feature [focus] in the input, both (26a) and (26b) incur fatal violations of FAITH (in addition to violations of FULLINTERPRETATION). In contrast, the optimal counterpart (23a) incurs only a violation of FULLINTERPRETATION. If the object O contains the feature [focus] in the input, O must then be fronted to satisfy ALIGNFOCUSLEFT. O, in turn, automatically provides a shield for [F], which can then satisfy NONINITIAL(F). There is absolutely no need for an expletive element. The result is a simple OVS structure (23c). When S has the feature [focus] in the input, S can satisfy ALIGNFOCUSLEFT without movement in lower SpecVP. There again, [F] automatically satisfies NONINITIAL(F) and yields an SVO structure (23b). On either reading, (26a) and (26b) are suboptimal candidates.

The present analysis of F2 further predicts that Breton will exploit other strategies whenever the input makes them available. One of them involves wh-phrases.

(27) Breton
   Piv en deus Yann gwelet dec’h?
   who 3 have Yann seen  yesterday
   ‘Who did Yann see yesterday?’

The presence of a wh-phrase in the specifier of the phrase headed by the auxiliary offsets the need to move V to get [F] in second position, and thereby avoids an additional violation of *t. (I am assuming that piv ‘who’ moves from its underlying VP-internal object position to the available top specifier position to satisfy OpSPEC (Grimshaw 1997).
Another avenue is available when the input contains a [neg] feature. According to the literature on Breton, the negative particle ne is a clitic. This means that it is realized at PF. Yet it prevents [F] from violating NONINITIAL(F). This is evidence that the second-position requirement on the finite verb is a PF requirement. The same pattern holds in South Slavic (Legendre 1998b, 1999a, forthcoming b). Adding an expletive auxiliary and, as a result, a violation of FULLINTERPRETATION is simply unnecessary.

(28) Breton

Ne lenn ket Anna al levr.
neg read-3 neg Anna the book
‘Anna does not read the book.’

The negative adverb ket is assumed to be adjoined to VP in tableau T9.3 (p. 260). Violations of *t are incurred by all candidates, hence they can be ignored. The fact that the optimal candidate (a) violates EGDIMOST(F) allows its relative ranking to be recovered: FULLINTERPRETATION \( \gg \) EGDIMOST(F). Otherwise candidate (b) or (c) would win. Note, however, that the two EGDIMOST constraints are unranked one relative to the other. Either ranking will favor candidate (a).

Interestingly, Press (1986:128) notes in his descriptive grammar that expletive ober can only be used emphatically in the negative, yielding grammatical structures like candidate (c). That is, in a negative context ober has the same (emphatic) function English do has in affirmative contexts: he did lie (vs. he lied). The present analysis offers a simple and straightforward explanation for this. The negative particle ne is sufficient to shield [F]. Thus, candidate (c)—with the finite expletive auxiliary in third position—is the optimal candidate for a distinct input, presumably one in which emphasis is placed on negation. Leaving the details to be worked out, whatever information structure constraint applies when emphasis is placed on negation overrides FULLINTERPRETATION. As a consequence, the finite expletive auxiliary surfaces in third position and the F2 effect is masked.

As noted early in the chapter, masking of F2 also occurs in the presence of clitic pronouns. The examples are repeated here for convenience.

(29) Breton

a. E c’halvet en deus Yann.
   him called 3 have Yann
   ‘Yann has called him.’

b. *E en deus c’halvet Yann.

My proposal is this. Both [acc] and [F] want to be EGDIMOST in \( V' \). If there is only one \( V' \) projection above the lexical projection of \( V \), that of aux, only one feature can be satisfied (as in candidate (b) in tableau T9.4). Breton offers another option, namely
### Tableau T9.3
Breton negVSO

<table>
<thead>
<tr>
<th>Input: V(S, O); [F] [neg]</th>
<th>NI(F)</th>
<th>FI</th>
<th>E(NEG)</th>
<th>E(F)</th>
<th>NI(NEG)</th>
<th>*t</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ([v' \neg v_f [v_p \neg [v_p s [v' t_i o]]]])</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. ([v' \neg v_i [v' expl_f [v_p \neg [v_p s [v' t_i o]]]])</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ([v' v_i [v' neg expl_f [v_p neg [v_p s [v' t_i o]]]])</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. ([v' v_f neg [v_p neg [v_p s [v' t_i o]]]])</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tableau T9.4
Masked F2 effects

<table>
<thead>
<tr>
<th>Input: V(S, O); [F] [acc] [perf]</th>
<th>E(acc)</th>
<th>NI(F)</th>
<th>E(F)</th>
<th>NI(ACC)</th>
<th>*t</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ([v' acc v_i [v' aux_f [v_p s [v' t_i o]]]])</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. ([v' acc aux_f [v_p s [v' v o]])</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
fronting the past participle, which it routinely does to satisfy NONINITIAL(F). Fronting the past participle incurs a *t violation but it provides an additional V’. In return for this, both EDGEMOST constraints can be simultaneously satisfied. Each feature is properly aligned, albeit in different V’ projections. In this analysis, no conflict arises because the building up of structure is relatively “cheap” in Breton. Economy of structure (MinPro; Grimshaw 1993) and *t are subordinated to EDGEMOST constraints. Thus, EDGEMOST(X) can be satisfied in separate projections. But not all features are “equal,” hence [F] cannot exchange its place with [acc]. If it did, it would fatally violate NONINITIAL(F). The consequence is that the finite auxiliary is relegated further away from the clausal edge, in third position.

