Ellipsis, Polarity, and the Cartography of Verb-Initial Orders in Irish*

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1   CLAUSE STRUCTURE AND ELLIPSIS

Probably the single best-known fact about Irish is that it is a VSO language. And indeed finite clauses of every type conform, for the most part, to the informal schema shown in (1) and exemplified in (2):

(1)   VERB < SUBJECT < OBJECT < OBLIQUE ARGUMENTS < ADVERBIALS

(2)   a.   Sciob   an cat an t-eireaball den   luch.
           cut.PAST the cat the   tail   off-the mouse
           'The cat cut the tail off the mouse.'
     b.   Má bhriseann tú an fhaocha,   tifidh   tú   na castái atá   ina   leath deiridh.
           if   open.PRES you the periwinkle see.FUT you the twists C-be.PRES in-its half   rear.GEN
           'If you break open a periwinkle, you will see the twists that are in its hind parts.'

Needless to say, deviations from the pattern in (2) are not unknown. For now, however, our focus will not be on those but on the more fundamental question of what the syntax is which yields as outcome the pattern in (1) and the examples in (2).

     What has been most clearly established about such structures is that their constituency is as in (3), which shows a skeletal structure for (2a):

(3)
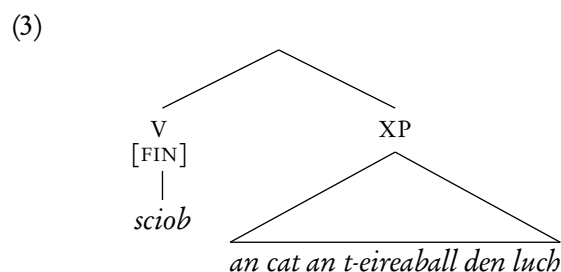
That is, there is a large postverbal constituent which subsumes virtually all of the material of the clause to the exclusion of the finite verb. The evidence for this somewhat surprising conclusion is substantial; every way that I know of to detect constituency in Irish suggests that the pattern shown in (3) is real (McCloskey (1991, 2011b), Elfner (2012, 2015), Bennett et al. (2013)). I will not review that evidence here, but I will focus on one of its strands – partly by way of illustration, partly because the phenomenon in question will be important for the discussion that follows.

     Consider the question-answer pair in (4):

(4)   a.   A-r   sciob   an cat an t-eireaball den   luch?
           Q.PAST cut.PAST the cat the   tail   off-the mouse
           'Did the cat cut the tail off the mouse?'
     b.   (i)   Sciob.
                cut.PAST
                'Yes'
         (ii)   Ní-or   sciob.
                NEG.PAST cut.PAST
                'No.'
         (iii)   Creidim   gu-r   sciob.
                believe.PRES.S1 C.PAST cut.PAST
                'I believe it did.'

It seems clear that the isolated verbs in the three possible responses of (4b) emerge from elision of the

large postverbal constituent (XP) of structures like (3). The task of understanding such ellipses, therefore, is inextricable from the task of understanding what XP of (3) is and what the syntactic mechanisms are which determine its existence and form. We will focus on those questions here, then – in the first place for what they reveal about the nature of XP of (3), and in the second place for what they reveal about ellipsis, head movement, and their interaction.

1.1 RESPONSIVE ELLIPSIS

The apparently isolated verbs of (4b) are known as 'responsive' forms in traditional descriptions. I will therefore use the term Responsive Ellipsis for the process which is at work in licensing them. Although a term is needed, and this one is convenient, it is undeniably inaccurate, since such fragments have many uses which do not involve answering questions. They appear freely, for instance, in coordinate structures (as in (5a)), in tag questions (as in (5b)), in adverbial clauses (as in (5c)) and in relative clauses (as in (5d)):

(5)   a.   Dúirt   siad   go dtiocfadh   siad, ach ní   tháinig   ariamh.
            say.PAST they   C   come.COND   they but NEG-FIN come.PAST ever
            'They said that they would come but they never did.'
   b.   Beidh   muid connáilte, nach   mbeidh?
            be.FUT   we   frozen   NEGQ be.FUT
            'We'll be frozen, won't we?'
   c.   le   heagla go gceapfá   go bhfuil, … níl   aon cheann de leabhra móra an   Oileáin
            for fear   C   think.COND.S2 C   be.PRES   is-not any one   of books   great the island
            san   léite   agam fós
            DEMON read.PERF-PASS by-me yet
            'Lest you think that I have, I have not yet read any one of the great books of that Island.'GLL 61
   d.   tráth a raibh   an Contae sin   daonmhar ar chaoi nach   bhfuil   inniu
            time C be.PAST the county DEMON populous   on way   NEG-C be.PRES today
            'at a time when that County was populous, in a way that it is not today'   CE 183

The possibilities of (5) suggest a kinship with VP Ellipsis in English and in fact the presence of (4) in the grammar of Irish has had an effect on varieties of English spoken in Ireland – namely that responsive patterns like that in (6) are much more common in those varieties than in other forms of English.

(6)   a.   Did you apply for the job?
   b.   I did.

The pattern in (6) has been much discussed in the dialectological literature (and much mocked on social media); it seems indisputable that its ubiquity in Irish English reflects substral influence from Irish. In his comprehensive overview, for instance, Filppula (1999: 166) reports the results of a corpus study showing that responsive patterns like (6) are most frequent in the English of those parts of Ireland (e.g. County Clare) from which Irish has most recently disappeared. What this means is that in the language contact situations in which Irish dialects of English are forged, speakers identify Responsive Ellipsis in Irish with VP Ellipsis in English. This identification (though remarkable, given the extensive surface dissimilarities between the two processes) is surely correct. Responsive Ellipsis in Irish in fact mirrors point for point the distribution and formal characteristics of VP Ellipsis in English and it seems clear that each is a fairly exact functional and formal analog of the other. The relevant evidence is developed in detail in McCloskey (1991, 2011b), and I will therefore not review it here.

     Accepting the conclusion, though, the analytic challenges seem clear. In trying to understand Responsive Ellipsis, what we seek is an analysis which is in the first place in harmony with what is independently

established about the syntax of Irish clauses and which in the second place makes the needed typological link with VP Ellipsis in English. In trying to meet those challenges, I will begin with the issue of VSO order.

2   THE SYNTAX OF VERB INITIAL ORDER

Understanding VSO order, as we have seen, is a matter of understanding what the syntactic mechanisms are which give rise to the structure in (3), representable more generally as in (7):

(7)
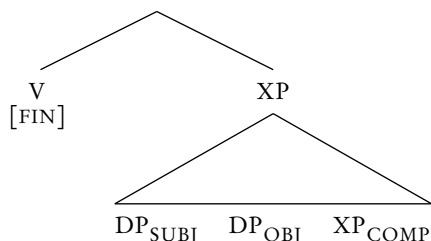
The large postverbal constituent XP excludes the inflected verb but includes its subject (if there is one), its object (if there is one), any other complements, and some, but not all, kinds of adjuncts.[1] An initial question, then, is how the finite verb comes to occupy initial position. There is in fact good reason to believe that both the form and the position of the finite verb reflect head-movement from a clause-internal to a left-peripheral position. When the verb is uninflected (in nonfinite clauses and in small clauses), it appears in medial position, following the subject and preceding (most) complements:

(8) a. Níor mhaith liom [í   a rá   liom   gur   loic mé].
         I-wouldn't-like   her   say .NON-FIN with-me C.PAST failed I
         'I wouldn't like her to say to me that I had failed.'
     b. Ba   mhinic [iad   ag troid   liom   ].
         PAST often   them PROG-fight with-me
         'They often fought with me.'

On every analysis, therefore, some link must be made, in one way or another, between the initial position of verbs and the mechanisms by which they come to have the various morphemes that define them as 'finite verbs'. The hypothesis of head-movement through the various heads of the extended projection makes exactly this link. But there is extensive evidence, in addition, that the inflected verb does not appear in C (Carnie (1995), Duffield (1995), McCloskey (1996a), Ostrove (2016) among others). It must therefore raise to a position beyond the verbal domain but within the inflectional layer.

The simplest version of an analysis along these lines is probably that schematized in (9), in which there is no raising of the subject (perhaps because EPP is inactive on T) and in which the V/v amalgam raises to fuse with a Tense head, creating an inflected verb:

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[1]Witness the adverbial survivors of what we take to be ellipsis of XP in (5a), and (5d) for example. This phenomenon deserves a paper in its own right, but the empirical generalizations seem clear enough. The adverbials which escape elision in such cases are high temporals (in this, the examples of (5a) and (5d) are completely typical) which, in the absence of ellipsis, may appear either at the left edge of the TP-layer (to the left of the finite verb) or at the absolute right edge of the clause. Given that they appear to the right of the stranded verb under Responsive Ellipsis, it is presumably this second option that underlies the stranding possibilities exemplified by (5a) and (5d). How one understands this empirical generalization will depend to a great extent on larger commitments concerning the syntax of adverbs, the status of adjunction structures, and whether or not one adopts the antisymmetry stance originating in Kayne (1994). However the core point (for present purposes) seems clear enough – adverbials of this type may appear outside XP of (7). See McCloskey (1996a,b) for some relevant observations.

(9)

TP
    T   *v*P
    |
    V
[FIN] DP_{SUBJ}
   *v*   VP
    DP_{OBJ}
    V   XP_{COMP}
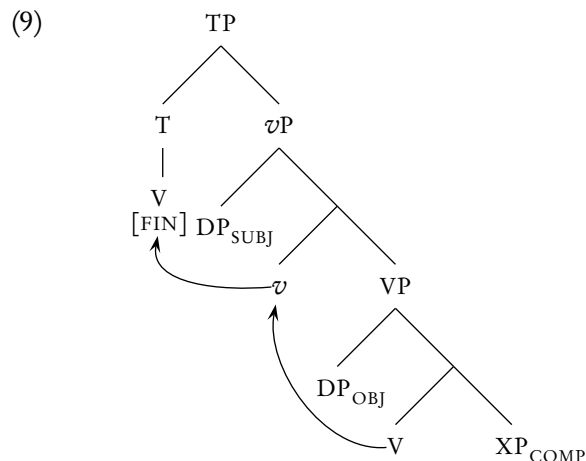
In the context of this very simple proposal, Responsive Ellipsis in Irish and VP Ellipsis in English emerge as the same process; both represent elision of the *v*P-complement of T, the subject raising and surviving in English, but remaining within *v*P and being elided in Irish, the verb raising and surviving in Irish, but remaining within *v*P and being elided in English. The fact that these parallels emerge in the context of (9) is a very welcome result indeed, since, as we have seen, the many properties that the two ellipsis processes share virtually demand some commonality in analysis.

Welcome as this result is, however, it is clear that the analysis sketched in (9) cannot be correct. Its central feature is that the subject remains inside *v*P (within the thematic domain). However, evidence has steadily accumulated that the subject in fact raises out of *v*P (McCloskey (1996b, 2001a, 2011b, 2014)). There is, for example, a lower subject position available in familiar contexts. In the examples of (10), the indefinite subject appears to the right of *v*P-peripheral adverbs, though subjects in general must appear to the left of the same class of adverbs:

(10) a. ní   raibh   riamh díospóireacht fá   na nithe seo
         NEG-FIN be.PAST ever   debate   about the things DEMON
         'there was never any debate about these things'   PNG 187
    b. Bhí   chomh maith mórchuid daoine ann ná   faca   riamh cheana.
         be.PAST as   well   many   people in-it NEG-C see.PAST.S1 ever   before
         'There were also many people there that I had never seen before.'   FI 236

There must then be at least two distinct postverbal subject-positions in finite clauses – a conclusion very much in line with much recent work on clause structure across languages (for a review, see for instance Cardinaletti (1997)). For Irish we must distinguish at least one low position, reserved for indefinites and typical of existential constructions, and one high position (see McCloskey (2014) for more detailed discussion and argumentation). The semantic and discourse-properties of the higher position, furthermore, closely parallel those of the relatively high English subject position (see McCloskey (2001a)). Given all of this, the region of syntactic space below C in Irish (the inflectional layer) must be at least as complex as suggested in (11):

(11)

