Where Oh Where Have The Complementizers Gone?

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Acknowledgements

If you had told me as I was starting my freshman year that someday I would write a 45 page paper, I would have laughed at you. If you had told freshman me that I would actually have a blast writing a 45 page paper, I would have called you a liar. But this is exactly what happened; I wrote this 45 page paper (and a lot more pages to produce the document here), and I cannot believe how much fun I had writing it.

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In this paper I argue against the view that Irish complementizers are heads that Merge in the left periphery of the clause (cf. McCloskey 1979, Chung and McCloskey 1987, McCloskey 1996b). I argue that the set of elements traditionally labelled "complementizers" in Irish are in fact not complementizers at all, but rather, a set of morphemes which obscures an underlying relative clause structure. First, I propose that instances of sentential complementation in Irish which are introduced by the element *go* are in fact relativizations of the phrase *go DEIMHIN* "in fact," similar to Kayne's (2010) analysis of complementizers in English. I then propose a structure for this embedded relative clause using an expanded DP à la Aboh (2004, 2010).

1. Irish Complementizers

Before examining any data, it is important that I make clear what the definition of "complementizer" is that I am assuming. Otherwise, it is meaningless to claim that Irish, or any language for that matter, lacks such an element.

The definition of a complementizer that I am using is gleaned from what most authors in the literature mean when they label an element a "complementizer."

Complementizer:

1) *a simple head which Merges high in the left periphery of a clause, with the left periphery defined as the area of the clausal hierarchy above IP.*

2) *a simple head which introduces either an embedded or matrix clause.*

Assuming this definition, what I mean when I claim that Irish lacks complementizers is that the collection of elements which have been claimed in the literature to be complementizers (see Section 1.1) are not simple heads which Merge above IP.

1.1 Introduction to Irish Complementizers

Irish Gaelic possesses a large range of elements which have been labelled "complementizers." This set encompasses a semantically disparate group of elements, including declarative markers, negative markers, interrogative markers, and negative interrogative markers. The relative marker is traditionally included in this set as well, dating back to McCloskey (1979). Also, as first noted in McCloskey (1979) and notably later in Chung and McCloskey (1987) and Rizzi (1997), these elements seem to agree in tense with the finite verb which they take scope over. This agreement manifests as a marker *-r* on the complementizer, which seems to mark past tense agreement. Consider the complete set of the complementizers in Table A, as well as the set of relative markers in Table B[1].

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1   I do not and will not have much to say about the difference between the so-called Direct and Indirect Relatives, but direct the reader to McCloskey (2002) and Adger and Ramchand (2005) for discussion within the literature.

Table A: Irish Complementizers

	Declarative	Negative	Interrogative	Negative Interrogative
Root Present	[phonologically null]	ní*L* /nʲi/	an*N* /ɑnˠ/	nach*N* /nˠɑx/
Root Past	do*L* /dˠə/	níor*L* /nʲiɾˠ/	ar*L* /eɾˠ/	nár/nachar*L* /nˠɑɾˠ/ /naxəɾˠ/
Embedded Present	go*N* /gˠə/	nach*N* /nˠɑx/	an*N* /ɑnˠ/	nach*N* /nˠɑx/
Embedded Past	gur*L* /gˠəɾˠ/	nár/nachar*L* /nˠɑɾˠ/ /nˠɑxəɾˠ/	ar*L* /eɾˠ/	nár/nachar*L* /nˠɑɾˠ/ /nˠɑxəɾˠ/

Table B: Irish Relative Markers[2]

	Direct Relative	Indirect Relative
Present Declarative	a*L* /ə/	a*N* /ə/
Past Declarative	a*L* /ə/	ar*L* /eɾˠ/
Present Negative	nach*N* /nˠɑx/	nach*N* /nˠɑx/
Past Negative	nár*L* /nˠɑɾˠ/	nár*L* /nˠɑɾˠ/

These elements were first described as complementizers in McCloskey (1979), and this assumption has not been challenged since then. The exact position of these various elements however has been subject to some debate. For instance, McCloskey (1996b) argues that each of these elements Merges in C° and then lowers to adjoin to T°. On the other hand, Roberts (2005) works within Rizzi's (1997) Extended Left Periphery, and identifies these elements with either the node Fin° (the declarative and negative markers) or Force° (the relative and interrogative markers). While the literature has not come to a consensus on the issue of the exact mapping of the Irish left periphery, the underlying assumption that these elements are simple heads which Merge somewhere in the left periphery has been maintained throughout.

1.2 Proposed Evidence that these Elements are Complementizers

McCloskey (1979) argues that the declarative marker *go* is a complementizer because it corresponds to complementizers in languages such as English.

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2   I shall use the conventions of the literature by using the symbols '*L*' to indicate that the element following this is marked by the consonant mutation Lenition, and the symbol '*N*' to indicate nasalization.

(1) Deir   sé   [**go**   dtuigeann   sé   an   scéal.]
    says   he   that   understands   he   the   story
    "He says that he understands the story."   McCloskey (1979: 12)

As can be seen in (1), the Irish element *go* seems to correspond nicely to English "that" in that they both introduce finite sentential complements. Given that English "that" has long been described as a complementizer, McCloskey concludes that the similarity between the two elements warrants Irish *go* to likewise be analyzed as a complementizer.

  McCloskey goes on to discuss that the element *go* and the relative markers seem to form a cohesive class within the broader set of complementizers. This can be seen in noting that both *go* and the relative markers in Table B take the same form when negation is present.

(2)

       {go*N* dtuigeann}
  Deir sé **{nach*N* dtuigeann}** sé an scéal
  says   he **{gur*L* thuig}**   he the story
       {nár*L* thuig}

       {understand}
  "He says that he {doesn't understand} the story."
       {understood}
       {didn't understand}   McCloskey (1979: 12)

(3)

      {a*L* thuigeann}
  an fear   **{nach*N* dtuigeann}** an   scéal
  the man **{a*L* thuig}**   the story
      {nár*L* thuig}

       {understand}
  "The man that   {doesn't understand} the story."
       {understood}
       {didn't understand}   McCloskey (1979:12)

(4)

      {a*N* n-insíonn}
  an fear   **{nach*N* n-insíonn}** tú an scéal dó"
      {ar*L* inis}
      {nár*L* inis}

       {tell}
  "The man that you {do not tell} the story to."
       {told}
       {did not tell}   McCloskey (1979: 12)

In comparing the bolded elements in (2), (3), and (4), we can see that all three series are identical in the

negative in both the past and present tenses. Assuming that the element *go* is a complementizer, McCloskey takes this data as evidence that the relative markers are also complementizers.

Additionally, McCloskey notes that all three elements seem to occur in the same position. This can be seen in that all three can follow the conjunction *mar*, as in (5).

(5)   a. D'inis sé an   scéal **mar a*L***   chuala sé é
          told   he the story *mar* REL   heard he it
          "He told the story as he heard it."

        b. ar an trá   **mar a*N***   mbíonn   sí   ag súgradh
          on the beach *mar* REL is (habitual) she at playing
          "on the beach where she plays."

(5)   c. **mar   (go*N*)** mbíonn   sé fliuch.
          mar   go   is (habitual) it wet
          "because it is wet."   McCloskey (1979: 15)

Setting the subtle differences in interpretation aside, McCloskey takes the data in (5) to be evidence that the element *go* and the relative markers are in complementary distribution, and therefore concludes that, since *go* is a complementizer, the relative markers must be complementizers as well.

Finally, McCloskey notes that the element *go* and the relativizers alternate in certain circumstances. In environments where we would expect to see the complementizer *go*, instead we see the relativizer. Particularly, if an element is extracted from an embedded clause introduced by *go*, the relativizer must be used instead of complementizer *go*.

In order to see this effect, consider a standard embedded clause.

(6) Deir   sé [**go** gcloiseann sé an nuacht].
    says   he *go* hears   he the news
     "He says that the hears the news."

As can be seen in (6), the embedded clause, shown in brackets, is introduced by the complementizer *go*, which is bolded. Consider what happens when a phrase is extracted from the embedded clause, as in (7).

(7) An nuacht [***a***   deir sé [***a*** chloiseann sé.]]
    the news   REL says he REL hears   he
    "The news that he says he hears."

In (7), we have extracted the direct object *an nuacht* "the news" from the embedded clause and formed a relative clause. Additionally, we can see that the embedded clause which was introduced by *go* in (6) is now introduced by a relativizer *a*. Of additional note is that *go* is impossible in (7).

(8) An   nuacht **(*go)/*(a)** deir sé **(*go)/*(a)** chloiseann sé.
    the news   *go*/REL says he *go*/REL hears   he
    "The music that he says he hears."

McCloskey takes this alternation to be evidence that both the relativizer and the element *go* are of the same category C. Additionally, the unavailability of *go* in (8) indicates that these two elements are in

complementary distribution, which supports the claim that these two elements are the same category C.

Evidence that these elements are heads comes from their appearance with what appears to be a past tense marker *-r*. This element is traditionally analyzed as INFL, or T°, stemming primarily from Chung and McCloskey (1987), who build upon a suggestion made earlier by Rotenberg (1978). This element *-r* is analyzed as adjoining via movement to the complementizer, yielding the morphologically complex forms seen in Tables A and B. As only heads can move to head positions (Travis 1984), this is taken to be evidence that the complementizer is also a head.

1.3 Evidence Against Analyzing Irish Complementizers as C

However, this account is problematic on two counts. First, it is hard to claim that the data in (5) represent elements in complementary distribution, as each sequence of the conjunction *mar* with the respective complementizer leads to different interpretations. In (5a), this sequence is interpreted as "as," while in (5b) it is interpreted as "where," and finally in (5c) it is interpreted as "because." These differences in interpretation may indicate that these elements are not in fact in complementary distribution, and therefore cannot be taken to occupy the same position.

Second, while the two elements do appear to occur somewhere in the left periphery, there is evidence that they do not occur in the same position. First, as noted in McCloskey (1996b), there appears to be some kind of discourse configurational position to the left of *go,* identified by Roberts (2005) as TopP. However, no such data is attested with the relative marker.

(9) Deiridís　　　　**[*an chead Nollaig　　eile*　[go**　　dtiocfadh　　　sé aníos]].
　　　say.IMPERF.3PL　　the first　Christmas　next　*go*　　come.COND　he up
　　　"They used to say that *next Christmas* he would come up."　　McCloskey (1996:59)

(10)　an　fear [*(*amárach*)　[**a**　　thiocfaidh　aníos (amárach)]].
　　　the　man　tomorrow　　REL　will.come　up　　tomorrow
　　　　"The man that *tomorrow* will come up."

As can be seen in (9), there is some kind of discourse configurational position, identified as TopP to the left of the element *go*. This is seen in the non-neutral reading of the adverb *an chead Nollaig eile* "next Christmas." However, no such position is available to the left of the relative marker *a*, as in (10). This asymmetry indicates that the two elements do not occupy the same position.