Note that candidate (a) in tableau T9.4 violates the HEADMOVEMENT constraint (HMC, Travis 1984)—V is fronted across an aux head. In fact, the HMC is also violated by optimal candidates in tableaux T9.1 and T9.2. This is not surprising since, from an OT perspective, the HMC is violable like any other constraint (see also Vikner, chap. 14, this volume). In Breton, it must be subordinated to EDGEMOST constraints. For present purposes, we may assume that the HMC ranks as low as *t.

Note that the competition in tableau T9.4 does not eliminate a third candidate, (c), in which the finite auxiliary and V exchange positions. If one assumes base generation of aux in the lower verbal projection and V in the higher one, (c) in fact fares better than (a), since (c) only violates NONINITIAL(ACC). The reason such a candidate is suboptimal is arguably Case, if Nominative Case assignment in VSO languages relies on government from I to the subject in SpecVP (McCloskey 1991).

The formal analysis in tableau T9.4 makes a prediction. Clitic pronouns should be ungrammatical in initial position just in case there is only one available verbal projection above the one containing the overt subject. As noted in Borsley, Rivero, and Stephens 1996:62, simple tense structures like (30a) and (30b) are indeed ungrammatical.

(30) Breton
      him called-3 Yann
      ‘Yann called him.’
   b. *O gwelis.
      them saw-1
      ‘I saw them.’

Note that the finite verb is in second position in (30), yet the result is ungrammatical. In the present analysis, the problem is that only one feature, [acc], is able to satisfy EDGEMOST, and that is not good enough.

A further prediction is that, all other things being equal, (30a) and (30b) should lose to counterparts with a finite expletive auxiliary. The grammatical sequence
should be: accusative, pro-V-finite ober (subject). I have not been able to check this prediction with a native speaker; Borsley, Rivero, and Stephens do not provide the grammatical counterparts to (30a) and (30b). In an analysis relying on inviolable principles, the explanation for the contrast between (29) and (30) must rely on an added stipulation. For example, Borsley, Rivero, and Stephens (1996:62) resort to stipulating that "the combination of a clitic and a finite verb counts as a finite verb." This solves the problem in (30) but it immediately creates another one. As illustrated in (31), the noninitial requirement on finite verbs in Breton is not absolute. The data is from Borsley, Rivero, and Stephens 1996.

(31) Breton
   a. Emañ Yann war an hent.
      is Yann on the road
      'Yann is on the road.'
   b. Emañ Anna o lenn al levr.
      is Anna prog read the book
      'Anna is reading the book.'

In (31a), finite emañ 'be' is used as a copula. In (31b), emañ is used to express the progressive aspect, in conjunction with the particle o. Breton shares with English (and other languages) the fact that the progressive aspect is expressed by means of a discontinuous relation between two morphemes, which by themselves may be used for other purposes—for example, copula be and gerund -ing. Both are necessary to express the progressive. How to best capture the discontinuous relation is beyond the scope of the present chapter. What exact feature label to give to a multipurpose auxiliary is not obvious either. (I will provisionally call it [aspect] or [modality], or [copula], depending on its use.) Instead, I focus here on the fact that once an auxiliary has been coopted for a particular function, it has to be positioned. The other morpheme—for instance, progressive o in Breton—is subject to its own alignment constraint, which I will ignore here.

In our terms, the [aspect] feature's preference is clearly one for Edgemost(Asp) over Noninitial(F) in Breton. The finite aux/copula emañ violates Noninitial(F) in order to satisfy the Edgemost requirement on the other feature it carries, [aspect]. It is not the case that Tense is licensed in two different ways in Breton, one for emañ and one for all other verbs and auxiliaries, as proposed in Borsley, Rivero, and Stephens 1996:63. Rather, the two features carried by emañ (aspect, F) conflict with one another. Alignment of [aspect] is dominant and thus dictates the outcome, masking the F2 effect in Breton.

Of course, this does not imply that emañ must always surface in clause-initial position. Whether it does or not depends on constraint interaction. Thus under VP topicalization triggered by a high-ranking information structure constraint, emañ
surfaces as expected following the topicalized constituent and the negative particle, if 
one is available. The example is from Borsley, Rivero, and Stephens 1996:56.

(32) Breton

O llen al levr n' emañ ket Yann.
prog read the book neg is neg Yann
'Reading the book, Yann isn't.'