CP

C   F2P

F2   F1P

|

V
[FIN]   DP_SUBJ

F1   *v*P

v   VP

DP_OBJ

V   XP_COMP
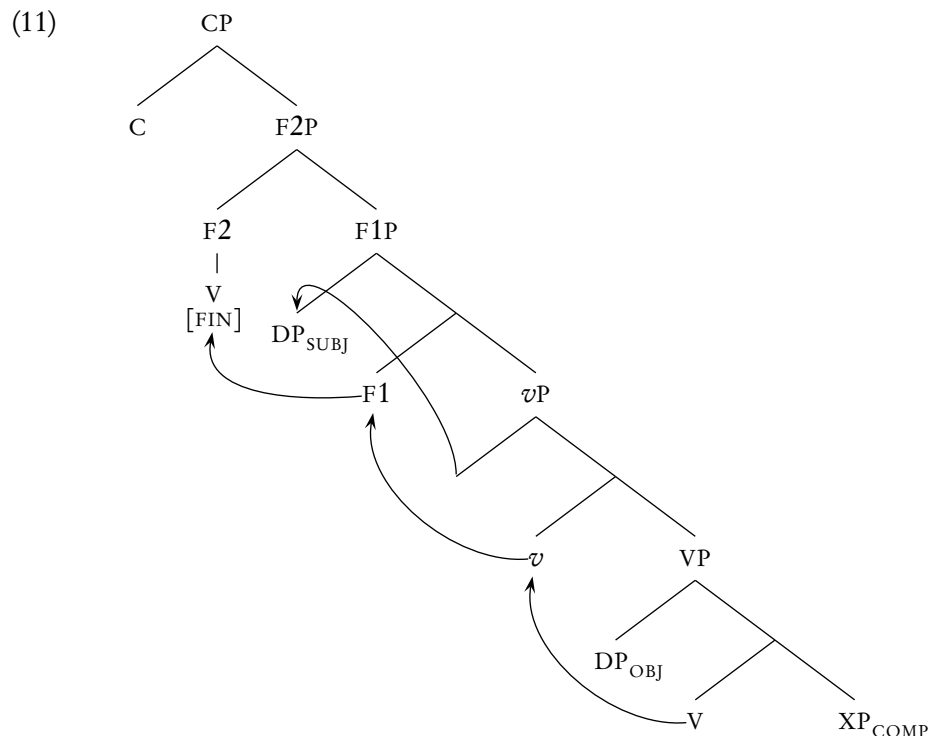
Given (11), the 'inflected verb' simultaneously lexicalizes four syntactic atoms – a verbal stem, a voice head *v*, and the content of F1 and of F2 respectively. The most prominent case-less nominal in *v*P, meanwhile, must (in the general case) raise to the specifier position of F1; the evidence for distinct high and low subject positions is thereby accommodated. VSO order emerges in turn because the verbal complex ultimately raises to F2 – higher than the subject. But since F2 is itself below C, the evidence that the verb does not appear in C is also accommodated. The constituency pattern of (3) falls out as before, except that XP of (3) and (7) is now identified as the larger F1P rather than as *v*P.

If the skeletal proposals of (11) are to have real substance, however, we must now ask if a believable account can be provided of what F1 and F2 of (11) are; and the answer to that question should have some grounding within the language and within some reasonable typological landscape. We must also ask if (11) provides a way of understanding the kinship between Irish Responsive Ellipsis and English VP Ellipsis. Responsive Ellipsis is now elision of F1P – the complement of the position to which the verb raises. Well and good, but it remains unclear how that configuration might relate to the configuration in which English VP Ellipsis does its work.

3   THE SYNTAX OF NEGATION

We will try to address these issues by embarking on what may feel like an extensive detour, examining the syntax of clausal negation. We will begin that investigation in turn by looking first at nonfinite clauses (so-called 'verbal noun clauses'). Since the nonfinite verb is morphologically simple and is in medial position, we do not have to deal in nonfinite clauses with the obscuring complexities of head movement, or not at least to the same extent as in finite clauses. The elements that constitute the extended projection therefore emerge with somewhat greater clarity in nonfinite clauses than in finite clauses.

3.1 NEGATION IN NONFINITE CLAUSES

If finite clauses show the rough pattern of (1), we can similarly characterize nonfinite clauses as in (12), a schema which is exemplified by (13).[2]

(12)　　　[(NEG)　DP　　DP　　V　　　XP ADJUNCTS]
　　　　　　　　　　[SUBJ]　[OBJ]　[−FIN]

(13)　　　i ndiaidh é　　an teach a dhíol　　　le　　n-a dheartháir
　　　　　after　　　him the house sell.NON-FIN with his brother
　　　　　'after he had sold the house to his brother'

Subjects (which are accusative when overt) are preverbal. Direct objects are also accusative and preverbal, while complements of all other syntactic types are postverbal; for extended discussion, see McCloskey (1980, 1986a), Chung & McCloskey (1987), McCloskey & Sells (1988), Guilfoyle (1990), Noonan (1992), Guilfoyle (1994), Noonan (1994), Duffield (1995), McCloskey (1996b), Carnie & Harley (1998), McCloskey (2001a), Doyle (2012).

　　　As indicated in (12) and as illustrated in (14), negation is expressed at the left edge of the clause, to the left of the (accusative) subject. It is realized by the element *gan*, which is homophonous with, but distinct from, the preposition meaning 'without'.

(14)　　　B'fhearr liom　gan　　　　iad　mé a fheiceáil　ag　　caoineadh.
　　　　　I-would-prefer NEG-NON-FIN them me see.NON-FIN PROG cry
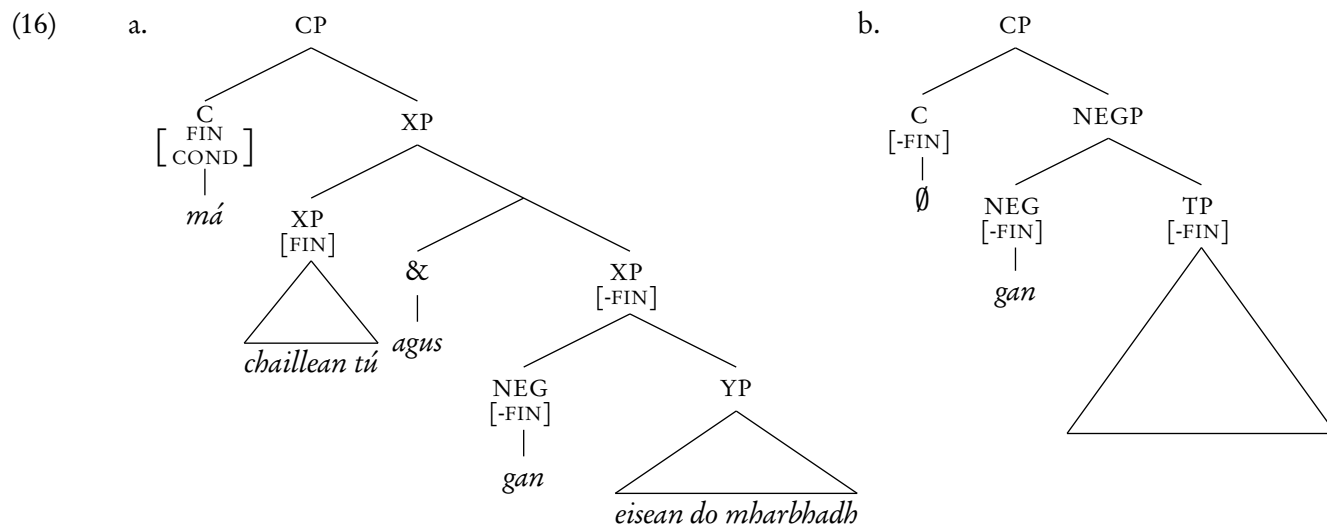　　　　　'I'd prefer that they not see me crying.'

How, then, should we understand the syntax of *gan*? Two positions have been advocated in earlier work. One (which I have consistently adopted) takes the left-peripheral position of *gan* to indicate that it is a negative complementizer (a member of the class C, endowed with the feature NEG). Others (see especially Duffield (1995)) have argued that *gan* is within a negative projection, lower than C. It now seems clear that that second position is correct and that *gan* is never in C. The crucial evidence comes from examples such as (15):

(15)　　　Má chailleann tú　agus gan　　　　eisean do　mharbhadh …
　　　　　if　lose.PRES　you and　NEG-NON-FIN him　　you kill.NON-FIN
　　　　　'if you lose and he doesn't kill you'　　　　　　　　　　　　　　ACO 473

(15) is an instance of a very common coordination pattern in Irish – in which a finite clause is coordinated with a nonfinite clause. This much is routine, as is the fact that the finite clause, in such cases, comes first in the coordinate series. The crucial observations about cases such as (15) are first that the marker of negation *gan* appears at the left edge of the rightmost conjunct, and second that the coordinate constituent itself is, in turn, the complement of *má*, the (realis) conditional marker. But all the evidence suggests that *má* is itself a complementizer – that is, it is in C (for the detailed evidence, see McCloskey (2001b)). It follows in turn that the marker of negation in nonfinite clauses is at the left edge of a constituent which is not CP but which is rather the complement of C. That is, what is needed for (15) is the schematic structure in (16a), a structure already suggested by considerations of compositionality. But, since word-like elements at the left edge of a constituent are almost always heads in this heavily head-initial language, the interpretation in (16b) for nonfinite clauses in general seems warranted.

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[2]The full range of possibilities schematized in (i) is instantiated only in some dialects (northern). The pattern of cross-dialect differences is important and interesting but will not effect the argument to be developed here. We set it aside for now.

(16) a.

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                      CP
            ┌─────────┴─────────┐
            C                   XP
        ┌ FIN  ┐        ┌────────┴────────┐
        └ COND ┘       XP                 &        XP
            │        [FIN]                         [-FIN]
           má      ╱─────╲        │        ┌────────┴────────┐
                  ╱ triangle╲    agus     NEG              YP
                 chaillean tú            [-FIN]      ╱──────────╲
                                           │       ╱  triangle   ╲
                                          gan     eisean do mharbhadh
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b.