Third, questions remain about the alternation between the complementizer *go* and the relativizer *a* seen above in (6) and (7). While this alternation can be accounted for theoretically via A'-binding sensitivity (McCloskey 2002) or Agree mechanisms (Adger and Ramchand 2005), as shall be discussed in Section 2.2 below, this alternation is not explained on a deeper level. Specifically, the question is never asked as to why Irish complementizers would show morphological distinctions between clauses which have had elements extracted from them, yet other languages, such as English, would not. Ultimately under the view that these elements are complementizers, the answer must be the result of a lexical accident; Irish simply has the lexical and morphological resources that English complementizers do not. While this position is not unreasonable, it seems to me that it should be a kind of last resort, in that all other possible explanations must be exhausted before one can propose lexical accidence as a cause for cross-linguistic differences. Below we shall examine an alternative theory which not only explains this alternation, but actually predicts it. Thus, we do not need to resort to claiming that this overt change in morphology in Irish results from a lexical accident.

1.4 The Irish Morpheme -*R*

Some of the strongest evidence that these elements are heads and not phrases unravels under closer examination. This evidence is the so-called "past tense agreement" morpheme -*r* which is suffixed to complementizers in the presence of a past tense verb. This is considered evidence that Irish complementizers are heads because this morpheme -*r* is identified as INFL, or T° (Chung and McCloskey 1987). In this system, the complementizer and T° adjoin syntactically. If the morpheme -*r* is a head, specifically T°, and assuming that only heads can move to head positions, then it follows that the complementizer must also be a head.

As shown above in Table A and Table B, this suffix -*r* occurs with all elements which have been labelled as complementizers, with the exception of the direct relativizer. Descriptively, this morpheme -*r* is suffixed to a complementizer which takes scope over a past-tense verb. This -*r* suffix is mandatory in all forms in which it appears. The complementizer and the suffix -*r* form a cohesive unit, and no elements are permitted to intervene between the two. (11) shows the declarative complementizer *go*, (12) the negative marker *ní*, commonly taken to be a complementizer (McCloskey 1996, Carnie 1997), (13) the embedded negative marker, and (14) the interrogative marker.

(11) Dúirt sé **gu-*(r) phóg**   Máire an leipreachán.
     said he *go-r*   kissed   Mary the leprechaun.
     "He said that Mary kissed the leprechaun."

(12) **Ní-*(or) bhuail** an   carr mé.
     NEG-*r*   hit   the carr me
     "The car did not hit me."

(13) Dúirt sé **ná-*(r)   phós**   an tsióg an leipreachán.
     said he EMB.NEG-*r*   married the fairy the leprechaun
     "He said that the fairy did not mary the leprechaun."

(14) **A-*(r) ith** tú   do   chuid   glasraí?
     Q-*r*   ate you your   portion vegetables
     "Did you eat your vegetables?"

As is evident from the above examples, the suffix -*r* mandatorily appears on the complementizer in the presence of a past tense finite verb.

Dating back at least to Chung and McCloskey (1987), these data have been taken to be evidence that the suffix -*r* is in fact the head INFL, or T° with a [+PAST] feature. Building on this analysis, McCloskey (1996b) proposed that the strict order C-T-V seen in (11) through (14) is derived via head movement of the finite verb to T°, coupled by lowering of the complementizer to T°. While this lowering process is described as taking place in the phonology, it is understood via syntactic means, as shown below in (16).

This simultaneous raising of V to T and lowering of C to T is shown in (16), which primarily demonstrates the bolded section of (15).

(15) Deir   sé **gu-r chuir** sé   síos   é.
    says he *go-r* put   he down   it
    "He says that he put it down."   McCloskey (1996: 54)

(16)
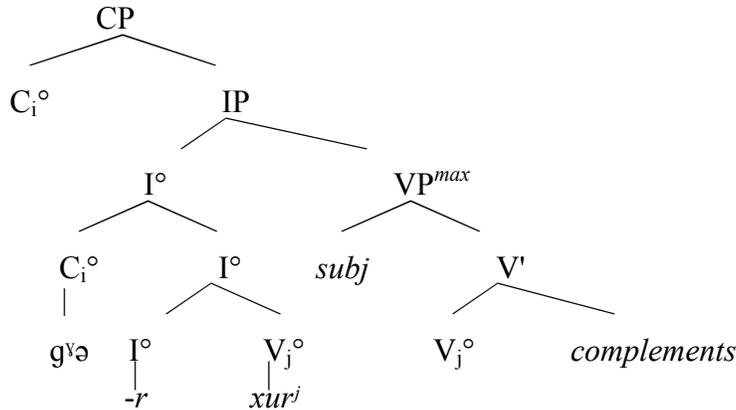
McCloskey, (1996:55)

   This analysis is unappealing for two reasons. The first is theory internal. To start, the lowering analysis, no matter how seemingly justified or necessary, is illegitimate under modern theoretical assumptions (Chomsky 2000, 2001), and should therefore be abandoned, or at the very least, a theory without lowering must be pursued before one with it. Furthermore, the rightward adjunction of the finite verb *chuir* "put" to I° in (16) is not only at odds with Antisymmetry, assumed here to be correct, but is unattested anywhere else in the language. There is a strong case for V-T movement in Irish that I shall not challenge (Chung &McCloskey 1987). However, in all instances in which T° appears on V°, it occurs as a suffix and never as a prefix. This morpheme order indicates that the verb left-adjoins to T°, in opposition to (16). Consider the data in Table C, which conjugates the verb *mol* "praise" in the West Munster dialect (Legate 1999). This dialect is discussed here because it shows the most person distinctions of all the dialects. However, tense, mood and aspect are suffixed to the verb in all dialects. If a pronoun is necessary, it is shown below in Table C in parentheses.

Table C: Irish Verb Conjugation Paradigm for Tense, Mood, and Aspect

	Present	Past	Future	Conditional	Imperfect
1st Sing	mol-**aim**	mhol-**as**	mol-**fad**	mhol-**fainn**	mhol-**ainn**
2nd Sing	mol-**air**	mhol-**ais**	mol-**fair**	mhol-**fá**	mhol-**tá**
3rd Sing	mol-**ann** (sé/sí)	mhol-**Ø**(sé/sí)	mol-**faidh** (sé/sí)	mhol-**fadh** (sé/sí)	mhol-**adh** (sé/sí)
1st Plural	mol-**imíd**	mhol-**amar**	mol-**faimíd**	mhol-**faimís**	mhol-**aimís**
2nd Plural	mol-**ann** (sibh)	mhol-**abhair**	mol-**faidh** (sibh)	mhol-**fadh** (sibh)	mhol-**adh** (sibh)
3rd Plural	mol-**aid**	mhol-**adar**	mol-**aid**	mhol-**faidís**	mhol-**aidís**

As is clear from Table C, in all instances in which the Irish verb adjoins to T°, T° occurs as a suffix. This indicates that V° left-adjoins to T°, contra (16). Furthermore, the suffix *-r* easily occurs with a verb conjugated for past tense, as in Table C.

(17) Dúirt sé   gu-**r** mhol-**amar**   an rí.
     said   he   *go-r* praise-1stPl.PAST   the king
     "He said that we praised the king."

Assuming that left-adjunction of V° to T° is what causes the tense ending to occur as a suffix on the verb, it is then impossible that the morpheme *-r* could represent T°.

Finally, there is evidence that suggests that the suffix *-r* does not represent [+PAST] T°, but rather that *-r* is an aspectual morpheme which suffixes to the complementizer. However, in the data seen above, this *-r* morpheme could be analyzed as some kind of agreement marker indicating tense agreement between T° and C°, as hinted at in Rizzi (1997). However, I shall show that this kind of analysis should be discarded. I shall show that this *-r* morpheme is best analyzed as an aspectual morpheme.

First, if this *-r* suffix represented past tense agreement between the finite verb and the complementizer, we would expect it to not be sensitive to the aspect of the verb as long as the verb has a [+PAST] feature. However, this is not the case in Irish. Irish verbs in the past tense conjugate for two aspects: a perfective which refers to a single event and overlaps with the simple past as the unmarked aspectual form, and an imperfective which refers to multiple events. The two are consistently distinguished morphologically, as shown below in Table D, which demonstrates the conjugation paradigm for the verb *mol* "praise." I provide the West Munster dialectal past data, shown above in Table C, for the perfective data below, in order to show the full morphological distinction. While dialects vary in how many person agreement forms are available in the past tense, all dialects conjugate the imperfective roughly as in Table D. As in Table C, pronouns are provided in parentheses where they are necessary.

Table D: Comparison of Irish Perfective and Imperfective Conjugations

	Perfective	Imperfective
1st Singular	Mhol-**as** /əs/	Mhol-**ainn** /ɪnʲ/
2nd Singular	Mhol-**ais** /əʃ/	Mhol-**tá** /tˠɑ:/
3rd Singular	Mhol-**Ø** (sé/sí)	Mhol-**adh** (sé/sí) /əɣ/
1st Plural	Mhol-**amair** /əmˠəɾʲ/	Mhol-**aimis** /əmˠiʃ/
2nd Plural	Mhol-**abhair** /əwəɾˠ/	Mhol-**adh** (sibh) /əɣ/
3rd Plural	Mhol-**adar** /ədˠəɾˠ/	Mhol-**aidís** /ɪdʲiʃ/

As is readily apparent from comparing the two paradigms in Table D, the perfective and the imperfective do not overlap morphologically. Additionally, both paradigms in Table D must be interpreted as past tense. (18) demonstrates this in the perfective, while (19) shows the imperfective.

(18) Lean-**adar**   é.
    follow-3PL.PAST him
    "They followed him (once)."

(19) Lean-**aidís**   é.
    follow-3PL.IMPERF   him
    "They used to follow him."

However, the perfective must co-occur with the *-r* suffix in embedded contexts, as in (20), while the imperfective is incompatible with *-r*, as in (21).

(20) Cheap   sí gu-*(**r**) **lean-adar**   é.
    thought she *go-r*   follow-3PL.PAST   him
    "She thought that they followed him (once)."

(21) Cheap   sí go-(***r**) **lean-aidís**   é.
    thought she *go-r*   follow-3PL.IMPERF him
    "She thought that they used to follow him."

This cannot be easily accounted for if *-r* is a past tense agreement marker. This is because the past tense reading in both utterances results from T° having a [+PAST] feature. If *-r* were truly a case of tense agreement between the complementizer and the T°, then we would expect *-r* to appear whenever an utterance has a T° with a [+PAST] feature, regardless of aspect. This is not the case, and it seems that *-r* is primarily sensitive to aspect, and not to tense.

