

# Prosody, Focus, and Ellipsis in Irish

Ryan Bennett, University of California, Santa Cruz, rbennett@ucsc.edu

Emily Elfner, York University, eelfner@yorku.ca

James McCloskey, University of California, Santa Cruz, mcclosk@ucsc.edu

## ABSTRACT

This paper analyzes a certain class of misalignments found in contemporary Irish in the relation between syntactic and phonological representations. The mismatches analyzed turn on the phonological requirements of focus (Verum Focus in particular) and of ellipsis and on how the two sets of requirements interact. It argues that the phonological mechanisms of ellipsis can be overridden when the phonological requirements of F-marking need to be satisfied. The analysis requires a theoretical framework in which the postsyntactic computation is characterized by parallel and simultaneous optimization. In particular, it is argued that certain facets of ellipsis, morphophonology, and prosody are computed in parallel, as in classic Optimality Theory. The analysis also relies crucially on a kind of head movement (from specifier to a commanding head position) whose existence is predicted by current conceptions of phrase structure but which seems to be little documented.

KEY WORDS: focus, Verum Focus, F-marking, ellipsis, polarity, head movement, Irish

## 1 INTRODUCTION

When we study<sup>1</sup> how phonological representations align with syntactic and semantic representations, we principally study imperfect parallelism. Prosodic representations must be to some degree faithful to the syntactic and semantic representations they express (otherwise, prosodic cues would not be as useful as they in fact are in syntactic and semantic processing, Wagner & Watson (2010)). But they must also meet purely phonological requirements, having to do especially with rhythm, balance, the needs of phonologically dependent elements and the needs of accentuation. The imperative to satisfy such requirements often results in imperfect parallelism across the systems of representation. This much is a virtual truism. The challenges come in understanding what the mechanisms actually are which regulate imperfect parallelism and the theoretical architecture within which those mechanisms do their work. Our goal here is to make some progress on these linked questions. We do that by offering a case study from Modern Irish which involves fairly dramatic mismatches between syntactic and phonological representations and some fairly intricate interactions among allomorphy, morphological incorporation, focus-marking and ellipsis.

The case study in question concerns the phonology and the morphosyntax of subject pronouns in Irish, exemplified in (1).

- (1)      Bhí sí    ag scríobh litreacha.  
               was she writing    letters  
               ‘She was writing letters.’

The long descriptive tradition for Irish has established that subject pronouns form a grammatical unit with the preceding verb in finite clauses. As we will see, the unit in question is something akin to a morphological word (section 3), formed through a morphosyntactic rebracketing operation which specifically targets subject pronouns (sections 3, 5). The nature of this rebracketing operation – which we take to be a species of head movement – is itself of some interest, as it merges syntactic objects of rather different types (a verbal head and a full nominal subject; section 3).

This close morphosyntactic relationship between verbs and subject pronouns interacts, further, with patterns of ellipsis in finite clauses. In certain contexts, Irish makes use of a construction in which all postverbal material in a finite clause is elided (sections 2, 5). Two interlocking puzzles arise here. First, subject pronouns undergo ellipsis in this context (3a), despite normally forming a tight constituent with the verb, which survives ellipsis. Second, when the verb is ‘emphasized’ (in a sense made precise in section 4), the pronoun survives ellipsis and carries a strong focal accent (3b).

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- (2) An raibh sí ag scríobh litreacha?  
 Q.PAST was she writing letters  
 ‘Was she writing letters?’
- (3) a. Bhí (sí ag scríobh litreacha)  
 was (she writing letters)  
 ‘Yes’ (lit. ‘Was.’)
- b. Bhí sí (ag scríobh litreacha)  
 was she (writing letters)  
 ‘Yes!’ (lit. ‘Was SHE.’)

We will argue that the survival of subject pronouns in such ‘emphatic’ contexts (3b) is fundamentally phonological in character and shows us that phonological constraints can take priority over the demands of the morphosyntax in certain circumstances (sections 4.1, 5). Similarly, the fact that ellipsis seems to preempt the morphosyntactic rebracketing of verbs and subject pronouns (3a) can be naturally understood if rebracketing is a postsyntactic operation, albeit one which is deeply intertwined with the syntax proper.

The analysis of these interactions that we offer, to the extent that it succeeds, provides support for a number of conclusions of larger import. At the center of our proposals is a kind of head movement whose existence is in a certain sense expected (see Chomsky (2013)) but which has as yet been little documented or studied. Our analysis also depends on the assumption that certain imperatives of the syntax-prosody interface, such as the nonpronunciation of given material in ellipsis constructions, reflect violable and fundamentally phonological preferences rather than absolute requirements (as in Optimality Theory, Prince & Smolensky 1993/2004). With respect to ellipsis, we believe that our results provide a new kind of evidence for the presence of articulated morphosyntactic structure within ellipsis sites. In addition, and relatedly, our results suggest beyond reasonable doubt that the resistance of focused material to deletion can have a phonological basis, rather than being grounded in interpretive factors. All of this, we believe, underlines the imperative to build a serious and well grounded theory of the phonology of ellipsis, alongside the now well-developed syntax, semantics, and pragmatics of ellipsis.

## 2 BACKGROUND

The interactions we care about center on the special status of subject pronouns in verb-initial clauses. We begin therefore by establishing some necessary background about such clauses, reviewing a large body of earlier work.

As is well known, Irish is rigidly verb-initial in its finite clauses. (4) illustrates this fact simultaneously for main clauses, adverbial clauses, and relative clauses.

- (4) Má bhriseann tú an fhaocha, tífídh tú na castáí atá ina leath  
 if break.PRES you the periwinkle see.FUT you the twists C-be.PRES in-its half  
 deirídh.  
 rear.GEN  
 ‘If you break open a periwinkle, you will see the twists that are in its hind parts.’

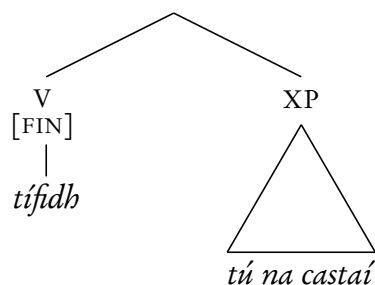
More specifically, constituent order in finite clauses can be described very roughly by way of the

informal schema in (5).

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

What has been most clearly established about such structures is that their constituency is as in (6), which shows a skeletal constituent structure for the main clause of (4).

(6)



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.

We will not review the evidence for this conclusion here (among others, see McCloskey (1991, 2011b, 2017), Elfner (2012, 2015), Bennett et al. (2016)) but it will be useful to focus on one of its elements – as an illustration and because the phenomenon at its heart is important for what follows. Consider the question-answer pairs in (7).

- (7) 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.’

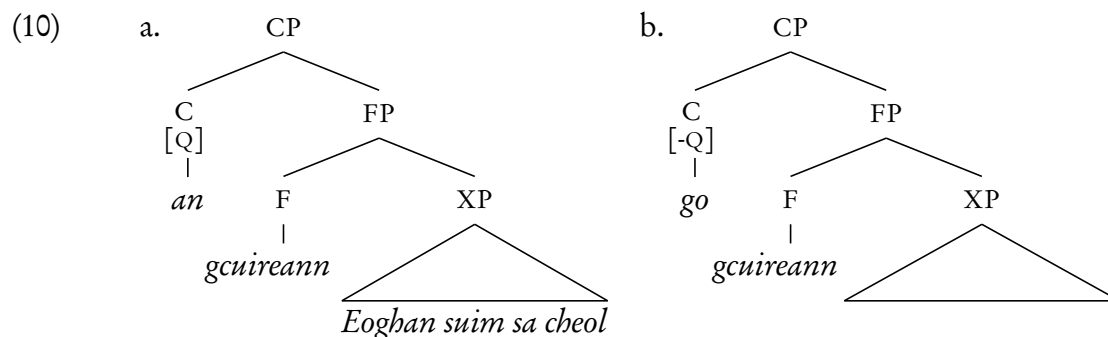
The extreme truncation of the clause seen in the isolated verbs of (7b) reflects elision of the large postverbal constituent (XP) of (6) (see McCloskey (2017) and references cited there).

We will use the term Responsive Ellipsis for this ellipsis, partly in deference to traditional usage (which calls the verbs of (7b) ‘responsive’ forms) and partly in recognition of its frequent use in the context of (7). However, while the term is convenient, it is also inaccurate, since it is an important fact about structures like (7b) that they are not in fact restricted to the responsive function. They appear freely in coordinate structures (8a), in tag questions (8b), in adverbial clauses (8c) and in relative clauses (8d).

- (8) 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  
 for fear C think.COND.S2 C be.PRES is-not any one of books great the  
 Oileáin san léite agam fós  
 island DEMON read.PERF-PASS by-me yet  
 ‘Lest you think I have, I have not yet read any of the great books of that Island.’
- 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’

We can understand the basic observations about VSO clauses and about Responsive Ellipsis if we assume that VSO orders of the Irish type emerge when the finite verb raises from an origin point within XP of (6) to a high left-peripheral position in the clause, from where it precedes and commands the subject, which is within XP. When XP undergoes ellipsis, the subject (along with almost every other major subconstituent of the clause) goes with it, but the finite verb, having raised out of the doomed constituent, survives. This family of analyses can be represented schematically as in (10), using (9a) for illustration. Here F represents the functional head which attracts the verb to itself and which may also license ellipsis of its complement.

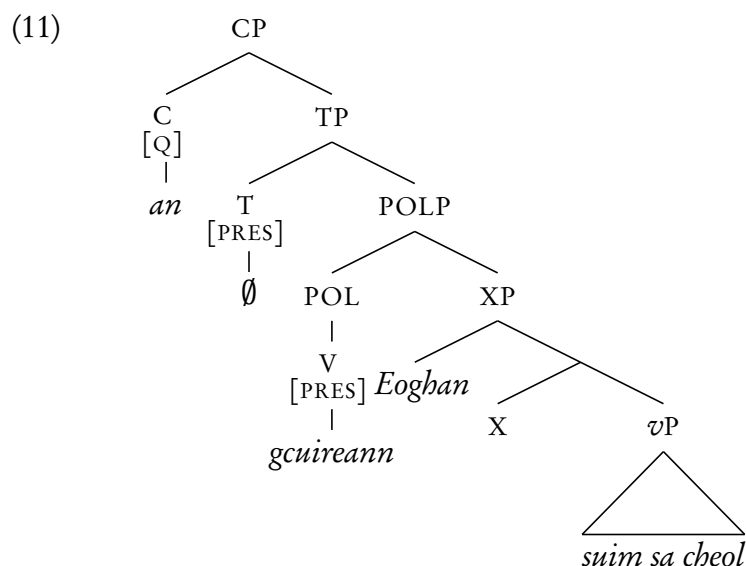
- (9) a. An gcuireann Eoghan suim sa cheol?  
 Q.PRES put Owen interest in-the music  
 ‘Is Owen interested in music?’
- b. Creidim go gcuireann.  
 believe.PRES.S1 C put.PRES  
 ‘I believe he is.’



F of (10) is then the functional head which licenses Responsive Ellipsis and whose complement (XP of (10) and (6)) is reduced to silence in (8a)–(8d).

There is a body of evidence (see, for example, McCloskey (2017), Acquaviva (2014)) which identifies F of (10) as the expression of sentential polarity. We will shortly review one strand of the evidence for this conclusion, but for now we can observe that it allows us to make the

appropriate typological links between Responsive Ellipsis in Irish and polarity ellipsis in many other languages. On this view, Responsive Ellipsis is elision of the complement of the polarity head; and it is for this reason that it shares many properties with such ellipses in other languages (López & Winkler (2000), Holmberg (2001, 2016), Griбанова (2017)) and why it is used so naturally, but not exclusively, in the responsive function. Adopting this view, and including the pre-verbal representation of tense-modality, we have the more articulated structure of (11) for (9a). The elided answer in (9b) reflects elision of the XP-complement of the polarity head.<sup>2</sup>



The proposals represented in (11) earn their plausibility in the first place because they let us understand all the observations which suggest that the material following the finite verb forms a constituent which includes a verbal projection (McCloskey (1991, 2011b), Schoorlemmer & Temmerman 2011, Griбанова (2017)). That constituent is XP of (11) and (10). Given that X of (11) attracts the subject into its specifier, the framework also incorporates the evidence that the subject raises out of the verbal domain (McCloskey (1996, 2001, 2011a, 2014)), while also allowing an understanding of the fact of VSO order. The relation between finite clauses and their nonfinite counterparts (superficially very different, given the (s)OV character of nonfinite clauses) also emerges in a natural way – the syntactic structures are parallel but the verb remains low in nonfinite clauses (Chung & McCloskey (1987), McCloskey & Sells (1988), Guilfoyle (1990), Duffield (1995), McCloskey (2017)).

- (12) Ba mhaith liom [ gan Máire an fear sin a phósadh ].  
 I-would-like NEG-NON-FIN Máire the man that marry.NON-FIN  
 ‘I would like for Máire not to marry that man. (Duffield, 1995:154)

In addition, the analysis in (11) has provided a useful framework for the analysis of the dauntingly

<sup>2</sup>A reviewer points out that, given the logic of Merchant (2013b), we now expect that voice mismatches will be impossible under Irish Responsive Ellipsis. This is correct, but the testing of the prediction is rendered difficult by the fact that Irish lacks true passives. Or rather, passive syntax is always part of the expression of particular aspects – progressive or perfect. For a given ill-formed example, then, it is difficult to know whether the ill-formedness should be attributed to the voice mismatch or to the aspectual mismatch.

complex verbal morphology of the language (see in particular Acquaviva (2014), Oda (2012), Ostrove (2015, 2017)) along with many aspects of its sentential prosody – Elfner (2012, 2015), Bennett et al. (2016). Most important for our present purposes, though, is that such analyses provide a framework in which Responsive Ellipsis can be reasonably understood.

