

VSO Order as Raising Out of IP? *Some Evidence from Old Irish*

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In the generative paradigm, there are at least two schools of thought about the derivation of VSO order via verb raising. One holds that the verb raises to the highest complementizer position (C°) of the matrix clause, in a manner familiar from den Besten's (1981) analysis of verb second languages like German and Dutch. The other holds that the verb is not in C° at all; rather it appears on the highest head of the inflectional complex, with the subject in some lower structural position. The first of these approaches was popular in the early work in the Government and Binding framework (Stowell 1989, Déprez and Hale 1986, Hale 1989). The latter approach has gained popularity in more recent work (Chomsky 1993, Bobaljik and Carnie 1996, Carnie 1995, Chung and McCloskey 1987, McCloskey 1990, 1991, 1996a, 1996b, Rouveret 1991, Sadler 1988, Guilfoyle 1990, 1993, Duffield 1991, 1995, Pyatt 1992, Fassi Fehri 1993, among many others). In this chapter, we would like to reopen the question of whether $V \rightarrow C^\circ$ movement is relevant to word order considerations in VSO languages. We will argue that both $V \rightarrow \text{Infl}$ and $V \rightarrow C^\circ$ are present in the VSO language Old Irish. We will argue that Old Irish had a "filled C° " requirement (in a sense to be made more precise below), thus deriving its basic VSO order from $V \rightarrow C^\circ$ movement. However, we will also assume that Old Irish derived VSO order from $V \rightarrow \text{Infl}$ movement in clauses with filled complementizers.

1. Two Approaches to VSO order

The earliest raising analysis of VSO order involved the movement of the verb to the complementizer head in a manner familiar from analyses of word order in verb second (V2) languages and from subject-auxiliary inversion in questions in

languages like English. This approach to verb second order was first proposed by den Besten (1981). Emonds (1980) extended this approach to VSO languages by claiming that all verb fronting was motivated by “attraction to the complementizer.” This approach was also popular in the early work on VSO in the Government and Binding framework (Stowell 1989, Déprez and Hale 1986, Hale 1989, Eska 1994, 1996). More recently, movement to C° has been proposed for Middle Welsh by both Clack (1994) and Sáinz (1994), and for Pembrokeshire Welsh by Watanabe (1993).

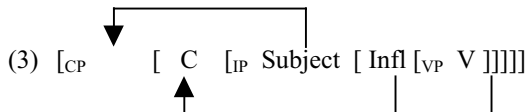
German and Dutch stand as typical examples of verb second languages. In tensed clauses without an overt complementizer, the verb must appear in “second position” in these languages. The first position in the sentence is occupied by any other XP constituent. In example (1) below (data from Haegeman 1991), the verb *kaufte* always appears in the second position; any of the other constituents (the subject *Karl*, the object *dieses Buch*, or the temporal adverb *gestern*) can appear in the first position. The remaining constituents follow the verb.

- (1) a. Karl kaufte gestern dieses Buch.
Karl bought yesterday this book
'Karl bought this book yesterday.'
- b. Dieses Buch kaufte Karl gestern.
'Karl bought this book yesterday.'
- c. Gestern kaufte Karl dieses Buch.
'Karl bought this book yesterday.'

In clauses with overt complementizers, by contrast, there is no verb second ordering. The verb appears in final position:

- (2) Ich dachte daß Karl gestern das Buch gekauft hat.
I thought that Karl yesterday the book bought has
'I thought that Karl had bought the book yesterday.'

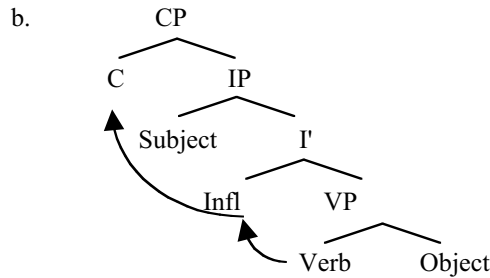
The traditional analyses of verb second (e.g., den Besten 1981, McCloskey 1992, among many others¹) hold that there is a requirement that the complementizer position be filled in tensed clauses.² The verb raises to the empty complementizer position in matrix clauses. There is then an additional requirement that the specifier of a matrix complementizer be filled by some element, giving the verb second orderings.



In embedded clauses, however, the complementizer position is filled, and the verb cannot raise to it; thus, verb second ordering is blocked.

An obvious extension of this approach is to posit a set of “verb first” (V1) languages where the requirement on filling the specifier of CP is not imposed, giving a VSO ordering.³ In this analysis, a Modern Irish VSO sentence like (4a) would have a derivation as in (4b).

- (4) a. Leanann an t-ainmní an briathar i nGaeilge.
 follow.PRES the subject the verb in Irish
 ‘The subject follows the verb in Irish.’ (Modern Irish)



The verb raises through its inflectional complex to C° and all the other arguments stay in their canonical positions. VSO order, under this approach, is thus like a “weak verb second effect”, in the sense that it is triggered by whatever triggers $V \rightarrow C^\circ$ movement in verb second languages, but lacks actual verb second order.

- (5) THE RAISING TO C HYPOTHESIS ($V \rightarrow C^\circ$)
 VSO order is derived via head movement of the verb to C° .⁴ There is a requirement in VSO languages that C° s be filled, but the specifier of CP need not be filled

An alternative approach to VSO order claims that the verb does not appear in C° , but rather appears at the left edge of the inflectional complex. In Sproat (1985), this is obtained by the adjunction of the verb to IP. In later work (e.g., McCloskey 1991, Duffield 1991, 1994, 1995, Guilfoyle 1993, Bobaljik and Carnie 1996, Pyatt 1992, Carnie 1995, etc.) this is achieved by head movement of the verb to the highest inflectional projection, in addition to shorter movement of the subject to some specifier of a lower inflectional head. In this chapter we will use Infl as shorthand for the inflectional complex, and leave the subject in the specifier of the VP, because the difference between positioning the subject in the specifier of VP or in some other specifier in the inflectional complex is irrelevant to the current discussion.