To sum up, I have argued that Breton exploits a number of strategies to achieve 
linearization of [F] in second position, including V fronting or the use of an expletive 
 auxiliary. While the conclusion that Breton is an F2 language is in accord with pre-
vious claims (Ortiz de Urbina 1994; Schäfer 1995), both the overall analysis of F2 
and that of expletive ober are quite different. First, the analysis is grounded in 
economy of structure and movement. Structure is built up only as much as is needed 
to meet the demands of high-ranked constraints. Second, the analysis relies on OT's 
unique input-output faithfulness to explain the relationship between word order and 
information structure status. That relationship is completely ignored in the generative 
literature. Third, there is an expletive auxiliary (ober) that comes into play as a last 
resort to save structures that otherwise would fatally violate different constraints 
in different contexts. Fourth and last, constraints are violable. For example, FULL-
INTERPRETATION is violated by the optimal candidate in tableau T9.2, while violating 
it is fatal to candidates with expletive ober in tableau T9.3. This fundamental prop-
erty of OT, by itself, explains the grammaticality of expletive ober in some contexts 
but not others.

F2 is masked in Breton to the extent that it is invisible on the surface. Formally, 
this is the result of two types of constraint interactions. First, F2 is masked when-
ever some information structure constraint overrides the constraint interaction that 
yields second position (e.g., VP topicalization). Second, F2 is masked when several 
features are realized as separate phrasal affixes. Under the Breton constraint ranking, 
no conflict arises. EDGEMOST(X) can be satisfied in separate projections. Additional 
structure is built up with the consequence that the finite auxiliary is relegated further 
away from the clausal edge. Thus, F2 can be masked by the relatively “cheap” 
building up of structure in Breton.

When the constraint NONINITIAL(F) is active (i.e., it eliminates suboptimal candi-
dates) as in tableaux T9.1 to T9.3, the unmarked pattern, F2, emerges from the 
competition. This is an instance of the Emergence of the Unmarked (McCarthy and 
Prince 1994).

9.3.4 Macedonian F2 Effects
We finally turn to Macedonian and a different constraint interaction underlying 
masked F2 effects. I propose that, in Macedonian, masked F2 effects derive from
competing with other features for the same (second) position. In other words, Macedonian is both an F2 language like Breton and a second-position clitic language like related South Slavic languages, Bulgarian and Serbo-Croatian.

To start, consider the basic empirical facts again. On the one hand, pronominal clitics precede finite lexical verbs but follow nonfinite ones. This is shown in (33).

(33) Macedonian

a. Ti go dade.
   you-dat it-acc gave-3
   ‘(He) gave it to you.’

b. Davaiji mi ja.
   give-ger me-dat it-acc
   ‘Giving it to me . . .’

On the other hand, participles display two patterns. Like nonfinite gerunds, verbal and predicate adjectives (as well as predicate nouns) precede auxiliary and pronominal clitics, as (34a) and (34b) show. Nonfinite l-participles used to report unwitnessed events, however, follow, rather than precede, the same set of clitics, as in (34c).22

(34) Macedonian

a. Dojden sum.
   come be-1
   ‘(I) have come.’

b. Mil si mi.
   dear be-2 me-dat
   ‘(You) are dear to me.’

c. Sum ti go dal.
   be-1 you-dat it-acc given-evid
   ‘(I) have (supposedly) given it to you.’

The idea is this. On the one hand, the finite verbal category seeks a noninitial position; see (33a) as well as (34a) and (34b). Translated into our terms, this follows from the ranking: NONINITIAL(F) >> EDGEMOST(F). On the other hand, pronominal clitics also seek a noninitial position, as shown in (33b) and (34c). This suggests the additional ranking: NONINITIAL(ACC, DAT) >> EDGEMOST(ACC, DAT). The outcome is of course a competition for noninitial position. If present in the input, [F] prevails, as shown in (33a); hence [F] is realized on the verb in noninitial position, while object clitics violate NONINITIAL(F). This reveals the relative ranking of the constraints pertaining to [F] and those pertaining to other features: NONINITIAL(F) >> NONINITIAL (ACC, DAT). Finite verbs appear after clitics because the NONINITIAL constraint on [F] outweighs that on [ACC], [DAT].
Tableau T9.5
Macedonian finite verbs

<table>
<thead>
<tr>
<th>Input: V(S, O); [F] [dat] [acc]</th>
<th>NI(F)</th>
<th>NI(CASE)</th>
<th>E(DAT)</th>
<th>E(ACC)</th>
<th>E(F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [v′ dat acc V_F]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [v′ V_F dat acc]</td>
<td>*!</td>
<td></td>
<td>*</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>c. [v′ dat V_F acc]</td>
<td></td>
<td>*</td>
<td></td>
<td>**!</td>
<td></td>
</tr>
</tbody>
</table>

The formal competition underlying (33) is displayed in tableau T9.5. In the interest of space, [dat] and [acc] are subsumed under [case] in NONINITIAL(CASE). The finite verb ends up in third position if two pronominal clitics are present because EDGEMOST(DAT, ACC) favors the two features [acc] and [dat] over [F]. That is, the relative ranking of EDGEMOST constraints favors candidate (a) over candidate (c). The relative position of the two pronominal clitics is determined by the dominant EDGEMOST(DAT).