We will have something to say later about the still unidentified category X of (11), which hosts the subject in its specifier. For now, we move on to a more pressing puzzle.

### 3 SUBJECT PRONOUN INCORPORATION

#### 3.1 OVERVIEW

However successful the syntactic proposals just reviewed may be, they are incomplete in at least one important way. Given (11), the subject of a VSO clause is the specifier of the complement of the head which hosts the finite verb. But some subject pronouns at least are in a much closer final relation with the finite verb than that would imply. The example in (13a), for instance, has the prosodic structure indicated informally in (13b), which in turn yields the phonemic realization in (13c) (in Ulster varieties).

- (13) 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. (ˈxanikʲmə) (ˈʃar ˈmo:r) (erʲ ə ˈvalax ˈwo:r)

In (13) the (unstressed) subject pronoun is an enclitic /mə/ on the finite verb /xanikʲ/. We call the process which leads to this outcome SUBJECT PRONOUN INCORPORATION, sometimes using the abbreviation SPI. SPI is at the heart of the issues we deal with here and so we must build a reasonable understanding of it. It turns out that that task is more interesting and more challenging than one might initially think. Our starting point will be the informal statement in (14).

- (14) Simple subject pronouns right-adjoin to the inflected verb.

The term ‘simple’ here is syntactic. ‘Simple’ pronouns are those which have not been augmented with any of the various suffixes or function words (contrastive, demonstrative, reflexive) which frequently appear to the right of pronouns in Irish. Various kinds of such complex pronouns are illustrated in (15) (for extensive relevant discussion see McCloskey & Hale (1984), Koopman (1999), Doyle (2002), McCloskey (2004), Kane (2014)).

- (15) a. DEMONSTRATIVE  
           *é sin*: 3rd person singular masculine accusative + distal demonstrative particle: ‘that guy, that one’  
       b. CONTRASTIVE  
           *siad-san*: 3rd person plural nominative + contrastive particle: ‘they’ (as opposed to others)  
       c. REFLEXIVE  
           *sinn féin*: 1st person plural + reflexive-logophoric particle: ‘ourselves’

Morphological complexity in this case clearly mirrors internal syntactic complexity (Koopman 1999, McCloskey 2004, Kane 2014). But simple pronouns exhibit no such internal complexity. We take it then that they are not just monomorphemic but also syntactically simple – consisting only of a lexical item of category D (determiner) bearing features of person, number, gender, and case.

One of the defining properties of simple pronouns is that they may not bear semantic focus (may not bear an F-feature). To express contrastive focus on a subject pronoun, one augments the pronoun with a suffix of the kind illustrated in (15b) and exemplified in (16).

- (16) Chuaigh si-se i dtreo na gcnoc, ach chuaigh mi-se i dtreo na farráige.  
 go.PAST she-CONTR towards the hills but go.PAST I-CONTR towards the sea  
 ‘SHE went towards the hills but I went towards the sea.’

Both of these properties (resistance to focus and syntactic simplicity) will be important for our discussion.

The phenomena which suggest that simple pronouns undergo SPI are morphological and phonological. In the first place, all observers are in agreement that simple subject pronouns are phonologically enclitic on the preceding finite verb (Quiggin (1906: p. 155, §486), de Bhaldraithe (1966: p. 65, §339), Greene (1973: 128), Lucas (1979: p. 120, §461), Chung & McCloskey (1987: 226–228), Doherty (1996: 23–25), Ó Baoill (1996: 90, §6.3.2), Ó Sé (2000: 156)). In the second place, simple subject pronouns enter into a range of allomorphic interactions with finite verbs – effects that are understandable only if the pronouns and the verbal morphemes with which they interact are in an appropriately local relation. Since such interactions play an important role in our discussion, we gather a representative sample in the subsection which follows.

### 3.2 ALLOMORPHIC INTERACTIONS

The interactions we care about are of two kinds – cases in which the form of an inflected verb is affected by a following subject pronoun and cases in which the form of a subject pronoun is affected by a preceding inflectional ending. The details differ from region to region, but the effects are widespread and are well described in the dialect descriptions. We will not try to catalog all such effects (see Wagner (1959: 95–96) on one Donegal variety), but we will consider a sample large enough (six cases) to give a full sense of the phenomenon.

#### TYPE ONE

In the dialects of Munster, the future tense ending spelled *-f(a)idh* is normally realized as /hig<sup>j</sup>/. But before a simple pronoun, it is realized as /hi:/

*cuirfidh Meáig*: /kir<sup>j</sup>hig<sup>j</sup> m<sup>j</sup>á:g<sup>j</sup>/ (‘Meg will put’), but *cuirfidh mé*: /kir<sup>j</sup>hime/ (‘I will put’)  
 (Ó Sé (2000: 23, 252, 258, 273, 285, 299), Ó Sé (2005) and references cited there).

#### TYPE TWO

In Donegal and in Mayo, the same future tense ending (spelled *-f(a)idh*) is normally realized as /hi:/ or as /hi/ depending on dialect. It is realized as /hə/ before a simple pronoun:

*cuirfidh Máire*: /kir<sup>j</sup>hi: m<sup>j</sup>á:r<sup>j</sup>ə/ (‘Mary will put’), but: *cuirfidh mé*: /kir<sup>j</sup>həmə/ (‘I will put’)  
 (Wagner (1959: 66, 95, §270(a)), Ó Baoill (1996: 30, §2.8.2, 31, §2.8.3)).



## TYPE THREE

In Donegal and in Mayo, the conditional ending spelled *-f(e)adh* is normally realized either as /hu:/ or as /hu/ depending on the dialect. It is realized as /hitʲ/ before a simple subject pronoun with initial /ʃ/:

*chuirfeadh Seán*: /xirʲhu ʃa:n/ ('Sean would put') but:

*chuirfeadh sé*: /xirʲhitʲʃə/ ('He would put')

(O'Rahilly (1932: 73), Wagner (1959: 96, §272), Ó Baoill (1996: 23, §2.1.3) and for Connemara Irish, Ó Curnáin (2007: Volume Two, 902)).

## TYPE FOUR

In Donegal and in Mayo, the stem ending spelled *-(a)igh* (on which see especially Ó Sé (1991)) is normally realized as long /i:/ or as short /i/ depending on dialect (or occasionally as a half-long /iː/). It is realized as /ə/ before a simple pronoun:

*d'imigh Séamas*: /dʲimi: ʃe:məs/ ('Seamas left'), but:

*d'imigh sé*: /dʲiməʃə/ ('He left')

(Wagner (1959: 96, §270(b)), Ó Baoill (1996: 22, §2.1.2)).

## TYPE FIVE

In Kerry and in Donegal, the root of the verb 'go' in the past tense (spelled *chuaigh*) is realized as /xu:əgʲ/ and /xuəi/ respectively. In both dialects, however, it is realized as /xuə/ before a simple pronoun. (Ó Sé (2000: 300, §546), Ó Sé (2005), Wagner (1959: 151, §411))<sup>3</sup>

## TYPE SIX

In the cases considered so far, the subject pronoun is the trigger and the affected morpheme is within the inflected verb. However the interaction can go the other way. The *s*-initial nominative pronouns all have initial palatal /ʃ/, as seen in many of the examples already cited. However, in Cléire and other coastal Munster varieties, the conditional ending /-həx/ and the past habitual ending /-əx/ induce depalatalization of the initial /ʃ/ to /s/ ((Ó Buachalla, 1962: 105), (Ua Súilleabháin, 1994: 485–6), (Ó Sé, 2002: 470), (Ó Buachalla, 2003: 11)):

*do chuirfeadh sí* (she would put): /də xirʲhəx si:/

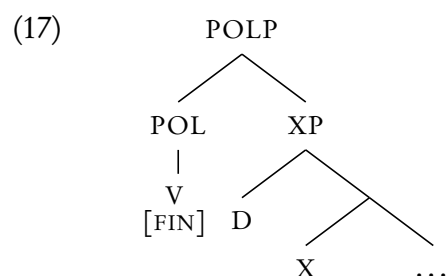
*do bhíodh sé* (he used to be): /də vʲi:əx se:/

The alternations just described reflect not living phonological processes, but rather suppletion. This is especially clear for the first and third types, in which the relation between the two allomorphs (/hu/ and /hitʲ/ in one case, /higʲ/ and /hi/ in the other) is now thoroughly opaque, although understandable in terms of remote linguistic history. Similarly, the depalatalization following /x/ seen in the final case (TYPE SIX) has no basis in the phonology of the contemporary language.

Whatever mechanisms determine these patterns must therefore do their work in a way that is consistent with the general theory of suppletive allomorphy. That theory has been the focus of a great deal of important recent work (Embick (2012), Bobaljik (2012), Arregi & Nevins (2013), Merchant (2013a), Bobaljik & Harley (2013), Bobaljik (2015), who in turn build on much earlier work) and as a result we are well placed to make deductions about the relations that must hold

<sup>3</sup>Certain other high frequency monosyllabic verbs show similar variants; for the details, see Ó Sé (2005).

between the simple pronoun and the inflected verb it interacts with. The assumptions made so far provide us with (17) as the theory of those relations.



And the question we now ask is whether the relation between V (the inflected verb) in (17) and D (the simple subject pronoun) is sufficiently local that D could trigger suppletion on a proper sub-part of V, or that a proper sub-part of V could trigger suppletion on D. Clearly the answer to that question is ‘no’. V and D will of course always be adjacent, but as has been repeatedly emphasized in the relevant literature (see Bobaljik (2012), Svenonius (2012), Merchant (2013a: 19, fn. 18 and *passim*)) and as we will see ourselves below, the locality conditions governing such allomorphic interactions are more stringent than can be captured by way of a simple adjacency condition. Many patterns which are in fact unattested should be frequent, if the trigger and the affected morpheme were required merely to be adjacent. We ask, then, if D of (17) is sufficiently local to the inflected verb, by other criteria, to permit the alternations described here.

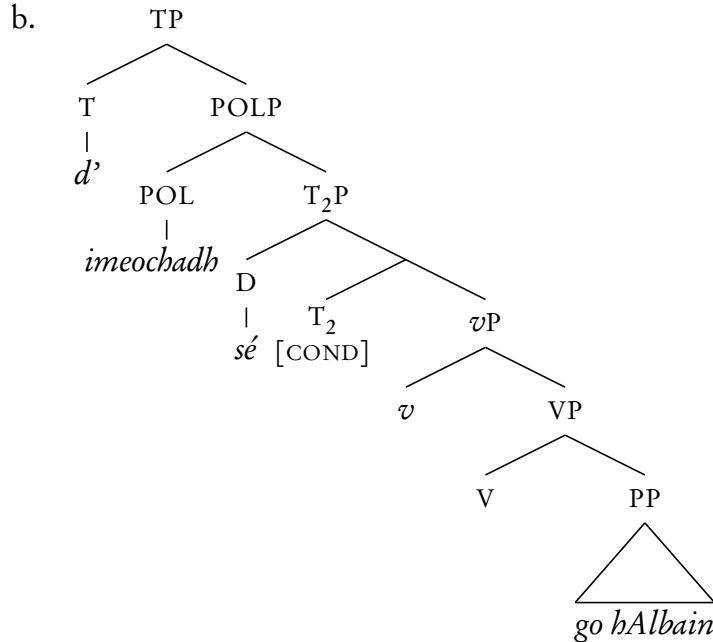
In (17), D is included in a maximal projection (XP) which excludes the position of the finite verb. The syntactic relation might well in fact be more distant still, given the distinct possibility that other heads (and the phrases they project) intervene in the extended projection between the polarity head and X. These observations are important because it is crucial for an understanding of many of Bobaljik’s (2012) most important typological discoveries that the configuration in (17) NOT be a possible locus of suppletive allomorphy. If we are to understand, for instance, why root suppletion is commonplace in synthetic comparatives and superlatives, but unattested in analytic comparatives and superlatives, it is essential that the trigger and the target in relations of suppletive allomorphy not be separable by a maximal projection boundary (for extended discussion, see Bobaljik (2012: 67–103), Bobaljik & Harley (2013), Bobaljik (2015)). These important results would be lost if we were to hold that the patterns of allomorphy described here emerge from an unadjusted syntax like that in (17).<sup>4</sup> But we already have good reason to believe that an adjustment does in fact apply to (17), namely SPI, and that SPI creates a complex word which includes the simple pronoun and the inflectional morpheme with which it interacts. Furthermore, within that complex word the trigger for the allomorphy is always adjacent (*modulo* null exponents) to the affected morpheme. To see this, we must fill out our proposals about clause structure. In particular, it will be important to identify the category X of (11) – the functional head which is selected by the polarity expression and which attracts the most prominent DP in its command domain (the ‘subject’) into its specifier position.