- (6) [CP C [IP [Infl [VP Subject [V object]]]]]
-

The exact details of how such an approach works are not crucial here, and we refer the reader to the above-mentioned works for more details. It is sufficient to

note that in an expanded Infl syntax (Pollock 1989, Chomsky 1993), the verb need not raise to C° to be initial in its clause; instead, it can raise to the highest inflectional category, with its arguments in the specifiers of lower inflectional phrases. Even in a non-expanded Infl, provided one assumes the Internal Subject Hypothesis of Koopman and Sportiche (1991), the verb needs only to raise to Infl to derive VSO order. After McCloskey (1996a), we will call this class of approaches the “left edge of inflection hypothesis” (7). We argue that, in Old Irish at least, both the “Raising to C” system and the “left edge of Infl” system are present. First, however, we will briefly discuss the evidence that has led many researchers to abandon the Raising to C analysis for other VSO languages (such as Modern Irish.)

(7) THE LEFT EDGE OF INFLECTION HYPOTHESIS ($V \rightarrow$ Infl)

VSO order is derived via head movement of the verb to the highest inflectional head (AgrS/T/Infl). Arguments appear in surface positions lower than this head. There is no (overt) raising to C° .

2. Against the Raising to C° Approach

McCloskey (1996a) has argued that a $V \rightarrow C$ analysis is unavailable for deriving basic VSO order in Modern Irish. First, as noted by Koopman and Sportiche (1991), there is the question of word order in embedded clauses with complementizers. Recall that in German, when the complementizer position is filled, verb second order does not arise. If Irish were analyzed similarly, then we would expect the order C° -SOV or C° -SVO in embedded clauses. In fact, we only see C° -VSO order. The verb still must raise:

- (8) Ceapaim [go bhfaca sé an madra.]
 think.PRES.1s [that see.PST he.NOM the dog]
 COMP V Subj Obj
 ‘I think that he saw the dog.’

The motivation for this verb-first ordering in the embedded clause cannot be a $V \rightarrow C^\circ$ movement requirement, since the complementizer position is filled.

McCloskey (1996a) makes a further argument against V-movement to C° in Modern Irish based on the interpretation of adjoined adverbials. McCloskey argues that elements like the italicized clausal adverbial in (9) are IP adjoined,⁵ since they modify only the lower clause.

- (9) Líonaim d’eagla *dá dtógfainn mo radharc dóibh* go dtitfínn.
 Fill.1s of-fear if lift-1s.COND my sight from.3.s that fall.1.s
 ‘I fill up with fear that, were I to take my eyes off, then I would fall.’

If McCloskey is correct in saying that these adverbial elements are IP adjoined material, it then follows directly that the verb cannot be higher than the left edge

of the inflectional complex, since it appears to the right of the IP adjoined adverbials.

3. Old Irish: A Language with Two Kinds of Raising

There is some evidence that in most cases Old Irish only moves its verb to the left edge of IP, just like Modern Irish. This evidence comes from the complementizer system. Old Irish has VSO word order in declarative sentences like (10).⁶

- (10) Beogidir in spirut in corp.
vivifies.3S the spirit the body
'The spirit vivifies the body.'

As in Modern Irish, when C° is filled, the verb is still otherwise clause initial:

- (11) As•berat [co mbeir in fer in claideb].
Say-3P that carries-3S-CONJ the man the sword
'They say that the man carries the sword.'⁷
- (12) Ní beir in fer in claideb.
NEG-C° carries-3s-CONJ the man the sword
'The man does not carry the sword.'

In (11), we have a subordinate clause with the overt complementizer *co*, and VSO order is still maintained. In (12), we have a matrix clause with a negation marker. Following the tradition in Celtic (see for example Duffield 1991, Guilfoyle 1987), we will assume that these negative markers (and certain other preverbal particles) are generated in C°. ⁸ The fact that we still have VSO order even with an overt particle suggests that verb raising in Old Irish is not to C°, but rather to Infl. In this sense, then, Old Irish patterns with Modern Irish.

We claim, however, using evidence from the placement of enclitic pronouns and phonological behavior of certain verbal elements, that Old Irish also has a filled C° requirement⁹ (see also Eska 1994, 1996). This requirement can be met by complementizers, by verbs, or by subparts of morphologically complex verbs. Thus Old Irish is a language that has both raising to C° and raising to the left edge of IP.

3.1 *The Cast of Characters*

A major difference between Old Irish and Modern Irish lies in the complexity of the verbal system. The morphology of the Old Irish verb includes verbal roots, inflectional endings, and a series of preverbal particles. The particles are of three types: conjunct particles (C), preverbs (P) and object enclitics (E). These

particles, the verb, and its person/number endings form what is called the “verbal complex.” Excluding the enclitics for the moment, there is a strict ordering to these forms (13b). An example of a maximal verbal complex is given in (14).

- (13) a. *Conjunct Particles (C)*
negation, question marker, complementizers
Preverbs (P)
alter verb meaning, add perfective aspect
Verb (V)+Subject inflection (S)
the verb root itself and person agreement
Enclitics (E)
object clitics and relative markers
- b. C > P > V-S

- (14) Ní-m• accai. (Ní + m + ad + ci+3s)
NEG-me•see.3S C (E) P V-S
'he does not see me.'

Following Chung and McCloskey (1987), we assume the conjunct particle position (C) corresponds to the C° position. This would explain why it must be ordered before the other preverbal particles (P). In Modern Irish, the conjunct particles form phonological units with overt complementizers (see Duffield 1991, 1995, for discussion and a slightly more elaborate view):

- (15) a. go 'that' + ní 'neg' → nach 'neg.comp'
b. go 'that'+ níor 'neg-past' → nár 'neg.past.comp'
c. a^L 'that [+wh]' + ní 'neg' → nách 'neg.comp.[+wh]'

Similar facts are found in Old Irish

- (16) a. co^N 'that' + ní 'neg' → coní 'neg comp'
b. Ø 'that[+wh]' + ní 'neg' → nád 'neg.comp.[+wh]'

Thus for the moment, we assume that the conjunct particles correspond to C° in the older form of the language as well.¹⁰

We now turn to our arguments that certain morphological, phonological, and syntactic processes show raising of the verb both to the left edge of IP and to C°.