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              CP
        ┌─────┴─────┐
        C          NEGP
     [-FIN]    ┌────┴────┐
        │     NEG        TP
        ∅    [-FIN]    [-FIN]
              │      ╱──────╲
             gan   ╱ triangle ╲
```

That is, we will assume that negation is a head relatively high in the clausal projection – just below C, taking TP as its complement. Coordination in (15) is at the level of NEGP and its properties are then as expected. This conclusion is in harmony with the typological proposals of Zanuttini (1997) and is further supported by a body of evidence suggesting that there is an A-position to the left of negation, but to the right of C– a position in which dative subjects are licensed under certain circumstances (see McCloskey (2001a:180–189) and Doyle (2012) for the details). In (17), the dative subject appears to the right of a fronted WH-phrase, suggesting that it is below C, but to the left of the negative head. From this it follows in turn that *gan* is below C.[3]

(17) Conas d' aonaránach gan   a bheith   ag braistint aonarach?
      how   to solitary-person NEG-C.NON-FIN be .NON-FIN feel PROG   solitary
      'How could a solitary person not feel solitary?'   AGMTS 102

Finally, *gan* appears freely at the left edge of clauses out of which Raising has applied:

(18) a. n'   fhéadfadh a cuid feola   gan   a bheith   righin
         NEG-FIN can.COND his share blood.GEN NEG-NON-FIN be.NON-FIN stiff
         'His blood couldn't not be thick.'   NAOT 77
     b. Ní   fhéadfadh sé   gan   a bheith   go maith.
         NEG-FIN can.COND he.NOM NEG-NON-FIN be.NON-FIN well
         'He couldn't not be well.'   T 15

If *gan* is taken to be in C, then examples such as (18) raise severe difficulties for the standard, and successful,

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[3]Duffield (1995) also demonstrates that for some (but not for all) speakers of northern varieties, accusative subjects of nonfinite clauses may appear to the left of *gan*. It seems likely that such accusative subjects occupy the same position as the dative subjects of (17). It is likely in turn, I think, that that position is the (unique) specifier-position of the polarity projection. Making that case here, however, would take us too far from our principal purposes. It is in part to allow for this possibility, though, that I do not assume, as Duffield (1995) does, that *gan* is itself a specifier of NEG.

A reviewer raises the interesting possibility that the head which attracts the dative subject of (17) and the accusative subjects observed by Duffield could be taken to be a Topic head in a framework such as that of Rizzi (1997). I know of no study of the pragmatic properties of the relevant elements (whether they are topics in one of the senses of that term). One thing that is clear, however, is that the locality constraints on the movements which raise such subjects to their high position are the constraints characteristic of case-driven A-movement (McCloskey (2001a:180–189)). So if the attracting head is in some sense topic-defining, it must also be endowed with whatever features drive such raisings – it must act as a ϕ-probe. All of these issues have to do with the role of the polarity head in the A-system, an important question that we return to briefly in the concluding section.

analysis of Raising as involving the selection of defective (sub-phasal) clausal complements. If *gan* is taken to be an element of the 'inflectional layer', as we are arguing here, the difficulty disappears.

We will return to all of these questions in a slightly changed and elaborated context. For now, the principal conclusion we take away is that the marker of sentential negation in nonfinite clauses (*gan*) is a head, that it occupies a high position in the extended projection, but crucially that it is below C.

3.2 NEGATION IN FINITE CLAUSES

If it is now clear that negation in nonfinite clauses cannot be in C, it is just as clear that in finite clauses, negation is always expressed in the C-position. Each complementizer in the language has a 'negative' variant, which may never co-occur with any other complementizer, and which may never co-occur with any other expression of sentential negation. Negative C takes the form of *ní* or *cha* in root finite clauses, *nach* or *ná-* in embedded finite clauses.[4]

The relevant observations are gathered in the examples of (19)–(26), the first two illustrating the root case, each subsequent pair of examples illustrating one of the finite complementizers alongside its negative counterpart. Finite complementizers are traditionally said to have non-past and past variants as well, many of which are illustrated in (19)–(26). How such forms are best analyzed is a question that we will return to. For discussion of all of these observations and patterns, see McCloskey (2001b) and references cited there. For more up to date discussion, see Acquaviva (2014), Oda (2012), and Ostrove (2016).

(19)   ROOT NEGATIVE COMPLEMENTIZER, NON-PAST

    a. Ní   chuireann sé isteach ar phostanna.
         NEG-FIN put.PRES he in   on jobs
         'He doesn't apply for jobs.'

    b. Cha   gcuireann sé isteach ar phostanna.
         NEG-FIN put.PRES he in   on jobs
         'He doesn't apply for jobs.'

(20)   ROOT NEGATIVE COMPLEMENTIZER, PAST

    a. Ní-or   chuir   sé isteach ar phost ar bith.
         NEG.PAST put.PAST he in   on job   any
         'He didn't apply for any job.'

    b. Cha-r   chuir   sé isteach ar phost ar bith.
         NEG.PAST put.PAST he in   on job   any
         'He didn't apply for any job.'

(21)   DEFAULT DECLARATIVE COMPLEMENTIZER, NON-PAST

    a. Creidim go gcuirfidh sí   isteach ar an phost.
         I-believe C   put.FUT she in   on the job
         'I believe that she'll apply for the job.'

    b. Creidim nach gcuirfidh sí   isteach ar an phost.
         I-believe NEG-C put.FUT she in   on the job
         'I believe that she won't apply for the job.'

(22)   DEFAULT DECLARATIVE COMPLEMENTIZER, PAST

    a. Creidim gu-r   chuir sí   isteach ar an phost.
         I-believe C.PAST put   she in   on the job
         'I believe that she applied for the job.'

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    [4]*Cha* is found only in Ulster varieties.

b. Creidim ná-r   chuir sí   isteach ar an phost.
I-believe C-NEG-PAST put   she in   on the job
'I believe that she didn't apply for the job.'

(23)   POLAR INTERROGATIVE COMPLEMENTIZER

a. An gcuirfidh sí   isteach ar an phost?
Q   put.FUT she in   on the job
'Will she apply for the job?'

b. Nach gcuirfidh sí   isteach ar an phost?
NEGQ put.FUT she in   on the job
'Won't she apply for the job?'

(24)   WH-COMPLEMENTIZER

a. an rud   a iarrann tú   _
the thing C ask.PRES you
'the thing that you ask for'

b. an rud   nach n-iarann tú   _
the thing NEG-C ask.PRES you
'the thing that you don't ask for'

(25)   RESUMPTIVE COMPLEMENTIZER

a. an post a-r   chuir tú   isteach air
the job C.PAST put   you in   on-it
'the job that you applied for'

b. an post ná-r   chuir tú   isteach air
the job C-NEG-PAST put   you in   on-it
'the job that you didn't apply for'

(26)   CONDITIONAL COMPLEMENTIZER

a. Má chuireann sí   isteach ar an phost …
if   put .PRES she in   on the job
'if she applies for the job, … '

b. Muna gcuireann sí   isteach ar an phost …
if-not put.PRES she in   on the job
'if she doesn't apply for the job'

Given these observations, Irish must have a set of realization rules roughly along the lines of those in (27a-c):

(27) a. $\begin{bmatrix} \text{C} \\ \text{FIN} \\ \text{NEG} \\ \text{ROOT} \end{bmatrix} \longrightarrow$ /niː/, /xa/

b. $\begin{bmatrix} \text{C} \\ \text{FIN} \\ \text{NEG} \\ \text{COND} \end{bmatrix} \longrightarrow$ /munə/, /murə/

c. $\begin{bmatrix} \text{C} \\ \text{FIN} \\ \text{NEG} \end{bmatrix} \longrightarrow$ /nax/, /naː/

The realization rules of (27) presuppose, first, that the embedded form in (27c) is the elsewhere case (root and conditional complementizers having more specific licensing environments) and, second, that the 'past tense forms' of the complementizers should be dealt with by way of some different mechanism. We return to this second issue presently.

The question now arises of how C acquires the negative feature referred to in (27). An obvious possibility is that the feature is there simply as an inherent lexical specification – that Irish expresses sentential negation in the C-position, and that no other expression of negation is necessary or possible in the clause. This was the view adopted in McCloskey (1979) and other earlier work. It is true to the patterns of realization just discussed but, given the discussions of the previous section, leaves us with an unexplained asymmetry between finite and nonfinite clauses. An alternative (developed, for instance, in Guilfoyle (1990), Duffield (1995)) is that the negative complementizers are derived heads, which have the surface form that they do as a consequence of raising of a lower independent negative head to the C-position.

Neither of these views can be entirely correct. There is indeed evidence that, as Guilfoyle and Duffield argued, there is a negative head lower than the C-position. But there is also evidence that the relation between that lower negative head and the C-position is not one of movement. Consider (28), which constitutes, in a certain sense, the mirror image of examples such as (15).

(28) Mur' dtéighinn agus iad   cailleadh,   mhuirbhfeadh siad mé.
      if-not go.COND.S1 and them lose.NON-FIN kill.COND   they me
      'If I were not to go and they were to lose, they would kill me.'   SHS 132

Like (15), such examples involve coordination of finite and nonfinite clauses within the scope of a conditional complementizer. Also as in (15), there is just one expression of negation. However (28) differs from (15) in that negation is overtly expressed only on the conditional complementizer (see (27b) and (26b)) – a position from which it should take scope over both conjuncts (finite and nonfinite). But it is not interpreted in that high position; the scope of negation in examples such as (28) is restricted to the left conjunct of the complement of C. That is, the logical form of (28) is as in (29):

(29) $[\,[\,[\,\neg p\,]\,\&\,[\,q\,]\,]\to[\,r\,]\,]$

in which negation associates only with the leftmost propositional variable of the protasis. There is in the form of (28), then, a curious misalignment between the position in which negation receives its morphophonological expression and the position in which it makes its semantic contribution. The logical form in (29) suggests the syntactic representation in (30):
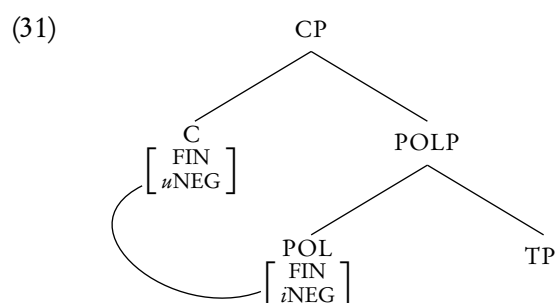
(30)

with coordination at the level of the complement of C (finite clause with nonfinite clause as before) and crucially negation only in the left conjunct. The representation in (30), which accurately reflects compositional properties, must now be squared with the morphophonological facts of (21)–(26). We can bridge that gap by way of the following general analysis of negation in finite clauses: From our discussion of nega-

tion in nonfinite clauses (see (15) above), we take the idea that there is a semantically potent expression of negation just below C. We are thereby relieved of an otherwise surprising asymmetry between the two clause-types while at the same time bringing the Irish facts into alignment with typological expectation (see Laka (1990), Zanuttini (1997), Cheng et al. (1996), Ladusaw (1992), Martins (1994), Potts (2002) among many others).

But we must now reconcile this conclusion with the observation that in morphophonological terms negation in finite clauses is clearly in C. We do this by way of the general analysis schematized in (31). This analysis in the first place follows Laka (1990) and a great deal of subsequent work in assuming that there is a a functional category POLARITY of which the various expressions of negative polarity (finite and non-finite) are members; in the second place it assumes that the semantically active finite polarity head is null and enters into an agreement relation with the (uninterpretable) negative feature in C – the feature which is crucial for the realization rules of (21)–(26).

(31)

```
                          CP
                    ╱          ╲
                   C            POLP
              ⎡ FIN ⎤        ╱      ╲
              ⎣ uNEG ⎦     POL       TP
                          ⎡ FIN ⎤
                          ⎣ iNEG ⎦
```

Landau (2002) develops an intriguingly parallel proposal for certain instances of negation in Hebrew as does Gribanova (2016a) for Russian.

In this changed context, the relation between C and the negative POL head in examples like (28) and structures like (30) emerges as an instance of left-conjunct agreement. The polarity head in such cases cannot be linked with C by way of head movement, because that would entail a head movement which violates the Coordinate Structure Constraint (CSC). But it is well established that head movement is subject to the CSC, as shown, for example, by the English examples in (32), the first illustrating the violation, the second illustrating the grammatical counterpart involving Across the Board head movement:

(32) a.   *Which car will Freddie choose and his parents will pay for?
     b.   Which car will Freddie choose and his parents pay for?

Head movement seems wrong, then, as an analysis of the link between C and the polarity head. However it has been long established that left conjunct agreement is a pervasive feature of Irish morphosyntax (see McCloskey & Hale (1984), McCloskey (1986b), Munn (1999), McCloskey (2011a)). That being so, the otherwise puzzling status of examples like (28) falls into place relatively smoothly, as long as it is agreement which links finite C with the polarity head that it most immediately commands.

Nor do the assumptions about coordination that are required by these proposals seem unreasonable. We will assume an asymmetric theory of coordination in which the coordinator is a head and all conjuncts but the last are specifiers of that head (the final conjunct is its complement). The requirement of identity across conjuncts is a requirement of semantic type (which ensures that there will be a close approximation to a requirement of syntactic identity across conjuncts, given that semantic type and syntactic category are at least loosely correlated). The selectional requirements of a complementizer like *má* or its negative counterpart *muna* are satisfied on the highest (closest) conjunct (because it provides its label as the label of the coordinate phrase) and this is why finite clauses precede nonfinite clauses in coordinations such as those in (15) and (28) (see Munn (1993), Johannesen (1998), Johannessen (1993), Kayne (1994), Chomsky (2013)). These positions on coordination seem reasonably well supported and they permit a straightfor-

ward understanding of the relationship between finite C and the finite polarity head:

(33)   COMPLEMENTIZER POLARITY AGREEMENT
        The label of C agrees, with respect to the values of the features [NEG] and [FIN], with the label
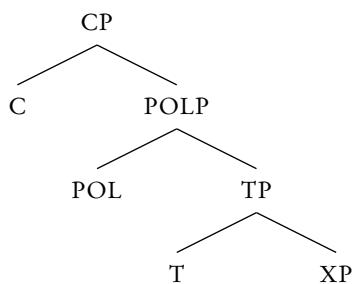   of the most prominent element in its domain which contains the same features.

(33) is presumably one instance of the operation AGREE (Chomsky (2000, 2001)).

    This seems reasonable enough overall and marks, I think, at least a descriptive advance over previous treatments. It remains embarrassing, no doubt, that a core property of the system does not emerge right away – namely that negation on C is incompatible with any independent expression of sentential negation. To prevent such 'polarity doubling' we have at present only the stipulation that the polarity head (in finite contexts) is null. But Irish is very strongly a head-marking language, in the sense defined first by Johanna Nichols (1986) and prominent in much subsequent typological work. That is (in our terms) in probe-goal interactions, the morphological effects of the interaction are realized on the probe and the phrase whose label provides the goal is characteristically null (McCloskey & Hale (1984), McCloskey (1986b), Andrews (1990), Legate (1999), Ackema & Neeleman (2003), Doyle (2002), McCloskey (2011a)). Given that we have analyzed the relation between finite C and finite polarity as a probe-goal relation, the fact that the finite polarity head is always null might be properly seen as one aspect of that larger pattern. It must be recognized, though, that in the absence of a real understanding of those patterns, this is little more than a promissory note

    It might also be regarded as embarrassing (as a reviewer suggests) that, although we have argued for a fundamental symmetry between finite and nonfinite clauses in the expression of negation (in both, the semantically relevant expression of negation is below C), an asymmetry remains – in nonfinite clauses the overt expression of negation is in the lower position and C is at least in this case null. This too, though, is one aspect of a larger pattern (explored in ongoing work). In nonfinite clauses, as noted earlier, the sequence of heads which defines the inflectional projection is surface-visible in a way that it is not in finite clauses. The reasons for this are almost certainly diachronic. Nonfinite clauses are recent innovations in the language, emerging only in the seventeenth century by way of re-analysis of earlier nominal structures (Stüber (2015)). The morphological fusions and accretions which provide evidence for grammars which include head movement and other exotic externalization devices have therefore not yet had time to accumulate and the sequence of functional heads can be seen in something like their pristine arrangement.

    Additional questions quickly arise – about patterns of coordination that go beyond those displayed in (15) and (28) and about how these proposals interact with the post-syntactic lowering of complementizers proposed by McCloskey (1996a) and further investigated by Ostrove (2016). These questions are important but not crucial for our immediate concerns. What matters most for now is the conclusion that the topmost region of the clausal projection in Irish looks like (34a). We also have the commitments in (34b).

(34) a.