McCloskey (2017) presents a series of arguments which purport to show that X is in fact a lower Tense-Modality head, one which is implicated in the expression of event time and one which

<sup>4</sup>In addition, D in (17) is not part of the extended clausal projection and therefore is not part of any span (in the sense of Svenonius (2012), Merchant (2013a), Merchant & Pavlou (2017) and others) which also includes the position of V. See also Ostrove (2017).

acts as probe in the agreement and case interactions which define subjecthood. It is therefore the syntactic correlate of the information – finiteness, tense, and  $\phi$ -features of the subject DP – expressed on the inflectional endings of finite verbs. If we further assume, as is now standard, that the verbal domain is in fact defined by the properties and interactions of two heads –  $v$  and  $V$  – we will have the syntactic structure in (18b) for the example in (18a).<sup>5</sup>

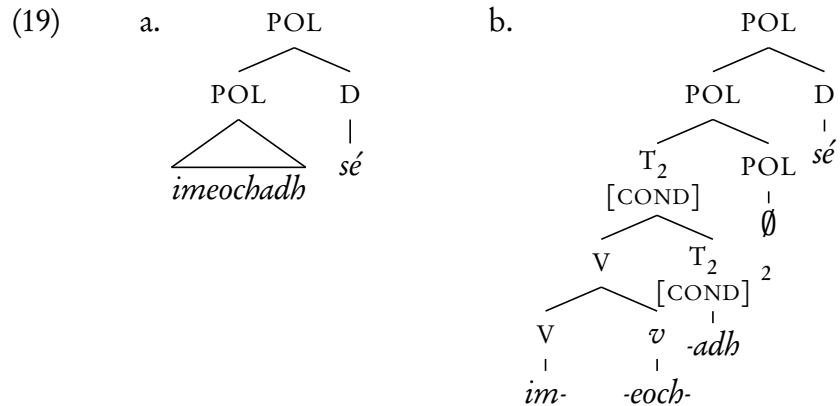
- (18) a. D' imeochadh sé go hAlbain.  
 PAST- leave.COND he to Scotland  
 'He would go to Scotland.'



The conditional verb *imeochadh* in (18), then, is the morphological exponent of a contiguous sequence of four functional heads – the verbal root  $V$ , the verbalizer  $v$ , the lower Tense head (conditional in this case) and the expression of positive polarity.

The effect of SPI, in this more articulated context, is to raise the subject pronoun *sé* from the specifier position of the lower Tense-Modality head to produce the complex morphological word in (19).

<sup>5</sup>See especially Acquaviva (2014), Oda (2012), Ostrove (2015, 2017) on the usefulness of distinguishing  $v$  and  $V$  in the grammar of Irish. See also McCloskey (2017).



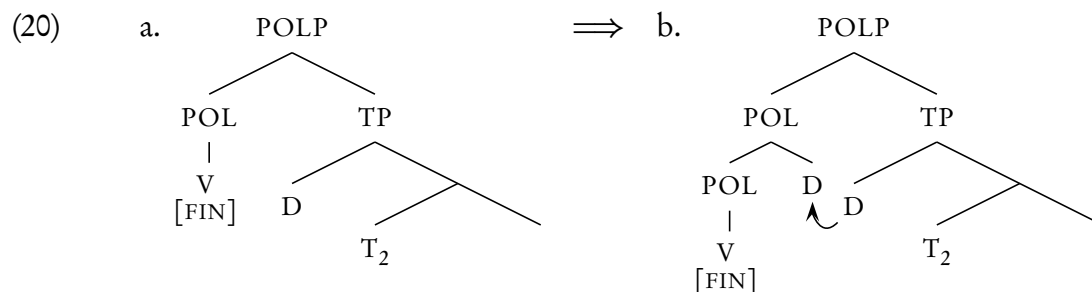
Given that the polarity head has a null exponent, it can be pruned; that is, it can be ignored for the calculation of allomorphic adjacency (see Embick (2012: 28–29), Merchant (2013a: section 2)). As a consequence, the incorporated pronoun is adjacent to the lower Tense,  $T_2$  of (18b), and is therefore in a position to influence its form. The morphemes which are the exponents of  $T_2$  (tense, modality, and agreement endings on finite verbs) are just the morphemes which participate in the TYPE ONE, TYPE TWO, TYPE THREE, and TYPE SIX alternations cataloged above. Further, if the exponent of the lower Tense were also null, then the influence of the incorporated pronoun should extend as far as  $v$ . This circumstance arises for the non-habitual past, whose exponent is null in the 3rd person singular. This is the TYPE FOUR allomorphy of section 3.2, in which we have allomorphy triggered by the incorporated pronoun on the stem ending *-(a)igh*, which is very plausibly analyzed as an exponent of  $v$  (Acquaviva (2014: 553–556), building on Ó Sé (1991)). If POL,  $T_2$ , and  $v$  are all null, then the allomorphic influence of the incorporated pronoun should extend as far as the root itself. This is the TYPE FIVE pattern of section 3.2.

Given SPI then, the allomorphic patterns considered here are reassuringly routine as far as theory goes – they all take place under adjacency within a closely delimited domain (within the morphological word). And it is now not an accident, as it surely should not be, that the evidence from allomorphy aligns so closely with the independent phonological evidence for enclisis.

We therefore assume that SPI is part of the grammar of Irish and we now ask what kind of operation it is. In preparation for addressing that question, we make a final observation. The patterns of allomorphy just described are obligatory – they appear whenever an inflected verb of the relevant type is followed by a simple pronoun. Since the allomorphy patterns presuppose a locality which is delivered only by incorporation of the pronoun, it follows that SPI, however understood, must itself be obligatory – either by stipulation or in a way that emerges from other requirements.

### 3.3 UNDERSTANDING SUBJECT PRONOUN INCORPORATION

The only existing proposal about the nature of SPI that we are aware of (that developed in Doherty (1996)) assumes that SPI is a syntactic head movement, one which raises the simple pronoun from subject position and right-adjoins it to the finite verb, creating, in effect, a compound word, as shown, in simplified form, in (20).



When first made, Doherty's proposal about SPI seemed troubling. In particular, it involved claiming that head movement could target for raising a head which originated as a proper subconstituent of a specifier (as a subpart of the subject in fact).<sup>6</sup> We maintain however that the proposal is fundamentally right and that shifts in the theoretical landscape since its formulation eliminate the apparent anomalies. Those shifts also allow SPI to be smoothly integrated into a believable typology of head movement.

Given the theory of Bare Phrase Structure (Chomsky (1995) and a great deal of subsequent work), the principal anomaly in Doherty's proposal in fact disappears. In (20a), the simple subject pronoun is both minimal and maximal (minimal in that it consists only of a lexical item, maximal in that it does not project its label). Since head movement, in the context of Bare Phrase Structure, is movement of a minimal syntactic object, it would take further theoretical elaboration to ban movements such as (20). In fact, it is a straightforward prediction of the framework of Bare Phrase Structure that such head movements as (20) should exist and we take it to be a theoretically welcome development that they are in fact observed (see also Jenks (2014)).<sup>7</sup>

Furthermore, the simple pronoun D in (20) is in an extremely local relation with the head to which it ultimately adjoins. In particular, the polarity head in (20) commands D and D in turn commands all of the other heads in the command domain of POL. Movement of D to the polarity head, then, satisfies the most stringent locality requirement possible – in effect Travis' (1984) Head Movement Constraint.

So far so good. But why should it be that the detectable effects of SPI are entirely morphological and phonological? While there is no intrinsic anomaly here (syntax must feed both the interpretive interface and the morphophonological interface), the observation does suggest that adjustments such as SPI operate in a representational space between the syntax and the morphophonology, having access to structures and properties such as those in (20), but having consequences which are purely morphophonological. That being so, it is tempting to view SPI as a postsyntactic operation, part of what Berwick & Chomsky (2011) call the mechanisms of externalization.

But in this respect too, there have been crucial theoretical developments since Doherty's pro-

<sup>6</sup>On this possibility, see (Matushansky, 2006: 77–78) and especially footnote 13, page 78, which anticipates our discussion here.

Doherty's (1996) proposal also assumed right-adjunction to the attracting head – a possibility forbidden in the framework defined in Kayne (1994). We see no way around this conflict, however, and assume either that the ban on right adjunction of heads is not maintainable (in fact it is not storable as a syntactic constraint given the framework of Bare Phrase Structure which we assume here) or that, even if banned in syntax, the option is permitted in the postsyntactic world.

<sup>7</sup>The head movement we propose here is similar, in certain respects, to a type which Chomsky 2013: 43 has argued should be impossible. He argues that the cases he considers are blocked by a particular understanding of how labeling, cyclicity, and intervention interact.

posal about SPI was first formulated. (Chomsky, 2001: 37–38) observed that the classical conception of head movement fits poorly with minimalist views of the course of syntactic derivations and proposed that certain classes of head movement were postsyntactic. This proposal set in motion a large scale reassessment of the place of head movement in the architecture of linguistic theory (among many other important contributions, see Boeckx & Stjepanović (2001), Harley (2004), Matushansky (2006), Roberts (2010), Schloormemmer & Temmerman (2011)). That reassessment is hardly complete but in recent work Gribanova & Harizanov (2018) have synthesized many elements of the relevant debates in a theoretical and investigative framework which recognizes two classes of head movement – those which form part of the syntactic derivation and have the familiar properties of syntactic movement (less stringent locality requirements and interpretive consequences) and those which apply in the immediate postsyntactic space and which have a different profile. In that typology, the second type is identified by the following defining properties:

- (i) they produce head adjunction structures
- (ii) they are driven by morphological properties of heads
- (iii) they obey a particularly strict kind of locality – essentially that encoded in Lisa Travis’ (1984) Head Movement Constraint
- (iv) they have no interpretive consequences

These properties match those of SPI very closely and we propose that SPI be taken to be one of the postsyntactic head movements whose existence is predicted by the framework – in effect a Merger under Adjacency in the sense of Bobaljik (2002), understood now in a much expanded theoretical context. Consider the properties of SPI in the light of this proposal.

We have already seen that what SPI does is to create, in effect, a compound word by adjoining D to the polarity head – itself morphologically complex because it hosts the finite verb. We will have more to say later (in section 4.1 below) about the phonological implications of this interpretation, but we note here that this places SPI squarely and clearly among the operations in Irish which build complex words.

What drives its application? SPI is clearly driven by a property of the pronoun rather than by any property of the head to which the pronoun raises. As we have seen, simple subject pronouns must incorporate. But the inflected verbs to which those pronouns adjoin coexist happily with subjects that are not pronouns and appear routinely in contexts which lack subjects altogether (unaccusative and impersonal passive structures for instance). Clearly the dependent element in the SPI interaction is the pronoun and it must bear some mark which encodes this dependency and forces application of SPI. We assume that the pronouns which undergo SPI bear a morphological subcategorization feature, very much in the spirit of Rizzi & Roberts (1989). For concreteness, we take it that all simple nominative pronouns in Irish bear the subcategorization requirement expressed in (21).

$$(21) \quad \begin{array}{c} \text{D} \\ \text{[NOM]} \\ \phi \end{array} : \quad [\text{POL} - \quad ]$$

(21) is satisfied only if the head bearing it is contained within a complex head of category POL.<sup>8</sup>

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<sup>8</sup>In a fuller and more detailed treatment, we would identify (21) with the M feature proposed by Gribanova and Harizanov (2018). In that system, M is the feature which forces the head which bears it to combine with either the

With Gribanova & Harizanov (2018), we depart from Roberts (1991) in placing such morphological subcategorization requirements on the incorporated item itself (the pronoun) rather than on its host (the inflected verb). This view is, as we have just seen, required by the facts and it is also consistent with the widespread view that only dependent (obligatorily bound) elements have such subcategorization frames (Lieber 1980, Inkelas 1990, among many others). Viewed in this general context, (21) is clearly a morphological property (part of the morphological profile of the pronoun) and the assessment of whether or not it is satisfied is part of the morphophonological computation. How exactly that happens is a question we return to presently, but for now we observe that (21) is what makes SPI, in effect and in the general case, obligatory. If SPI does not incorporate the pronoun into the verbal complex, (21) will not be satisfied and the subject pronoun will be viewed, in effect, as a stranded affix (see Baker 1988 and many others). We will be more precise about this effect in section 5 below.

We also now have an understanding of the interaction between SPI and another aspect of the postsyntactic landscape in Irish – pronoun postposing. Here we must install some necessary background. In Irish, as in other languages, there is a rough correspondence between syntactic XP's and the phonological domains ( $\phi$ -phrases and  $\iota$ -phrases) which determine the location of intonational prominences and other aspects of phrasal phonology. Given this correspondence, when a prosodically weak pronoun appears at the left edge of a syntactic phrase, it is at risk of forcing a violation of an important prosodic constraint – STRONG START as stated in (22).<sup>9</sup>

- (22) STRONG START: Prosodic constituents above the level of the word should not have at their left edge an immediate subconstituent which is prosodically dependent, where a 'prosodically dependent' element is any prosodic unit smaller than the word.

The simple object pronoun in (23), for example, appears at the left edge of *vP* (the verb having raised out) and so is at risk of violating (22). (See Elfner (2012, 2015) for evidence that prosodic structures like (23b) are widely attested in Irish.)

- (23) a. Fuair Eoghan é óna dheartháir an lá cheana.  
 get.PAST Owen it from-his brother the-other-day  
 'Owen got it from his brother the other day.'  
 b. SYNTAX: [ fuair Eoghan [<sub>vP</sub> é óna dheartháir an lá cheana ]]  
 PROSODY: ( $\phi$  fuair Eoghan ( $\phi$  é óna dheartháir an lá cheana ))

---

head which immediately commands it (in RAISING) or the head which it immediately commands (in LOWERING).