Of additional importance to this discussion is the class of six "irregular" verbs which in the past tense can never appear with the *-r* suffix. Traditionally in the literature these verb forms are called "dependent" forms, the modern reflex of Old Irish's "absolute vs. conjunct" inflection pattern (Carnie, Pyatt & Harley 1994). These forms only occur after what is traditionally called a complementizer, such as declarative embedded marker *go,* negation *ní,* the negative complementizer *nach* and the interrogative marker *an*. All of these verbs can only be interpreted as past tense*,* and yet none of them may appear with the marker *-r*:

(22)   a. Cheap   mé go-**(*r) ndúirt** sé leis an muniteóir é.
              thought   I   *go-r*   said   he to the teacher   it
              "I thought that he said it to the teacher."

         b. Cheap   mé go-**(*r) ndearna** sé   a obair 'bhaile.
              thought I   *go-r*   did   he his homework
               "I thought that he did his homework."

         c. Dúirt sí   go-**(*r) ndeachaigh** Maim chuig an siopa leabhar.
              said   she *go-r*   went   Mom to   the bookstore
               "She said that Mom went to the bookstore."

         d. Rinne sé   mórtas go-**(*r) bhfaigh** sé carr nua.
              made he boast   *go-r*   got   he car new
              "He boasted that he got a new car."

         e. Dúirt sé liom   go-**(*r) bhfaca** sé mo Sheamaisín.
              said he to.me *go-r*   saw   he my little Seamus
               "He said that he saw my little Seamus."

         f. Dúirt Giles go-**(*r) raibh** Buffy ag an   reilig.
              said Giles *go-r*   was   Buffy at the graveyard
              "Giles said that Buffy was at the graveyard."

Like the imperfective verb in (19) and (21), all of the verbs in (22) must be interpreted as past tense, yet none of them are permitted to occur with the *-r* complementizer suffix. This is quite surprising if we employ a complementizer/past tense agreement analysis of *-r*, as we would not expect complementizer agreement to be sensitive to the lexical entry of the finite verb. However, the data in (22) is much easier to account for if *-r* is a part of the verbal morphology. If *-r* is analyzed as being a part of the verbal morphology, then one can easily imagine a system in which certain lexical verbs are simply incompatible with certain morphology, much as the English verb "put" is incompatible with the past tense suffix "-ed." Thus, the data in (22), combined with the perfective/imperfective data in (20) and (21), allow us to make a case that *-r* is neither complementizer past tense agreement nor T°, but rather an aspectual verbal prefix with misleading orthography.
        In some ways, this is not surprising. Historically, the suffix *-r* originates from an Old Irish perfective preverb *ro* (Yocum 2011).

(23) Ro   marb   in fer.
    PERF kill.3SG the man
    "He has killed the man."   Campbell (1991: 643)

Preverbs, which have largely been lost in the modern language, are pieces of verbal morphology which alter the interpretation of the predicate, such as by adding a perfective meaning (Carnie, Harley, and Pyatt 2000). Thus, I propose that the modern orthography of Irish is misleading, and the element -*r* is not a manifestation of complementizer agreement with tense, but rather continues to be a perfective verbal prefix in the modern language. Presumably, this affix Merges somewhere within the Aspect field of Cinque's (1999) sentential hierarchy, and raises with the verb as the verb moves.

       This is important to our discussion of Irish complementizers. Recall McCloskey's (1996b) analysis of this construction, reproduced below in (24).

(24) Creidim gu-   **-r**   **fhill**   sé ar an bhaile.
    I-believe COMP PAST   return he on home
    "I believe that he returned home."   McCloskey (1996: 50)

The analysis in (24) rests on the complementizer suffix -*r* being the sole phonological representation of T°, and additionally requires that the complementizer be a simple head, as it must adjoin to T°, as in (16). However, as shown above, there is evidence to support the claim that Irish verbs always left-adjoin to T°, resulting in T° occurring as a suffix. Thus, I propose that the bolded section of (24) should be analyzed as in (25).

(25) **-r**   -fhill   -**Ø**
    PERF   return PAST

       Of note is that if one assumes that this complex is formed via head movement, and assuming that aspect heads Merge between vP and TP in the sentential hierarchy (Cinque 1999), the analysis in (25) seems to violate Antisymmetry's restriction to left-ward adjunction. However, I point out that this order of ASP-V-T is identical to the Hungarian morpheme order analyzed by Koopman and Szabolcsi (2000).

(26) **meg**   olvas- **-t-**   am
    ASP   read   PAST AGR
    "I have read it."

The strong parallelism between the Hungarian data in (26) and the Irish data in (25) means that the kind of analysis proposed in (25) is fully supported in the literature, and thus theoretically viable despite the apparent violation of Antisymmetry. While I shall not derive the Irish verbal complex in (25) as it is beyond the scope of this paper, the similarity between the Irish and the Hungarian suggests that the Irish data should be accounted for as in Koopman and Szabolcsi (2000). Of note is that all of the Hungarian examples derived there have a surface order of VSO, as does Irish. However, I leave the task to transposing Koopman and Szabolcsi's analysis of Hungarian and Dutch to Irish to future research.

       Assuming the analysis in (25) is on the right track, this means the data which have been used as evidence that Irish complementizers are heads does not provide any evidence as to the categorical status of the complementizer. Thus, if there is no evidence that Irish complementizers such as the declarative complementizer *go* are heads, then what is the best analysis for these elements?

1.5 Analyzing Irish Complementizers with a Relative Clause Structure

I shall now pursue an analysis based on an emerging literature which analyzes complementizers as representing relative clause structures. I shall apply the insights of this analysis to Irish, and propose that Irish complementizers, particularly the declarative marker *go*, are best analyzed as representing relative clause structures.

This recent work on complementizers has pointed to an interesting conclusion: elements which appear to be complementizers in many languages in the classic sense, as defined in the introduction of this paper, can in fact be reasonably and fruitfully analyzed as representing larger relative clause structures. In this framework, what has been called "CP" in much of the generative syntactic literature is reanalyzed as a complex DP. Notably, this analysis has been put forward in recent years by Koopman (2003, 2005) and Kayne (2010), although this line of thinking has roots in Rosenbaum (1967). This research is part of a broader group of analyses which reanalyzes elements which have been thought of in the past as simple heads as more complex phrasal structures (see Leu 2008 for a summary of this literature). From here on, I shall refer to this research program as it applies to analyzing CP as a relative clause structure as the Complementizers as Relative Clause Analysis, or CARCA.

Analyses which claim CARCA to be true (notably Kayne 2010) rely on the inherent similarity between sentential "complementizers," relative pronouns, and other elements in certain languages: demonstratives in the case of English and other Germanic languages, and wh-elements for Romance. (27) shows the relevant English examples, while (28) shows Spanish.

(27) a. **that** book   *demonstrative*
      b. I think **that** the man is here.   *sentential 'complementizer'*
      c. the book **that** I read.   *relative pronoun*

(28) a. **Que**   has   hecho?   *wh-element*
         what   you.have   done
          "What have you done?"

      b. Creo   **que** el   hombre está aquí. *sentential 'complementizer'*
         think.I   what   the   man   is   here
          "I think that the man is here."

      c. El   libro **que** he   leído.   *relative pronoun*
         the book   what have.I read
          "The book that I have read."

(27) and (28) show that, at least superficially, the same element is used as the sentential complementizer and the relative pronoun. CARCA proposes that these three seemingly disparate constructions in fact contain the same element, specifically a determiner of some sort. Notably, what appears as an instance of sentential complementation in (27b) and (28b) employs the syntax of a relative clause headed by a silent element FACT (Kayne 2010). A structure of the bracketed section in (29) looks roughly like (30):

(29) I think [FACT **that**] the man is here.

(30) $_{DP}[_{SPEC,DP}$ FACT$_i$ $[_{DP}$ that $[t_i]_j$ …..t$_j$ …...

While the exact Merge position of this silent nominal has yet to be determined, the structure in (30) is quite interesting. As stated explicitly by Kayne (2010), "[t]he *that* that introduces sentential complements is really a relative pronoun, and sentential complements are really relative clauses" (Kayne 2010: 226). Thus, Kayne, and CARCA more generally, proposes that there are no complementizers in the classic sense of the term.

I shall show that CARCA can be applied to Irish's seemingly elaborate complementizer system, and that elements which appear to be complementizers in Irish are actually determiners and prepositions. I shall ultimately propose a relative clause structure which can account for a wide range of data. The structure that I propose is shown in (31).

(31)
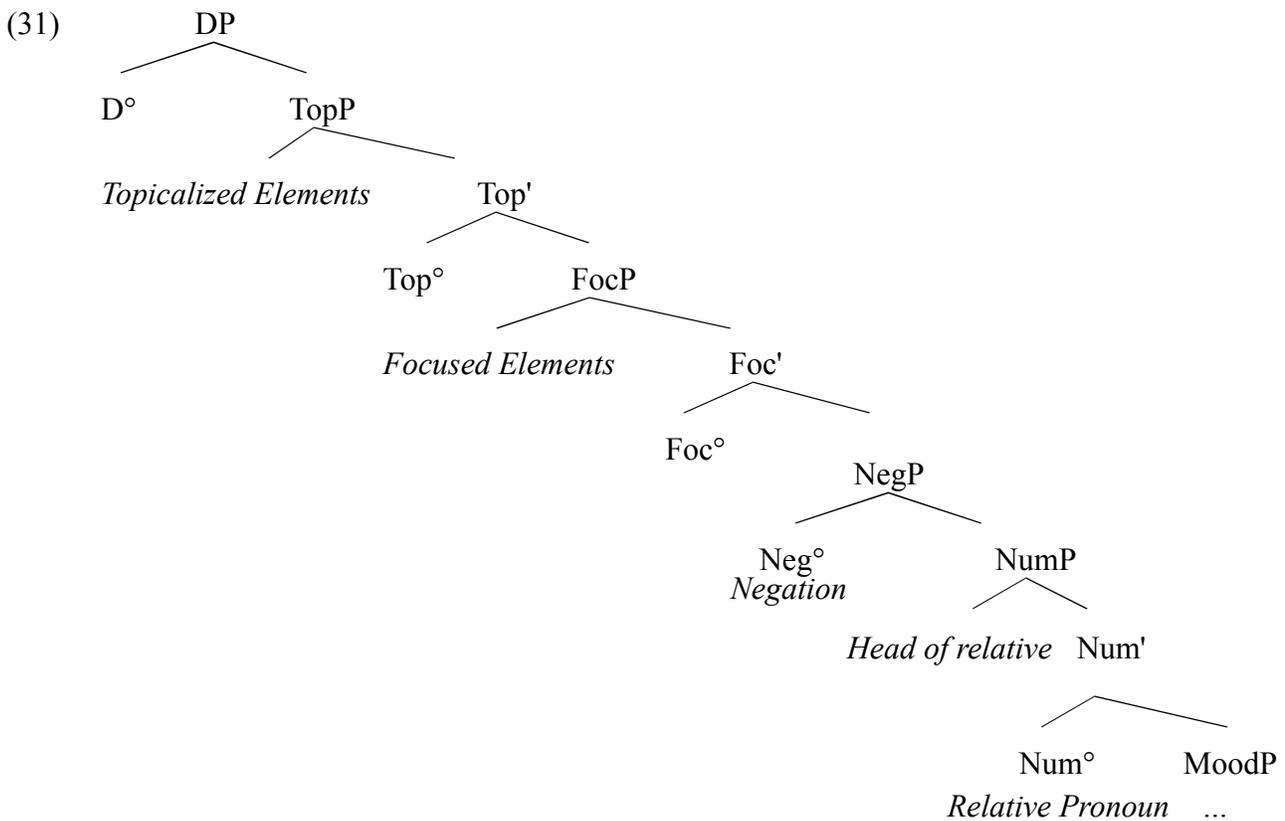
Throughout this paper, I shall assume Antisymmetry is correct (Kayne 1994). In line with this, I shall assume a raising analysis of relatives. In addition, I shall not pursue a theory which allows multiple specifiers.