```
              CP
            /    \
          C       POLP
                /     \
             POL       TP
                     /     \
                    T       XP
```

    b. In nonfinite clauses, NEG (realized as *gan*) appears in the polarity position of (34a). In finite
        clauses the polarity head is null, but C bears an uninterpretable NEG feature which agrees with
        the semantically active NEG feature on the polarity head below it.

We will return to and elaborate these proposals. First, though, we must make the obvious move.

4   POLARITY AND VERB RAISING

Our discussion of VSO order in Irish ended with the skeletal proposal in (11). We were then left with the challenge of identifying believable candidates for the crucial elements of (11) – F1, to which the finite verb raises, and F2 which attracts the 'subject' into its specifier, below F1. An additional question was what that structure implied about Responsive Ellipsis – how it functions internal to Irish and how it relates to similar processes in other languages. Our discussion of polarity suggests some obvious answers to these questions – we can understand (11) as in (35).

(35)
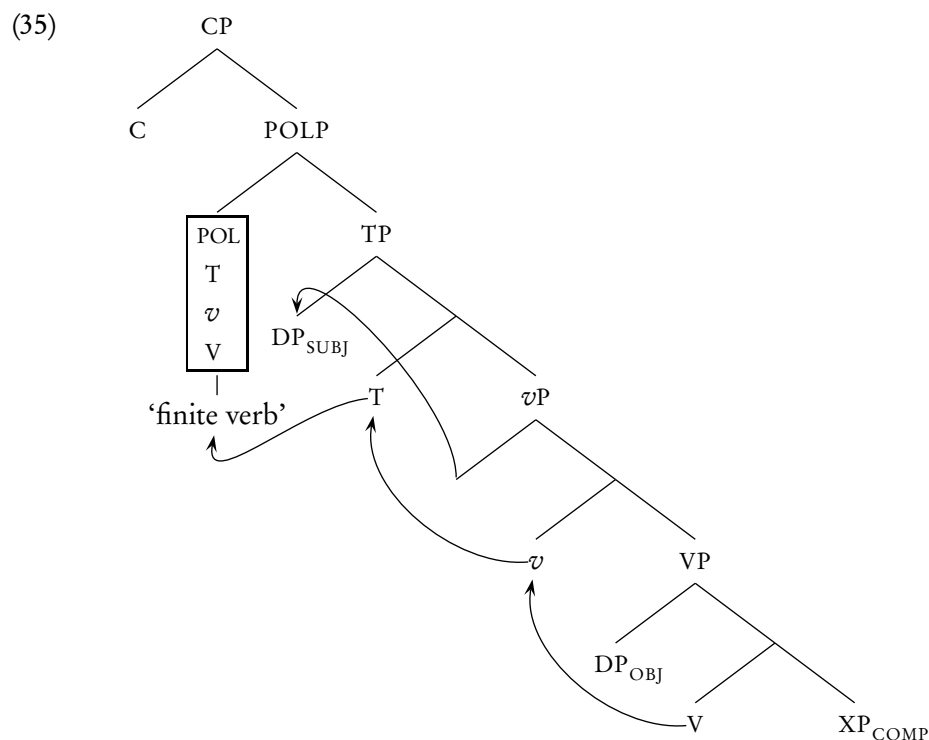
That is: F1 is the polarity head; F2 is T; finite verbs raise to the polarity position and subjects raise to the specifier of T, deriving VSO order.

   I want to argue that in this case the obvious move is the right move. The section which follows traces some consequences and entailments of the proposal in (35) and argues that it makes possible an understanding of certain patterns and observations which would otherwise remain surprising.

5   CONSEQUENCES AND ENTAILMENTS

5.1   BASICS

The core results we want to secure – the observations about constituency which suggest that finite VSO clauses have the general shape in (3) and (7) above – are captured, of course, as before. The inflected verb has a phrasal sister which includes the subject, and the object, along with complements and other dependents of V. Given (35), that large postverbal constituent is TP and it is, further, TP which is elided under Responsive

Ellipsis, stranding the finite verb to its left but taking the subject with it.[5]

Certain scope facts are also captured as before (see McCloskey (1996a, 2001a, 2014). Given (35) the finite verb occupies the polarity position, positive or negative; thus any element to its right will be in the scope of that polarity expression. We correctly expect, then, that Negative Polarity items will be licensed in the subject position of negative clauses:

(36) a. Níor   ith   éinne riamh a dhotháin le   haon anlann amháin.
         NEG.PAST eat.PAST anyone ever his fill   with one meal   one
         'Nobody ever ate their fill at one sitting.'   CFOC 11
     b. Níor   thaibhsigh gáire éinne   acu   neirbhíseach.
         NEG.PAST appear.PAST laugh anyone.GEN of-them nervous
         'None of them's laugh seemed nervous.'   LG 138

We also expect the contrast between English (37), which is ambiguous, and Irish (38), which is not:

(37)   Every player didn't get a goal.

(38)   Ní   bhfuair achan imreoir cúl.
         NEG-FIN get.PAST every player   goal
         'Not every player got a goal.'

The two readings of English (37) depend on whether the expression of negation or the universal quantifier in subject position takes wider scope. In the Irish example of (38), by contrast, only one reading is available and on that reading negation has wider scope than the universal quantifier in subject position. This is an expected contrast, if we attribute the English ambiguity to the availability of scope reconstruction under A-movement. In raising from its thematic position to the specifier position of T, the subject of (37) crosses the negative head. If it is interpreted in its higher position, we get the reading on which the universal quantifier out-scopes negation. If it reconstructs to its thematic position, then negation out-scopes the universal quantifier. In undergoing an exactly parallel raising, however, the Irish subject can never escape the scope (the command-domain) of the polarity-head, whose scopally relevant position, according to (35), is that of the finite verb.

These are not new results. On earlier interpretations they would be guaranteed by the assumption that negation on C is the semantically relevant polarity position and the reasoning otherwise would be entirely parallel. However, in arguing, as we will shortly, that the analysis in (35) yields an improved understanding of certain phenomena, it will be important to also establish that there is no analytic slippage in other areas.

5.2 VERUM FOCUS

If the proposal currently on the table is correct, every finite verb in Irish contains within itself an element which expresses polarity, negative or positive. Although this element has no phonological exponent, its presence within the verb ought to be detectable in some way. In this section I argue that it is, briefly summarizing a longer and more detailed discussion which can be found in Bennett et al. (2015).

Finite verbs, if this proposal is to be believed, are constructed by combining a sub-sequence of the functional heads of (35) into a single morphological word, one that can be represented roughly as in (39):

(39)   { V v T POL }

The verb *thosnaíodar*, for example (the 3rd person plural past tense form of 'begin') will have the internal

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[5]As pointed out by a reviewer, the class of 'large' ellipses (that is, TP-sized) which show the properties of English VP Ellipsis is probably large in crosslinguistic terms. For some intriguing parallels in Hungarian, see Bántréti (2001).

representation in (40), in which the order of morphemes (when they can be heard) is a faithful mirror image of the syntactic sequence we have argued for in (35):[6]

(40)   { [$_V$ *thosn-*] [$_v$ *-aí*] [$_T$ *-odar*] [$_{POL}$ $\emptyset$] }

How might the presence of the null polarity item of (39) or (40) be detected? The answer is that its presence is indirectly but palpably detectable when it is F(ocus)-marked.

Consider the exchange in (41), extracted from a radio interview broadcast on November 3rd 2016. (41a) is the interviewer's question; (41b) is the interviewee's response.

(41) a.   Siud   é an chéad chuid den   fheachtas seo   – an agóidíocht seo   a tá   sibh
           DEMON it the first piece of-the campaign DEMON   the protest   DEMON C be.PRES you.PL
           ag   dul a dhéanamh. Ar oibrigh   sé?
           PROG go do.NON-FIN Q work.PAST it?
           'This was the first phase of this campaign – this protest that you are mounting. Did it work?'
     b.   D'oibrigh. D'oibrigh SÉ.
           work.PAST work.PAST it
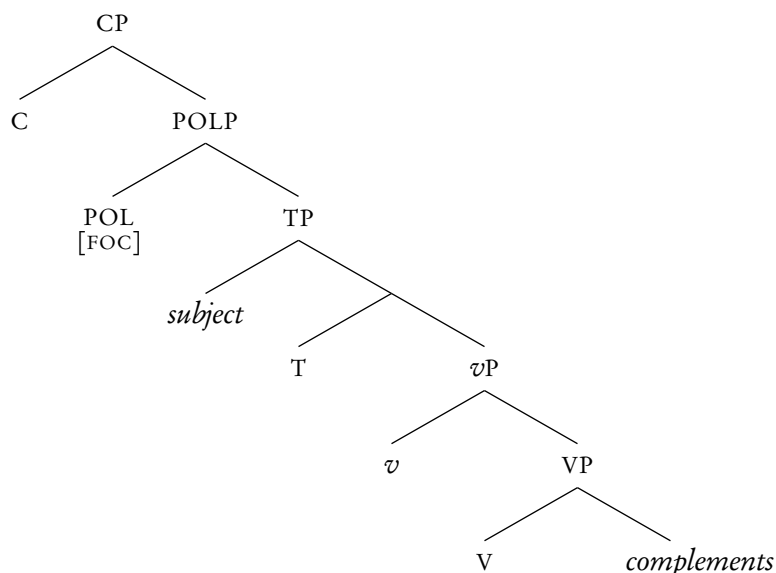   'It did. It absolutely did.'   RNG 03112016

In (41b), we use small caps to indicate the fact that the simple pronoun *sé* ('it') in the second part of the interviewee's response bears a strong focal accent (and its vocalic nucleus is long). In this it contrasts sharply with the corresponding pronoun in the interviewer's question, which is unaccented, has a short and centralized vocalic nucleus and forms a prosodic word with the preceding finite verb. Both pronouns are of course given. In fact both are anchored to the same discourse referent – the campaign of protest referred to in the interviewer's opening statement. Despite the fundamental similarity in the discourse relations that the two pronouns enter into, however, they are treated phonologically in profoundly different ways. The phonological form of the first is exactly as one would expect for a pronoun which is given – it is deaccented and its vocalic nucleus is therefore shortened and centralized. The second pronoun, by contrast, bears a strong and distinctive focal accent.

But of course in cases such as (41), in semantic terms, focus is not on the pronoun at all. As argued at some length in Bennett et al. (2015), what we have in the second clause of (41b) is an instance of Verum Focus in the sense originally identified by Tilman Höhle (1992) for German – appropriate in a context in which the truth or falsity of a proposition p is a salient discourse issue and in which the truth of p is asserted with some force. With Samko (2014, 2016), Bennett et al. (2015) argue that Verum Focus is best understood in terms of F(ocus)-marking (in the sense of Jackendoff (1972), Rochemont (1986), Selkirk (1996, 2008) and much related work) on the polarity head, positive or negative. That is, the syntax will present to the interpretive system a structure like the schematic (42a), which will in turn yield the complex morphological word (42b) in the position of the polarity expression:

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[6]On identifying the stem suffix *-aí* with the voice head v, see Ó Sé (1991), Acquaviva (2014), Ostrove (2016).

(42) a. SYNTAX:

```
                        CP
                       /  \
                      C    POLP
                          /    \
                       POL      TP
                      [FOC]    /  \
                           subject \
                                  / \
                                 T   vP
                                    /  \
                                   v    VP
                                       /  \
                                      V   complements
```

    b.   MORPHOLOGY:

$$\{\quad V \quad v \quad T \quad \underset{[FOC]}{POL} \quad \}$$

If we now assume for Verum Focus the kind of alternative semantics proposed by Samko (2014, 2016), building on Rooth (1985, 1992a), the focus semantic value of a clause containing an F-marked polarity head (as in (42a)) will be an alternative set consisting of positive and negative variants of the same propositional core (in effect, a polar question), while its ordinary semantic value will be the propositional core – which is what is asserted in a use of (42). In the exchange of (41), for example, what we expect is that the second clause of the interviewee's response should be appropriate only in a discourse context in which the truth of p (*that the protest worked*) is a salient issue and in which the interviewee wishes to assert the truth of p. This seems correct; that is, assuming the representation in (42a) for (41b) seems to yield the right interpretive results. Furthermore, the availability of (42) as a possible and appropriate response is more or less inevitable, given the framework we have gradually been assembling.[7]

    The question that remains, of course, is how the syntax of (42) might relate to the actual phonological outcome in (41b), why, in particular, an accent should appear on a subject pronoun in the context of Verum Focus. The crucial link, though, is provided by a very old and well established generalization: in Irish finite clauses, simple subject pronouns incorporate into the verbal complex to their left as phonological clitics (Quiggin (1906: p. 155, §486), de Bhaldraithe (1966: p. 65, §339), Greene (1973), Lucas (1979: p. 120, §461), Chung & McCloskey (1987: 226–228), Doherty (1996: 23–25), Ó Baoill (1996: 88–89), Bennett et al. (2015)). The example in (43a), for instance, has the prosodic structure indicated in (43b) and a phonemic realization as in (43c) (in Ulster varieties):

(43) a.   Chonaic mé fear mór ar an bhealach mhór.
             saw   I   man big on the way   great
             'I saw a large man in the roadway.'
     b.   (chonaic mé) (fear mór) (ar an bhealach mhór)
     c.   (xanɨkʲmə)   (fʲar moːr) (erʲ ə valax woːr)

---

[7]This account of the semantics and pragmatics of Verum Focus seems reasonable as far as it goes, but it can hardly be complete. What is missing is an account of the very mysterious notion of 'emphasis' or 'forcefulness'.

If we interpret this cliticization in terms of right-adjunction (though that interpretation is by no means crucial), then the actual output structure we expect for the finite verb is not in fact (42b), but rather (44), in which the mono-morphemic pronoun (D) right adjoins to the complex created by head movement through the extended projection:

(44)   {{ V v T POL } D }
                  [FOC]

The generalization that then emerges, as Bennett et al. (2015) make clear, is a fundamentally phonological one – focal accents are realized at the right edge of the phonological constituent which most immediately contains them. The mismatch between (42a) and (41b) is then another instance of the kind of approximate and imperfect matching that is the hallmark of syntax phonology interactions.[8]

Much work remains to be done to flesh out this account in a serious way, particularly with respect to the phonological mechanisms involved (on which see Bennett et al. (2015)); but this has already been something of a detour and the core point can be fairly quickly recapped. It is this: we were led to claim that verb-raising in Irish finite clauses targets a high polarity head (below C but above T and therefore above the position of the subject). We therefore predict that every finite verb in the language has within it a semantically active expression of polarity. The initially very strange Verum Focus effects described here are ultimately, we have argued, phonological manifestations of the presence of that polarity element within the fronted verb.

Before leaving the topic, though, it is worth adding a final observation. The discussion so far has been concerned with the expression of Verum Focus in the context of positive polarity. But the mechanisms are exactly the same in the context of negative polarity, as we can see from an example like (45), which is again taken from a radio interview):

(45) a. A-r   shíl   tú ariamh go mbeadh sé i nDáil   Éireann?
         Q.PAST think.PAST you ever   C be.COND he in Parliament Ireland.GEN
         'Did you ever think that he'd be in the Irish Parliament?'
     b. Nío-r   shíl   MÉ.
         NEG-FIN.PAST thought I
         'I certainly did NOT.'   RNG 29112010

Here too, we see the focal accent displaced on to the incorporated pronoun to express Verum Focus, just as in (41b), and the mechanisms that are at at work are evidently the same in the two kinds of cases. Here, however, we have a negative complementizer and further there is no phonological reason why that element should be unable to support a focal accent (consisting as it does of a closed syllable with a long vocalic nucleus). If the negative complementizer were the actual expression of negative polarity, then, we should expect the focal accent to appear on that element. On the analysis so far developed, however, the negative feature on C is uninterpretable and agrees with the semantically relevant expression of negative polarity which, in (45b) as in (41b), is actually within the inflected verb. The facts of (45), then, and their parallel with cases like (41b) are as expected. Also expected, given our proposal about the syntax of polarity, is the observation that it is utterly impossible to place the focal accent on the apparent expression of negative polarity, that is, on the negative complementizer:

(46)   *NÍOR shíl mé.

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[8]In the absence of a subject pronoun, Verum Focus may be realized either on a verbal agreement suffix (one that has sufficient prosodic substance) or on certain otherwise semantically empty post-verbal particles. What is common to all cases, however, is that the accent appears at the right edge of the verbal complex. See (Bennett et al., 2015: 27, 29) for discussion.

5.3   RESPONSIVE ELLIPSIS AND THE TYPOLOGY OF ELLIPSIS

On the analysis of (35), what we have called 'Responsive Ellipsis' in Irish emerges as elision of the phrasal complement of the polarity head.[9] This way of understanding Responsive Ellipsis has several consequences.

   The first is that the parallel between Responsive Ellipsis in Irish and VP Ellipsis in English is restored. The English ellipsis type is at least sometimes, and perhaps generally, also to be analyzed as elision of the complement of the polarity head. This is clearest for cases like (47), on which see Lobeck (1995) and especially Potsdam (1997):

(47)   You CAN smoke in these rooms, but we suggest that you not.

As Potsdam shows, such cases are best analyzed along the lines shown in (48), with the polarity head being the licenser of the ellipsis and the constituent elided being its complement:
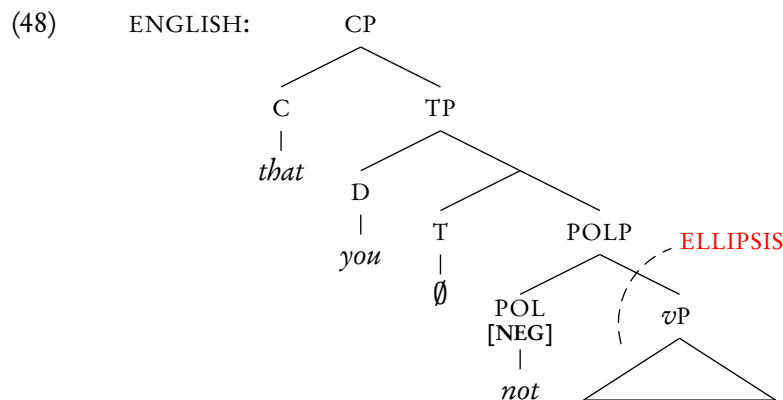
(48)   ENGLISH:

Given the proposals developed so far, our Irish cases are entirely parallel, a result that, as we saw in section 2 above, is one that we need to secure. The parallels between English and Irish become clear if we compare the English structure in (48) with that in (50), which is the structure that our proposals, as so far developed, assign to the Irish example in (49).

(49)   D'iarr   mé air   a theacht   ach deir sé nach dtiocfaidh.
          ask.PAST I   on-him come.NON-FIN but say he NEG-C come.FUT
          'I asked him to come but he says that he won't.'

(50)   IRISH:

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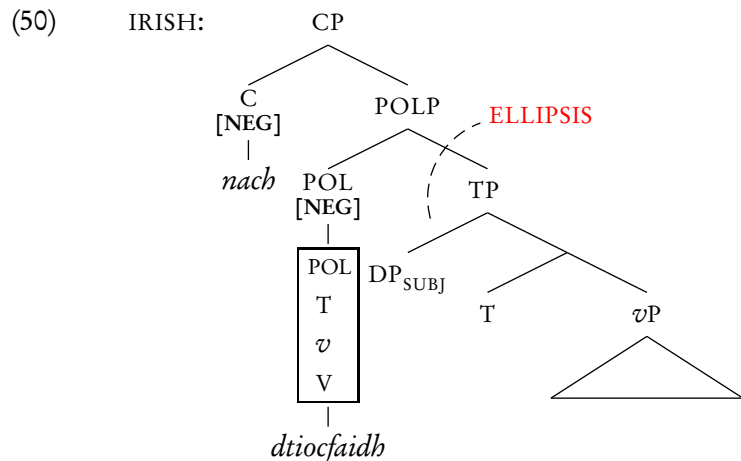
[9]For parallels in Finnish, Hungarian and Russian respectively, see Holmberg (2001), Liptak (2013), and Gribanova (2016a).

The differences between the ellipsis processes of the two languages now emerge as reflections of an independent and more fundamental difference – where the polarity head occurs in the inflectional projection. Because polarity is higher in Irish than it is in English, Responsive Ellipsis in Irish is elision of a larger constituent – one, crucially, that subsumes even the high subject position (specifier of T) but of course excludes the finite verb. The kinship between the ellipsis constructions of the two languages is therefore restored and both emerge as instances of the larger class of polarity ellipses – on which see especially Gribanova (2016a).

We also now perhaps better understand why both Responsive Ellipsis in Irish and VP Ellipsis in English occur so naturally in the responsive function (although, as we have seen, neither is restricted to that function). The discourse context in which a Yes or No answer is appropriate is one in which two propositions have been made salient by previous moves in the discourse game: p and $\neg p$. This is exactly the discourse context in which, in a response, there would be FOCUS-marking on the expression of polarity (signaling that the alternatives p and $\neg p$ are salient) and in which the semantic content of its complement (that is: p) is therefore given. But these are in turn exactly the conditions in which ellipsis is licensed and favoured. Given-ness (in the sense of Rooth (1985, 1992a,b), Tancredi (1992), Schwarzschild (1999), Merchant (2001)) is the key component in many theories of the semantic licensing of ellipsis, but focus just outside the ellipsis-site is often a crucial additional requirement (Rooth (1992a), Heim (1997), Merchant (2001), Romero (1988), Takahashi & Fox (2005) and much subsequent work). Therefore we need no additional theoretical apparatus to understand why Responsive Ellipsis (like VP Ellipsis) should be so frequently deployed in the answering of polar questions.

Finally there is also a distributional expectation internal to the language which should be considered. We have seen that in nonfinite clauses there is little or no head movement (this is probably the principal language-internal difference between the two clause-types). We have also seen that in nonfinite clauses the marker of negation (*gan*) appears below C and in the polarity head position (see the discussion of Section 3.1 at page 7 above). If Responsive Ellipsis is elision of the complement of a polarity head, we now have an expectation – *gan* too should be a licenser of the same kind of ellipsis. This possibility is in fact fairly well attested in the language as we see, for example, in (51):

(51) B'fhéidir nár dhóite   dhuit é   siúd   a tharrac   ort;   b'   fhearra
      perhaps it-would-not-be-good to-you him DEMON draw.NON-FIN on-you COP-COND better
      dhuit   gan.
      to-you NEG-NON-FIN
      'Maybe it would do you no good to bring that guy down on you. You'd better not.'   CFOC 90

In the second clause of (51), all but the negative polarity marker has been elided from the infinitival complement of the modal *b'fhearra dhuit* ('you had better'). This is the expected possibility.

The hedge 'fairly well attested' is used here because the pattern in (51) is not accepted by all speakers or in all varieties. This variability is probably attributable to whether or not the speaker or variety in question has an accented version of *gan*. It is well known that phonologically dependent elements may not appear at the left edge of ellipsis-sites. This restriction (behind which there is a long history of investigation[10]) is the basis for the humour in Richard Armour's celebrated poem in (52):

(52)   Shake and shake the catsup bottle
          First none will come and then a lot'll.

Given this requirement, (51) should be possible in Irish only if *gan* appears in a fully accented form. However it is characteristically unaccented and proclitic, as is typical for functional heads in Irish (see

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[10]See, among many others, Zwicky (1970), Kaisse (1983), Selkirk (1984), Anderson (2008), Ito & Mester (2016).

Bennett et al. (2013: pp. 221–224) for relevant discussion). Therefore our expectation will be that examples like (51) will be available only in idiolects and dialects which have innovated or inherited an accented version of *gan* to co-exist with its unaccented version. If this set of ideas is tenable, we will have an understanding not only of the possibility in principle of (51), but also of the vagaries of its distribution. We will also have some further reason for confidence in our general approach to what should really be termed 'polarity ellipsis' in Irish.

6 ELLIPSIS AND IDENTITY

Our starting point was the body of evidence which suggests that in Irish VSO structures there is a large postverbal constituent – one which seems to exclude the verb but to include all of the other major clausal constituents (as in (7) above). The analysis proposed is a standard one, according to which the verb originates inside that postverbal constituent and raises to its high initial position. An important commitment of the proposal, then, is that every VSO structure in the language includes two occurrences of the verb – one high and peripheral, one low and medial (the position in which the verb appears in nonfinite clauses). The goal of this section is to argue that the lower occurrence of the verb is in fact detectable – by way of a particular restriction on Responsive Ellipsis, one which is by now fairly familiar, but which is nonetheless surprising. Making this argument will force us to engage certain ongoing controversies about the nature of head movement – the process that gathers the independent syntactic atoms of the extended projection into a single morphological word.