3.2 *Deriving Absolute vs. Conjunct Forms*

In Old Irish, the verb and its inflection take two different forms¹¹ depending upon whether it is in absolute initial position. These two forms are traditionally called ABSOLUTE and CONJUNCT (17) (examples taken from Strachan 1949):

(17)	<i>Absolute</i>		<i>Conjunct</i>	
	beirid		-beir	‘he carries’
	berait		-berat	‘they carry’
	marbfa		-marbub	‘I will kill’
	midimmir		-midemmar	‘we judge’

The absolute form is used when the inflected verb is not preceded by any conjunct particles, preverbs, or pronouns (18). The conjunct form is used when the verb is preceded by a conjunct particle (complementizer) or a preverb (19).

- (18) Beirid in fer in claideb. (absolute)
 Carries.3s.ABS the man the sword
 ‘The man carries the sword.’
- (19) Ní beir/*beirid in fer in claideb. (conjunct)
 NEGcarries.3s.CONJ/*ABS the man the sword
 ‘The man does not carry the sword.’

Interestingly, the appearance of the conjunct verb form is not necessarily a function of the presence of the preverbs or conjunct particles. Rather, the conjunct form is found anywhere that the verb is not in absolute first position.¹² This is often called “Bergin’s law”¹³ (Bergin 1938). This is especially true in some poetic forms where strict VSO order is not obligatory. Take the following lines from the *Énna Labraid Luad Cáich*, as cited in Carney (1978):

- (20) ...srethaib sluag *soí* Crimthan Coscrach cing
 ...with-lines of-hosts won.CONJ Crimthan Victorious hero
- cét catha, ...
 hundred battles
- ‘with lines of hosts, Crimthan the victorious hero, won a hundred battles’
- (absolute: **soid*)

In this fragment, the verb *soí* takes conjunct form, despite the fact that it does not appear with a conjunct particle or preverb. We can conclude, then, that conjunct verbal inflection is a feature of non-initial position.¹⁴ We claim that this distribution is definable in a systematic way: When the verb has raised to C°, it takes the absolute morphology. We assume that the movement to this position is caused by a filled C° requirement. When the verb is in any other position (either at the left edge of IP or in verb medial order as in the poem fragment above), it takes the more basic conjunct form. Consider the case of (19) above, where the C° has been filled with the conjunct particle *ní* ‘neg’, thus blocking the raising of *beir* ‘carries-3S-CONJ’ to C°. The verb raises through the

inflectional heads to the left edge of Infl just as it would in Modern Irish; the inflected verb is thus realized as *beir*. The resultant S-structure is seen in (21):

- (21) [CP Ní_{[IPbeir_i+Infl [IP in fer [VP t_i in claideb.]]]]}

In (18), by contrast, there is no overt complementizer nor any other type of preverbal particle. The filled C° requirement forces the verb to raise to C° (22).

- (22) [CP Beirid_i+C° [IPt_i [VP in fer [V' t_i in claideb.]]]]

When the inflected verb *beir* ‘carries’ raises to C°, it actually is incorporating into a null C°. This C-Infl-V complex is then realized as absolute *beirid* instead of conjunct *beir*.¹⁵

An important variation to this pattern occurs in relative clauses. If the null C° is [+wh], then a third form of the verb is used in lieu of the absolute form (23). For example, in the sentence below, the inflected verb of the relative clause: *gaibid* ‘grabs.ABS’ surfaces as *gaibes*, the relative form of the verb:

- (23) Is oinfer_i [CP Ø_i gaibes_i [IP t_i búaid.]]
 COP one-man OP. grabs-3S-REL victory
 ‘It is one man who grabs victory.’

The differences between the relative form and the matrix absolute form show that the morphology of the absolute is used to signal which null C° ([±wh]) is present in the complementizer position. Since the verb forms in absolute initial position vary depending upon what type of complementizer is present in the clause, this data lends support to the theory that these verbs are in fact in C°. ¹⁶

3.3 Compound Verbs and Preverbal Particles

Let us now consider alternations in the forms of preverbs and how they lend support to the analysis we have presented here. The preverbs are the prepositional components of Old Irish compound verbs. For example, given the basic verb *beirid* ‘carries’, the addition of a preverbal particle shifts the meaning in unpredictable ways: *as•beir* means ‘says’ (literally ‘out-carry’). Similar forms, such as *shine/outshine* and *blow/blow up*, are occasionally found in English, and prepositional preverbs and separable prefixes are found in many Germanic and Slavic languages. Certain preverbs may also cause a shift in aspect, giving perfective force.¹⁷ In Old Irish, the use of these particles is quite common, and they form a large class of Old Irish verbal morphology. We claim that depending upon what other elements appear in the complex, these preverbal particles can behave either as if they were in C° or as if they were combined with the verb in Infl. In particular, we propose that given a compound verb with no conjunct particle, a preverbal particle satisfies the filled C° requirement.

Consider the following compound verb: *as•beir* ‘says-3s’. This is composed of the preverbal particle *as-* ‘out’ and *beir* ‘carries’. However, when this verb

comes after a conjunct particle *ní* ‘NEG’, the form of the verb is radically changed. In the example below, the form for ‘say-1s’ is *as•biur* when there is no conjunct particle (24), but *epur* when it follows a conjunct particle like *ní* (25):

- (24) *As•biur* in-so.
 say-1s this
 ‘I say this.’
- (25) *Ní epur/*as•biur* a n-anman sund.
 NEGsay-1s their names here
 ‘I do not say their names here.’