Throughout this paper I shall use the word "complementizer" liberally, primarily due to its pervasive presence in the broader syntax literature. I mean for this term to be interpreted loosely, and use it to refer to the class of elements which have historically been called complementizers in the Irish literature.

2. Irish Declarative Complementation

2.1 The Irish Element *Go*

The orthographic sequence *go* and the phonetic form /gə/ is quite frequent in Irish, and this sequence of sounds has quite a few functions in the language. Ó Dónaill and Bhaldraithe (2005) list nine entries under this orthographic sequence. I shall take what I believe to be the most interesting and fruitful position that all nine of these dictionary entries can be successfully reduced to a single morpheme: a preposition with a meaning corresponding to "until" or "towards." Once this has been shown, it shall follow naturally that when *go* appears to be a complementizer, there is a silent relative clause structure.

Historically, this element derives from an Old Irish preposition *co* "with."

(32) **co**   claidbib
      with swords.DAT
      "with swords"   Campbell (1991:44)

While the meaning of this element has changed slightly in the modern language, it is still a preposition. The uses of *go* which are clearly prepositional have a meaning corresponding roughly to English "to," "towards," or "until."

(33)   a. Tá mé ag dul **go** hÉirinn.
            is I   going to Ireland
            "I am going to Ireland."

        b. Fáilte   **go** Meiriceá!
            welcome to America
             "Welcome to America!"

        c. Thit mé **go** talamh.
            fell I   to ground
            "I fell to the ground."

        d. Fánfaidh mé anseo **go**   bánú   an lae.
            will.wait I   here   until dawning the day.GEN
             "I will wait here until dawn of day."

        e. Bhí mé i mo shuí **go**   maidin.
            was I   in my sitting until   morning
            "I was sitting until morning."

The preposition *go* can also take a sentential complement, and retains a meaning similar to "until."

(34)   a. Fánfaidh mé **go**   dtiocfaidh tú.
            will.wait I   until will.come you
             "I will wait until you come."

(34)   b. Bhí mé ansin **gu-r   chríochnaigh sé.**
            was I   there until-ASP finished   he
             "I was there until he finished."

As is evidenced by the semantics, this distribution of *go* in (34) is equivalent to the preposition meaning "until." To capture this fact, I propose that there is a silent relative clause structure headed by a silent TIME, in order to yield the correct semantics. The relative clause structure which I propose for (34a) is shown in (35).

(35) Fánfaidh mé **go   TIME A**   dtiocfaidh tú.
       will.wait I   until TIME REL will.come you
         "I will wait until the time when you come."

The relative pronoun *a* in (35), is pronounced /ə/. Note that in (35), and in all natural Irish sentences, the relative pronoun *a* /ə/ is not written nor distinctively pronounced in contexts such as (35). The most natural way to account for this is to propose that the relative pronoun is silent at PF for one of many possible reasons. We shall return to these questions below, but for now what is important is that the apparent absence of the relative pronoun need not be problematic.

    Additionally, this prepositional use of *go* can also combine with nouns and adjectives to produce an adverbial reading. Presumably in the cases where *go* takes an adjective as a complement, there is some kind of silent noun which the adjective modifies, as in (36d).

(36)   a. Tá mé **go** maith.
            is I   to goodness
             "I am well."

        b. Ritheann an   síota   **go** tapa.
           runs   the cheetah to speed
             "The cheetah runs quickly."

        c. Tá an aimsir **go** holc inniu.
           is   the weather to evil today
             "The weather is awful today."

        d. Siúlann na   seilidí **go MANNER mall**
           walks   the snails to MANNER slow
             "Snails walk slowly."

Again, it is not controversial to assume that this element is a preposition, probably deriving from an older use of *go* with a meaning corresponding to English "with" (see 32 above).

    Of particular interest to us here is that one of the best translations for English "in fact" in Irish uses this preposition *go*, as demonstrated below in (37).

(37)   a. Beidh   oíche álainn   againn, **go deimhin**.
            will.be night beautiful at.us   to fact
             "We will have a beautiful night, truly/surely."

(37)   b. **Go deimhin** ní   rachaidh mé.
            to fact   NEG will.go   I
             "(It is the case that) I will not got go."

The fact that the Irish expression for "in fact" involves the element *go* is important. This is because Kayne (2010), building on Kiparsky and Kiparsky (1970), analyzes English factives as relative clauses of a silent FACT.

(38) We're sorry [FACT that] you're here.

Irish factives also require the element *go*, and presumably also involve a structure with a silent FACT, and a silent relative pronoun as in (35) above. (39) demonstrates an Irish factive, while (40) demonstrates how the analysis in (38) for English can be applied to it.

(39) Tá brón   orainn **go** bhfuil tú   anseo.
     is sorrow   on.us *go* is   you here
     "We are sorry that you are here."

(40) Tá brón   orainn **go DEIMHIN a**   bhfuil tú   anseo.
     is sorrow   on.us to fact   REL is   you   here
     "We are sorry that you are here."

     Note that in Kayne's (2010) original analysis, the relative clause is only formed out of a silent DP FACT, and not a silent prepositional phrase IN FACT, as shown above in (38). However, Kayne also provides an analysis in which the phrase "the way that," as in (41), actually consists of a structure such as (42) below, in which there is a silent preposition IN.

(41) the way that they solved it.

(42) IN the way that they solved it.   Kayne (2010: 213)

     Kayne also notes that the preposition can be overt if the relativizer *which* is used instead of *that*.

(43) the way **in which** they solved it

     Having noted that the preposition *in* can be silent in certain environments, Kayne draws a parallel between cases such as "IN the way" in (42) and the occurrence of the overt preposition *in* in the phrase *in fact,* as in (44):

(44) **In** fact you're here.

     Kayne goes on to claim that phrases such as (45) are derived via the relativization of the prepositional phrase *in fact* in (44).

(45) The fact that you're here.

     Thus, there must be a silent preposition in (45), similar to the silent preposition IN proposed in

(42), as in (46).

(46) IN the fact that you're here.

   Thus, it seems that in English at least, overt prepositions alternate with silent ones in a fairly predictable way; if the relativizer *that* is used, the preposition is silent, while if the relativizer *which* is used, the preposition may be overt.
   While Kayne does not draw an explicit connection between the relativization of *fact* in (46) and the proposed relative clause structure involving a silent FACT in (38), it is not unreasonable to transpose the analysis in (46) on (38), yielding (47).

(47) We're sorry IN FACT that you're here.

   Comparing the proposed structure in (38), (reproduced in 48) with the structure I proposed for Irish above in (40), (reproduced in 49) we can see that they are almost identical, with the only difference being which elements are overt and which are covert.

(48) We're sorry   **IN FACT   that**   you're here.
(49) Tá brón   orainn **go DEIMHIN A**   bhfuil tú   anseo.
    Is sorrow on.us   to   fact   REL   is   you   here
    "We're sorry that you are here."

Thus, I propose that the only difference between the English in (48) and the Irish in (49) is which preposition is used, and which elements are overt and which are silent. In English, only the relative pronoun "that" is overt, while the prepositional phrase *in fact* is silent, while in Irish the preposition *go* is overt, the relative pronoun *a* is phonologically silent, while the noun *deimhin* "fact" is silent.
   Finally, the element *go* which marks factives as in (49) is also used in non-factives.

(50)   a. Deir sé [**go**   bhfuil sé anseo gach   lá.]
          says he *go*   is   he here   every day
           "He says that he is here every day."

        b. Ceapaim [**go**   dtagann fear an phoist ag a dó a chlog].
          think.I   *go*   comes   post-man   at two o'clock
          "I think that the post man comes at two o'clock."

In comparing the factive in (49) with the non-factives in (50), we can see that they both appear to be quite similar, both structurally and in interpretation. Thus, in the spirit of Kayne (2010), I propose that the factive examples in (49) and non-factive examples in (50) employ the same relative clause structure as in (51). We shall examine the syntax of this construction in much more detail below, but for now, the brief structure provided by Kayne (2010) suffices. A simple derivation of the bolded section of (49) is provided below in (51):

(51) DP i[SPEC, DP go DEIMHIN$_j$ [$_D$ A   t$_j$]].....t $_i$ …...
             to fact   *REL*

While I do not have a theory as to why the noun *fact* is silent, I find it quite suggestive that it is silent in both languages. I believe that the fact that these two languages exhibit such striking parallelism may point to a deep property of UG. My instinct is that the obligatory silence of *fact* in both languages is directly related to the impossibility of what I will call here "intermediate relativization." That is to say, in multi-clausal utterances, a relativized element must raise to the left periphery of the highest clause, and cannot remain in the left peripheries of one of the lower clauses. This effect can be seen in (53), which shows a relativization of the phrase *the song* in (52).

(52) I think that John said that Bill wrote Mary the song.
(53) **the song that** I think (***the song**) that John said (***the song)** that Bill wrote Mary <the song>.

As can be seen in (53), when an element is relativized out of the lowest clause, the relativized element cannot be overtly pronounced in any of the intermediate left peripheries. While I assume that the phrase which is relativized out of the lowest embedded clause raises cyclically though all of the intermediate positions, which are noted in (53) as the ungrammatical positions, the relativized phrases cannot be pronounced in these lower, intermediate positions..

Thus, there seems to be a general restriction on pronouncing heads of relatives in any intermediate position. This could explain why the proposed structures in (48) and (49) require the element *fact* to be silent. If the head of the relative (*in*) *fact* were pronounced, it would violate this general restriction forbidding the pronunciation of a raised element in an intermediate position. A secondary question is why the relativized element must stop in the proposed structures in an intermediate left periphery in (48) and (49) and not raise to the left periphery of the matrix clause as in (53). While we do not yet have a developed enough framework to begin to answer this question, a possible analysis will be proposed below in Section 4.

There is another question as to why the preposition *go* "to," in Irish embedded relatives must be overt while the corresponding English preposition *in* may not be overt. This may be a reflex of a more general parameter about whether a given language ever allows prepositions to be silent. In English, one can readily find examples in which prepositions seem to arbitrarily be overt or silent. However, no such alternations are present in Irish.