Responsive Ellipsis in Irish is one instance of a phenomenon that has come to be known as 'Verb Stranding VP Ellipsis' (perhaps better now 'Verb Stranding Ellipsis' or VSE), a term which originates with Goldberg's (2002, 2005) extensive and careful discussion of the phenomenon in Modern Hebrew. First identified independently for Irish and for Hebrew in the very early 1990's, VSE has since been identified in an impressively broad range of languages and language-families.[11] VSE is the reduction to silence of some constituent XP out of which a verb has raised via head movement to a position outside XP. Having raised, the verb survives the mechanisms of elision, which target only elements exclusively dominated by XP.

For many of the languages in which the phenomenon has been most closely studied, there is a confound which makes it hard to identify VSE. In those languages, VSE co-exists with a process of object drop and it is not always easy to tell for a given expression whether it should be taken to involve VSE or object drop. However investigators like Goldberg (2005) for Hebrew and Gribanova for Russian (2010, 2013a, 2016a) have developed arguments that object drop cannot be responsible for the full range of observations and that appeal to something like VSE is also required (see also Matos (1992) and Cyrino & Lopes (2016) for European and Brazilian Portugues). For Irish the view is somewhat clearer, since the potential confound does not arise; there is no process of object drop in the language which might provide an alternative way of understanding examples such as those in (4b) above.

The phenomenon is real then, and well-attested. And it is hardly surprising that this should be so. If verb-raising is real, it would be very strange if those XP's out of which a verb happens to have raised were somehow excluded from the purview of the normal ellipsis operations of a language (though it has occasionally been suggested that they should be). But if the existence of VSE is unsurprising, what is genuinely surprising is the fact that VSE in every case so far studied closely also shows a 'Verbal Identity Condition'. Responsive Ellipsis in Irish shows this effect in a particularly strong and clear way, as we now show.

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[11]See McCloskey (1991, 2005, 2011b), Doron (1991, 1999), Sherman (Ussishkin) (1998), Goldberg (2002, 2005), Ngonyani (1996), Martins (1994, 2000), Holmberg (2001), Matos (1992), Cyrino & Matos (2002, 2005), Santos (2009), Schoorlemmer & Temmerman (2011), Rouveret (2011), Liptak (2013), Gribanova (2010, 2013b, 2016a,b), Cyrino & Lopes (2016).

6.1 THE VERBAL IDENTITY CONDITION

Pedagogical grammars of Irish invariably introduce the phenomenon we have called here Responsive Ellipsis with the dictum that to answer a polar question 'one repeats the verb of the question'. And that is an accurate prescription, since, as it turns out, the stranded verb in Responsive Ellipsis must be identical to the verb of its antecedent. This prescription is violated in the examples of (53), all of which are ill-formed:

(53) a. *Níor cheannaigh mé teach ariamh, ach dhíol.
       nior buy   I   house ever   but sold
        'I never bought a house, but I sold one.'
    b. *Cé   gur   mhol an bainisteoir na himreoirí inné,   cháin   inniu.
       although c.PAST praise the manager   the players yesterday, criticized today
       'Although the manager praised the players yesterday, he criticized them today.'
    c. *Níor   éist sí le-n-a   cuid   daltái ach labhair.
       NEG.PAST listen she with-her portion pupils but spoke
       'She didn't listen to her pupils but she spoke to them'
    d. *Cháin sé é   féin,   ach ag an am   chéanna chosain.
       criticized he him .REFLEX but at the time same   defended
       'He criticized himself, but at the same time he defended himself.'

The ill-formedness of the examples in (53) was re-confirmed by six native speaker consultants without disagreement (summer 2011). In addition, examination of 294 examples of Responsive Ellipsis chosen at random from various texts and audio sources revealed 100% compliance with the verbal identity condition. Speakers have no difficulty in composing meanings for examples such as (53)– the relevant inferential steps are straightforward and salient; they are, nevertheless, systematically unacceptable. Similar observations hold for Hebrew (Goldberg (2002, 2005)).[12]

   The Verbal Identity Condition, however, does not require complete identity of form between the two verbs:

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[12]VSE can seem similar to the much-studied 'Argument Ellipsis' of many East Asian languages (see Xu (1986), Huang (1987), Otani & Whitman (1991), Hoji (1998), Oku (1998), Kim (1999), Saito (2004, 2007), Takahashi (2006, 2008a,b, 2009)), as illustrated for Japanese in (i).

(i)   a.   Taroo-wa   zibun-no hahaooya-no sonkeisiteiru.
           Taroo-TOP self-GEN mother-ACC respect
           'Taroo respects self's mother.'
      b.   Ken-mo [   ] sonkeisiteiru
           Ken-also   respect-PRES
           'Ken also respects (self's mother).'

The Japanese pattern in fact is similar enough (on the surface) to the Irish and Hebrew patterns that it was originally analyzed as another case of VSE (see Otani & Whitman (1991)). Subsequent work, however, beginning with Hoji (1998), has shown that the ellipsis at work in (i) targets a much smaller constituent than vP or VP (it is elision of an argument of the verb). Crucially there seems to be no Verbal Identity Condition for Argument Ellipsis; the Japanese example in (ii), for example, is unlike the superficially similar Irish example in (53d) in being fully well-formed:

(ii)   Taroo-wa zibun-o semete-ga   Ken-wa [   ] kabatta.
          Taroo-TOP self-ACC blamed-while Ken-TOP   defend-PAST
          'While Taroo blamed self, Ken defended (self).'

This contrast suggests strongly that the identity condition holds in Irish and in Hebrew because the constituent targetted for ellipsis is large enough to have contained the original occurrence of the verb.

(54) a. Chuireadh   sé as   do Bhreandán dul   ar cuairt chuici agus is   annamh a
     put.PAST-HABIT it out to   go.NON-FIN on visit   to-her and COP-PRES rare   C
     théadh.
     go.PAST-HABIT
     'It bothered Breandán to go to visit her and he would seldom go.'   IA 333

    b. ní   theastaíonn sin uaim.   Cén fáth   a dteastódh?
     NEG-FIN want.PRES   that from-me what reason C want.COND
     'I won't want that. Why would I?'   FF 7

    c. Ní   labharfaidh mé focal amháin agus má labhrann, is   orm   féin   a bheas an
     NEG-FIN speak.FUT   I   word one   and if   speak.PRES COP-PRES on-me REFLEX C be.FUT the
     locht
     fault
     'I won't speak a word, and if I do, the fault is my own.'   OTA 159

    d. Gabh   ar mo dhroim anseo. Chuaigh.
     go.IMPERV on my back   here   go.PAST
     'Get up here on my back. He did.'   CD 242

    e. Suigh   síos. … Ní   shuífidh.
     sit.IMPERV down   NEG-FIN sit.FUT
     'Sit down. … I won't.'   LAD 29

Nonfinite forms may antecede finite forms (in (54a), the nonfinite (and suppletive) *dul* matches the finite past habitual form *théadh*). Present tense forms may antecede conditional forms, as in (54b). Verbs in the future tense may antecede verbs in the present tense, as in (54c). And imperatives may antecede finite verbs in various tenses – in (54d) the imperative (and again suppletive) form *gabh* matches the simple past form *chuaigh*, while in (54e) the imperative form of 'sit' matches a finite future form of the same verb. And so on. As long as the requirement is observed that the two stems be identical (*modulo* suppletive allomorphy), the ellipsis site and the antecedent may vary in any way with respect to tense, mood, force and finiteness. Again, similar observations hold for Hebrew.[13]

What one makes of these observations will obviously depend on what one's commitments are about how ellipsis works in general or about how ellipses of this type work in general. But there is surely a pre-theoretical sense in which such observations are very surprising: the isolated finite verbs of (53) and (54) seem to be entirely outside the elided constituent; why, then, should they be required to be identical to anything? And the contrast with Japanese argument ellipsis (see footnote 12), in which the ellipsis site clearly does not include the verb and in which there is no Verbal Identity Condition, reinforces this sense of surprise.

Surprising or not, though, if we take on some theoretical commitments, we may begin to understand why such patterns should hold. For example, if there is a requirement of lexical and syntactic parallelism between the form of the antecedent and the form of the ellipsis-site,[14] then the Verbal Identity Condition can immediately be understood as reflecting that more general requirement, as long as there is a bare (that is uninflected) verb inside the elided constituent in cases like (53) and (54). But the presence of such a bare verb in that position is exactly the core commitment of the verb-raising analysis schematized in (35). On this view, then, the Verbal Identity Condition holds because for all relevant (syntactic and semantic) purposes, the uninflected verb is inside the ellipsis site. It is no more surprising, then, that verbal identity

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[13]On the implications of the observations about apparent root allomorphy, see Gribanova (2015). On the mechanisms which determine the allomorphy see Acquaviva (2014), Ostrove (2016).

[14]On this issue, see among others Rooth (1992a), Fiengo & May (1994), Heim (1997), Takahashi & Fox (2005), Merchant (2015), Chung (2013), Rudin (2016), Kroll & Rudin (2016). For comprehensive overviews of the state of the discussion, see Merchant (2005), Craenenbroeck & Merchant (2013:710–714) and Merchant (2016).

should be enforced under Responsive Ellipsis in Irish than that it should be enforced under VP Ellipsis in English. This is a simple and in many ways attractive proposal, but it is subject to at least two serious objections.

6.2   OBJECTION ONE

If head movement is a syntactic movement like any other, it should leave a 'trace' (a lower occurrence) like any other. When inside an ellipsis-site, the trace of phrasal movement can, under certain conditions, be 're-bound' by a phrase distinct from its binder in the antecedent. We see this for A-movement in (55) and for Ā-movement in (56) (Rooth (1992a), Heim (1997), Schuyler (2001), Takahashi & Fox (2005), Hartman (2011)).

(55) a.   Sandy gets on well with her advisor, but Christina doesn't.
     b.   John's coach thinks he'll do well, and Bill's coach does as well. (Rooth (1992a))
     c.   Aubergines seem to do well here, but carrots don't.

(56) a.   There are things which big data science CAN explain and things which it CAN'T.
     b.   The BLUE one, I like; the BLACK one, I don't.

That is: no identity condition is imposed on phrases that undergo movement out of an ellipsis-site. In which case, unless head movement is different in some important way from phrasal movement, there should be no Verbal Identity Condition.

6.3   OBJECTION TWO

The logic that 'explains' the Verbal Identity Condition leads us to expect that the inflectional material expressed on the finite verb should also be required to be identical to corresponding material within the antecedent. After all we have argued that Tense, in particular, is below the subject and should therefore be within the ellipsis-site. If the Verbal Identity Condition follows from a requirement of lexical and syntactic parallelism between ellipsis site and antecedent, that same requirement should impose a similar parallelism on all of the heads within TP, including the Tense head itself. It follows that there should be a requirement of strict inflectional identity between the antecedent verb and the verb in the Responsive Ellipsis clause and all of the well-formed examples in (54) should be impossible. In the section which follows we will address the narrower empirical concern (OBJECTION TWO). We will then turn in the final section to OBJECTION ONE, which has to do, at bottom, with the status of head movement in linguistic theory and therefore demands a larger context.

7   THE SYNTAX OF TENSE IN IRISH

The discussion so far has taken a fairly simple view of the syntax of verbal inflection in Irish, assuming as it does that all relevant distinctions are expressed on the single head T of (35). But this view takes no account of one of the most distinctive aspects of the Irish system – the curious double marking of certain tenses and moods.[15] This double marking is exemplified for the past tense in the examples of (58), all of which have the general form in (57):

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[15]Discussions with Paolo Acquaviva, Kenji Oda and Jason Ostrove over several years were very helpful with the material of this section. See Sells (1984:127–131), Chung & McCloskey (1987), Duffield (1995), Cottell (1995), McCloskey (2001b), Acquaviva (2014), Oda (2012), Ostrove (2016) for further discussion and alternatives. The papers of Acquaviva, Oda, and Ostrove all draw on earlier presentations of much of the material of the present paper and the four jointly define a more or less harmonious framework of analysis, though with a number of important differences of (what one might regard as) detail.

(57)   C–PTC–V+AFFIX

That is, certain tenses and moods (including past) have a double exponence – one component in the form of a preverbal 'particle' and one component as a verbal suffix.

(58) a.   gu–r   ól+adar   an deoch
           C–PAST drink-PST-P3 the drink
           'that they drank the drink'
     b.   an fear a–r   labhr+adar leis
           the man C–PAST speak-PST-P3 with-MS3
           'the man that they spoke to'
     c.   a–r   ól+adar   an deoch?
           INTERR–PAST drink-PST.P3 the drink
           'Did they drink the drink?'
     d.   ní–r   ól+adar   an deoch
           NEG–PAST drink-PST.P3 the drink
           'They didn't drink the drink.'