Another issue to be addressed in a fuller treatment would be the issue (emphasized by a reviewer) of how SPI interacts with the mechanisms (perhaps head movements) which create inflected verbs. In particular: how does the lower tense-modality head 'cross' the intervening pronoun in (20) to combine with the polarity head without violating locality requirements? The natural answer within the system developed by Gribanova & Harizanov (2018) is that it does not. Rather, the subject pronoun and the tense head first amalgamate (probably by Lowering) and the resulting complex then raises to the polarity head. As far as we know, that derivational path is entirely consistent with the available observations. We do not pursue a full treatment here because the discussion would be a distraction from our principal goals and deserves a fuller and independent treatment.

Our discussion of SPI is also entirely consistent with lexicalist treatments of the composition of inflected verbs. In that context also, our larger conclusions below remain.

<sup>9</sup>The constraint in (22) is due to Selkirk (2011). See that paper, as well as Bennett et al. (2016) for discussion and alternatives.

As shown in some detail in Bennett et al. (2016, 2015), there are in general two ways to avoid what would be a fatal violation of (22) in a case such as (23). The pronoun, being enclitic, may cliticize leftwards – to the right edge of the preceding phonological constituent – or it may appear not in its syntactically expected position but rather as an enclitic at the right edge of one of the phonological phrases which contain it. This is the option (known as Pronoun Postposing) illustrated in (24a) and (24b) for (23).

- (24) a. Fuair Eoghan – óna dheartháir an lá cheana é.  
 get.PAST Owen from-his brother the-other-day it  
 ‘Owen got it from his brother the other day.’  
 b. Fuair Eoghan – óna dheartháir é an lá cheana.

Postposing, however, is impossible for subject pronouns.

- (25) a. \*Chuir – a lámh ina phóca sé.  
 put.PAST his hand in-his pocket he  
 ‘He put his hand in his pocket.’  
 b. Chuir sé a lámh ina phóca.

It seems clear that the impossibility of postposing is an effect of the incorporation requirement on simple subject pronouns. A good theory of SPI, then, will provide an understanding of the contrast in (25) and the proposal we are developing does this.

The pronoun (the word of category D) which must undergo SPI in (25b) may be realized either as a phonologically strong or as a phonologically dependent element. We discuss the former possibility at length in section 4 below. If the pronoun of (25) is realized as phonologically weak (as an enclitic, integrated into a single prosodic word  $\omega$  with its host), no violation of the crucial prosodic constraint in (22) will be registered. Having incorporated, the pronoun will not find itself exposed at the left edge of any prosodic constituent; it will be, rather, at the right edge of a complex word (the verbal complex). SPI, then, ensures that (25b) will host no violation of (22).

Why, though, can the pronoun not make use of the alternative option available to nonsubject pronouns and postpose as in (24)? The answer, clearly, is that, being nominative, it must bear the morphological subcategorization feature in (21); the requirement expressed by that feature will not be satisfied if the pronoun postposes. The only available option, then, is for the pronoun to incorporate under SPI. On this view, then, we understand a key property of SPI – that it preempts pronoun postposing (Bennett et al. (2015)).

### 3.4 INTERIM SUMMARY

We have argued here that SPI is a post-syntactic operation of a kind whose existence and properties are predicted when one brings together the Bare Phrase Structure framework and the framework defined by Gribanova & Harizanov (2018).<sup>10</sup> We take these conclusions forward now as we con-

<sup>10</sup>Inflected verbs which include person number marking crossreferencing the subject (‘synthetic’ forms of the verb) are incompatible with the independent expression of the subject.

- (i) a. Chuirfinn isteach ar an phost sin.  
 put.COND.S1 in on the job that  
 ‘I’d apply for that job.’



sider how SPI interacts with two other aspects of the postsyntactic computation – the phonology of focus and the phonology of ellipsis. These interactions provide the empirical core for the theoretical proposals we develop in section 5 – our principal focus.

#### 4 A CURIOUS PHENOMENON

Many observers<sup>11</sup> have noted the existence in all contemporary varieties of Irish of a curious phenomenon, at the heart of which is a striking mismatch between interpretive focus on the one hand and the phonological exponent of that focus on the other. For reasons that we will come back to, Tomás de Bhaldraithe (1953: 69, §166) uses the term *béimniú dúbáilte* or ‘double stressing’ for these cases. But the phenomenon has no generally agreed upon name at present and so we have to innovate one. We will use the term SPECIAL FOCUS CONSTRUCTION here and we will sometimes abbreviate that as SFC. The examples in (26) exemplify the Special Focus Construction in an initial way. Here and throughout, we use small caps to indicate the presence of a very prominent pitch accent.

- (26) a. A: Cuir síos é.      B: Ní rachaidh SÉ síos.  
           send down it            NEG-FIN go .FUT it down  
           ‘Drive it down.’      ‘It won’t GO down.’
- b. A: An ngéillfidh siad?      B: Caithfidh SIAD.  
           Q yield .FUT they            must they  
           ‘Will they yield (on this)?’ ‘They HAVE to.’

The context for (26b) was a discussion of academic politics; the exchange in (26a) took place between two men trying to drive a pole into hard earth.

What these cases have in common is the presence of a strong stress, or focal accent, on a simple subject pronoun and what is so striking about them is the profound misalignment that we observe in them between phonological and interpretive systems of representation – the constituent on

- 
- b. \*Chuirfinn mé isteach ar an phost sin.  
           put.COND.S1 I in on the job that  
           ‘I’d apply for that job.’

There is a long tradition of analyzing such complementarity effects in various Celtic languages in terms of incorporation: if the inflectional ending simply IS the subject pronoun and that pronoun incorporates into the inflected verb, the impossibility of (i)b can be understood as a direct effect of incorporation (McCloskey & Hale (1984), McCloskey (1986), Baker & Hale (1990), Andrews (1990), Legate (1999), Ackema & Neeleman (2003) among many others). This has always been an attractive possibility – one might then take inflected endings like *-finn* above to be portmanteau realizations of  $T_2$  and the incorporated D of (19) above. The complementarity effect would then have the same source as the impossibility of *\*de le gâteau* ‘of the cake’ in French, blocked by the synthetic form *du gâteau*. But the question of the nature of SPI (now taken to produce the structure which can be realized as a portmanteau) remains entirely open on this account and the general line of analysis is easily articulated in the context of the analysis we argue for here. In effect, the complementarity effect would become another subcase of the alternations we discussed in section 3.2 above. Difficulties remain, however, especially with respect to the interaction with ellipsis, which we consider in section 5 below. We return to the issue (briefly) there.

<sup>11</sup>See for instance Greene (1973: 128), Wagner (1959: 98-99), Lucas (1979: 94, §360), Ó Baoill (1996: 89, §6.3.1), de Búrcá (1970: 77, §383), de Bhaldraithe (1966: 65, §340), Ó Curnáin (2007: Volume One, 391, §1.383), Ó Sé (2000: 156, §336, 50, §56). Jason Ostrove points out that the phenomenon is also found in Scots Gaelic, as can be heard in the soap opera *Bannan, Episode Three* (which is available [here](#)) at 12:45 and 17:35.

which the focal accent falls is not at all the constituent which bears interpretive focus. In the responses of (26a) and (26b), we have a simple pronoun as subject, upon which falls a strong focal accent. That much is already strange, since, as pointed out earlier (see the discussion around (16) in section 3 above), simple pronouns may not in general be focused. What is stranger still is that the pronoun upon which this accent falls is, as far as interpretation goes, unfocused. More than this, it is in fact necessarily given, referring to a discourse referent already established and made salient in the first part of the exchange (in the imperative of (26a), in the interrogative of (26b)). In (26a) interpretive focus is on the verbal stem *rach-* ('go'), while in (26b) it is on the modal verb *caithfidh* ('must'). The fact that interpretive focus is on the verb in such cases means that the pronoun itself must be within a constituent that is given, or anaphoric; this follows from well established felicity conditions on focus (see, for instance, Rooth (1985, 1992)).

If not the pronoun, what can then be focused in the SFC? David Greene (1973:128) provides the following description:

In the latter conjugation, the normally enclitic pronouns may be stressed in emphatic replies ... with a pronoun stressed equally with the verb (it should be noted that in this construction it is the action which is stressed, not the agent) ... Stressed pronouns in this case have always their long vowel form, in Scottish Gaelic as well as in Irish.

Greene's reference to 'stress on the action rather than on the agent' is consistent with the examples in (26), but Brian Ó Curnáin (2007:Volume One, p. 391, §383) has a different interpretation when he speaks of:

the ... common use of double stress or stress shift used to emphasize the truth or propositional meaning of an utterance

These differences of interpretation reflect the fact that there are, in reality, two subcases of the SFC. The examples so far considered have involved, in semantic terms, contrastive focus on the verbal root. But the same effect is also (and probably more frequently) found as a realization of Verum Focus, in the sense of Höhle (1992). We see this in the examples of (27)–(29).<sup>12</sup>

- (27) a. 'nois, bain           giota dó 'na bhaile.  
 now, take.IMPERV bit   of-it home  
 'Now, head off home.'
- b. Tá       MÉ a' gabhail 'na bhaile. Níl    mé a' fanacht áit   ar bith nach bhfuil  
 be .PRES I   PROG go home       am-not I   PROG stay place any   NEG-C be .PRES  
 iarraidh orm.  
 want   on-me  
 'I AM going home. I'm not staying anywhere I'm not wanted.'                    RNG 26-5-2008
- (28) Níl                    SÉ furasta a   leithéid a dhéanamh.  
 NEG-FIN-be.PRES it easy   its like   do.NON-FIN  
 'It's NOT easy to do such a thing.'   RNG 03-09-2014

<sup>12</sup>The examples in (27), like almost all of the data we will use in this discussion, come from broadcasts on the Irish language radio network RTE Raidió na Gaeltachta. These examples are indicated by the tag RNG followed by a number representing the date of broadcast.

- (29) amharcann siad air mar fhear a bhí ag troid ar son saoirse, agus  
 look.PRES they on-him as man C was PROG fight for-the-sake of freedom and  
 throid SÉ ar mhaithe le saoirse  
 fight.PAST he for freedom  
 ‘they look on him as a man who fought for freedom, and he DID fight for freedom’  
 RNG 12-11-2010

An important observation is that the phenomenon in question is absolutely restricted to simple subject pronouns. The placement of a focal accent on a subject which is not a pronoun, or on a complex augmented pronoun of the type illustrated in (15), can only be interpreted as focus on the subject itself, never as Verum Focus or verbal focus.

We contend that the framework already put in place (especially our understanding of SPI), when combined with what is known about the phonology of accent placement, allows a natural understanding of this striking set of observations. Consider first the syntactic side of things. The syntax will present to the interpretive systems structures like the two in (30).

- (30) a. TP  
 T<sub>1</sub> POLP  
 POL [FOC] TP  
 subject T<sub>2</sub> vP  
 v VP  
 V complements
- b. TP  
 T<sub>1</sub> POLP  
 POL TP  
 subject T<sub>2</sub> vP  
 v VP  
 V [FOC] complements

The structures in (30) incorporate the standard assumption that a FOCUS feature (in the sense of Jackendoff (1972), Rochemont (1986), Selkirk (1996) and much subsequent work) can be applied to elements of the syntactic representation. That feature may of course appear on the polarity head POL, or on the verbal root V (among many other possibilities). We assume (with Samko (2014)) that the possibility in (30a) gives rise to the cluster of effects that was investigated by Tilman Höhle (1992) under the name of Verum Focus. We also assume for Verum Focus the kind of alternative semantics proposed by Samko (2014), building on Rooth (1985, 1992). That is, the focus semantic value of a clause containing an F-marked polarity head will be an alternative set consisting of positive and negative variants of the same propositional core (in effect, a polar question). Many important semantic and pragmatic issues arise at this point (see especially Schwarzschild (1999)) which we will have to set aside here; but these natural assumptions, we think, will provide a reasonable treatment of Verum Focus cases like (27)–(29). (30b) meanwhile, the case in which F-marking applies instead to the verbal root V, corresponds to our initial set of examples in (26). Here too the standard Roothian analysis in terms of an alternative semantics

seems to yield a good theory of their interpretive properties. F-marking on V will give rise to a focus semantic value consisting of a set of propositions differing from one another only in that different verbal meanings will replace the sense of the verb found in the ordinary semantic value.

All of this is as expected (one might say inevitable) when we bring together our syntactic assumptions, the generally available possibility of F-marking, and the alternative semantics for focus which derives from Rooth's work.<sup>13</sup> How, though, will structures like those in (30) fare when interpreted by the morphology and the phonology?

#### 4.1 THE PHONOLOGY OF FOCUS

We begin by establishing some important background concerning the prosodic consequences of focus, drawing on studies of one variety – Donegal Irish – reported in O'Reilly et al. (2010) and Dorn & Ní Chasaide (2011). In broad focus utterances, in which all words are equally discourse new and unfocused, content words may bear a rising L\*H pitch accent (which is technically speaking a 'phrase accent'; see Grice et al. 2000, Elfner 2015). The primary phonetic correlates of focus appear to be (i) increased pitch range and larger pitch excursions on the focused element, particularly in medial position in an utterance; (ii) increased duration for the focused element; and (iii) frequent deaccentuation and/or pitch compression of postfocal material. These properties distinguish both narrow and contrastive focus from broad focus renditions of the same sentences. Notably absent from this list of phonetic cues is any kind of distinct melody indicating focus: pitch accents in declaratives are always realized with the same L\*H tune in Donegal, for focused and unfocused items alike.