Despite the obvious differences between these forms, there is no suppletion here. Instead, rules of stress shift, syncope, provection, reduplication, and lenition all interact to muddy the forms (see McCloskey 1978 and McCone 1987, 1994, for more detailed discussion of the actual phonological forms). The domain of application of these phonological rules provides evidence for our analysis. The entire verbal complex forms a single phonological unit that cannot be broken apart by adverbs and other intrusive material.¹⁸ Following the phrasal phonology frameworks of Selkirk (1984), Hayes (1989), and Nespor and Vogel (1986), we will call this grouping the “clitic group”—(κ).¹⁹ However, there is a smaller phonological unit, the word (ω), which is the domain of stress and syncope. Consistently, conjunct particles (C) and enclitic pronouns stand outside the phonological word (26a). Preverbal particles (P), on the other hand, vary in their position, depending upon what other material is in the clitic group (26b):

- (26) a. [κ C [ω P (P) (P) V]]
 b. [κ P [ω P (P) (P) V]]

For concreteness, let us consider the example of stress. Stress in Old Irish is always on the leftmost syllable in the word. This is true of absolute verbs, nouns, and adjectives. When the verb is complex, however, either with a conjunct particle or with a preverb, the stress falls on the second non-enclitic morphological unit, indicated here in boldface:

- (27) a. C • **P** (P) (P) V
 b. C • **V**
 c. P • **P** (P) (P) V
 d. P • **V**

There thus is a special “pretonic” slot in initial position for a preverb or conjunct particle, which does not participate in the metrical structure of the rest of the verbal complex. We will indicate the division between the pretonic position and the rest of the complex with the use of the symbol <•> (following Thurneysen 1946). Prosodically, this pretonic position corresponds to a form which is

outside the domain of ω but is still within the domain of the clitic group (κ). Usually, the enclitic and any syllabic material it brings with it will be part of the pretonic. We can thus describe the distribution of the elements as follows:

- (28) i. Conjunct particles are always pretonic.
 ii. If there is no conjunct particle, then the first preverb is pretonic.

If we add a conjunct particle to a verb with preverbs, then the previously pretonic preverb joins the rest of the verbal complex and participates in its metrical structure, causing the stress pattern to change, as seen in (29):

- (29) a. as•biur ‘say-1s’ /as.**biur**/ (stress on the second syllable)
 b. •epur ‘say-1s’ /e.bur/ (stress on the first syllable)

The boldface syllable is the one that receives the stress. In (29a) the preverb *as* appears in pretonic position and does not participate in the metrical structure of the verb (stress falls on *biur*). When the conjunct particle is added, the preverb behaves as if it is part of the second element in the complex and takes main stress. The other phonological alternations, /a/~e/ and /sb/~b/ (orthographic <p>) follow from this shift in metrical structure.²⁰ See McCone (1987, 1994), Pyatt (1996), and McCloskey (1978) for more details.

As the conjunct particles always fall in the pretonic position, and these conjunct particles are C° s, we assume that the pretonic position is associated with the complementizer head. Since one preverb is required to be pretonic when there is no complementizer, it follows that a preverb can satisfy the filled C° requirement. When there is no overt complementizer, only the preverb, not the entire inflected verb, raises to C° to satisfy the filled C° requirement. When there is neither a preverb nor a complementizer, the verb itself raises to C° , taking absolute inflection as a result, to satisfy the filled C° requirement.

Supporting evidence for this approach to preverbs comes from their behavior in relative clauses. Recall that absolute verb forms in relative clauses varied in form depending upon the [$\pm wh$] content of the complementizer head, lending support to the notion that these forms represented incorporation of the verb to C° . The pretonic preverb can also show special marking in relative clauses. For instance, if the preverb is *im(m)* ‘about’, as in the sentence *imm•rádi* ‘he thinks/meditates’ (literally ‘about-speak’²¹) in example (30a) below, then in a relative clause the suffixed form *imma* or *imme* appears (30b), as noted by Greene (1977:24). Let us emphasize that this form, with a pretonic preverb, only appears if there is no complementizer particle occupying the preverbal slot.

- (30) a. imm•rádi
 about•speak.CONJ.
 ‘he thinks/mediates’
 b. imma•rádi
 about.REL•speak.CONJ.
 ‘who thinks/mediates’
- (Thurneysen 1946:§841)

This provides further evidence that the pretonic slot is in fact the realization of the complementizer head, since the relative marking appears on the preverb—precisely what is predicted by the idea that these elements are in C° .

3.4 Moving Preverbs to C° : Long Head Movement

Let us consider a derivation of a compound verb, with a pretonic preverbal particle in C° . We will assume that the preverbal particles are reflexes of a Hale and Keyser (1991) type complex VP, or a Pesetsky (1995) style stacked PP structure. We will consider the sentence in (24) with the base form in (31):

$$(31) \quad [_{CP} [\emptyset] [_{IP} [_{Infl}] [_{VP} pro [_{V'} as [_{V'} biur \text{ in so}]]]]].$$

The preverb *as* raises to C° to satisfy the filled C° requirement. The root *biur* raises to Infl, as in Modern Irish, accounting for the difference in phonological domains. The two domains correspond to two syntactic heads: Infl and C° .

$$(32) \quad [_{CP} [as_i] [_{IP} [biur_j] [_{VP} pro [_{V'} t_i [_{V'} t_j \text{ in so}]]]]].$$

When a conjunct particle complementizer like *ní* ‘NEG’ is present, however, the preverb remains in Infl with the rest of the verb, putting it into the same metrical unit with the root verb (33):

$$(33) \quad [_{CP} \text{Ní} \quad [_{IP} [_{Infl} \text{epur} (\leftarrow as + biur)] \text{ a} \quad \text{n-anman sund}]].$$

NEG say-1s their names here
‘I do not say their names.’

The reader may have noticed that in allowing the two verbal heads (the preverb and the verbal root) to raise to separate functional categories, we may well have created a violation of the Head Movement Constraint (HMC) (Travis 1984), which prohibits moving X° s from skipping intermediate potential X° landing sites. Consider (32). It appears as if the verbal root skips the intermediate preverb on its way to Infl. Similarly, the preverb seems to skip the intermediate inflectional heads on its way to C° .