(54) We went (up) to the top of the mountain.
(55) Chuamar *(suas) go mullach an tsliabh.
     went.1PL   up   to summit the mountain.GEN
     "We went up to the top of the mountain."

Assuming that *suas* "up" is a preposition, we can see in (55) that Irish does not allow prepositions to be phonologically silent in the way that English does. Thus, the overtness or silence of the preposition does not need to be related to the embedded relative construction, but to a broader generalization which requires prepositions in Irish to be pronounced at PF[3].

To sum up what we have seen in this section, we examined the most salient meanings of *go* /gə/ in Irish, and determined that they could all be syntactically reduced to a single element: a preposition with a meaning corresponding to English "to" or "until." With this in mind, we saw that Irish "complementizers" could then be plausibly analyzed as relative clause structures. Finally, we conjectured as to why there seems to be cross-linguistic variation as to which elements in the embedded relative clause structure are silent. Thus, in conclusion, CARCA can be reasonably applied to Irish.

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3   Of note is that in my English, I can get an overt preposition *in* in the relevant constructions, as in "There is significance **in** that you came, even though you didn't want to."

With all of this in mind, let us examine a puzzle in Irish syntax that can be neatly analyzed and easily accounted for if Irish complementizers are in fact relative clause structures, specifically alternations between *go* and the relative marker.

2.2 Irish Relative Clauses

Irish relative clauses have been discussed at length in the literature, with two competing analyses put forward by Adger and Ramchand (2005) for Scottish Gaelic as well as Irish, and McCloskey (2002) for Irish. Before we examine these two analyses, let us examine regular Irish relative clauses.

In the orthography, relative clauses are marked by *a*, /ə/.

(56)   a. An leabhar **a**   tá ar an bhord.
        the book   REL is on the table
         "The book that is on the table."

      b. An fear **a**   labhair leis an gcailín.
         The man REL spoke with the girl
         "The man who spoke with the girl."

Presumably this *a* is a determiner much like English "that." This can been observed by comparing the relative pronoun (57a) *a* /ə/ with the definite article *an* in (57b), which is also pronounced /ə/ in the colloquial, modern spoken language.

(57)   a. … fear **a**   tá anseo.
        … man **REL** is here
         farʸ   ə   tɑ ɑnʃɔ
         "The man who is here."

      b. Tá **an**   fear anseo.
        is **the**   man here
        tɑ ə   farʸ ɑnʃɔ
        "The man is here."

Since the relative pronoun in (57a) and the definite article in (57b) are phonologically identical, it is not unreasonable to assume that the relative pronoun and the definite article are the same element. Assuming a raising analysis of relative clauses, the bolded section of (57a) would have a structure roughly as in (58).

(58) DP $_i$[SPEC, DP fear$_j$ [D a   t$_j$]]…..t $_i$ tá…...
              man   ART   is

The structure in (58) is the sort of derivation which is common for relatives, such as in Kayne (2010). A much more detailed analysis shall be pursued in the following section.

Additionally, recall that I propose that Irish "complementizers" represent relative clause structures headed by a prepositional phrase *go DEIMHIN* "in fact." As Harves (p.c.) notes, relative clauses headed by PP's seem strange at first glance. However, examples can easily be found in English

(59), and more importantly, Irish (60):

(59) There were a lot of cops **in the park where** John reads.

(60) Tá an Mhálta suite **san   áit   a**   bhfuil sí.
     is the Malta located in.the place REL is   it
       "Malta is located in the place where it is (located in)."

Thus, relative clauses of prepositional phrases are attested in languages.
   Now let us turn our attention to one peculiar fact about Irish embedded phrases which we discussed briefly above. This is that the element *go* and the relative pronoun *a* seem to alternate in that *a* appears in environments in which one would expect *go*. This alternation is sensitive to whether or not a constituent has raised out of the embedded clause, and has been used by McCloskey (2002) as evidence for successive cyclicity of movement (Chomsky 2000, 2001).
   In order to see this effect, first consider (61).

(61) Sílim   **go**   bhfuil an fear anseo.
     think.I *go*   is   the man here
       "I think that the man is here."

(61) shows the kind of utterance which has become familiar in this paper. The embedded clause is marked by the element *go*. I have proposed that this element represents a much larger relative clause structure, with the prepositional phrase *go DEIMHIN* "in fact" serving as the head of the relative, followed by the relative marker *a* which is phonologically silent.

(62) Sílim **go DEIMHIN A**   bhfuil an fear anseo.
     think.I to fact   REL is   the man here
       "I think that the man is here."

With this in mind, consider what happens when the element *an fear* "the man" in (62) is relativized out of the embedded clause.

(63) An fear **a**   shílim **a**   tá anseo.
     the man REL   think.I REL   is here
       "The man who I think is here."

Crucially, where the preposition *go* appears in "complementizer" position in (61) and (62), what is obviously the relative pronoun appears in (63).
   Previously in the literature this alternation has been accounted for in two ways. First, McCloskey (2002), assuming that *go* and the relativizer *a* both represent complementizers, proposes that this alternation results from a sensitivity to A'-binding through CP. In other words, the embedded complementizer is sensitive to whether or not an element has been extracted from the embedded clause, and this sensitivity leads to overt morphological differences between complementizers that introduce clauses which have not had elements extracted from them and those which have. Thus, the complementizer *go* occurs in (61) because no A'-binding relationship is mediated through this CP, while in (63), an A'-binding relationship is mediated through CP, and thus the complementizer *a* is selected instead of *go*.

While this analysis can plausibly explain these alternations, it is problematic for two reasons. First, as we have seen above in Section 1 in examples (9) and (10), reproduced below in (64) and (65), there is evidence that the relativizer *a* and the complementizer *go* do not occupy the same position. There is a discourse configurational position, identified as TopP in Roberts (2005) to the left of the element *go* that does not occur to the left of the relativizer *a*.

(64) Deiridís   ***an chead Nollaig   eile go***   dtiocfadh   sé aníos.
     say.IMPERF.3PL   the first Christmas next "that" come.COND   he up
     "They used to say that *next Christmas* he would come up."   McCloskey (1996: 59)

(65) an   fear (**amárach**) a   thiocfaidh aníos (amárach).
     the man tomorrow REL will.come   up
      "The man that *tomorrow* will come up."

The availability of TopP in (64) and the unavailability of such a position in (65) indicates that these two elements occupy different positions.

Second, McCloskey's proposal cannot explain why Irish would show this morphological sensitivity to extraction while English would not. The differences must simply be the result of a lexical accident. That is to say that English complementizers are sensitive to the same A'-dependencies that Irish complementizers are sensitive to, but English simply lacks the morphological resources to express these differences. This position is not unreasonable to take, but it is not ideal, as it means that we cannot predict which languages will show morphological sensitivities to A'-dependencies and which will not. I shall show below that under a relative clause analysis of Irish complementizers, we can account for this alternation without resorting to lexical accidence.

The alternation between *go* and *a* has been accounted for in another way by Adger and Ramchand (2005). They analyze similar data found in the closely related Scottish Gaelic:

(66) Thuirt   sinn **gun** do sgrìobh i   an leabhar.
     say-PAST we   that write-PAST she the book
     "We said that she wrote the book."

(67) Dè   **a**   thuirt   sibh **a**   scrìobh   i?
     what C-REL   say-PAST you C-REL   write-PAST she
      "What did you say that she wrote?"   Adger & Ramchand (2005: 166)

As can be seen in (66), Scottish Gaelic embedded clauses are introduced by the element *gun*, which is clearly historically related to the Irish *go*. Additionally, in (67) we can see that when an element has been extracted from the embedded clause, in this case a wh-phrase *dè* "what," the embedded complementizer shifts to the relativizer. This alternation is reminiscent of the same alternation which occurs in Irish (61-63), and the authors propose that Irish can be accounted for via the same mechanism.

Adger & Ramchand account for these examples by proposing an Agree mechanism. In this framework, the extracted element does not Merge in the embedded clause and raise to the higher position, but rather it is base generated in the high position in which it is pronounced. Additionally a silent pronominal-like element with unspecified φ-features is Merged in the position in which the higher element is to be interpreted. Thus, in (67), the wh-phrase *dè* "what" Merges in the high position in which it is pronounced, and a silent pronominal-like element is Merged in the object position of the

embedded clause. Under this configuration, the higher element enters into an Agree relation with the silent lower element, specifically agreeing in "identification features," which are valued as φ-features. This agreement relationship is mediated through the complementizer, which is why it is the complementizer which shows morphological distinctions between whether an Agree relation is established (the relativizer *a* in (67)) or not (the complementizer *gu* (66)). From this, the authors construct a typology of languages which behave like Scottish Gaelic (Merge languages) and those which do not (Move languages) for wh-movement.

Adger & Ramchand's analysis, while interesting, is incompatible with the raising analysis of the relative pursued here. These theoretical assumptions aside, their account requires that both *go* and the relativizer *a* be heads, as they enter into an Agree relation with the base generated element and the silent pronominal. This is against the spirit of the discussion here, which casts doubt on the assumption that these elements are simple heads.

Now I shall provide my account of the alternation between *go* and *a*. First, recall that I analyze examples like (68) as involving a relative clause structure (69).

(68) Sílim **go** bhfuil an fear anseo.
    think.I "that" is the man here
    "I think that the man is here."

(69) Sílim **go DEIMHIN A** bhfuil an fear anseo.
    think.I to fact REL is the man here
    "I think that the man is here."

As (69) involves a relative clause structure, the phrase *go DEIMHIN* "in fact" must be occupying the position reserved for heads of relatives. Importantly, there can only be one such position for heads of relatives to raise to. This can be seen in the general cross-linguistic prohibition on the relativization of two elements from the same clause. For instance, English (70), (71) and (72) are all perfectly grammatical, while (73) is profoundly ungrammatical.

(70) John sang the song to the woman.

(71) **The song** that John sang **\<the song\>** to the woman.

(72) **The woman** that John sang the song to **\<the woman\>**.

(73)   a. ***The song** *the woman* that John sang **\<the song\>** to *\<the woman\>*.

       b. ***The woman** *the song* that John sang *\<the song\>* to **\<the woman\>**.

The ungrammaticality of (73) is presumably due to both relativized elements competing for only one position somewhere in the relative clause. As only one element is allowed in this position (71-72), the presence of two forces the sentence to crash. Importantly, the unacceptability of (73) holds when multiple clauses are involved. Compare the grammatical (74) and (75) with the unacceptable (76).

(74) **The song** that I think **\<the song\>** that John sang **\<the song\>** to the woman.

(75) **The woman** that I think **\<the woman\>** that John sang the song to **\<the woman\>**.

(76)   a. ***The woman** that I think **\<the woman\>** that *the song* **\<the woman\>** that John sang
        \<the song\> to **\<the woman\>**.

      b. ***The song** that I think **\<the song\>** that *the woman* **\<the song\>** that John sang **\<the song\>** to
         \<the woman\>.