Along with these phonetic markers of focus, there is an important phonological difference between focal and nonfocal elements. Pitch accents are, impressionistically, obligatory on focused constituents.<sup>14</sup> This is in contrast with nonfocused material, which may or may not bear a pitch accent depending on its position in the phrase. For Connemara Irish, Elfner (2012, 2015) shows that pitch accents are assigned only to lexical words located at the edge of a  $\phi$ -phrase (the prosodic constituent which typically corresponds to a syntactic XP), provided certain structural requirements are met. Particularly prevalent in Connemara Irish are the falling H\*L tones which occur at the right edges of  $\phi$ -phrases (Elfner, 2012, 2015); these H\*L tones are the analogs of the L\*H tones found in Donegal varieties (Dalton & Ní Chasaide, 2003, 2005).<sup>15</sup>

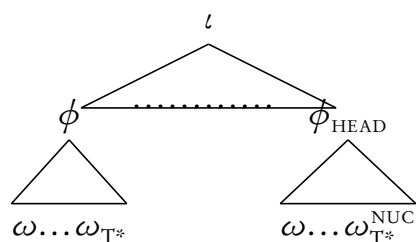
<sup>13</sup>Gutzmann et al. (2017) argue against the kind of treatment of Verum Focus that we adopt here (one that identifies it as a special case of the general phenomenon of focus marking) – at least for the languages that form their principal focus and therefore as a general theory of Verum Focus effects across languages. They allow, though, that in some languages the general phonology of focus will be co-opted for the expression of the VERUM operator whose existence they argue for. As we discuss in some detail in the section which follows, however, Irish must be such a language in the framework they define, since it is very clear for this language that the phonology of Verum Focus is just the phonology of focus. For this reason, most of the questions that we address in the present paper are unaffected if we adopt the alternative analysis they urge.

<sup>14</sup>Blankenhorn 1981: 260: *a syllable which the speaker wishes to emphasize will receive both stress and pitch prominence*; see also Quiggin 1906: 155-6.

<sup>15</sup>The results of Elfner (2012, 2015) have not yet been replicated for northern or southern varieties of the language and so we cannot claim, with full certainty, that L\*H accents in Donegal Irish have exactly the same distribution as H\*L accents in Connemara Irish. We nonetheless suspect that the primary intonational differences between Irish dialects reside in the shape of the tunes used rather than in their distributions (see too Quiggin 1906:154–6). This impression seems consistent with what is currently known about prosodic variation across different dialects of Irish (e.g. Dalton & Ní Chasaide (2005, 2007), Dorn et al. (2011), etc.). Preliminary research by Joseph Windsor and

In discourse neutral contexts, the strongest (or ‘nuclear’) accent in Irish is typically the final accent of the clause or utterance. We interpret this pattern of relative prominence in structural terms, drawing on a rich tradition in prosodic hierarchy theory (e.g. Selkirk 1984, Nespor & Vogel 1986, Pierrehumbert & Beckman 1988 and much following work). Within this framework, clauses and sentences are taken to map to  $\iota$ -phrases in prosodic structure, at least by default (Selkirk 1984, 2005, 2011, Nespor & Vogel 1986, Hamlaoui & Szendrői 2015, 2017 and references there). We assume that the rightmost  $\phi$ -phrase ( $\approx$  XP) within an  $\iota$ -phrase ( $\approx$  clause) functions as its head, meaning that the accent associated with that rightmost  $\phi$ -phrase is the strongest in phonetic and phonological terms, as shown in (31) (see, for example, Liberman & Prince 1977, Selkirk 1984).

- (31) Nuclear accents as  $\phi$ -phrase edge-marking and  $\iota$ -phrase headedness  
(T\* = phrase-final tonal accent)



We implement this analysis with the constraint HD-R( $\iota$ ) in (32), which positions head  $\phi$ -phrases to the right within their containing  $\iota$ -phrases (33) (e.g. McCarthy & Prince 1993, Truckenbrodt 1995, Féry 2013 and references there). Throughout this section we indicate  $\phi$ -level pitch accents with a superscript ‘\*’, and prosodic headedness with a subscript ‘HD’.<sup>16</sup>

- (32) HD-R( $\iota$ ) Assign one violation for each  $\phi$ -phrase which (i) is the head of a dominating  $\iota$ -phrase and (ii) is not right aligned within that dominating  $\iota$ -phrase.

- (33) Broad focus prosody

/ Bhí Méabh ina luí /	HD-R( $\iota$ )
a. $\text{☞} (\phi \text{ Bhí Méabh}^*) (\phi \text{ ina luí}^*)_{\text{HD}}$	
b. $(\phi \text{ Bhí Méabh}^*)_{\text{HD}} (\phi \text{ ina luí}^*)$	*! W

*Bhí Méabh ina luí* ‘Méabh was lying down.’ (after Dorn & Ní Chasaide 2011)

We noted above that focal accents are normally realized with a larger pitch range than non-focal pitch accents. However, O’Reilly et al. (2010), Dorn & Ní Chasaide (2011) report that the phonetic effects of focus are strongly attenuated in final position in Irish, such that ‘broad focus [may not be] truly different from narrow focus in the case where the nucleus falls on the last accented element’. We take this finding as evidence that focal pitch accents have the same phonetic and

colleagues on the intonation of Munster Irish also suggests that the distribution of pitch accents in those varieties is much the same as in Connemara Irish, though further analysis of the relevant data is needed (Windsor, 2017).

<sup>16</sup>Tableaux are given in the ‘mixed’ format recommended by McCarthy (2008:p.47), which combines a traditional violation tableau with a comparative tableau showing the favoring relations of each constraint (Prince & Smolensky, 1993/2004, Prince, 2002).

phonological status as the nuclear pitch accents found in utterance final position under broad focus (though more research is needed on the prosody of focus in Irish to fully confirm this result).

Building on these observations, we assume that the accent on a focused word simply corresponds to the nuclear accent – the strongest, or *head* accent – of the intonational phrase ( $\iota$ ) that it occurs in.<sup>17</sup>

We formalize this intuition with the constraint FOCUS-TO-PROMINENCE( $\iota$ P) (34), drawing on similar formulations of this constraint in Selkirk (2005), Féry & Samek-Lodovici (2006) and work cited there.

- (34) FOCUS-TO-PROMINENCE( $\iota$ P) (=FOC-PROM( $\iota$ ))  
Assign one violation for every constituent  $C_{[F]}$  which is semantically focused and which does not contain the strongest intonational prominence of a dominating  $\iota$ -phrase.

The constraint FOC-PROM( $\iota$ ) guarantees that  $\phi$ -level pitch accents will be obligatory on focused words in Irish, while also ensuring that focused words will bear the strongest such accent in the clause. In phonetic terms, this means that focal pitch accents will be realized with a larger pitch range and longer duration than other accented words, exactly as reported for Donegal Irish (see Pierrehumbert & Beckman 1988, Hayes 1995, Truckenbrodt 1995, 2007, Gussenhoven 2004, Selkirk 2005, Myrberg 2013, Hamlaoui & Szendrői 2015 for discussion and additional references). This analysis, which treats focal accents as being effectively equivalent to discourse neutral nuclear accents, is consistent with the fact that nuclear (head) accents have relatively large pitch excursions even under broad focus conditions in Irish (O'Reilly et al. 2010, Dorn & Ní Chasaide 2011; see also Myrberg 2013:82 on Stockholm Swedish).

These three constraints suffice to derive the normal patterns of prosody for broad focus (33) and narrow focus utterances (35) in Irish (abstracting away from some particulars of how syntactic constituents map to prosodic constituents, Elfner 2012, 2015, Bennett et al. 2016, 2015). We indicate semantic focus with a subscript '[F]'.<sup>18</sup>

- (35) Focus prosody: FOC-PROM( $\iota$ )  $\gg$  HD-R( $\iota$ )

/ Bhí Méabh <sub>[F]</sub> ina luí /	FOC-PROM( $\iota$ )	HD-R( $\iota$ )
a. ( $\phi$ Bhí Méabh <sub>[F]</sub> <sup>*</sup> ) ( $\phi$ ina luí <sup>*</sup> ) <sub>HD</sub>	*! W	L
b. $\text{☞}$ ( $\phi$ Bhí Méabh <sub>[F]</sub> <sup>*</sup> ) <sub>HD</sub> ( $\phi$ ina luí <sup>*</sup> )		*

*Bhí MÉABH ina luí* 'Méabh (and not someone else) was lying down.' (after Dorn & Ní Chasaide 2011)

FOC-PROM( $\iota$ ) thus enforces the common requirement that focused elements be stressed and carry a relatively prominent pitch accent (i.e. the 'focus-to-accent' principle; Jackendoff 1972, Gussenhoven 1983, Selkirk 1984, 2005, Féry & Samek-Lodovici 2006, Féry 2013, Ishihara 2011, 2016; see Ladd 2008: Ch.6, Downing & Pompino-Marschall 2013, Hamlaoui & Szendrői 2015

<sup>17</sup>It is not clear to us whether  $\phi$ -final pitch accents in Irish are phonologically the heads of their associated  $\phi$ -phrases, or are instead just edge marking phrase accents (and not structural heads as such). Nothing about the analysis proposed here depends on this distinction.

and references there for more discussion).<sup>18</sup>

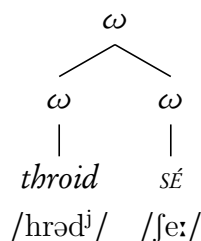
Our next task is to show how the analysis as currently developed may be extended to both cases of the Special Focus Construction – one expressing Verum Focus, one expressing verbal focus. Recall that the crucial property shared by both is that a pitch accent falls on a simple pronoun which has been incorporated into the verbal complex (by way of SPI on our analysis). An important consideration is that the accentual pattern observed in the SFC is very reminiscent of the patterns found in compound words. Under SFC, the incorporated pronoun – always in its strong form – bears its own stress and accent and is more or less equally stressed with the first syllable of the verb.

This is exactly how stress is distributed in compounds (such as *droch-chladach* ‘bad shore’). As has been noted many times in the descriptive literature, both elements of a compound are equally stressed. The description in Mhac an Fhailigh (1968: 62, §267), for instance, is typical:<sup>19</sup>

Compound words that are felt to be such – loose compounds – have double stress about equal on their component parts.

The ‘double stressing’ mentioned in such descriptions is very reminiscent of how the SFC is characterized in the same descriptive tradition. Taking this connection seriously, we suggest that the prosodic structure that underlies special focus is that in (36), which shows the prosodic structure (following SPI and prosodic phrasing) that we assume for the initial verbal complex of example (29).

(36) EXAMPLE (29):



In (36) there is a recursive prosodic word in which each constituent word bears a single stress. This constituency is a faithful match for the morphosyntactic structure delivered by SPI, a complex

<sup>18</sup>We have not yet accounted for the post-focal deaccenting reported by O’Reilly et al. (2010), Dorn & Ní Chasaide (2011) for Donegal prosody. One possibility is that FOC-PROM(*t*) and HD-R(*t*) jointly dominate syntax-prosody mapping constraints like MATCH(XP, $\phi$ ) (Selkirk, 2011, Elfner, 2015). As a consequence of this ranking, the winning output in (35) would instead be (i), which merges the focal  $\phi$ -phrase with the following  $\phi$ -phrase in order to satisfy HD-R(*t*) (cf. (35b)). This will have the effect of eliminating all  $\phi$ -phrases (and thus all pitch accents) following the focused word.

(i) ( $\phi$  Bhí Méabh<sub>[F]</sub>\* ina luí)<sub>HD</sub>

This analysis presumes that intonational pitch accents may be exceptionally assigned to  $\phi$ -medial words under focus. Determining if this approach is tractable will depend (among other things) on finding independent diagnostics, beyond the assignment of intonational pitch accents, for the location of  $\phi$ -phrase boundaries in Irish. See Ishihara (2011, 2016), Myrberg (2013), Kügler & Féry (2017) for discussion and references.

<sup>19</sup>As is often observed in the dialect handbooks, in well-established or conventionalized compounds like *seanbhean* (old woman) the second element is either unstressed or only weakly stressed.

word consisting of a full verb (including POL) with an adjoined subject pronoun (compare (36) with (19) above).

Given this structure, it is unsurprising that incorporated subject pronouns are realized with ‘focal accents’ under verum and verbal focus. In both types of focus, the F-marked terminal node is contained within the same complex morphosyntactic and prosodic word, that produced by SPI, as seen in (37).

- (37) a. VERUM FOCUS:  $\{ \{ \underset{[FOC]}{V} \quad v \quad F \quad POL \} \quad D \}$   
 b. VERBAL FOCUS:  $\{ \{ \underset{[FOC]}{V} \quad v \quad F \quad POL \} \quad D \}$

As the verbal complex is the locus of semantic focus in either case (despite the lack of a phonological exponent for POL in Verum Focus (37a)), the constraint FOC-PROM( $\iota$ ) will require that the inflected verb appear at the right edge of a  $\phi$ -phrase, in the position where pitch accents are assigned (35). And since the incorporated pronoun is itself the final prosodic word appearing in the focal  $\phi$ -phrase, it will inevitably be the host of the pitch accent which marks the right edge of that domain (38). In this sense, the ‘focal accent’ found on pronouns in the SFC is an epiphenomenon of phrasing – nothing more nor less than a regular,  $\phi$ -final pitch accent.<sup>20</sup>

(38) The Special Focus Construction (SFC)

/ [Bhí sí] <sub>[F]</sub> ina luí/	FOC-PROM( $\iota$ )	HD-R( $\iota$ )
a. ( $\phi$ [Bhí sí*] <sub>[F]</sub> ) ( $\phi$ ina luí*) <sub>HD</sub>	*! W	L
b. $\text{☞}$ ( $\phi$ [Bhí sí*] <sub>[F]</sub> ) <sub>HD</sub> ( $\phi$ ina luí*)		*

*Bhí sí ina luí* ‘She WAS lying down.’