A number of predictions immediately follow. One is that, in the absence of the finite feature [F], object clitics cluster in noninitial position. That is, when NONINITIAL(F) is vacuously satisfied, encapsulated NONINITIAL(CASE) dominates, ruling out the suboptimal candidate that contains domain-initial clitics. The ranking NONINITIAL(CASE) ≫ EDGEMOST(CASE), in turn, ensures second position, for example, for the feature [accusative] in the presentative construction with clitic doubling in (35).

(35) Macedonian
Ene go čovekovt.
here him-acc man
‘Here is the man.’

The Macedonian future is a periphrastic construction in which the future auxiliary is an invariable clitic. The lexical verb, on the other hand, appears in the perfective present and thereby instantiates [F]. In the present analysis, the future auxiliary is predicted to precede the finite verb. Again, this is because given the choice between placing a finite verb or a clitic in noninitial position, Macedonian opts for the first alternative. This prediction is correct, as shown in (36).

(36) Macedonian
Ke dojdam.
will come-1
‘(I) will come.’

Thus the ranking—NONINITIAL(F) ≫ NONINITIAL(CASE) ≫ EDGEMOST(CASE) ≫ EDGEMOST(F)—entails procliticization with finite verbs and encliticization with nonfinite verbs, the core pattern of Macedonian identified in Joseph 1983 and Tomić 1996.
Further predictions pertain to the intermixing of Edgemoest constraints. In particular, the present analysis of [F] predicts that a finite verb (i.e., when [F] is realized on a head) can break up a clitic cluster if Edgemoest(F) is ranked among other Edgemoest constraints. Such patterns are actually found in Macedonian imperatives: [neg-Vimp,F-dat-acc].

(37) Macedonian

\[
\begin{align*}
\text{Ne dava} & \text{je mu go!} \\
\text{neg give-imp dat acc} \\
\text{`Don't give it to him.'}
\end{align*}
\]

\textit{Ne} is a clitic (Tomić 1996). I have argued elsewhere that imperatives involve two features, [imp] and [F]. [F] may or may not be parsed in a given language, giving rise to nonfinite imperatives. The Balkan imperatives display agreement with their understood subject. Hence they are finite, as discussed in Legendre (1998b, 1999a).

Dative and accusative clitics are inseparable in Macedonian. The present analysis, however, predicts that this is not a universal pattern. Reranking of Edgemoest constraints, in particular, predicts that pronominal clitics can be split by [F]. The prediction is correct. For example, in Franco-Provençal dialects of Romance, object clitics (i.e., accusative, dative, and partitive) can be split and separated by a finite auxiliary or a complex verb. Examples (38a) and (38b) are from Olszyna-Marzys 1964:48, while example (38c)—cited in Kayne 1991:661—is originally from Chenal 1986. I have retained the quasi-phonetic spelling of the authors.

(38) a. Si mots \textit{ei} va \textit{se} metr kontr a dzuta.
\hspace{1cm} this fly 3-dat fut-3sg refl-acc put against the cheek
\hspace{1cm} `This fly will land on his cheek.'

b. \textit{Me chei} pa \textit{enschwenae}.  
\hspace{1cm} refl-dat be-1-sg not part-remember
\hspace{1cm} `I did not remember (of) it.'

c. \textit{T' an tē deut- lo?}
\hspace{1cm} 2-dat have they said 3-acc
\hspace{1cm} `Have they told it to you?'

We return to our main interest, deviations from the core pattern in Macedonian—predicative constructions and the two past participle patterns, repeated in (39).

(39) Macedonian

a. Dojden \textit{sum}.
\hspace{1cm} come be-1
\hspace{1cm} `(I) have come.'

b. Mil \textit{si mi}.
\hspace{1cm} dear be-2 me-dat
\hspace{1cm} `(You) are dear to me.'
c. *Sum ti go dal.*
be-1 you-dat it-acc given-evid
'(I have (supposedly) given it to you."

Despite the fact that all participles are nonfinite (see note 22), predicative constructions and *n*/l-participles show encliticization, while *l*-participles show procliticization.

The basic idea is the following. First, note that clitic auxiliaries like *si*, *sum* are special in the sense that they instantiate two separate features, [aspect/copula] and [F]. Now suppose that [aspect/copula] is basically a domain-initial clitic in an otherwise second-position clitic language. In terms of constraint ranking, this means that EDGEMOST(ASP/COP) outranks NONINITIAL(ASP/COP). We have a conflict: on the one hand, *sum* wants to be in domain-initial position because it instantiates [asp]; on the other, *sum* wants to be in second position because it instantiates [F] and [F] is subject to NONINITIAL(F) ⇒ NONINITIAL(ASP/COP). This conflict can be resolved by having EDGEMOST(ASP/COP) tie with NONINITIAL(F). As a consequence, EDGEMOST(ASP/COP) and NONINITIAL(F) violations cancel out and the optimal candidate is determined by lower-ranked constraints. (See my introductory chapter in this volume for further discussion of ties.)

In the case of predicate adjectives and *n*/l participles, the next-lower constraints on the hierarchy are NONINITIAL(ASP/COP) and NONINITIAL(DAT, COP), unranked with respect to one another, which preclude domain-initial position. There is one way and one way only to satisfy them: by encliticization. The competition is displayed in tableau T9.6 (p. 268) for predicate adjectives. Note that candidate (e) (reversing the relative order of [cop] and [dat] from the optimal candidate (a)) is eliminated by two violations of gradient EDGEMOST(COP).