In (74) and (75) we see an element being relativized through the embedded clauses to the matrix clause. These relativized elements raise cyclicly through lower positions, and leave copies in these positions, making them unavailable landing sites for other elements. This is confirmed by the data in (76). In (76), we see that one element cannot be raised to the matrix clause while another element is only raised as high as the embedded clause. As the higher relativized element has raised through this position in the lower clause and left a copy, this position is not available for any other elements. Thus, the ungrammatically of (76) results from the same reason that (73) is ungrammatical: there is only one position available for relativized elements, and two elements cannot occupy this position without causing the sentence to crash.

Crucially, Irish shows the same restrictions. Examples (70) through (73) are reproduced in Irish in (78-80) respectively.

(77) D'inis Seán an scéal do a   chara.
     told Sean   the story to his friend.
     "Sean told the story to his friend."

(78) **An   scéal a**   d'inis Seán **\<an scéal\>** do a   chara.
     the story that told Sean the story   to his friend.
     "The story that Sean told to his friend."

(79) **An cara   a-r**   inis Seán an   scéal dó   **\<an cara\>**.
     the friend REL-PREF   told Sean the story to.him   the friend
     "The friend that John told the story to."

(80) a. ***An scéal** *an cara*   **a-r**   inis Seán **\<an scéal\>** dó   *\<an cara\>*.
         the story the friend REL-PERF told Sean   the story   to.him   the friend
          "*The story the friend that Sean told to."

      b. ***An cara**   *an   scéal* **a-r**   inis Seán *\<an scéal\>* dó   **\<an cara\>**.
         the friend   the   story REL-PERF told Sean the story to.him   the friend
          "*The friend the story that Sean told to."

As can be seen in the above examples, Irish patterns similarly to English. Irish can either not relativize anything (77), or it can relativize one element, as in (78) and (79), but it cannot relativize two (80). This is identical to the English data above in (70) through (73).

Additionally, Irish patterns like English with respect to relativization out of embedded clauses in that only one element may be extracted from the lower clause. This is exactly the situation in which we see the alternation between *go* and *a*.

(81) Ceapaim **gu**-r　　inis Seán an scéal do a　chara.
　　think.I　*go*-PERF told Sean the story to his　friend
　　"I think that Sean told the story to his friend."

(82) **An scéal a**　　cheapaim **<an scéal> a**　d'inis Seán **<an scéal>** do a　chara.
　　the story REL　think.I　　the story　REL told　Sean　the story　to his　friend
　　"The story that I think that Sean told to his friend."

(83) **An cara　a**　　cheapaim **<an cara> a**-r　　　inis Seán an scéal dó　　**<an cara>**.
　　the　friend REL think.I　　the friend REL-PERF　told　Sean the story　to.him the friend
　　"The friend that I think that Sean told the story to."

(84)　　a. ***An cara　a**　cheapaim **<an cara>** *an　scéal* **a**　　d'inis Seán ***<an scéal>*** dó　　**<an cara>**.
　　　　the friend REL think.I　　the　friend the　story REL told　Sean　the story　to.him the friend
　　　　"*The friend that I think that the story that Sean told to."

　　　　b. ***An scéal a**　cheapaim **<an scéal>** *an chara*　a-r　　　inis Seán **<an scéal>** dó **<an cara>**.
　　　　the story REL think.I　　the friend the friend REL-ASP told Sean the story　to　the friend
　　　　"*The story that I think that the friend that Sean told to."

In (81), we see a standard example of an Irish embedded clause, with a clause introduced by *go*. Bear in mind the analysis pursued here in which *go* represents a relativization of the phrase *go DEIMHIN* "in fact." Now, in (82) and (83), we can see that an element is relativized up to the matrix clause, presumably leaving copies in the intermediate position below, leaving this lower position unavailable to other elements. This unavailability is apparent in (84), in that no other element can raise to this lower position, presumably because it is already occupied by a silent copy of the higher phrase.

　　Important to our discussion here is that this is precisely the environment in which the alternation between *go* and *a* takes place. If we assume that the proposal developed here is on the right track in claiming that *go* represents a relative clause structure, then it is strongly predicted that *go* cannot occur when another element is relativized out of the embedded clause. This is because when another element is relativized out to the matrix clause, it must raise through the lower position which *go* would raise to. This makes this lower position unavailable to *go*, as it is filled with the silent copy of the element which has been relativized to the higher position. Thus, it is not the case that the complementizer *go* alternates with the relative marker *a*, but that an overt relative clause structure headed by the phrase *go DEIMHIN* "in fact" alternates with silent copies of relativized elements which have raised through the lower positions.

　　Thus, if we assume that the element *go* represents a larger relative clause structure, then we not only have a mechanism to account for the alternation between *go* and *a*, but we have a theory which strongly predicts that such an alternation will take place.

　　Let us examine the actual syntactic structure of the embedded relative construction, particularly the syntax of the embedded relative headed by the prepositional phrase *go DEMHIN* "in fact."

2.3 The Syntax of the Relative

　　To start, I shall assume a raising analysis of the relative (Kayne 1994, among many others). Additionally, I shall not project a distinct CP layer and will assume, following Kayne (2010), that the category "CP" does not exist. Consider again the sentence in (85).

(85) Sílim   **go DEIMHIN A**   maraíonn Buffy bhampairí
    think.I to FACT   REL kills   Buffy vampires.
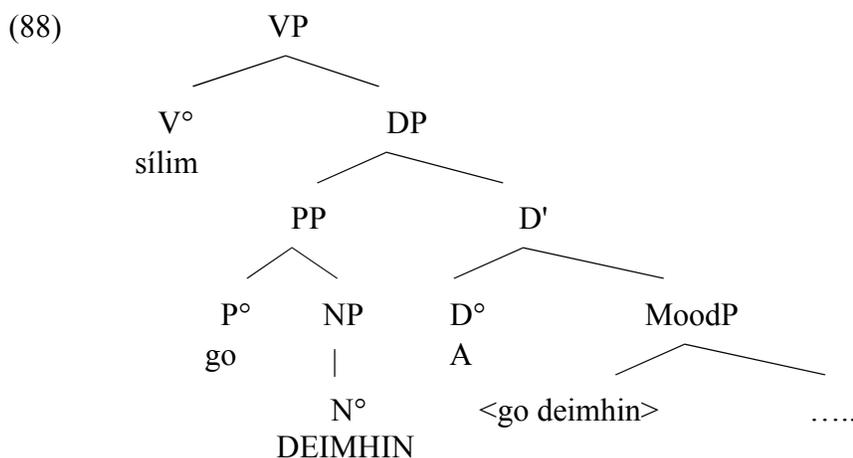   "I think that Buffy kills vampires."

      Our first task is to determine the External Merge position of the PP *go DEIMHIN "*in fact." As this element has an undeniable adverbial reading, let us consult Cinque's (1999) sentential hierarchy.

(86) [Mood *speech-act* **frankly**
   [Mood *evaluative* **fortunately**
    [Mood *evidential* **allegedly**
     [Mod *epistemic* **probably**
      [T *past* **once**
       [T *future* **then**
        [Mod *irrealis* **perhaps**
         [Mod *necessity* **necessarily**
        [Mod *possibility* **possibly**
        [Asp *habitual* **usually**
         [Asp *repetetive* **again**
          [Asp *frequentative(I)* **often**
          [Mod *volitional* **intentionally**
         [Asp *celerative(I)* **quickly**
        [T *anterior* **already**
         [Asp *terminative* **no longer**
         [Asp *continuative* **still**
        [Asp *perfect(?)* **always**
         [Asp *retrospective* **just**
         [Asp *proximative* **soon**
         [Asp *durative* **briefly**
          [Asp *progressive* **characteristically**
         [Asp *prospective* **almost**
         [Asp *sg.completive(I)* **completely**
         [Asp *pl.completive* **tutto**
        [Voice **well**
         [Asp *celerative(II)* **fast/early**
         [Asp *repetetive(II)* **again**
          [Asp *frequentative(II)* **often**
          [Asp *sg.completive(II)* **completely**

The most logical Merge position of *go DEIMHIN* "in fact" seems to be to the highest of the functional projections: Mood$_{SPEECH-ACT}$ P, abbreviated for our purposes here as MoodP. This seems correct from the semantic connection between "in fact" and "frankly." While the meanings of "in fact" and "frankly" are not completely identical, the semantic correlation is strong enough to postulate Mood$_{SPEECH-ACT}$ P as the Merge position of the phrase *go DEIMHIN* "in fact."

      Now that we have proposed a Merge position for *go DEIMHIN* "in fact," let us consider the position it raises to. A first pass at this structure is shown below in (88) for the bolded section of (85), reproduced in (87). I will not show the movement of verbs, subjects, and objects, but direct the reader to McCloskey (1996b) and Roberts (2005) for discussion of these points.

(87) Sílim   **go DEIMHIN A**   **<go deimhin>** maraíonn Buffy bhampairí
    think.I to FACT   REL   kills   Buffy vampires.
    "I think that Buffy kills vampires."

(88)
```
                    VP
              _____|_____
             V°           DP
            sílim      ____|____
                     PP         D'
                   __|__     ___|___
                  P°   NP   D°     MoodP
                  go   |    A    ___|___
                       N°   <go deimhin>   …..
                    DEIMHIN
```

In the structure in (88), the verb *sílim* "I think" takes a DP complement, which provides the necessary architecture for a relative clause structure. This DP takes the embedded clause as a complement. A DP taking a clausal complement my seem odd, but it is certainly not a new idea in the literature, such as in Rosenbaum (1967), and Adger and Quer (2001) more recently, among many others.

    Additionally, recall that we proposed the relative pronoun *a* /ə/ in examples like (87) was silent at PF. However, we did not have a mechanism to account for this silence until now. If the structure above in (88) is on the right track, then we have a way of understanding why the relative pronoun is not overt. The relative pronoun is required to be silent under Koopman's (1997) Generalized Doubly Filled Comp Filter, which states that:

(89) *Generalized Doubly Filled Comp Filter:*

    No projection has both an overt specifier and an overt head at the end of the derivation.
    (Koopman and Szabolcsi, 2000, p.4)

Thus, we can see in (88) that the head of the prepositional phrase *go* "to" must be pronounced, recalling the fact mentioned above that all Irish prepositions must be overt. As this phrase occupies the specifier of DP, the head D° cannot be overt by the end of the derivation, given (89). However, it is of course

still syntactically active, as well as phonologically active as we shall see below in Section 3.1, even if it does not receive any phonetic material at Spell-Out.
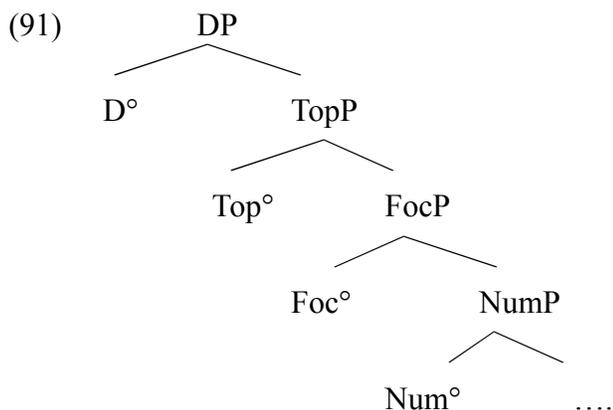
However, more data show that the structure in (88) cannot be correct, as it fails to account for several key facts which have proven to be influential in the literature of Irish. Recall cases of Irish's well-known sentential adverbs (McCloskey 1996).