This is the core of our proposal. However, another aspect of the prosody of the Special Focus Construction remains to be accounted for – one which will become important when we discuss the interaction of the SFC with ellipsis in section 5. Recall that simple pronouns have both strong and weak variants, the strong variants being bimoraic (realized with long vowels). Only strong pronouns are observed in the SFC – whenever a pitch accent appears on an incorporated subject pronoun, that pronoun must be produced with a long, unreduced vowel (see section 4 above). This requirement reflects, we believe, the ubiquitous preference for binary prosodic constituents,

<sup>20</sup>Identifying the precise pitch pattern associated with the SFC is a delicate matter. Many examples involve two distinct pitch accents – one on the verb, and another, stronger accent on the incorporated pronoun. In other cases, it seems to us that the entire verbal complex is realized with just a single pitch accent on the subject pronoun. Recall Brian Ó Curnáin’s description cited earlier, in which he speaks of ‘double stress or stress shift used to emphasize the truth ... of an utterance’ (Ó Curnáin, 2007: Volume One, p. 391, §383). This variation, if real, may indicate that there is some flexibility in accent assignment within compound prosodic word structures. Perhaps the two accent pattern occurs when pitch accents are assigned to each of the lower  $\omega$ s in (36) and the one accent pattern occurs when pitch accent is assigned only to the topmost  $\omega$ . Another possibility is that the one accent pattern occurs when the two accent pattern is phonetically truncated or undershot under time pressure (see Jun 1998, Arvaniti & Ladd 2009 for examples). Alternatively, the entire verb-pronoun complex may be promoted to a  $\phi$ -phrase in the SFC, such that the pitch accent on the verb marks the left edge of the  $\phi$ -phrase, while the pitch accent on the pronoun marks the right edge of the  $\phi$ -phrase (see Elfner 2015). In any case, both pitch patterns are consistent with our claim that the ‘focal’ accent on subject pronouns in the SFC is simply a regular, nuclear accent falling at the right edge of  $\phi$ .



particularly those which contain two independent prosodic words (Ghini (1993), Ito & Mester (1992, 2006, 2009), Selkirk (2000), among many others). A structure consisting of a verb and a strong (bimoraic) pronoun (36) satisfies these requirements, while the same structure with a weak pronoun does not (40).

We implement this requirement with a version of BINARITY referring specifically to constituents which contain focused material (for evidence that such a constraint may be needed independently, see Zec & Inkelas 1990, Frascarelli 2000:Ch. 2, Prieto 2006; on binarity and strong positions more generally, see Dresher & van der Hulst 1998, Elordieta 2007, Bennett 2012, 2013; on binarity in Irish phrasal phonology, see Elfner 2012, 2015, Bennett et al. 2016, 2015). To legibly represent the recursive  $\omega$  structure (36) in tableaux, we use curly braces  $\{\omega\}$  to mark the outermost prosodic word, and subscript  $\omega$ X to mark the innermost prosodic words when needed.

- (39) BINARY-FOCUS (BIN-FOC)  
Assign one violation for every constituent  $C_{[F]}$  which is semantically focused and does not contain at least two prosodic words.
- (40) Strong pronouns required in the SFC

/ [throid sé] <sub>[F]</sub> /	BIN-FOC	FOC-PROM( $\iota$ )	HD-R( $\iota$ )
STRONG PRONOUN /ʃe:/ <sub><math>\omega</math></sub> : a. $\left( \phi \left\{ \omega \omega \text{throid } \omega \text{sé}^* \right\}_{[F]} \right)_{\text{HD}}$			
WEAK PRONOUN /ʃə/: b. $\left( \phi \left\{ \omega \omega \text{throid } \text{sé}^* \right\}_{[F]} \right)_{\text{HD}}$	*! W		

*throid* SÉ ‘He DID fight.’

Following Bennett et al. (2016) we assume that the choice between weak and strong pronouns is essentially a choice between two distinct lexical items: prosodic considerations (like BIN-FOC) then determine whether a strong pronoun, a weak pronoun, or both will be grammatical in a given context. Outside of the SFC, both weak and strong subject pronouns are typically possible (Bennett et al., 2016, 2015) (e.g. *léim sé* [ˈlʲe:mʲ ʃə] ‘he jumped’), consistent with the view that binarity is a property of focus constructions specifically.

There is clear supporting evidence, in fact, that focus phrasing is sensitive to prosodic weight. The evidence concerns how focus realization works for synthetic verb forms – verbs whose inflectional endings reflect person and number features of the subject. In such cases, the final syllable of an inflectional affix (the exponent of subject verb agreement) may be accented in a way that is very similar to our cases – but only if it hosts two moras (has two syllables or has a long vowel). These cases have been noted by de Bhaldraithe (1953: 69, §166), Ó Sé (2000: 50, §55, 52, §60), and de Búrca (1970: 77, §383). Typical examples are given in (41). In (41a) the focal accent is realized on the past tense third person plural morpheme *-(a)dar*, which has two syllables, while in (41b) it is realized on the second person singular conditional ending *-f(e)á*, which has a long vowel.

- (41) a. An rabhadar ann? BhíODAR.  
 Q be.PAST.P3 in-it be.PAST.P3  
 ‘Were they present? They certainly were.’  
 b. An mbeinn buartha dá ndéanfainn a leithéid? BheifeÁ.  
 Q be.COND.S1 regretful if do.COND.S1 its like be.COND.S2  
 ‘Would I regret it if I did such a thing? You certainly would.’

We conclude that the preference for binary focal constituents can trigger the promotion of an inflectional verbal suffix to the status of full prosodic word, provided it is bimoraic and thus large enough to satisfy binarity requirements at the  $\omega$ -level.<sup>21</sup>

In the absence of a simple pronoun subject or an appropriate inflectional ending of the type just discussed, other means have to be found to express Verum Focus. Brian Ó Curnáin has suggested to us that the discourse particle *muis(e)*, whose meaning is, to say the least, unclear, may serve exactly this function in cases like (42).

- (42) A: An raibh Colm ann? B: Bhí muis.  
 Q be.PAST there be.PAST  
 ‘Was Colm there? He was indeed.’

In such cases, the otherwise apparently meaningless element *muis* bears a strong accent. The same mechanism seems to be at play in example (47) below which involves the element *leoga*, usually taken to be an interjection whose meaning is ‘indeed’.

What seems to happen, in sum, is that when a focal accent is ‘trapped’ within the complex morphological and prosodic word created by SPI, purely phonological principles of accent realization and distribution take over, forcing the accent to the right edge of the containing morphological word and therefore, accidentally so to speak, onto the pronoun. In this interplay, the important distinction between the two cases in (30) above is lost (verbal focus and Verum Focus are realized identically) and in addition a striking mismatch emerges between syntactic and semantic representations on the one hand and prosodic and phonological representations on the other. This mismatch is tolerated, it seems, because it makes possible the satisfaction of purely phonological desiderata related to the expression of focus prosody.

We end this part of our discussion with some final observations. The first is that this analysis depends in an important way on one aspect of our syntactic proposals – namely that the inflected verb in VSO clauses raises as far as the polarity head. This is what guarantees that every inflected verb in the language contains within itself a semantically potent expression of polarity, one which may end up being F-marked. If this possibility did not exist, then the entire chain of inference laid out here concerning the expression of Verum Focus would not have a starting point. To the extent that our analysis of special focus is successful, then, we have support for the clause structure we propose and for the larger syntactic framework they imply.

<sup>21</sup>It is not generally true of Irish that prosodic words must be bimoraic, as monomoraic content words like *te* [tʲe] ‘hot’ are permitted (Green, 1997). The requirement that pronouns be realized in their strong form, and that accented inflectional endings be minimally bimoraic in the SFC, is thus an instance of the EMERGENCE OF THE UNMARKED (McCarthy & Prince, 1994), facilitated by the fact that pronouns have both weak and strong realizations (see again Bennett et al. 2015, as well as Mascaró 2007, Bennett 2017).

We also note that these bimoraic inflectional suffixes are not normally stressed in the language, not even in those southern varieties of the language which permit noninitial stress (e.g. Ó Sé 1989).

Our second observation is that these proposals entail that the Special Focus Construction is in an important sense parasitic on a prior application of SPI. Incorporation of the simple pronoun creates the compound-like structure in (19), which is in turn matched with the prosodic structure in (42). And it is the existence of this prosodic structure, we have argued, which allows for the realization of focal accents which would otherwise be trapped inside the inflected verb. If the subject pronoun were not incorporated into the verbal complex in the way that we have proposed, the understanding of the distribution of focal accents just presented would be untenable.

It is this aspect of our proposals that lets us understand the very surprising fact that special focus always implicates a simple pronoun, rather than one augmented with a contrastive element or a focus element such as *féin* (on which, see McCloskey (1999) and (15) above). What is crucial is that simple pronouns are monomorphemic lexical items. They are therefore minimal syntactic objects when introduced into a syntactic representation and are targeted by SPI as we have formulated it. Complex pronouns – those which combine with contrastive or other suffixes – have a complex internal syntactic structure (Koopman (1999) among others), are therefore phrasal and cannot undergo SPI, which is a head movement. They cannot therefore, on our account, participate in special focus.

There is, as it turns out, clear independent evidence that special focus is in fact parasitic on a prior application of SPI. That evidence has to do with the patterns of suppletive allomorphy discussed in section 3.2 above. The crucial observation is that the allomorphic variants triggered when a simple pronoun incorporates into an inflected verb are obligatory in the context of the SFC (Wagner (1959: p. 98–99, §276)). All examples of the relevant type that we have found in the descriptive literature are consistent with this generalization. In the examples of (43), for instance, we have reduction of the future ending to /ə/ in the context of Verum Focus and ellipsis (whose interaction we discuss in detail in section 5). (43a) and (43b) are from an Ulster variety and so involve allomorphic interactions of TYPE THREE from the discussion of section 3.2 above; (43c) is from a Munster variety and is an instance of a TYPE ONE interaction.

- (43) a. Rachaidh MÉ /'rahə 'me:/  
       go.FUT I  
       'I WILL (go).' (Wagner, 1959: 98, §276)
- b. Coinneochaidh MÉ /'kiNʲahə 'me:/  
       keep.FUT I  
       'I certainly will (keep).' (Wagner, 1959: 99, §276)
- c. ach tiocfaidh SÉ /'tʲukə 'fe:/  
       but come.FUT he  
       'but he WILL (come)' (Ó Sé, 2000: 50, §56)

(44) is from a Connemara variety and is an example of TYPE FOUR of section 3.2. That is, the conditional modal of the response in (44b) was realized with the suppletive form /-hitʲ/, triggered by presence of the simple pronoun *sé*.

- (44) a. Ceapaim go mb'fhéidir go dteastódh sé uainn freisin muna bhfeabhsáíonn an  
 think.PRES.S1 C perhaps C need.COND it from-us also if-not improve.PRES the  
 aimsir.  
 weather  
 'I think that maybe we'd need it as well, if the weather doesn't improve.'
- b. Ó, d'fhéadfadh sé /'dʲe:itʲ ʲe:/.  
 can.COND it  
 'Oh, it could be. ('That's certainly possible.')
- RNG 19-12-2012

In addition, work with six native speaker consultants confirms that these allomorphic variants are not just possible but are in fact required in the context of special focus. But these patterns of suppletion are possible, we have argued, only if the pronoun has been adjoined to the morphological word corresponding to the inflected verb. The locality necessary for such interactions otherwise does not hold. The appearance of these triggered allomorphic variants is therefore a certain indicator that SPI has applied.

The special focus phenomenon seems bizarre at first blush. But when we examine the various components of the analysis that we have developed in this section, it turns out that the observed patterns emerge naturally from an interplay among elements that have substantial independent grounding. The syntactic foundation we use was developed for reasons entirely independent of our present concerns; the evidence for SPI is independent of present concerns, and the phonological constraints we appeal to are well established within Irish and beyond. In fact, if the proposals developed in this section are tenable, then there is nothing in fact 'special' about the phonology of special focus. Given the output of SPI as starting point, the observed outcomes emerge, with no special pleading, from the general phonology of focus in Irish.

We take this to be an encouraging outcome. The most challenging theoretical issues, however, remain. Those issues arise when we probe the interaction among SPI, special focus, and another intriguing aspect of the postsyntactic landscape – the reduction to silence of material subject to ellipsis. In the final section we use that interaction to make the case for a particular view of the architecture of linguistic theory and a particular view of the interaction between syntax and phonology.

## 5 INCORPORATION, SPECIAL FOCUS, AND ELLIPSIS

Two observations define the interaction between Responsive Ellipsis and the mechanisms we have been concerned with here. The first is that simple pronouns are like subjects in general in not surviving ellipsis (Wagner (1959: 98, §276), McCloskey (1991)): <sup>22</sup>

<sup>22</sup>This is one of the ways in which SPI is distinct from simple subject verb agreement in Irish, despite their similar prosodic behavior in focus contexts (see section 4.1). The synthetic endings which express person and number agreement between subjects and verbs in Irish are obligatory in ellipsis contexts (e.g. Duffield (1995:107–113)):

- (i) a. An dtagann tú abhaile ar an traen?  
 Q come.PRES you home on the train  
 'Do you come home by train?'
- b. Tagaim (\*Tagann)  
 come.PRES.S1 (come.PRES)  
 'Yes (I come)'

- (45) a. An bhfuil sé breoite?  
 Q be.PRES he ill  
 ‘Is he ill?’  
 b. Tá (\*sé).  
 be.PRES he  
 ‘He is.’