The claim that the F2 effect in Macedonian is purely positional receives additional support from the fact that other elements besides the past participle or the predicative adjective can serve as hosts of clitics and [F]. Emphatic subject pronouns can, and so can modifiers that always precede the element they modify (Legendre 1998b).

(40) Macedonian

a. Ti *si mi mil.*
you be-2 me-dat dear
'You are dear to me.'

b. Mnogu *si mi mil.*
very be-2 me-dat dear
'(You) are very dear to me.'

Returning to *l*-participles (39c), recall that they express evidential modality in conjunction with the clitic auxiliary *be*. I will label the aux as encoding [modality] and the participle as bearing the feature [evidential], interpreted here as subject to the same alignment constraints as other features. The formal competition underlying (39c) is depicted in tableau T9.7. Note that all elements carry at least one feature,
Tableau T9.6
Macedonian predicate adjectives

<table>
<thead>
<tr>
<th>Input: V(S, IO); [F], [cop], [dat]</th>
<th>E(COP)</th>
<th>NI(F)</th>
<th>NI(COP)</th>
<th>NI(DAT)</th>
<th>E(DAT)</th>
<th>E(F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [v' pred cop_F dat]</td>
<td>⊙</td>
<td></td>
<td></td>
<td></td>
<td>⊙⊙</td>
<td>⊙</td>
</tr>
<tr>
<td>b. [v' cop_F dat pred]</td>
<td></td>
<td>*</td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. [v' dat cop_F pred]</td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. [v' cop_F pred dat]</td>
<td></td>
<td>*</td>
<td>*!</td>
<td></td>
<td></td>
<td>**</td>
</tr>
<tr>
<td>e. [v' pred dat cop_F]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>f. [v' dat pred cop_F]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**</td>
</tr>
</tbody>
</table>

Tableau T9.7
Macedonian l-participles

<table>
<thead>
<tr>
<th>Input: V(S,O); [F] [mod] [dat] [acc] [evid]</th>
<th>E (MD)</th>
<th>NI (F)</th>
<th>NI (CASE)</th>
<th>E (DAT)</th>
<th>NI (MD)</th>
<th>E (ACC)</th>
<th>E (F)</th>
<th>E (EV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [v' mod_F dat acc evid]</td>
<td></td>
<td>⊙</td>
<td></td>
<td>⊙⊙⊙</td>
<td></td>
<td>⊙⊙⊙</td>
<td>⊙</td>
<td>⊙⊙⊙</td>
</tr>
<tr>
<td>b. [v' dat acc mod_F evid]</td>
<td>**!</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>c. [v' evid mod_F dat acc]</td>
<td></td>
<td></td>
<td>**!</td>
<td>***</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. [v' mod_F evid dat acc]</td>
<td></td>
<td></td>
<td>**!</td>
<td>***</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. [v' mod_F dat evid acc]</td>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
<td>***</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. [v' dat mod_F acc evid]</td>
<td></td>
<td></td>
<td>*</td>
<td>*!</td>
<td></td>
<td>**</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>
hence a NONINITIAL constraint is violated by all candidates. EDGEMOST(MOD) and NONINITIAL(F) tie, hence single violations of either one count alike. The decision falls to EDGEMOST constraints. Candidate (c), for example, shows the same pattern of violations of the three highest-ranked constraints (given the equal ranking of EDGEMOST(MOD) and NONINITIAL(F)). But fronting of the participle entails one additional violation of EDGEMOST(DAT), compared to not fronting the participle (candidate (a)). Hence candidate (a) is optimal. Breaking the cluster of clitics, as in candidates (d), (e), and (f), has a similar effect. It entails additional violations of EDGEMOST(ACC, DAT), compared to the optimal candidate (a) or even a fatal violation of NONINITIAL(CASE) (as in candidate (f)).

To sum up, Macedonian exemplifies a different type of masked V2 effect because [F] is borne by a clitic auxiliary. In the absence of other effects, the competition is just among features that compete with one another for linearization in second position. Once the nature of the competition is understood in these terms, the complex Macedonian pattern of pro- versus encliticization is a natural consequence of optimizing their conflicting alignment requirements at PF. Viewed from the perspective of OT, the basic and elegant generalization proposed in Joseph 1983 and Tomić 1996—procliticization with finite verbs and encliticization with nonfinite verbs—can be retained without its analytical complications because the deviations are the direct consequence of the optimization process.

9.4 Conclusion

The overall claim of this chapter is that the positioning of functional elements like [F] is not a deep syntactic phenomenon, contrary to the prevailing view in generative circles. Rather, it is a fairly superficial process involving a lot of jostling at PF. [F], like other features commonly realized as clitics, is universally positioned by violable alignment constraints. Depending on the language—in particular, whether [F] is realized as a clitic or not—and the input, the competition may be strictly among PF constraints (as in the Macedonian examples), or it may involve the interaction of alignment constraints with syntactic and information structure constraints (as in the Breton examples). Either kind of interaction may, in some contexts, mask the basic second-position requirement that the two languages impose on their finite verbal elements. F2 is masked by other effects derived from higher-ranked constraints, including some pertaining to information structure (Breton) or to competing features (Macedonian and Breton). The very nature of constraint interaction in OT has been shown to allow such effects to be recovered when higher-ranked constraints are controlled for. Under these conditions, the unmarked pattern emerges, namely F2.