(90) a. Deiridís   **an chead Nollaig   eile   go**   dtiocfadh   sé aníos.
         say.IMPERF.3PL   the first Christmas next *go*   come.COND   he up
         "They used to say that next Christmas he would come up."   McCloskey (1996b: 59)

      b. Is   dóiche   **faoi   cheann cúpla   lá**   **go** bhféadfaí   imeacht.
         COP   possible   under   head   couple day   *go*   could.AUT   leave
          "It is possible that in a few days it would be possible to leave." McCloskey (1996b: 59)
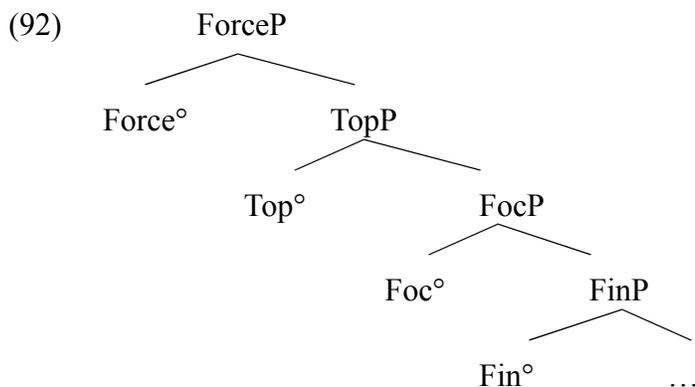
The data in (90) are important because the sentential adverbs appear to the left of the complementizer, while in English they appear to right, as seen in the glosses provided for (90). McCloskey (1996b) originally analyzed the data in (90) as an instance of IP Adjunction. However, Roberts (2005) analyzed such data as (90) as instances of movement to the specifier of one of the many TopPs proposed to occur in the Left Periphery (Rizzi 1997, 1999). I take Roberts' analysis to be correct.

Note that the adverbs in (90) can only be interpreted as modifying the embedded clause, and not the matrix clause. Thus, the adverbs must be moving to the specifier position of an embedded TopP. But what exactly is the position of this TopP within the relative clause structure?

I propose that a possible explanation for the topicalization of elements to the left of the embedded relative can be found in Aboh (2004). Here it is argued that there are DP internal topic positions within a much more extensive DP structure than in (88). Aboh's (2004) DP structure is presented below in (91).

(91)

```
                DP
              /    \
            D°      TopP
                  /     \
               Top°      FocP
                        /    \
                     Foc°     NumP
                             /    \
                          Num°     ….
```

In (91), we see that Aboh's "Extended D Domain" largely mirrors Rizzi's (1997) Extended Left Periphery, reproduced below in (92).

(92)

```
                    ForceP
                   /      \
            Force°        TopP
                         /     \
                     Top°       FocP
                               /     \
                           Foc°       FinP
                                     /     \
                                 Fin°       …
```

　　　　If we assume an Extended D Domain as in (91), we are provided with additional space for TopP and FocP. However, proposing this kind of structure for Irish embedded relative clauses requires that the landing site for *go DEIMHIN* "in fact" be lower than TopP, possibly in Spec,NumP. Additionally, the relative pronoun cannot be the phonological realization of D°, but the lower Num°.

　　　　There is in fact independent evidence from Irish that what is often called the definite article in Irish, which has been argued above to also occur as the relative marker, is most closely associated with Number. First, the Irish "definite article" shows sensitivity to number.

(93)　　　a. **an**　　cat
　　　　　　　the.SG　cat
　　　　　　　"the cat"

　　　　　　b. **na**　　cait
　　　　　　　the.PL cats
　　　　　　　"the cats"

Additionally, the elements which correspond to English *this* and *that*, which are standardly analyzed as D°, occur post-nominally and are not sensitive to number. (94) shows the Irish equivalent of Engish "this", while (95) shows the Irish equivalent of English "that."

(94)　　　a. an　　　cat　　seo
　　　　　　　the.SG　cat　　this
　　　　　　　"this cat"

　　　　　　b. na　　cait　　seo
　　　　　　　the.PL cats　　this
　　　　　　　"these cats"

(95)　　　a. an　　　cat　　sin
　　　　　　　the.SG　cat　　that
　　　　　　　"that cat"

　　　　　　b. na　　　cait　　sin
　　　　　　　the.PL　cats　　that
　　　　　　　"those cats"

Thus, it seems that what has been called the "definite article" in Irish in the past is in fact sensitive to number, and can therefore be analyzed as Num°, and not D°

Thus, the bolded part of (90a), reproduced below in (96), would be represented as in (97).

(96)   Deiridís   **an chead Nollaig   eile   go**   dtiocfadh   sé aníos.
        say.IMPERF.3PL   the first   Christmas   next   *go*   come.COND   he up
         "They used to say that next Christmas he would come up."   McCloskey (1996: 59)

(97)
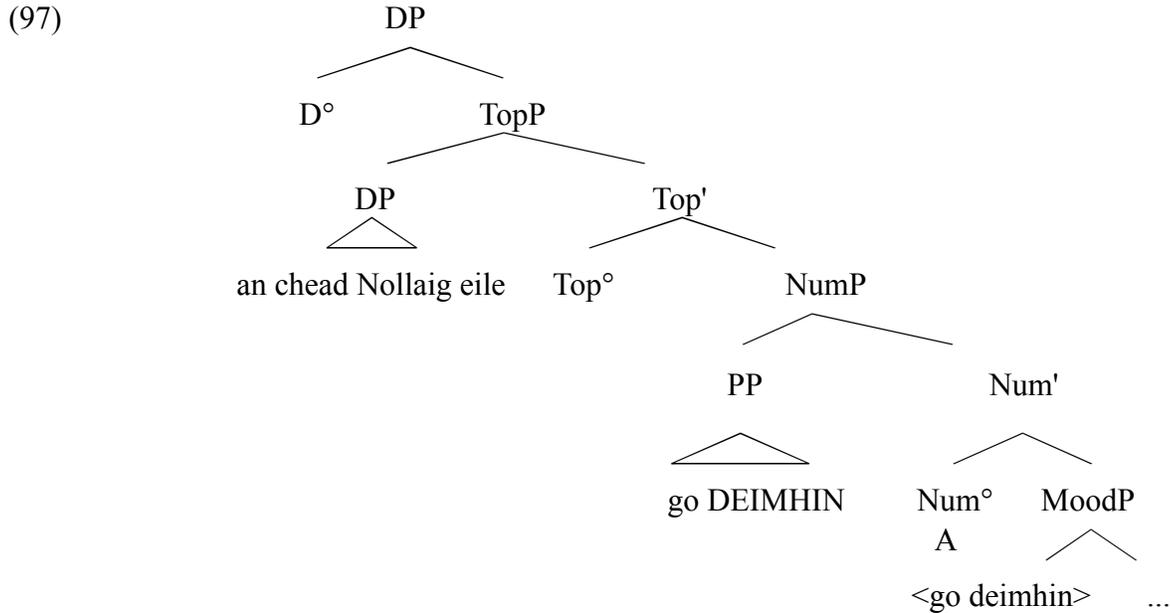
The structure in (97) allows us to both maintain the sentential adverb facts of McCloskey (1996b), as well as the relative clause analysis pursued here. Additionally, proposing that relativized elements in Irish raise to Spec,NumP still requires that the relative pronoun *a* be silent, as a Generalized Doubly Filled Comp Filter violation occurs otherwise.

Now that we have seen the argument for claiming that Irish declarative complementizers are in fact relative clause structures, as well as a possible derivation in (97), let us examine Irish's negative "complementizers."

3.   Irish Negation

Traditionally in the Irish literature negative markers are also included in the set of "complementizers" (see McCloskey 1996 for a discussion and the citations there, as well as Section 1 of this paper). Here I shall use the term "negative marker," and not "negative complementizer."

Negative markers are the only elements Irish possesses to negate a finite clause, and they always take sentential scope. These negative markers must occur in the left periphery of the clause, and must be immediately followed by the predicate, similar to the element *go* seen above. If constituent negation is required, the negated constituent is clefted, and the cleft clause is negated via the negative marker. Examples shall be provided below.

3.1 Matrix Negation

To begin, let us examine matrix negation, which is signaled by an initial negative marker *ní* /nʲi/. This marker causes lenition on the following finite verb.

(98) **Ní**   shiúlann na héisc.
    NEG walk   the fishes
    "Fish do not walk."

The negative marker *ní* may also occur with the aspectual *-r* suffix, which appears under the same aspectual conditions as examined above. The negative marker suffixed with *-r* is pronounced /nʲiɾˠ/. This form shall prove very useful below.

(99) **Ní-or**   tháinig sé abhaile aréir.
    NEG-ASP   came   he home   last.night
    "He did not come home last night."

Before we continue, let us observe the phonological structure of the aspect marker *-r*. As pointed out previously in the literature, the "complementizer," and suffix *-r*, and the finite verb all form a single phonological unit, called the "Verbal Complex" (McCloskey 1996). However the aspectual suffix *-r*, which I propose here Merges and behaves syntactically as a verbal prefix, cliticizes to the element immediately to its left and not to the finite verb to its right, and thus forms a closer phonological unit with what occurs to its left.

We can see this by observing a regular phonological process in the language. Irish makes a phonemic contrast between palatalized and non-palatalized (velarized) consonants. Additionally, it is predictable where a consonant will be palatalized and where it will not be; segments within the same phonological unit which immediately follow or precede the high front vowel /i/ must be palatalized. This can be seen clearly when the diminutive ending /inʲ/ is affixed to a stem ending in a non-palatalized consonant.

(100)   a. bád   + ín   →   báidín
      /bˠɑːdˠ/   /inʲ/   /bˠɑː**dʲ**inʲ/
      boat   DIM   little boat

    b. Seamus   + ín   →   Seamuisín
      /ʃemˠəsˠ/   /inʲ/   /ʃemˠə**ʃ**inʲ/
      Seamus   DIM   little Seamus

    c. stór   + ín   →   stóirín
      /stˠorˠ/   /inʲ/   /stˠo**rʲ**inʲ/
      treasure   DIM   darling

In (100a), the presence of the high front vowel /i/ causes the preceding consonant /dˠ/ to be palatalized to /dʲ/. In (100b) the fricative /sˠ/ palatalizes to /ʃ/ in the same phonological environment. In (100c), this process also affects the rhotic, which is palatalized from /rˠ/ to /rʲ/ in the presence of the high front vowel /i/.