This problem is especially acute in the cases where more than one preverb appears, as in (34). In *ad•roilli* ‘deserves’ (*ad-ro-sli*), the first preverb moves to the C° head, but the other preverb is incorporated with the verbal root (*ro + sli* → *•roilli*).

$$(34) \quad [_{VP} [_{V'} \boxed{\text{ad}} \quad [_{V'} \boxed{\text{ro}} [_{V'} \text{sli} . .] .]]]$$

to C to Infl

When the C° head is filled with a complementizer, of course, both preverbs are incorporated with the verbal root, giving *•arilli* (Thurneysen 1946:§822).

One possible approach to this problem is to claim that (34) is in fact the correct representation of the phenomenon. In this illustration, the preverb moves to C° in one jump, skipping the intermediate Infl head(s) as it does so. Although such movement at first glance appears to violate the HMC, certain phenomena in other languages (including a Celtic language, Breton) have inspired a proposal which allows precisely this type of movement in cases which are at least superficially similar to the one presented here. We refer to Long Head Movement (LHM) of participle heads around auxiliaries to create a participle-auxiliary initial order, a phenomenon common to Bulgarian, Czech, Slovak, Serbo-Croatian, Rumanian, Old Spanish, and European Portuguese as well as Breton (Rivero 1991, 1994, Roberts 1994, Schafer 1994, Borsley et al. 1996, among others).

A typical example of a LHM proposal is seen for the Breton sentence in (35) below, with the structure and movement in (36) (Borsley et al. 1996:56):

- (35) Lennet en deus Yann al levr.
 read 3SM has Yann the book
 ‘Yann has read the book.’

- (36) [_{CP} C [_{IP} Infl [_{VP} Yann [_V [_V en deus] [_V [_V lennet] [_{NP} al levr]]]]]]
-

The above cited analyses provide convincing evidence that the phenomenon under discussion must in fact be head movement, rather than, for instance, remnant topicalization (for example, it can be blocked by other heads, such as negation). Without going into too much detail, the analysis of this phenomenon asserts that head positions, as well as XP positions, are subject to an A/A-bar distinction. Tense in the LHM-type languages requires syntactic licensing of some sort; one way in which such licensing can occur is by movement of a participle to the C° head. The C° head is an A-bar head position, while Infl (and members of the Infl complex) and V° are A head positions. Head movement is subject to Relativized Minimality (Rizzi 1990), which prevents the skipping of a potential landing site by a moving element. Participles moving to C° , however, are moving to an A-bar position, not an A position, and hence are not skipping any potential landing sites by moving past the Infl head position.

The extension to the present situation should be clear. Movement to C° is A-bar movement, not A movement; hence, a preverbal particle moving to the pretonic C° position in one long leap, as illustrated in (34) above, is not skipping any potential landing sites and is not in violation of the HMC as restated in terms of Relativized Minimality. This account also represents a satisfactory mechanical treatment of the phenomenon, and there are some interesting parallels which perhaps make it a desirable treatment. LHM is blocked in Breton by a negative element, which Borsley, et al. argue is in C° — precisely the effect

a negative particle has in Old Irish. Movement of a preverbal prepositional particle is disallowed with a negative conjunct particle.²²

3.5 Placement of Enclitics

The final piece of evidence we present in favor of our account comes from object enclitics. The somewhat convoluted facts of enclitic placement do not lend themselves obviously to a phonological analysis, but on the approach adduced here, a straightforward syntactic account is possible.

Old Irish has second position enclitics (E) which include object pronouns, relative pronouns, and conjunctions. Following the tradition in Celtic grammars we will call these “Wackernagelian clitics.”²³ The enclitic pronouns²⁴ are always found after the first morphological element in the verbal complex (38). The following examples are taken from Strachan (1949):

- (38) a. Ní-m• accai. (Ní + m + ad + cí-3s)
 NEG-me P.see.3s C E P V-S
 ‘She does not see me.’
- b. At-on•cí. (ad + (do)n + cí -3s)
 P-1PL see.3s P E V-S
 ‘She sees us.’
- c. Bertaig-th-i.²⁵ (bertaig -th +i)
 shake-3s.ABS-him V- S E
 ‘he shakes him.’

The distribution of enclitics is somewhat puzzling from a syntactic perspective if no filled C° requirement is assumed; sometimes they precede the verb (when there is a preverb or conjunct particle); other times they follow the verb (when the verb is absolute). Similarly, there is no easy phonological characterization of their placement. Sometimes they precede the first phonological word, i.e., when there is a preverb or conjunct particle, as outlined above. When the verb is absolute, however, there is no pretonic slot in the phonological sense—the first syllable of the verb receives main stress, as usual. In these cases, the enclitic follows the first phonological word. Enclitics appear *within* the first prosodic unit when there is a pretonic slot ([_κ C (E)[_ω P (P) (P) V]); otherwise, they follow the first prosodic unit. Thus, a Wackernagel-style analysis of this cliticization under which these enclitics attach after the first prosodic unit is *prima facie* untenable. An account of enclisis according to which the enclitic attaches either to the first phonological word or to the first prosodic unit (the clitic group κ) would predict that the enclitic would suffix to the verbal complex rather than appearing medially.²⁶ The enclitic only follows the first phonological word if there is no pretonic element; when there is a pretonic element, it precedes the first phonological word. While a phonological account would have

to include a two-part rule to this effect, the syntactic account we present requires no such disjunctive rule. The distribution of enclitics is transparent when we assume that Old Irish had a filled C° requirement. Once we make this claim, the distribution of enclitics is straightforward. We express this in (41). This is true whether the C is filled by a conjunct particle, a preverb, or an absolute verb form:

(41) Enclitics (E) adjoin to C° .²⁷

4. Complementizers, Verb Second, and Negation

In this section, we consider a few of the open questions remaining to our analysis. First, we examine in detail the assumption that the head we are looking at is indeed the complementizer head. Next, we consider some alternative analyses of V2 phenomena. Finally, we consider what the content of the “filled C° requirement” might be.