[F] is oblivious to the status distinction among clitic auxiliaries and nonclitic verbal elements (including lexical verbs). Traditionally, this has been interpreted as evidence
that all verbal categories have the same status of syntactic heads. I have argued against this view, on the basis that it does not explain the crosslinguistic syntactic inertness of clitic auxiliaries. The unification can therefore not be in syntactic terms. I have proposed that the unification takes place at PF via [F], which, in some cases in some languages, may drive the syntax of verbal heads.

The present analysis achieves a further unification of all second-position phenomena, whether they pertain to clitics or to verbal categories—and thereby bolsters an earlier claim made in Anderson (1993, forthcoming). In particular, languages are not partitioned into V2 languages, LHM languages, and so on. In the present analysis, they are all subject to the same constraints. What is observable on the surface is the product of constraint interaction, where constraints are construed as violable.

The present proposal is a radical departure from approaches to inflectional morphology that rely on movement in the syntax, either via head adjunction (e.g., Baker 1988; Pollock 1989) or via checking of strong features (Chomsky 1995). As is well known, the head-adjunction approach has led to a proliferation of abstract functional projections that cannot be assumed to be present in all languages, opening the door to further parametrization. Checking Theory, at least for Chomsky (1995), relies on abstract rather than morphological features, raising some serious questions about the explanatory value of formal features, once they are divorced from any morphological grounding.

There is a clear alternative in an optimizing system where structure does not come for free. The present chapter shows that the latter approach is not only viable but empirically well motivated; it offers a promising avenue for addressing the nature of intra-Germanic complications that are a challenge to the traditional V-to-C analysis of F2 effects. It also finds a natural place in a general alignment-based theory of surface word order, aspects of which are explored elsewhere in this volume.

Notes

This chapter has benefited from discussions with Paul Smolensky, comments by Luigi Burzio, Jane Grimshaw, and Sten Vikner, and elicitations from Olga Tomić. I thank and hereby absolve all from any remaining errors.

1. Prosodic Inversion moves a clitic (generated in the leftmost position in its syntactic domain) immediately to the right of its prosodic host at PF. The host is assumed to be a prosodic word, since the original proposal was made for (western) Serbo-Croatian clitics, which appear in second position after the first prosodic word. Morphological Merger is a similar operation, but movement is to the right of a lexical head (rather than a prosodic word). Use of such mechanisms largely amounts to undoing at PF what was previously done in the syntactic component. See Legendre (1996) for further discussion.

2. The existence of a NONINITIAL constraint finds corroboration in one of the better-known empirical generalizations on clitics, called the Tobler-Mussafia Law in Old Romance studies (see, for example, Benincà 1995).
3. Space precludes discussion of SOV languages like Basque, which show strikingly similar effects. See Legendre (forthcoming a) for details.

4. All the Breton data reported in this chapter is drawn from the generative literature (Stump 1989; Borsley 1990; Ortiz de Urbina 1994; Schafer 1995; Borsley, Rivero, and Stephens 1996) and a descriptive grammar (Press 1986). The Macedonian data comes from Tomić 1996 and supplementary elicitations from Olga Tomić.

5. Elsewhere, this clitic functions as an object clitic. Historically, the root expresses ‘be’: en deus ‘x is to him’ (Stump 1989).

6. Some complications pertaining to finiteness in Breton need to be put to rest before proceeding with the main issue. In Breton, there is near complementarity between the presence of subject agreement in person and number on verbal forms and null subjects. Typically, verbs agree with null subjects, but a default third-person singular form called analytic in the literature is found with overt subjects (Stump 1989): (1) Levriô a lenont ‘(They) read books (lit. books particle read-3pl)’, (2) Levriô a lenn (*lennont) ar vugale ‘The children read books (lit. books particle read-3sg the children)’. Complementarity of subject agreement and null subjects is not absolute, however, because the past tense auxiliary endevout ‘have’ does not follow this distribution. Despite the fact that the finite status of these auxiliary forms en deus ‘3sg masc’, he deus ‘3sg fem’, o deus ‘3pl’, and so on is controversial—see, for example, Borsley and Stephens 1989 versus Stump 1989—there is, in my opinion, substantial theory-external evidence for their finite status. First, the forms clearly differ with respect to the clitic preceding the root, depending on the person/number of the subject of predication. Second, these forms occur in null-subject contexts, which according to Stump (1989), require an agreeing form. Henceforth, I will use forms of endevout to document the position of finite verbs and leave aside the more complex issue of Breton agreement, which does not affect the points made here. Further complications arise with preverbal subjects and negation, which we may ignore here altogether (see Stump 1989 and Borsley and Stephens 1989 for discussion).