The second observation, apparently at odds with the first, is that in the context of special focus, the accented simple pronoun *does* survive ellipsis. We see this especially under Verum Focus, in which the SFC is accompanied by Responsive Ellipsis very frequently indeed.<sup>23</sup> In this case, the simple subject pronoun does survive, as seen in (46)–(48), all of which are question answer dialogues excerpted from radio interviews.

- (46) a. Siud é an chéad chuid den fheachtas seo – an agóidíocht seo a tá  
 DEMON it the first piece of-the campaign DEMON the protest DEMON C be.PRES  
 sibh ag dul a dhéanamh. Ar oibrigh sé?  
 you.PL 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 03-11-2016
- (47) a. Ar shíl tú ariamh go mbeadh sé i nDáil Éireann?  
 Q.PAST think.PAST you ever C be.COND he in Parliament  
 ‘Did you ever think that he’d be in Parliament?’  
 b. Níor shíl, leoga; níor shíl MÉ.  
 NEG-PAST think.PAST indeed NEG-PAST think .PAST I  
 ‘Indeed I didn’t. I did not.’ RNG 29-11-2010
- (48) a. Cén aois anois tú, a Shéamais?  
 what age now you VOC  
 ‘How old are you now, Séamas?’  
 b. Tá mé ag tarraingt ar na trí scór, a Rónáin.  
 be.PRES I PROG draw on the three score VOC  
 ‘I’m almost sixty, Rónán.’  
 c. Níl TÚ.  
 NEG-FIN-be.PRES you  
 ‘You are not!’ RNG 23-04-2005

This is a remarkable fact, since subjects in general do not survive ellipsis. Furthermore, simple pronouns are necessarily unfocused in their interpretation. In contexts like (46)–(48), in fact, they

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As SPI must not occur in ellipsis contexts in the general case (see (45)), we conclude that SPI cannot be identified with the mechanisms which subserve subject verb agreement, or not at least in any straightforward way.

<sup>23</sup>To such an extent that some descriptions (e.g. Wagner (1959: 98–99, §276)) claim, in effect, that the SFC is found ONLY in ellipsis contexts. This is not the case, as we have seen throughout section 4, but the perception that the two are necessarily linked is understandable.

are necessarily given, because F-marking on the polarity expression requires a discourse context in which there is an antecedent proposition differing only in polarity from the proposition expressed in the ellipsis site (on the general phenomenon, see Rooth (1992), Schwarzschild (1999), Tancredi (1992); on Verum Focus in particular, see Samko (2014)). The accented subject pronouns of (46)–(48), then, do not ‘survive ellipsis’ on semantic grounds.

Such cases as (46)–(48) must in addition be carefully distinguished from cases such as (49), which illustrate the fact that focused, nonpronominal subjects can also sometimes survive ellipsis in Irish (under conditions that are not at present well understood).

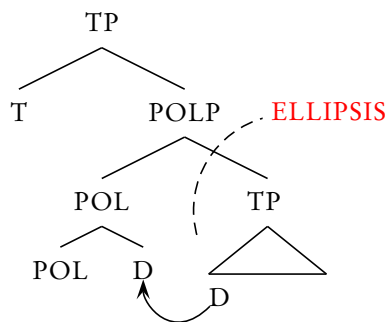
- (49) Tá Seán breoite, ach níl MÁIRE  
 be.PRES Seán ill but is-not Máire  
 ‘Seán is ill but Máire isn’t.’

The pattern of (49) is fundamentally different from the retention of subject pronouns under the SFC (that is, in cases like (46)–(48) above), since subject pronouns in that circumstance are NEVER semantically focused. (We return to this point in passing in section 6 below.) That interpretive focus on the subject pronoun is not the relevant factor for the SFC cases like (46) – (48) is made all the more evident by cases like (50)–(51) (again excerpted from radio interviews), in which the element which survives to be pronounced is an expletive pronoun.

- (50) a. An gcuireann sé iontas ort anois gur fágadh ceithre mhí gan  
 Q put.PRES it wonder on-you now C leave.PAST-IMPERS four month without  
 an obair seo a dhéanamh?  
 the work DEMON do.NON-FIN  
 ‘Does it surprise you now that four months went by without this work being done?’  
 b. Ó cuireann SÉ dáiríre.  
 put.PRES it seriously  
 ‘Oh, it really does.’ RNG 06-8-2012
- (51) a. Agus an gcuireann sé as duit an méid sin má bhíonn siad amuigh ar an  
 and Q put.PRES it out to-you that-much if be.PRES-HABIT they out on the  
 bhfarraige?  
 ocean  
 ‘Does it bother you that much if they are out on the ocean?’  
 b. Cuireann SÉ, mar tá áilleacht na háite le bheith millte go deo.  
 put.PRES it for be.PRES beauty the.GEN place.GEN to be.NON-FIN destroyed forever  
 ‘It absolutely does, for the beauty of the place is to be destroyed for all time.’ RNG  
 27-11-2011

Why are the simple pronouns of (46)–(48) and (50)–(51) treated exceptionally (treated leniently as it were) by the mechanisms of ellipsis? To begin to answer that question, we can observe that in adjoining a subject pronoun to the inflected verb, SPI lifts it out of the ellipsis site.

(52) SPI:



In the context of our proposals, then, the question of whether or not the subject pronoun ‘survives ellipsis’ is naturally reframed as the question of how SPI interacts with ellipsis. That interaction can now be encapsulated in two generalizations.

(53) GENERALIZATION A: Despite being obligatory in general, SPI may not apply out of an ellipsis site.

GENERALIZATION B: But SPI may apply out of an ellipsis site if the subject pronoun is destined to bear a focal accent.

Generalization A reflects our earlier observation that subject pronouns systematically delete in contexts (like (45) above) in which SFC is not implicated. This deletion would be unexpected if the subject pronoun were incorporated into the verb, since (i) the pronoun is now outside the ellipsis site and (ii) ellipsis does not in general target subparts of morphological words.<sup>24</sup> The interpretation in terms of SPI is supported by an additional observation. When subject pronouns are elided, the morphological traces of SPI – the allomorphic alternations of section 3.2 – also disappear. Consider again our Type Three pattern from section 3.2, that involving the two forms of the conditional ending in Northern varieties. There is an elsewhere form (54a) and a form observed in the context of SPI (54b).

- (54) a. chuirfeadh Seán ... (John would put) /xir<sup>j</sup>hu fa:n/  
 b. chuirfeadh sé ... (he would put) /xir<sup>j</sup>hit<sup>j</sup>fə/

Under ellipsis, it is the elsewhere form – (54a) – that is required.

- (55) a. An gcuirfeadh sé fearg ort?  
 Q put.COND it anger on-you  
 ‘Would it make you angry?’  
 b. Chuirfeadh.  
 /xir<sup>j</sup>hu/ \* /xir<sup>j</sup>hit<sup>j</sup>/  
 ‘It would.’

This is so even when the elided subject pronoun is, as in (55), one of those that forces appearance of the variant in (54b). The absence of verbal suffix allomorphy here suggests strongly that SPI does not apply when subject pronouns happen to be within the constituent targeted by Responsive Ellipsis.

The two statements of (53) provide a good first level description of the facts, but the impor-

<sup>24</sup>See Booij 1996, 2012 for an analysis of apparent counterexamples.

tant questions obviously remain: what mechanisms in what theoretical framework yields those generalizations?

There is of course a crucial difference between the subject pronouns that are elided and those that resist elision: those that resist end up bearing the the focal accent which is the phonological exponent of Verum Focus or of focus on V. Subject pronouns survive ellipsis, it seems, only when they are needed to provide the necessary prosodic infrastructure for realization of a focal accent somewhere or other within the verbal complex. We believe that this view is correct, but it brings with it a theoretical challenge. SPI is, as we have seen, an obligatory head movement – rendered obligatory by a property of the pronoun which raises. But at the point at which SPI must apply or not apply, it cannot be locally determined that the incorporated pronoun will end up bearing a focal accent. As we have seen, the pronoun itself is never F-marked (it is given) and the realization of the focal accent on the pronoun reflects the operation of purely phonological mechanisms – those governing the placement of accents. We seem, then, to have a problem of globality (derivational look ahead to be more specific) – to determine that a pronoun should exit the ellipsis site by way of SPI, the system has to be able to foresee, so to speak, that in a future phonological afterlife its presence will be required to support a focal accent. In what remains, we argue that such apparent paradoxes dissolve once we think more carefully (i) about how the mechanisms of elision do their work and (ii) what theoretical architecture governs the interaction between syntactic and phonological processes.

Ellipsis is a very complex phenomenon whose effects are distributed over all aspects of linguistic representation (pragmatics, semantics, syntax, morphology, phonology, the lexicon). It is important, then, not to fall into the trap of presupposing a unitary operation of ‘ellipsis’. We take as our starting point, then, the following more nuanced assumptions, drawing especially on Merchant (2001, 2004).

- (56) a. The syntactic head H which licenses a given ellipsis type optionally includes a morpheme E, which has a semantic and a morphophonological component.  
 b. The semantic component of E is a use condition which guarantees that the requisite semantic parallelism condition(s) hold between antecedent and ellipsis site.  
 c. The morphophonological component of E marks the terminal nodes of the complement of H for nonpronunciation in the phonological module (see also Postal 1970, Wasow 1972). We use the notation  $X_{[\emptyset]}$  to indicate such ‘doomed’ terminals.<sup>25</sup>  
 d. In the case of Responsive Ellipsis in Irish, the head which includes the E-morpheme is the polarity head POL.

The most important consequence of this view for our present purposes is that terminal elements which are scheduled for elision will bear a formal mark which wellformedness constraints can make reference to.<sup>26</sup>

<sup>25</sup>There is a long tradition in studies of ellipsis which holds that the calculation of parallelism for identity is a calculation of head by head correspondence between antecedent and ellipsis site – see especially Fiengo & May (1994) and for a recent instantiation in a much changed context Rudin (2017). It would be intriguing to link the head marking assumed here with this head based calculus of parallelism.

<sup>26</sup>A central theme in the literature on ‘Givenness’ is that, in its semantic/pragmatic aspect, it is a property of fairly large constituents, but that its phonological consequences, in the form of deaccenting, must be distributed down to the terminal elements of that larger constituent (Schwarzschild (1999), Féry & Samek-Lodovici (2006), Selkirk (2008) among others). The feature  $X_{[\emptyset]}$  in this context might be construed as being dependent on G-marking (or



Our second crucial assumption is that the postsyntactic derivation allows parallel and simultaneous optimization. In particular, we assume that certain facets of ellipsis, morphophonology, and prosody are computed in parallel, as in classic Optimality Theory.<sup>27</sup> In this context, the kind of look ahead presupposed in Generalization B of (53) – involving a cross-modular interaction between syntax and prosody—is not anomalous, but is rather expected and natural.

Let us begin with GENERALIZATION A, though, and focus on SPI in elliptical contexts without special focus.

We have already seen that SPI is driven by a morphological need of the incorporated pronoun, one which we have encoded by way of the feature in (57), repeated from (21) above.

$$(57) \quad \begin{array}{c} \text{D} \\ \text{[NOM]} \\ \phi \end{array} : \quad [\text{POL} - ]$$

The presence of (57) on a simple pronoun is what makes SPI obligatory in the general case. But within the general perspective we are building, it is natural to assume that when SPI does not apply and (57) is therefore not checked, no violation will be assessed in the case of a pronoun which has been elided. If the element which carries (57) were to be eliminated from the representation that is being assessed, it would be strange indeed if there were some memory preserved of its presence and of its properties. But that is what would be required if a violation of (57) were to be assessed against an elided pronoun.<sup>28</sup> These assumptions provide an immediate understanding of the interaction of SPI and ellipsis in nonfocal contexts. Deletion is driven by the constraint

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as being a variant of G-marking). The effects we discuss here, then, especially Generalization B, would turn on what the expected interaction should be between the phonology of F-marking, the phonology of G-marking and the phonology of  $X_{[\emptyset]}$ . Relevant to that discussion is the fact that the SFC also supports what seem to be instances of second occurrence focus, as seen in (i).

- (i) Ach ní fheicfidh tú Toryaigh.  
but NEG-FIN see.FUT you Tory Island  
'but you WON'T see TORY'

RNG 02-09-2014.

In (i), the incorporated pronoun was articulated with a strong pitch accent and the object had a weaker, but clearly perceptible accent. The context was a discussion of landmarks that could or could not be seen from certain points on the Donegal coastline. In the terms of Selkirk (2008), the object here is both G-marked (because of the Verum Focus context) and F-marked (because it contrasts with other potential fillers of the same semantic slot). We leave the pursuit of these interesting questions and possibilities for future work. See Winkler (2011) for relevant discussion.

<sup>27</sup>Prince & Smolensky 1993/2004, and see Haugen 2008, Teeple 2008, Henderson & Tucker (2010), Bennett (2012, 2017) and references there for related arguments and proposals.