4.1 *Is It Raising to C° ?*

The above discussion is aimed purely at establishing that Old Irish had what we have called up to this point a “filled C° requirement”; that is, that Old Irish C° was always filled by some element, whether it was a complementizer particle, preverb, or finite verb. In addition, finite verbs moved to Infl, giving CVSO order in all Old Irish clauses, both matrix and embedded.

Let us now briefly consider the possibility that the head involved is not C° but some lower inflectional head. An analysis of this kind has been proposed for Modern Irish by Duffield (1995). The vast majority of cases we have examined have negative particles serving as exemplars of complementizer particles. The claim that negation is in C° is perhaps problematic, since it is widely claimed that negation heads its own functional projection (either NegP or Laka’s (1991) ΣP , generated between IP and CP). Other elements are found in Old Irish conjunct particles, including particles expressing $[\pm Q]$ (such as *an*), particles expressing subordination, and the variety of suffixal elements expressing $[\pm wh]$. These, unlike Negation, are clear cases of elements we expect to find in complementizers. So let us consider the possibility that negative particles are generated in some position lower than C° but higher than Infl, corresponding to the positioning of Laka’s ΣP :

(47) $[_{CP} C [_{\Sigma P} [_{\Sigma} Ni] [_{IP} Infl \dots]]]$

This seems a likely locus of base-generation for negation in Old Irish, and nothing we have seen would preclude an analysis where negation was generated in this position, and the elements we have been identifying as C° in fact represent a combination of the Σ° and C° heads incorporated together.

First, let us consider whether there are any empirical differences between this proposal and the simpler one made in previous sections of this chapter. The primary difference between this analysis and one without ΣP lies in the number of heads above IP. Under this story, we predict that we should be able to have more than one particle preceding the verb. In essence, this is correct, since we get combinations of negation with the other complementizer material:

- (48)
- | | | |
|----|----------------|----------------|
| a. | coni (co + ní) | ‘that.neg’ |
| b. | arna (ar + ní) | ‘that.neg’ |
| c. | ná (a + ní) | ‘rel.that.neg’ |

Notice, however, that these complex complementizers form a single phonological unit (either obviously decomposable like *coni*, or blended like *ná*). It seems to be a requirement of Old Irish that this class of elements forms a single head. A straightforward account of this fact follows if we assume with Laka that ΣP is an A-bar category (see also Schafer 1995 on the A/A-bar status of ΣP); assuming the A-bar equivalent of head movement, the negation head might raise and incorporate into the complementizer.²⁸ In the general case, for chain uniformity reasons, A-heads (like verbs) may not incorporate into these positions, except as a measure of last resort to satisfy our still unspecific “filled C° requirement.” This explains why, when there is an overt complementizer of some kind, the verb is at the left edge of IP, and no higher. When there is no phonological content to any of the A-bar heads, the filled C° requirement (in a sense to be defined below in section 4.3) is not met, and either the verb or one of its preverbs moves through these A-bar heads.

Given this, there actually seems to be no empirical difference between the accounts where negation is generated in C° or in Σ° . The two analyses seem to be notational variants in that they both predict a strong complementarity between overt complementizers (the complex of Neg, [$\pm Q$], and subordinating C° s), and preverbal and verbal elements bearing special absolutive ([*-wh*]) or relative ([*+wh*]) marking. For this reason we do not distinguish between the two approaches, and we claim that $V \rightarrow C^\circ$ can either mean “raising to a single head C° ” or “raising to the class of A-bar heads constituting C° .”²⁹

4.2 What Drives Movement to C° ?

The primary goal of this chapter has been to motivate a certain structural analysis of Old Irish clauses which can involve movement of the verb to C° . The possibility of this movement is in striking contrast to Modern Irish, where, it can be argued, such movement never occurs and the verb moves only to the left edge of the inflectional complex. This entails that a parametric change must have occurred by the time of Modern Irish which caused the disappearance of the filled C° requirement. The obvious question, then, is what originally drove the movement to C° in Old Irish, and what changed diachronically to produce the Modern Irish $V \rightarrow I$ system.

A full treatment is obviously beyond the scope of this chapter. However, as we are drawing the parallel with verb second languages, it could be instructive to consider possible proposals for the motivation of V-to-C movement in such languages. Platzack (1995) provides an analysis of the loss of verb second phenomena in English and French which is of considerable relevance to the discussion here. He proposes (following Holmberg and Platzack 1988) that the finiteness feature [\pm F] is responsible for verb second, reducing the raising to C parameter to a parameter where [+F] is or is not located in C° . Finiteness (distinct from Tense) is responsible for the assignment of Nominative Case, argues Platzack; to assign Case, [+F] must be lexicalized³⁰ (that is, phonologically realized, or overtly checked, in a feature-driven theory of movement like that of Chomsky 1993). Hence, when the verb second parameter above is active, C° must be lexicalized to permit the assignment of Nominative Case and thus to trigger the appearance of V-to-C movement. When the V2 parameter is not activated, [+F] appears in Infl, and must be lexicalized there. Platzack argues that the deactivation of the V2 parameter in English and French resulted in the non-verb second nature of the modern languages. Crucially, Infl had differing properties in the two languages at the time of deactivation, resulting in the modern differences in the lexicalization of [+F]: *do*-support and Infl-lowering/affixation in English, but verb-raising to Infl in French. (It is not clear from the discussion in Platzack (1995) what drives movement of an XP to the specifier of CP in V2 languages. In the absence of anything less stipulative, and assuming a feature-checking account of movement, we can posit strong D-features on C° , requiring topicalization of an XP.

Evidently, the extension to Old Irish should be clear: Old Irish had the V2 parameter activated, such that C° needed to be lexicalized to permit the [+F] feature³¹ to assign Case. (Evidently the requirement that the specifier of CP be filled was not operative in Old Irish; that is, C° had weak D-features.) The parameter is deactivated in Modern Irish, triggering only movement to Infl, as in Modern French; again, French and Irish differ in the requirement on overt movement of the subject to the specifier of IP.