7. The Macedonian future (clitic) auxiliary is used in the example below because the auxiliary be is restricted to reported modality in the speech of my informant, hence incompatible with questions (Olga Tomić, personal communication). The fact that the future auxiliary is invariable is irrelevant (other finite clitic auxiliaries behave like (8a)).

8. Despite superficial similarity with the French Stylistic Inversion construction Où est parti Pierre? ‘Where has Peter gone?’, the pattern in (8) is not a case of Stylistic Inversion. As is well known since Kayne 1972, the French construction is triggered, for example, by a fronted wh-phrase. Note also that Stylistic Inversion is ungrammatical in yes-no questions, whereas the absence of subject auxiliary inversion is found in both wh- and yes-no questions. See Legendre 1999b for an OT analysis of Stylistic Inversion.

9. Unfortunately, I do not have corresponding data in Breton.

10. The fact that Macedonian clitic pronouns and auxiliaries can occur in initial position has traditionally been interpreted as evidence that they are not second-position clitics (Joseph 1983; Tomić 1996). But they only do so in some contexts. We have already seen that the auxiliary be alternates between initial and second position. Pronominal clitics (underscored in the examples below) do the same. They “cluster” in second position in some contexts, including l-participles and nonfinite verbs: (1) sum ti go kazal ‘I have told it to you (lit. have to-you it told)’, (2) davaiuki mi ja ‘giving it to me (lit. giving to-me it)’. See Legendre 1998b for further discussion.
11. Walpiri (Central Australia) provides additional evidence for the present analysis of auxiliary clitics as PF objects. Walpiri is a free word order language, meaning that the lexical categories S, V, O may appear in any order in relation to one another (Hale 1973, 1992). The only requirement is that an auxiliary encoding tense—*ka* in the example below—appear in second position. Thus, example (i) exemplifies only one of six possible well-formed sentences incorporating the same lexical elements.

(i) *Karnta-ngku ka yarla karla-mi.*

woman-ergative pres yam dig-nonpast

'The/a woman is digging yams.'

Besides encoding present tense, *ka* forms the base to which are affixed morphemes encoding person, number (and case, to some extent) of arguments, as well as complementizers. The base may be phonologically null—in which case only person markers (and complementizers) are realized. Note that the second-position requirement applies only if the base of the auxiliary is monosyllabic or if it is phonologically null. This restriction alone is strongly suggestive of a PF phenomenon.

12. The fact that pronominal clitics satisfy subcategorization properties of verbs is not necessarily evidence that they are syntactically independent items, contra the view held since Kayne 1975. The effect could be derivative, arising from the absence of clitic doubling in a given language. A theory that takes clitic doubling to be the default and derives its absence in some languages from the interaction of the need to mark case versus economy is sketched out in Legendre 1998a. Note further that ethical dative clitics share the same positional restrictions as other pronominal clitics, despite the fact that they do not satisfy subcategorization frames. See Sportiche 1996 for further discussion.

13. As extensively discussed in Anderson's (1992) book and subsequent work, there is a strong universal tendency for clitics to behave like word-level affixes despite the fact that clitics are less choosy with respect to their host.

14. Alternatively, the domain of *Edgemost*(F) is VP and (16b) results from a dominant constraint on specifiers relevant to the positioning of subjects, possibly SpecLeft (Grimshaw 1997). This implies that *Edgemost*(F) is violated in (16b). The advantage of construing the domain as VP (as pointed out by Jane Grimshaw, personal communication) is that it exploits the basic competition mechanism of OT whenever an overt subject surfaces. Yet construing the domain as VP makes a wrong prediction. Constraint reranking predicts that a language is possible in which the subject may split clitics. Where clitic splitting occurs, it only involves verbal elements, as far as I know. See (38) for some examples and discussion.

15. Ortiz de Urbina (1994) also notes that the clause-initial ban on finite verbal forms does not extend to embedded clauses. In other words, Breton is an asymmetric F2 language.

(i) Lavaret *en deus [ he deus desket Anna he c'hentelioù].*

said 3 have 3 have learned Anna her lessons

'(He) has said that Anna has learned her lessons.'

Why is that? Note that the subordinate clause contains no clause-initial complementizer. I tentatively propose that (a) the subordinate clause is not intonationally marked as a separate Intonational Phrase, and (b) this state of affairs is related to the absence of an overt complementizer. (I was unable to verify this with native speakers.) Embedded [F] automatically satisfies *NonInitial*(F) if the whole clause constitutes one Intonational Phrase domain. Past
Participle fronting is suboptimal because it entails unnecessary additional EDGEMOST(F) violations, in violation of economy.

Germanic languages complicate the picture but, to some extent, provide supportive evidence. German has embedded F2 in the absence of a complementizer: Er sagt, die Kinder haben diesen Film gesehen ‘lit. he says the children have this film seen’. As confirmed by Sten Vikner (personal communication), there is an intonational break right after the main verb. Thus, embedded [F] is second in a separate Intonational Phrase, as expected under the present analysis. Moreover, the fact that Icelandic and Yiddish display embedded V2 in the presence of a complementizer—a problem under the V-to-C analysis—is consistent with the claim that a complementizer “signals” a separate Intonational Phrase. Yet the fact that the Mainland Scandinavian languages display V2 in the presence of a complementizer only in the presence of certain matrix verbs (Vikner 1995) suggests that additional factors (and dominating constraints) are relevant.