(59) a.   má d'   ól+adar   an t-uisce
           if   PAST drink-PST.P3 the water
           'if they drank the water'
     b.   an t-uisce a   d'   ól+adar
           the water C-WH PAST drink-PST.P3
           'the water that they drank'
     c.   D'   ól+adar   an t-uisce.
           PAST drink-PAST.P3 the water
           'They drank the water.'

The preverbal particle *do* is proclitic on the finite verb which follows it;[16] the particle *-r* is enclitic on the complementizer to its left. Which 'past tense particle' is used depends on the selecting complementizer. Most members of the class C demand the preverbal past tense marker *-r*, but a smaller group forces appearance of *do-*. In the absence of a complementizer (in root clauses), *do-* appears (see (59c)). I want to argue here that the double morphological exponence of tense in VSO clauses in fact reflects the presence of two independent inflectional heads and their projections. So for (58a) we will have the structure in (60):

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[16]In most contemporary varieties, *do* appears only before vowel-initial verbs and its vowel is elided. In many of the dialects of Munster, however, especially in conservative varieties, it appears quite generally. See Ó Buachalla (1962, 1964, 2003) and the editors' Introduction to Ó Buachalla (2016) for discussion.

(60)
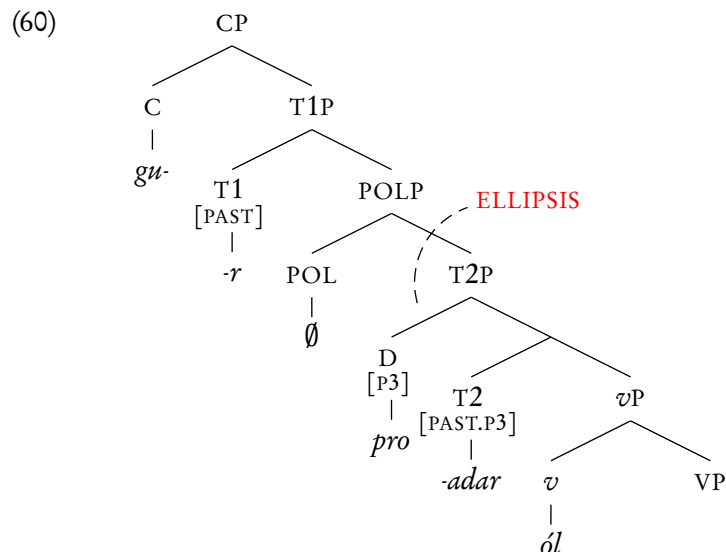
T1 is the position in which the 'past tense particles' *do-* and *-r* appear (along with certain other elements which we will consider shortly). T2 is the position through which the finite verb raises, and the various tense affixes (present, past, future and so on) are its exponents. T2 is also the locus of ϕ-agreement with the subject. T2, that is, acting as a probe, drives the array of morphosyntactic interactions which define subjecthood in verbal clauses (position, case, and agreement). Subjects are therefore in the specifier of T2 and agreement with the subject is expressed on the tense affixes (the exponents of T2). The higher tense (T1) never interacts with the subject and therefore has no agreeing forms. Verb-raising, as before, targets the position just below T1 (the polarity head) resulting in the observed orders of (58) and (59).

The innovation in (60) that matters most here is the postulation of an additional high projection (T1 of (60)) which is implicated in the expression of tense, broadly construed. One might instead view the appearance of the preverbal particles in fundamentally morphological terms (Cottell (1995), Oda (2012), Acquaviva (2014)). But there is evidence that the high T-position of (60) has an independent syntactic, semantic, and selectional function – as host to a class of elements whose status as independent syntactic heads is not in question. I have in mind here the various realizations of the 'copula' – the high functional element which introduces verb-less predications of various types – nominal, adjectival, and prepositional. The copula shows a range of positional, interpretive, and morphological commonalities with the preverbal tense particles that we can begin to understand if they are members of the same (functional) category. The basic facts for copula clauses are illustrated in (61), using the case of AP-predicates, and the general form of such clauses is schematized in (62).

(61) a. Is   cosúil le   taibhse é.
        PRES similar with ghost   he.ACC
        'He's like a ghost.'
    b. Ba   chosúil le   taibhse é.
        PAST similar with ghost   he.ACC
        'He was like a ghost.'
    c. Ba   chosúil le   taibhse é.
        COND similar with ghost   he.ACC
        'He would be like a ghost.'

(62)   [T   XP   DP   ]   (where XP can be NP, AP, or PP)
            [PRED] [ACC]

In semantic terms, the property expressed by XP of (62) is predicated of the referent of the (accusative) subject. The T-element of such clauses, however, can express only a very restricted range of tense or tense-like distinctions. In semantic terms, T can be gnomic (as in (61a)), past (as in (61b)), or conditional (as in (61c)). In terms of their realization, however, the past and the conditional/irrealis forms are not distinguished (see especially Ó Sé (1987, 1990) for documentation and discussion of this pattern, which is fully systematic).

Such verb-less predicational structures are much investigated (Ahlqvist (1972), Stenson (1981), Doherty (1996, 1997), Carnie (1995, 1997, 2000, 2006), Legate (1997, 1998), DeGraff (1997), Adger & Ramchand (2003), McCloskey (2005, 2014), Lash (2011)) and while disagreements of course remain, there are also clear areas of consensus. It is agreed, I think, that the copula itself is not a lexical verb but is rather a functional element, an expression of tense, in some sense. It is also agreed that the copula must be relatively high in the inflectional projection but below C.

If the copula is an expression of tense, however, its various realizations must crucially be distinct from the element (T2 in the analysis sketched in (60)) which is implicated in the morphosyntax of subjecthood in verbal clauses. There are two reasons for insisting on this distinction. The first is that the verbal affixes (exponents of T2) express a much broader range of tense distinctions (present, past, future, past habitual, present habitual and so forth) than are expressible in copula clauses, which are are restricted to the limited range of options illustrated in (61) above – two forms, three possible interpretations. The second reason for insisting on a distinction between the copula and T2 is that the morphosyntax of subjecthood in copula clauses is entirely different from the morphosyntax of subjecthood in verbal clauses – the subjects of copula clauses are accusative, they never enter into agreement relations and they are not subject to the Highest Subject Restriction on resumption (McCloskey (1990/2011) and much subsequent work). The case and agreement properties have already been illustrated; the final contrast (regarding the Highest Subject Restriction on the distribution of resumptive pronouns) is illustrated in (63):

(63) a. *Fear a raibh   sé   breoite.
            man C be.PAST he.NOM ill
            'a man that (he) was ill'
     b. Fear a-r   chosúil le   taibhse é.
            man C-.PAST similar with ghost   him
            'a man that was like a ghost'/'a man that would be like a ghost'

The contrast between the ill-formed (63a) and the routinely well-formed (63b) suggests strongly that subjects of copula clauses appear in positions that are lower, and therefore more distant from their potential binders in Ā-positions, than subjects of verbal clauses. In the terms that we are now considering, T2 is the pivotal element for all of the relevant interactions in verbal clauses (case, agreement, and raising). The natural conclusion would seem to be that T2 is absent from the extended projection of copula clauses. This being so, subjects of such clauses do not raise; they are not nominative; and they do not agree. And only the limited range of semantic distinctions expressible on T1 is expressible in copula clauses. These facts are now linked – they are all reflections of a single difference between the inflectional projection of a copula clause and the inflectional projection of a verbal clause. The absence of T2 may well be the defining feature of the distinctive syntax and semantics of copula clauses.[17]

In a striking parallel, however, the tense, or tense-like, distinctions that can be made in copula clauses correspond exactly to the distinctions that can be expressed within the small class of preverbal particles. We have noted that the T1-particle *do-* appears in past tense contexts (simple past and habitual past), but it

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[17]Copula clauses have their subjects in post-predicate position, as is clear from the examples in (61). There are two traditions for the analysis of this fact. One holds that the predicate fronts around the subject, which appears in a leftward specifier position. The other holds that the subject appears in a rightward specifier position and is sceptical of the appeal to predicate-fronting. See Lash (2011) for a comprehensive overview and extensive commentary. As far as I can tell, it does not matter for the issues that we are concerned with in the present paper which of these options is closer to the truth.

is also an obligatory presence in conditionals:

(64)   D'   ól-fainn   deoch uisce.
           PAST/COND drink.COND.S1 drink water
           'I'd drink a drink of water.'

This mirrors closely the pattern that we see all through the many forms of the copula in different dialects: there is an under-specified form and alongside the under-specified form there is a form which can in different contexts be either past or conditional in interpretation (see (61) above). Diarmaid Ó Sé (1987) makes this point and also documents a series of intricate and pervasive morphological parallels between forms of the copula and forms of the preverbal particles. In certain Munster varieties, for example, the past/conditional form of the copula may be realized as *do* – exactly like the past/conditional preverb in the same dialect and overt in exactly the same circumstances as that preverb (in conservative registers and as a mark of emphasis):

(65) a.   do   bhreá leat   bheith   ag   éisteacht leis
           PAST/COND fine   with-you be.NON-FIN PROG listen   with-him
           'You'd love to be listening to him.'
    b.   do   mhaith liom   dul   ann
           PAST/COND good   with-me go.NON-FIN there
           'I'd like to go there.'   Ó Sé (1987: 103)

The *-r* enclitic form which appears as one of the markers of past tense in verbal clauses (see (58) above) also appears in copula clauses and is selected by the same set of complementizers as in verbal clauses:

(66) a.   rud   a–r   chosúil le   míorúilt é
           thing C–PAST/COND like   with miracle it.ACC
           'a thing that would be/was like a miracle'
    b.   A–r   mhaith leat   a bheith   ag   éisteacht leis?
           INTERR–PAST/COND good   with-you be.NON-FIN PROG listen   with-him
           'Would you like to be listening to him?'

In this use, *-r* permits both a past and a conditional interpretation, as seen in (66). There is clear evidence that this parallelism is not an instance of accidental homophony but rather that both the copula form and the preverb form reflect the same morpheme. In a very recent diachronic shift affecting many of the dialects of West Kerry, the enclitic *-r* preverb is disappearing (being replaced by a zero-realization). This is illustrated in the examples of (67), in which other dialects (and indeed the same West Kerry dialects 60 years ago) would have had *gu-r* and *níor* respectively:

(67) a.   go dteastaigh uaidh   cúpla punt a thuilleamh
           C   want.PAST from-him couple pound earn.NON-FIN
           'that he wanted to earn a few pounds'   MOD 210
    b.   Ní   fhágais   id dhiaidh é?
           NEG-FIN leave.PAST.S2 after-you   it
           'You didn't leave it behind you?'   MOD 38

As stressed in the detailed discussion in Ó Sé (1987), this ongoing shift applies equally not just to the preverbs (as in (67)), but also to the relevant forms of the copula, as seen in the examples of (68), where again other dialects would have *ní–r* (in (68a)) and *cá–r* (in (68b)).

(68) a. Ní   mhaith liom   mo mhéar a chur   eatarthu
         NEG-FIN good   with-me my finger put.NON-FIN between-them
         'I didn't want to put my finger between them.'   MOD 33

   b. cá   gceart dúinn a bheith?
         where proper to-us be.NON-FIN
         'Where should we be?'   MOD 186

These and the many other parallels and parallel shifts documented by Ó Sé (1987) suggest that the past preverbs *do-* and *-r* are not simply alternative, or additional, morphological exponents of past tense, but rather belong to the same grammatical category as the various forms of the copula. But if the extensive literature on copula constructions is correct in concluding that the copula is a functional head in the extended clausal projection, it follows that we should reach a similar conclusion about the preverbal particles which appear in past and conditional contexts.

   More specifically, the various patterns we have considered begin to fall into place once it is assumed (i) that there is a functional category T1 (ii) that all forms of the 'copula' belong to that category, (iii) that the preverbal particles *do-* and *-r* belong to that category and (iv) that there is a distinct category T2 which expresses a broader range of distinctions than are expressible on T1 alone. The higher head T1 is present in all finite clauses (verbal and copular); the lower tense head T2 is present only in verbal clauses. We are left, then, with the syntax of (60) for verb-initial clauses.[18] And for the more particular purposes of the present discussion, what is most crucial is that, given the more elaborated structure in (60), only T2 is 'trapped' within the ellipsis site when Responsive Ellipsis applies. T1 is outside the elided constituent (which is now taken to be T2P).

7.1 IDENTITY REDUX

In a series of papers over many years, but most comprehensively in Stowell (2007), Tim Stowell has argued for a view of the syntax of tense which closely parallels the claims made here on the basis of the very particular facts of Irish. Specifically, he argues, on grounds that are entirely independent of our concerns here, for a syntactic decomposition of each tense into two interacting but independent functional heads, one high in the inflectional projection and one low, very close to the verbal domain. In semantic terms, the high tense head introduces a Reference Time (RT) argument and the low tense head, in a way that is related to its appearance just above the verbal domain, introduces an Eventuality Time (ET) argument. In a root clause, Reference Time is (usually) the Utterance Time. The semantics of the higher head imposes an ordering relation on the value of the RT variable and the value of the ET variable (so for instance, past tense orders RT after ET). Crucially for our concerns here, the relation between the higher head and the lower is taken to be a binding relation, analogous in important ways to the relation of Control. The parallels between Stowell's general findings and the findings of the present paper, based as they are on very particular syntactic and morphological facts of Irish, seem striking.