It follows from this suggestion that the possibilities for legitimate lexicalization must differ cross-linguistically. Lexicalization in V2 languages always involves either movement of the finite V or phonological realization of the complementizer. Lexicalization in Old Irish can mean realization of the complementizer, movement of a preverbal particle, or as a last resort, movement of a finite verb. The difference between Old Irish on one hand and Middle English and Middle French on the other could rest either in the availability of items in the lexicon or in the type of element that qualifies as “lexical” enough to satisfy the requirement for [+F]. The first type of approach would argue that Middle English and French simply lacked the repertoire of separately realizable complementizer and preverbal particles that Old Irish has available, and which considerations of economy (move the least amount necessary) would dictate are preferred to the verb itself as candidates for movement to C° . This approach, however, has the drawback that it predicts that the forms which can satisfy the parameter will vary arbitrarily cross-linguistically, which is *prima facie* false. In the Germanic languages, it is always a full verbal form that satisfies the

parameter; no particles of the Old Irish type ever appear. The second account might prove more principled, and could presumably be linked to the differences between the systems in the requirement on movement to the specifier of CP. Under this view, the weaker verb initial language requires a weaker type of lexicalization for [+F] in C°, perhaps connected to the fact that C does not have strong D-features (associated with XP topicalization) on top of the strong [+F] feature which motivates $V \rightarrow C$ movement. A fuller account will be left to future research.

5. Conclusion

In this paper, we have accounted for the complex and intricate behavior of verbs, preverbs, particles and clitics in the Old Irish verbal complex. We have argued that, contra most current theories of VSO ordering, Old Irish makes use of raising to C° due to a filled C° requirement, which in turn is due to the lexicalization of [+F]. The fact that the pretonic element and the rest of the verbal complex behave metrically like two words rather than one follows from the fact that the two elements are in different structural positions in the sentence, forming a “clitic group” rather than a single phonological word. The distribution of absolute inflection is now definable in a systematic way: The raising of the verb to C° is reflected morphologically as the absolute inflection. Finally, the position of enclitics is now uniformly accounted for. They always attach to C°, whether C° is filled by a preverb, conjunct particle, or the verb itself. The fact that this analysis provides a systematic account for these facts is a strong argument for the raising to C° analysis. Raising to the left edge of Infl is also still required to account for the fact that the verb still precedes its subject even when there is an overt complementizer. The filled-C° requirement, not active in Modern Irish, thus explains many facts about the Old Irish verbal complex that would otherwise remain mysterious.

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question is the verb, standing alone, copying the tense, mood, and agreement features of the verb of the question: *An mbeir in fer in claideb?* ‘Does the man carry the sword’ is answered simply with *beir*, ‘carries’, in conjunct form. In this case, it seems likely that either the verbal head is simply copied, without the associated clausal structure. (See McCloskey 1991 for a discussion of the related phenomenon in Modern Irish, claiming that the responsive is simply an ellipsis phenomenon where everything but the tensed verb and the elements adjoined to it are elided.) In such circumstances there is no C° present, so it is expected that only the conjunct form is found.

13. Bergin’s Law is usually not phrased exactly this way. In Thurneysen (1946:§513), for example, it is articulated as “Simple and compound verbs may be placed at the end of the clause; . . . [they] then have conjunct flexion . . .” However, Carney (1978) argues that the formulation adopted in the text above is more accurate, since verbs can appear medially in some poetic registers. It is also a relatively rare and marked phenomenon.

14. A well-known fact about Modern Irish is that the conjunct/absolute distinction has some remaining reflexes in some irregular verbs; when a verb appears in a clause with certain clause initial particles, a conjunct (or dependent) form of the verb appears, apparently selected for by the particle:

(i)	<i>without particle</i>	<i>with particle</i>
	<i>chonaic</i>	<i>ní fhaca</i>
	saw	neg saw
	<i>bhí</i>	<i>ní raibh</i>
	was	neg was

It might be claimed that whatever accounts for the appearance of the conjunct/dependent form with the particle in this small class of irregular Modern Irish verbs (a selectional relation between C° and Infl, for example) could also be responsible for the selection of the Old Irish conjunct forms. In fact, such a relation seems highly unlikely in Old Irish. The first problem we have with such an analysis comes from the fact that it draws unfounded conclusions about the parallels between the Old Irish and Modern Irish systems. Notice that the absolute/conjunct alternation is found in every simplex verb in Old Irish. In Modern Irish, the independent/dependent alternation is found in only eleven irregular (and highly suppletive) verbs. Six of these verbs show further irregularities in taking the present tense complementizer particles in the past tense. This alternation is clearly of a different and more limited form than the Old Irish situation, which is probably lexical and paradigmatic rather than syntactic. Second, we note that the Old Irish conjunct form is found without any complementizer at all (in Bergin’s Law sentences). It would seem unusual to claim that a particular relation holds between a null C° and a non-initial verb (resulting in conjunct flexion), but that in an otherwise completely equivalent verb initial sentence, the same relation does not hold of the null C° and verb, thus resulting in absolute inflection. Finally, we have strong suspicions of an account that makes reference to a selectional restriction between complementizer particles and the verbal head. As will be seen below in section 3.3, not only is conjunct inflection found with conjunct particles, it is also found when the verb is compounded with a prepositional preverb and there is no overt complementizer particle present. If a selectional restriction between the C° and the verb is the trigger for the conjunct inflection, it is surprising that it should also be triggered by the presence of these pretonic prepositional preverbs. In modern Irish, there are no separable prepositional

preverbs, and thus a selectional account of the dependent/independent alternation is available. Such an account does not extend to Old Irish, however. As will be seen below, the account presented here easily captures the complementary distribution of complementizers (and prepositional preverbs) and absolute verbal morphology in Old Irish.