16. Input-Output Faithfulness plays a crucial role in a number of studies, including Legendre et al. (1995), Legendre, Smolensky, and Wilson (1998), Grimshaw (chap. 8, this volume), Bresnan (chap. 5, this volume), as well as Baković and Keer (chap. 4, this volume).

17. I am ignoring typological issues relevant to left versus right alignment of focused elements. See both Costa and Samek-Lodovici (chaps. 7 and 11, respectively, this volume) for relevant discussion.

18. What determines whether a language makes use of an expletive auxiliary as opposed to an expletive subject (which could equally ensure second position of the verb) is presumably the relative ranking of constraints pertaining to subjects, SpecIP, and heads.

19. Note that, in the interest of limiting constraints to a more manageable number, the particle a is assumed to be part of expletive ober. It can easily be reinstated with its own EDGEMOST constraint, affecting the number of EDGEMOST(F) violated by the expletive auxiliary. This does not affect the outcome in any way.

20. Additional candidates are eliminated by other constraints, provided they outrank NONINITIAL(acc). For example, placing the pronominal clitic in the specifier of the lowest VP in a candidate similar to (a) saves a violation of NONINITIAL(acc), but it entails (assuming a *doubly filled Spec constraint) that the subject has to move somewhere and violate either *ADJUNCTION (Legendre 1999b) or FAITH.

21. Schafer (1995) adopts the standard analysis of Germanic V2—that is, verb movement from I to C. Note, however, that I to C is string-vacuous in a VSO language. Hence, Schafer only shows that Breton is compatible with the Germanic analysis, not that it must be analyzed as an instance of I-to-C movement. Borsley, Rivero, and Stephens (1996) propose a Long Head Movement (LHM) analysis instead—that is, head movement across another head.

Because Borsley, Rivero, and Stephens (1996) also appeal to tense as a motivation behind LHM, their analysis might, at first glance, be characterized as very similar to the present one. In their analysis, languages with F2 effects are characterized as being either LHM or verb-second languages. Two separate mechanisms of Tense licensing are proposed in LHM languages. Tense may be licensed by a V adjoined to Tense (i.e., in its checking domain) or in the internal domain of C. The latter is proposed for Breton and for Slavic auxiliaries allowing LHM (i.e., clitic auxiliaries). The former (Tense licensing in its checking domain) is proposed for auxiliaries that allow VP topicalization (i.e., nonclitic auxiliaries). Two homophonous (expletive) ober auxiliaries with different Tense-licensing properties are invoked because, ober, in
their terms, allows both LHM and VP topicalization. In the present analysis, there is no such thing as an LHM language since LHM is intimately tied to an analysis of clitic auxiliaries as syntactic heads. This is not to say that the HEAD MOVEMENT constraint (HMC, Travis 1984) is never violated. It can be, under compulsion of higher-ranked constraints. This is the case in Bulgarian under compulsion of information structure constraints (Legendre 1996) and Breton (when V is fronted across an auxiliary to satisfy NONINITIAL(F), as in tableau T9.1). There is no need for a separate concept of “functional auxiliary” that subsumes clitic auxiliaries on the one hand and other auxiliaries that violate HMC on the other (Rivero 1994; Borsley, Rivero, and Stephens 1996) because the latter is simply the consequence of constraint interaction. Other proposals, like the present one but focusing on Germanic V2 languages, appeal to finiteness features. These include many different versions, including Holmberg and Platzack (1995) arguing for a finiteness operator [+F] located in C in V2 languages and Tomaselli (1990) favoring tense and agreement in C. Vikner (1995:51–64) offers critiques of both analyses couched in standard Government-Binding terms.

22. Some comments on the finiteness of l-participles are called for here. Because of the contrast just mentioned, some scholars, in particular Joseph (1983) and Tomić (1996), have proposed the following generalization: Macedonian clitics procliticize to finite verbs but encliticize to nonfinite verbs. This leads to treating l-participles as finite. Legendre (1998b), however, provides a number of arguments against this conclusion, including the following. First, l-participles, like nonfinite -n/-t participles, are inflected for gender and number but not for person. Second, they co-occur with an auxiliary that is finite (with tense + person/number morphology). Treating l-participles as finite would amount to claiming that two verbal elements in a single sentence are finite, despite a lack of corresponding morphology for one of them. Finally, l-participles in other South Slavic languages behave exactly like their nonfinite participles, including with respect to cliticization.

23. As is well known, V2 is limited to root clauses in some Germanic languages (Dutch, German) but not others (Icelandic, Yiddish). See, for example, Vikner 1995 for a clear presentation of the crosslinguistic facts and issues. The present approach suggests investigating masking effects in asymmetric languages like Dutch and German.

References


Legendre, Géraldine. 1998a. PF Cliticization and Complex Inversion in French. Handout of a talk delivered at the Second OT Workshop, University of Stuttgart, November.