   If we adopt something like Stowell's proposals, we would identify our T1 with his higher tense head and we would identify our T2 with his lower tense head, the head which introduces a temporal variable corresponding to the time of the eventuality of which its *v*P complement provides a description.

   An important claim of the discussion just completed is that copula clauses in Irish lack that lower tense head (T2 for us). The evidence presented for that conclusion was fundamentally morphosyntactic. But if we take from Stowell's framework the idea that the lower tense head is the element which introduces a tem-

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[18]One might consider an alternative – close to the system tentatively advocated by Acquaviva (2014) – in which there is no independent polarity head below T1, but in which polarity, positive or negative, is a sub-feature of what we are calling here T1. Such a system would capture most of the results that are of concern to us here, as far as I can tell, and distinguishing it empirically from the proposal in (60) will be, I think, a delicate matter.

poral variable (the event time), it must follow that copula clauses allow no such temporal variable and that they express no event time. It is a well-established property of the predications that are expressed by copula clauses that (as Ó Sé (1990:65) puts it) they express 'inherent qualities' as opposed to 'transient states' and he describes such predications as 'timeless' (1990: 66). Doherty (1996, 1997) interprets such 'timelessness' in terms of individual-level predication, in the sense of Carlson (1977). His claim is that copula clauses express only individual-level and never stage-level predications. But if individual-level predicates are understood in the way proposed by Angelika Kratzer (1995) and developed in much subsequent work, their central semantic property is that they have no spatio-temporal event argument. If this proposal proves tenable, we will have established a link between the very distinctive morphosyntactic profile of copular clauses (which have their source in the absence of T2) and one of their most striking semantic properties (which also has its source in the absence of T2). We have not previously had such a link.

But we were led into this elaborate investigation originally by way of a very particular puzzle – why there should be mismatches in tense and finiteness between antecedent and elided clause under Responsive Ellipsis (see the examples of (54) above). Returning now to that puzzle, we have a possible resolution. A central element in Stowell's proposals, as we have seen, is that the semantic material introduced by T1 enters into a binding relation with the semantic content of T2. As a consequence, the lower temporal variable would be as open to rebinding as any bound anaphoric element inside an ellipsis site – a reflexive as in (69a), controlled PRO as in (69b), or an A-bound trace as in (69c):

(69) a. Fred criticized himself and Jack did as well.
    b. Sally decided to apply for the position and Greta did as well.
    c. The protesters were arrested and the photographers were as well.

In the context of the theory of ellipsis resolution developed in Heim (1997), (see also Rooth (1992a), Takahashi & Fox (2005)) the temporal variable introduced by the lower expression of tense (T2) would be ripe for re-binding because it would be un-bound within the ellipsis-site, but bound within the larger parallelism domain forced by its presence. This should yield the effects of (54) if the higher head, T1, is focused.

7.2 INTERIM CONCLUSION

These tentative remarks amount to little more than a promissory note. The actual work of designing and testing a system along the lines suggested here remains to be done.[19] The prospects, though, do not seem unreasonable, especially if one could manage to incorporate into it the insights of Ó Sé (1990) concerning the semantics of what we have called here T1, the head which hosts both the preverbal particles and the copula. Ó Sé argues that the core semantic distinction encoded there is the distinction between realis and irrealis mood (past tense must be taken to be at least possibly irrealis in this system, as he discusses). Melding this insight with a system like that proposed by Stowell would make for a challenging and interesting project. But for our narrower present purposes what matters is that there seems to be a way of understanding the coexistence of the Verbal Identity Condition with the tense-related mismatches seen in (54). [20]

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[19]In particular, to capture the kinds of mismatches documented in (54) the variable which is free in the ellipsis site would have to be a variable over relations between reference time and event time. This does not seem unthinkable, but the hard work remains to be done.

[20]There is an alternative path which one might follow in thinking about the problem posed by the legal mismatches illustrated in (54). In some very recent work on sluicing, Rudin (2016) and Kroll & Rudin (2016) discuss some fairly dramatic possible mismatches between antecedent and ellipsis-site with respect to sluicing in English and German and from that starting point argue for a syntactic licensing condition on sluicing which inspects only elements appearing within the 'eventive core' of the clause (in syntactic terms the *v*P-phase), a domain much smaller than the constituent targeted for elision. If extended to the case of Responsive Ellipsis in Irish, the approach would lead us to expect identity of heads within *v*P, but possible mismatches in the

8   IDENTITY AND HEAD MOVEMENT

We return finally to our original puzzle – why the Verbal Identity Condition should hold in the relation between an instance of Responsive Ellipsis and its antecedent clause. It is of course as true of the more articulated structure proposed in (60) as it is of its ancestor proposals, that inside every phrase elided by Responsive Ellipsis there is a bare verb – a verb dissociated from the inflectional bric-à-brac that it comes to have in virtue of its clause-initial position. It seems unlikely that it is an accident that this is exactly the unit of identity that the Verbal Identity Condition cares about (compare (53) above with (54)).

If the discussion of the previous section survives scrutiny, then the simple and intuitive proposal entertained in section 6.1 above is viable: the Verbal Identity Condition holds because for all relevant purposes (syntactic and semantic) the bare verb is within the ellipsis-site and representations such as (60) are the only representations that the ellipsis-licensing mechanisms are ever exposed to. This result is delivered immediately if the operations which build inflected verbs are post-syntactic, part of the process by which morphological exponents are found for the atomic elements of syntax. There have been a number of influential proposals along these lines, especially since Chomsky (2000) argued that head-movement, as classically conceived, was not easily integrated into otherwise plausible and attractive minimalist architectures (Boeckx & Stjepanović (2001), Harley (2004), Platzack (2013), Merchant (2013) and, in a very different theoretical context Wescoat (2002)). The identity condition on VSE has already played a role in these discussions (McCloskey (2011b), Schoorlemmer & Temmerman (2011)).

The post-syntactic view of head-movement yields the Irish facts (and probably also the relevant Hebrew facts) immediately and correctly, and as far as the principal goals of the present paper are concerned, the discussion could end here. It would be wrong to end, however, without recognizing that the theoretical and typological landscape is both more varied and more interesting than this over-brief discussion would suggest. As work on Verb-Stranding Ellipsis has proceeded, it has become clear that two types at least must be distinguished, determined in part by the form that the Verbal Identity Condition takes. There is a sub-type (which includes Irish and Hebrew) in which the requirement seems to be strict and invariant (as we have seen here) and a second group (which includes at least Russian, Hungarian, varieties of Portuguese and Ndendeule) in which the facts are more complex. In these languages verbal identity largely holds, but verbal mismatches are possible under a particular circumstance – if the verbs are themselves focus-marked (Ngonyani (1996), Santos (2009), Liptak (2013), Cyrino & Lopes (2016), Gribanova (2016a)).

As part of an ongoing program to re-map the theoretical landscape for head-movement, Boris Harizanov and Vera Gribanova (2017) have argued that when cases of successful empirical appeal to the device of head-movement are examined carefully, two rather different classes of phenomenon emerge. There are cases of true head-movement, in which already fully-formed morphological words displace to higher positions – often to positions associated with the expression of focus or with the expression of clausal force. But there are also cases in which head movement seems to be principally driven by the needs of morphological composition – the building of morphologically complex words. The two classes exhibit very different clusters of properties and the contrasts, they argue, fall into place if one assumes that the first type reflects syntactic movement of a more or less familiar kind, while the second reflects the work of a set of post-syntactic word-building operations. The typology they thus elaborate marks, in an important sense, the restoration of an earlier typology for head-movement proposed by Luigi Rizzi and Ian Roberts (1989)[21] and the framework developed by Gribanova and Harizanov seems very promising as a way of resolving the many difficulties that have marked the attempt to integrate head movement into the architecture of

syntactic space above vP. In this way we would derive the Verbal Identity Condition but allow the mis-matches of (54). In the context of such proposals, of course, our conclusions about the syntactic expression of tense in Irish stand.

[21]The typology proposed by Rizzi and Roberts turned on the difference between substitution and adjunction; their results were lost sight of when it came to be widely believed in the 1990's that head movement always proceeds by adjunction. See also van Riemsdijk (1998).

mature minimalist theory.

These proposals also have implications for the question of how we should understand the Verbal Identity Condition, since it seems more than possible that when we see the Verbal Identity Condition in its strong form (as in Irish and Hebrew) we are dealing with the post-syntactic word-building type of head movement, but that when focus-related exceptions to the Verbal Identity Condition are tolerated, the head-movement in question is of the second type – true syntactic movement to a focus-position. The Irish head movements we have been concerned with in this paper – which result in the construction of morphologically complex verbs in a relatively high region of the extended projection – are clearly of the post-syntactic type and it is therefore expected, within the framework under development, that Irish should show a strong form of the identity condition.

Much empirical and theoretical work remains to be done to flesh out and explore these possibilities (see Gribanova (2016b) for an initial laying out of the territory) but the prospects seem promising.

9 CONCLUSION

We have seen that the proposals of (60) provide a basis for understanding a broad range of observations about Irish clause-structure – some of them very basic (verbs come first …), some of them more esoteric. The final part of the discussion provides both an independent piece of evidence for the basic thrust of the proposal (there is evidence for the presence of a bare verb inside the postverbal constituent of (7)) and an argument for the postsyntactic status of at least some instances of what has been called 'head movement'.

Achieving some new understanding in this area will have important consequences for the larger goal of understanding in crosslinguistic perspective how clauses are built. With respect to that question, I think it is fair to say that the general program of focusing on combinatorial properties of functional heads has yielded both a better understanding of the various clause-types in Irish and a better understanding of their inter-relatedness, than has previously been available. More fundamental questions – where those atomic elements come from, what the combinatorial possibilities are, what the limits of variation are in how they express themselves in particular languages (the cartographic questions in effect) – remain mysterious.

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APPENDIX: SOURCES OF EXAMPLES

ACO:	*An Chloch Órtha*, Walter Scott, trans. Niall Ó Domhnaill
AGMTS:	*Ar Gach Maoilinn Tá Síocháin*, Pádraig Ó Cíobháin
CD:	*Cith is Dealán*, Séamus Ó Grianna
CE:	*Caithfear Éisteacht, Aistí Mháirtín Uí Chadhain in Comhar*, ed. Liam Prút
CFOC:	*Cnuasach Chléire*, Breandán Ó Buachalla
FF:	*Fonn na Fola*, Beairtle Ó Conaire
FI:	*Fan Inti*, Domhnall Mac Síthigh
GLL:	*An Gealas i Lár na Léithe*, Pádraig Ó Cíobháin
IA:	*Iomramh Aonair*, Liam Mac Con Iomaire
LAD:	*Lár an Domhain*, Beairtle Ó Conaire
LG:	*Le Gealaigh*, Pádraig Ó Cíobháin
MOD:	*An Mám Ó Dheas*, Muiris Mossie Ó Scanláin
NAOT:	*Na hAird Ó Thuaidh*, Pádraig Ua Maoileoin
OTA:	*Ón tSeanam Anall, Scéalta Mhicí Bháin Uí Bheirn*, ed. Mícheál Mac Giolla Easbuic
PNG:	*Pobal na Gaeltachta*, ed. Gearóid Ó Tuathaigh, Liam Lillis Ó Laoire, Seán Ua Súillebháin
RNG:	*Raidió na Gaeltachta*
SHS:	*Scéal Hiúdaí Sheáinín*, Eoghan Ó Domhnaill
T:	*Taidhgín*, Tomás Ó Duinnshléibhe