15. See Zwart (1993a), where comparable morphological alternations are seen in Dutch verb second constructions.

16. This pattern is not unattested in Modern Irish; in some dialects, special relative forms of the verb can appear in relative clauses, as in (i) below.

- (i) an bhean a^L gheobhas buaidh
 the woman that get.FUT.REL victory
 “the woman who will conquer”

Again, this observation that there must be some relationship established between C° and the verb in Modern Irish is perfectly valid. However, the crucial difference between Old and Modern Irish here is that in Old Irish this agreement takes place (a) in absolute flexion and hence (b) only in the absence of an overt C°. In Modern Irish, by contrast, this form appears only when preceded by a relative complementizer (such as *a^L*). If we posited a null C° in a relationship with the verb giving the variation in absolute flexion, there is no principled reason why such variation should not appear in conjunct flexion as well.

17. In particular, the preverb *ro-* (PIE **pro* ‘forward’) performs this function, although *ad-* and *com-* are also sometimes found.

18. Except in the highly marked tmetic construction found in poetic works.

19. We use κ here instead of the more common C, in order to distinguish clitic groups from complementizers and conjunct particles.

20. Briefly, the changes are as follows: *as* is underlyingly /es/, ‘out’. /e/ becomes /a/ (possibly schwa) in unstressed pretonic position, but remains /e/ when stressed as the first syllable of the compound verb. /s/ undergoes a morphophonological debuccalization process in this conditioning environment, becoming /h/ and then undergoing deletion, giving /ebur/, orthographically <epur>. See the references noted in the main text for a full account of these phenomena.

21. The gloss of the morpheme *rádi* is obscure from both primary and secondary materials; we believe this to be the correct translation, but this is speculation on our part.

22. However, there are some differences, as well, which keep us from embracing the account wholeheartedly. In Breton and other LHM languages, mechanisms exist for licensing Tense other than filling C° with a negative particle or non-finite participle. Rivero (1993) proposes that it can be licensed a C° heading a CP with a filled specifier, or by a C° which heads an L-marked CP. This last property accounts for the fact that LHM, being movement of a last-resort nature, is impossible in nearly all subordinate (hence L-marked) CPs in LHM languages. Since the facts for root and subordinate (relative) clauses in Old Irish are essentially identical, clearly L-marking cannot be relevant to the Old Irish case. Second, it is transparent that filling of the CP specifier is never possible in Old Irish, since no XP can ever precede the C°+Infl clitic group at the beginning of the clause, so it differs from the LHM languages in that fashion as well. A theoretical problem with the LHM approach lies in the fact that the structure of the dual movements depicted in the diagram in (34) above for Old Irish still involves a violation of the HMC even on the relativized minimality account. The movement of the particle to C° across Infl is legitimized because it is A-bar head movement, but the movement of the verb to Infl across the base position of the particle will still be blocked, because the

particle will be generated in an A-head position. (For a discussion of the reasons why the verb itself does not simply move up into C° see the discussion in section 4.3 below.) This problem is avoided in Breton where the paths of the movement are nested. One possible solution to this problem would be to suggest that the preverbs in Old Irish compound verbs head XP-shell projections below the verb root, which would itself then head the topmost VP. LHM would then take the lowest preverb and move it to C° , and other preverbs would left-adjoin to the verb root and incorporate with it into Infl, nested inside the LHM of the most embedded preverb.

23. So named in honor of Wackernagel's (1892) paper on second position clitics. See Duffield (1994), Anderson (1993), and the references therein for discussion of this kind of clitic.

24. We assume, following Thurneysen (1946), McCone (1987) and McCloskey (1978) here, that these elements are in fact real clitic pronouns rather than some kind of object agreement marker (see Eska 1996 for a different view). The distinction between an agreement analysis and an enclitic analysis makes no difference to the account we have presented here.

25. This form is replaced by *no-s•mbertaigedar*, with the “do-support”-like null preverb *no*, in later forms of Old Irish. However, the absolutive form continues to be used when there is no object pronoun. We will be concerned mainly with the period when object clitics adjoined after the main verb; it seems likely that the shift to insertion of a “dummy” preverb heralded the beginning of the shift to the Modern Irish system, in which the verb does not raise beyond expanded Infl.

26. It is possible that an account could be proposed according to which the enclitic looked for the first phonological word (ω) and affixed itself to the left (rather than the right). Such an approach would run into problems in the instances where no pretonic units appear in the verbal complex, (i.e., the absolutive verb forms). In these cases the enclitic adjoins to the right of the first phonological word, giving V-E order. Also, such an approach seems unnecessarily unusual; accounts of Wackernagelian cliticization tend to use suffixation to the first prosodic unit. Arguing for prefixation in the middle of the first prosodic unit seems particularly abstruse given that a clear syntactic constituent is available to the analysis at exactly the right place. See Eska (1996) for a diachronic perspective on the issue.

27. Old English clitics have been analyzed as marking the left edge of IP in a similar manner; see, e.g., Pintzuk (1991).

28. The account sketched here predicts, among other things, that cross-linguistically we might find more than one A-bar preverbal particle in front of verbs in VSO languages, depending upon whether they have A-bar head-movement or not. This seems to be the case, as in the Polynesian VSO languages where complementizers, question particles, negative markers, and sometimes mood each form their own particle to the left of V.

29. In this, we are following Schwartz and Vikner's claim that the word order is derived by moving the verb outside of the IP complex, unless the CP complex is filled by some other element.

30. This is similar to the approach suggested by Rivero (1993) and Borsley et al. (1996) where (long head) movement to C° occurs to license tense features.

31. In the face of a lack of evidence to the contrary, we are simply assuming that it is Platzack's [+F] feature which is driving the requirement of lexicalization. We note, however, that nothing crucial rests upon the choice of [+F] as the relevant feature for Old Irish. Given the fact that the initial “C $^\circ$ ” element seems to bear [$\pm wh$] features, it might be the case that that is the relevant feature. We leave this open, and simply follow Platzack until evidence to the contrary emerges.