<sup>28</sup>It follows that whatever operations build inflected verbs out of their component parts (classical head movement) must be different in some way from SPI, since they apply routinely and obligatorily from within ellipsis sites, giving rise to the phenomenon of 'Verb Stranding Ellipsis'. For relevant discussion, see especially (Merchant, 2001: 65–72); also Merchant (2013b), Gribanova & Harizanov (2018). Two further observations suggest that the mechanisms involved in SPI and those involved in the formation of morphologically complex verbs must be kept distinct. The first observation is theory internal and relates to the locality conditions on head movement. If SPI and verbal inflection both involve head movement to POL (of either a syntactic or postsyntactic type), it needs to be explained why the presence of a subject pronoun does not block verb raising to POL, since the subject pronoun is the closest head in the c-command domain of the POL and might therefore serve as an intervener for head movement from lower positions (see (18b) and see footnote 8 above for some speculations). The second observation is phonological: SPI sometimes produces compound-like structures containing multiple prosodic words  $\omega$  (see (36)), but verbal inflection does not (with the exception of certain synthetic verb endings; section 4.1). The fact that SPI and verbal inflection have different prosodic consequences may also point toward differences in their morphosyntactic sources.

ELIDE( $X_{[\emptyset]}$ ), as in (58) which penalizes the appearance in phonological representations of material marked for deletion.

- (58) ELIDE( $X_{[\emptyset]}$ )  
Assign one violation mark for each  $[\emptyset]$ -marked node which is realized with phonological content in the output.

This constraint, being ranked high, rules out the b- and c- candidates in tableaux like (60) – candidates in which the subject pronoun is overtly realized rather than being deleted ( $X_{[\emptyset]}$  indicates a terminal node marked for deletion;  $\times$  indicates that deletion (non-pronunciation) of X has occurred). But since deletion satisfies ELIDE( $X_{[\emptyset]}$ ) without triggering a violation of the constraint which penalizes un-checked versions of (57), ellipsis of the pronoun will be preferred to SPI in elliptical contexts – deletion comes without cost in this circumstance.

SPI, on the other hand, when it applies, forces a violation of a fundamental constraint – faithfulness between syntactic and morphophonological representations of the same material. We understand it as in (59) and its interaction with the other constraints at play here is displayed in the tableau in (60).<sup>29</sup>

- (59) FAITH( $S \Rightarrow M, X^0$ ) ( $F(S \Rightarrow M)$ )  
Assign one violation mark for each pair of nodes X and Y (both minimal) such that there is no domination relation between X and Y in the input, but there is such a domination relation between X and Y in the output.

SPI changes the domination relations which define the syntactic representation which forms the input to the morphophonology and therefore must always trigger a violation of (59).

- (60) Donegal: *chuirfeadh sé* /xir<sup>j</sup>-hu fə/ ‘He would (put)’  
(ellipsis applies, SPI does not)

$[\Sigma_P V^0_{[E]} \quad [TP D_{[\emptyset]}[NOM, PRO] \dots]]$	ELIDE( $X_{[\emptyset]}$ )	SC(SPI)	F( $S \Rightarrow M$ )
a. <del>ɹ</del> xir <sup>j</sup> hu fə:			
b. xir <sup>j</sup> hu fə: <sub>[\emptyset]</sub>	*! W	*! W	
c. [xir <sup>j</sup> hit <sup>j</sup> + fə: <sub>[\emptyset]</sub> ]	*! W		*! W
d. [xir <sup>j</sup> hit <sup>j</sup> + fə:]			*! W

Candidates (60c,d), which involve applications of SPI (followed by elision in the latter case), are thus ruled out as unmotivated departures from syntax morphology isomorphism (the constraint F( $S \Rightarrow M$ ) of (59)). The intuition here is the venerable one that operations are costly and apply only if they yield some effect or benefit at the interfaces – an intuition routinely and naturally cashed out in terms of Faithfulness constraints in frameworks that assume parallel and simultaneous optimization. Candidate (62a) then prevails, since it is faithful to the (syntactic) input and respects

<sup>29</sup>We retain IPA transcriptions in the remaining tableaux so that we can illustrate the patterns of verbal allomorphy triggered by SPI; these are not represented in the standard Irish orthography.

the imperative to eliminate material marked for deletion, while avoiding the penalty that would normally accrue to a form which did not satisfy the morphological subcategorization requirement in (57). This constraint system thus correctly generates the bleeding interaction between ellipsis and SPI that we encapsulated in Generalization A of (53).

The interaction of ellipsis, SPI, and focus marking is, of course, more challenging and more interesting. To formally implement the intuition that ellipsis of the subject pronoun can be inhibited by prosodic factors related to focus, we assume that a phonological constraint governing focus prosody (BINARY-FOCUS, abbreviated BIN-FOC, section 4) crucially dominates the constraint demanding nonrealization of material marked for deletion in the narrow syntax (ELIDE( $X_{[\emptyset]}$ )). Effectively, ellipsis of subject pronouns is prohibited when focus falls on the verbal complex because retention of the subject pronoun (in its strong form) permits better satisfaction of a purely phonological requirement – the need to realize focused constituents as binary with respect to the prosodic word  $\omega$ .<sup>30</sup>

- (61) BIN-FOC  $\gg$  {ELIDE( $X_{[\emptyset]}$ ), FAITH( $S \Rightarrow M, X^0$ )}  
 Donegal *chuirfeadh* SÉ /'xir<sup>j</sup>-hit<sup>j</sup> 'fé:/ ‘he WOULD put’  
 (SPI applies under focal accent, ellipsis does not apply to the subject pronoun)

$[\Sigma P \ V^0_{[E]} \ [TP \ D_{[\emptyset]}[NOM, PRO] \ \dots]]$	BIN-FOC	EL( $X_{[\emptyset]}$ )	SC(SPI)	F( $S \Rightarrow M$ )
a. $\text{[xir}^j\text{hit}^j + \text{fe}_{[\emptyset]}]$		*		*
b. xir <sup>j</sup> hu fe <sub>[\emptyset]</sub>	*! W	*	* W	L
c. xir <sup>j</sup> hu fe <sub>z</sub>	*! W	L		L

By allowing BIN-FOC to take precedence over ELIDE( $X_{[\emptyset]}$ ) and F( $S \Rightarrow M$ ), we correctly derive the nonapplication of subject pronoun ellipsis in focal contexts: better to retain material marked for deletion than to realize focus prosody on an imperfect host (see Féry & Samek-Lodovici 2006 for a related proposal).

Importantly, this analysis correctly predicts that only morphologically incorporated subject pronouns can survive ellipsis in order to satisfy prosodic binarity requirements on the focused verb. Material which is not incorporated on the other hand (a full nominal subject for example) cannot be saved from deletion under pressure from BIN-FOC. The reason is simple: non-incorporated material does not form a recursive prosodic word with the verb – it is prevented from doing so by mapping constraints like MATCH( $\omega, x^0$ ), which penalize unlicensed prosodic structure (Selkirk, 2011, Myrberg, 2013) – and so the retention of such material cannot hope to satisfy BIN-FOC, which requires that the focused verbal complex contain two prosodic words.<sup>31</sup>

Lastly, it bears repeating that subjects which are not simple pronouns (including complex pronouns, (15)) are blocked from incorporating into the verb by basic conditions on head movement.

<sup>30</sup>We are implicitly presuming here that other constraints governing focal prosody (such as FOC-PROM( $t$ ), section 4) are undominated. While this may not be a necessary assumption, we have no clear evidence at present that these constraints are ever violated in Irish.

<sup>31</sup>Note the important parallel here between our treatment of SPI and Merchant’s 2002 treatment of ‘swiping’ – in which exceptional head movement is triggered in order to guarantee the correct placement of pitch accent (on the P-head of a PP).

Full, internally complex nominals (XPs) cannot move into head positions, and so the incorporation of nonpronominal subjects is simply impossible. The incorporation of a subpart of a subject – e.g. the pronoun *sí* ‘she’ in a complex expression like *sí sin* ‘she (over there)’ – is similarly blocked by the ban on head movement from XPs contained in a specifier position (e.g. Travis (1984:Ch.4), Baker (1988:Ch.2)). Even though BIN-FOC outranks FAITH( $S \Rightarrow M, X^0$ ), it cannot trigger the incorporation of just any material: syntactic principles governing head movement, which we take to be inviolable, dramatically narrow the space of possible unfaithful mappings between syntactic and postsyntactic representations. In this way we formalize the intuition that simple pronouns survive elision only when they are ‘destined’ to make the realization of a focal accent phonologically possible. And we formalize that intuition in a theoretical framework which renders such interactions expected and routine – by way of the logic of parallel and simultaneous optimization.

## 6 CONCLUSION

We have been fairly deep in the specifics of the Irish phenomena at this point and it is time to stand back and ask what more general lessons may be drawn from our case study.

Our central goal has been to contribute to the project of understanding the mechanisms by which mismatches between syntactic and phonological representations arise and what those mechanisms may imply about the architecture of linguistic theory. In pursuing that goal, we have been much concerned with the apparently small matter of subject pronoun incorporation in Irish. Minor and particular it may be, but we have seen that in its interactions with the phonological expression of focus and the phonological expression of ellipsis, we observe dramatic mismatches between interpretive and phonological representations of the same linguistic material. In trying to understand those interactions, we are brought to theoretical conclusions of some significance.

In the case of focus, we have added to the small but growing (and we think important) literature on Verum Focus and on the often surprising phonological distortions that it gives rise to (Höhle (1992), Dořák & Gergel (2004), Huidobro (2005), Becker (2006), Dořák (2007), Gutzmann & Miró (2011), Gribanova (2017), Pizarro-Guevara (2017), Gutzmann et al. (2017)). Our analysis aims to reduce its apparent anomalies in Irish to a very standard view of the syntax, semantics and pragmatics of contrastive focus in interaction with the very particular (and independently needed) phonology of focus in Irish. In this, our proposals stand in marked contrast to the point of view developed in Gutzmann et al. (2017).

For ellipsis, our observations and analysis suggest that it must involve the nonpronunciation of material which is in fact present in syntactic representations. We see no way to analyze the interaction between ellipsis and focus marking in the SFC without this assumption – the fact, in particular, that phonological conditions on focus prosody can trigger exceptional pronunciation of subject pronouns under ellipsis.

A closely related finding is that the elision of discourse given material can be subordinated to other grammatical requirements – conditions having to do with phonological wellformedness in our case. This means that the mechanisms of elision, whatever their ultimate form, must be understood as imposing violable rather than absolute conditions on the phonological expression of elidable material. As noted by a number of our reviewers, this move opens some doors that might be thought best left closed – making possible certain kinds of ‘survivals’ in ellipsis sites that have not, at least so far, been observed. We recognize the force of this concern, but the

constellation of Irish facts that we have confronted here seems to demand an analysis along these lines and we think that the relevant empirical territory is ripe for reassessment and exploration.

More particularly, we have addressed the question of why focused material resists elision (Heim 1997: 209, Merchant 2001: 26, Takahashi & Fox 2005: 230). When there is no misalignment between the phonological and the interpretive aspects of focus, it is difficult to know whether the basis for that exclusion is semantic or phonological. For the interactions in Irish that we have examined here it seems to be beyond doubt that the exclusion of F-marked material from ellipsis sites has a phonological basis. The subject pronoun, though necessarily given, must ‘survive ellipsis’ for reasons having purely to do with the phonology of focus. This conclusion does not seem to depend on particulars of the analysis but rather to be deducible from the observations themselves.

Following Gribanova & Harizanov (2018), we have also found reason to support a typology of head movement which distinguishes a purely syntactic type from a type which does its work in the borderlands between syntax and phonology – having access on the one hand to syntactic relations and properties like command and minimality but on the other having detectable effects only in the morphology (suppletive allomorphy) and in the phonology (accent placement).

Taking SPI to involve head movement provides a basis for understanding the limits on pronoun incorporation. Only simple subject pronouns incorporate in Irish: the fact that complex pronouns, full nominals, and object pronouns do not follows from standard conditions on head movement (e.g. locality conditions, the ban on head movement out of an XP in specifier position, and so on). Taking it to be a postsyntactic head movement allows us to understand its interaction with ellipsis and with the phonology of focus. The challenge for a purely syntactic treatment of SPI is then clear: it must be explained why SPI applies in tandem with ellipsis if and only if the incorporated pronoun will eventually bear the focal accent associated with a focus feature [F] that is borne by some other element in the syntactic representation. Developing a principled analysis of this type strikes us as a daunting task.

For these reasons we have implemented our proposals within a theoretical architecture in which the output of the syntactic computation is the input to a morphophonological computation which is defined by the logic of parallel and simultaneous optimization. This is what provides an understanding of why on the one hand SPI should be sensitive to syntactic properties but that on the other its application or nonapplication should be regulated by fundamentally phonological concerns. In the framework we assume, such effects are expected rather than anomalous.

In some ways this conclusion recalls constraint based approaches to syntax, particularly those which allow for rich, parallel interactions between syntax and other components of grammar (e.g. Parallel Architecture, Jackendoff 2010; Automodular Grammar, Sadock 2012; etc.). Our analysis differs from these approaches in retaining a derivational component (the traditional ‘Y’ model of grammar; Chomsky & Lasnik 1977), alongside a more limited system of parallelism at the interface between syntax, morphology, and prosody. We also depart from these models in assuming that syntax makes use of derivational movement operations and that ellipsis involves the nonpronunciation of material which is literally present in the syntax (e.g. Jackendoff 2015).

We have not attempted here to argue against imaginable alternatives which would not commit us to such assumptions – our argument rests on the existence of a working analysis. Those who are skeptical of our theoretical conclusions will hopefully build alternatives and compare them with that presented here. The data patterns we have been engaged with are certainly rich enough to deserve such close scrutiny.

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