With this in mind, let us examine what happens when the aspectual suffix *-r* occurs between the

relative pronoun /ə/ and a verb beginning with the high front vowel /i/. From this, we can determine whether the suffix *-r* forms a phonological unit with either the preceding relative pronoun or the following verb.

(101) go   DEIMHIN   A   -r   íoc   →   gu   -r   íoc
       gə   Ø   Ø   ɾ   iəkˠ   gə   ɾˠ   iəkˠ
       P   FACT   REL   ASP   paid

In (101), we can clearly see that the rhotic /ɾ/ is not palatalized to /rʲ/ in the presence of the high front vowel /i/, as we saw in (100). Rather, /ɾ/ is velarized to /ɾˠ/, presumably due to the presence of the preceding schwa, which is phonologically active despite its lack of phonetic material. Thus, the suffix *-r* forms a phonological unit with the preceding element, and not with the following finite verb.

With this in mind, the negative marker with the *-r* suffix *níor* /nʲiɾˠ/ is remarkable in that it seems to violate the phonology of the language. From what we have seen, we expect the suffix to palatalize to /rʲ/. However, this palatalization does not and cannot occur, even if the suffix is entirely surrounded by high front vowels:

(102) ní   -r   íoc   →   ní   -r   íoc
       nʲi   ɾ   iəkˠ   nʲi   ɾˠ   iəkˠ
       NEG   ASP   paid

The conclusions drawn from (101) and (102) are seemingly contradictory; how can the element *-r* form a phonological unit with something yet violate the phonology of the language?

I propose that the solution to this problem can be found if the form *níor* is structurally more complex than in (102). Based on the velarization of /ɾ/ in the form *níor* despite its being entirely surrounded by high front vowels, we have evidence for a back vowel which is phonetically null yet phonologically active occurring to the left of the aspectual suffix *-r* in the form *níor* /nʲiɾˠ/. I propose that the most logical candidate is a schwa, and that this schwa is the relative marker *a* /ə/. Thus, all negation in Irish is in fact a cleft-like relative clause structure, presumably headed by a silent noun CASE. Based on this, I propose the following structure for Irish negation suffixes with the aspectual marker *-r*:

(103) ní   CASE   A   r   →   níor
       nʲi   Ø   ɾˠ   nʲiɾˠ
       NEG   CASE   REL   ASP

Presumably, the structure is the same when no aspectual *-r* suffix is present, and the schwa is still silent at PF, as in (98).

Additional evidence for claiming that all negation in Irish is a relative clause cleft structure comes from the semantics of Irish negation. As mentioned above, negation in Irish always takes scope over the entire utterance; the language only employs sentential negation. This can be seen in the ungrammaticality of (104) below.

(104) #Ní   ritheann an   fear, ach siúlann sé.
       NEG   runs   the man but walks   he
       "The man does not run, but he walks."

Thus, the meaning of basic negation in Irish must be as in (105).

(105) $\neg \, (\, \exists \, x \, [R(x) \, \wedge \, x = \text{the man}])$

This mandatory interpretation of negation as taking sentential scope is much more consistent with negation being an extra-clausal cleft structure, comparable to English (106).

(106) It is not the case that the man runs.

      Also of note is that the negative marker *ní* may freely occur in relative cleft structures with phonologically overt heads.

(107) **Ní**   mise   a   rinne é!
      NEG I.EMPH REL did   it
      "It was not me who did it!"

Examples like (107) strongly support the claim that basic Irish negation is syntactically a relative clause structure.
      Now that we have evidence that hints at the structure of Irish negation, let us examine Irish embedded negation. First, I shall present the facts of Irish embedded negation, and then I shall propose an analysis.

3.2 Embedded Negation

      Irish embedded negation has the same semantics as matrix negation in that they both take sentential scope over the clause which follows. I shall assume that embedded negation has the same syntax as matrix negation in that they both are essentially relative clause cleft structures. I propose that the two structures differ only in which element acts as the head of the relative. In matrix clauses, the head of the relative is a silent noun CASE, while in embedded clauses, the head of the relative is *go DEIMHIN* "in fact," which acts as the head of the relative clause structure in non-negated embedded clauses.
      Now, let us examine the form of the embedded negative marker.

(108) Deir sé   **nach**   bhfuil suim   aige   i leadóg.
      say he   EMB.NEG is   interest at.him in tennis
      "He says that he is not interested in tennis."

In (108) we see that the element which marks embedded negation is *nach* /nˠɑx/. In comparing this form *nach* /nˠɑx/ with the matrix negation marker *ní* /nʲi/, it is clear that the negative piece of these forms is the alveolar nasal /n/. However, what are the remaining pieces of *nach* /nˠɑx/, specifically *-ach* /ɑx/?
      I propose that it is not an accident that the embedded form contains a velar sound, specifically the velar fricative /x/. Recall the phonological form of the preposition *go* in the phrase *go DEIMHIN* "in fact," which I argue to be the head of a relative clause structure which marked embedded clauses: /gə/. Note the velar sound in this form as well, specifically the velar stop /g/.
      I propose that the velar fricative /x/ in the form *nach* /nˠɑx/ represents the velar stop /g/ from the prepositional phrase *go DEIMHIN* "in fact," which acts as the head of the relative clause structure

which is used to mark embedded clauses in the language. Note that stops in Irish frequently become fricatives in the well-known phenomenon of initial consonant mutation, specifically the process of lenition. Recall from above that lenition occurs after the negative marker *ní*, and thus we would expect lenition to occur in this phonological context. Specifically, the velar stop /g/ lenites to /ɣ/, the voiced velar fricative[4].

Therefore I propose that the form *nach* /nˠɑx/ can be decomposed to the general negative marker *ní* /nʲi/ followed by the prepositional phrase *go DEIMHIN* "in fact," and then presumably followed by the relative pronoun *a* /ə/.

(109)   ní   g(h)o   DEIMHIN   A   →   nach
        /nʲi/   /ɣə/   Ø   Ø   /nˠɑx/
        NEG   to   fact   REL

I do not have an explanation as to why the vowel /i/ in the negative marker /nʲi/ shifts to the low back vowel /ɑ/. One idea is that the "vowel-backing" results from the vocal tract preparing to produce the velar /x/ after it has produced the alveolar nasal /n/.

Thus, I propose that embedded clauses without negation and embedded clauses with negation have essentially the same syntactic structure, namely a relative clause structure. The only difference between them is that the matrix relative clause is headed by a silent noun CASE, while the embedded relative clause is headed by *go DEIMHIN* "in fact."

Now, let us consider the syntax of negation in Irish, specifically to try and determine where negation Merges.
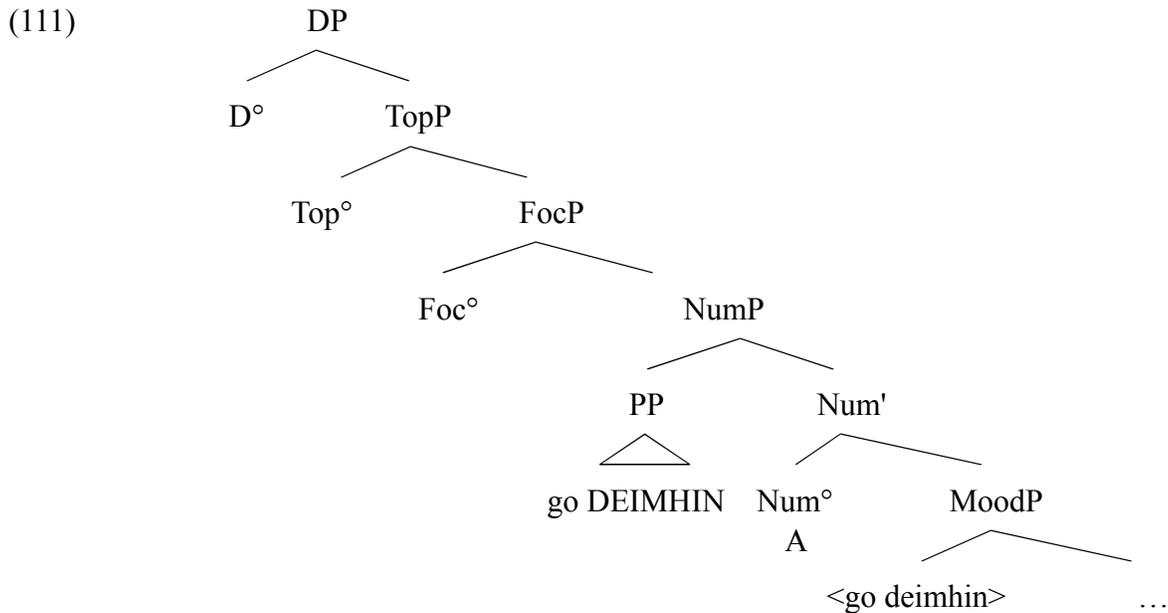
3.3 The Syntax of Irish Negation

Following most assumptions in the literature, dating back at least to Pollock (1989), I assume that negation projects its own phrase NegP. However, what exactly is the position of NegP in Irish?

Let us start with the relative clause structure I have proposed for declarative embedded sentences such as (110), reproduced below in (111).
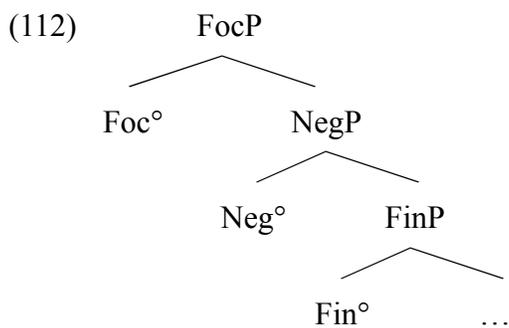
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4   While I do not have an explanation as to why the fricative would lose its voicing, I believe that this minor detail detracts from the overall phonetic similarity between these two elements.

(110) ...**go DEIMHIN A**...
      to FACT   REL
      "in fact that"

(111)

```
                      DP
                     /  \
                   D°    TopP
                        /    \
                     Top°     FocP
                             /    \
                          Foc°     NumP
                                  /    \
                                PP      Num'
                               / \     /    \
                         go DEIMHIN  Num°    MoodP
                                      A      /    \
                                    <go deimhin>    …
```

Recall that the structure in (111) is based on Aboh's (2004) Extended D Domain, in which the author captures the intuition that DP mirrors CP, specifically Rizzi's (1997) Extended Left Periphery, in a very literal way.

      Importantly, Aboh has recently proposed another position within the left periphery: a NegP (Aboh 2010). This NegP occupies a position between FinP and FocP, shown in (112).

(112)

```
          FocP
         /    \
       Foc°    NegP
              /    \
           Neg°     FinP
                   /    \
                 Fin°     …
```
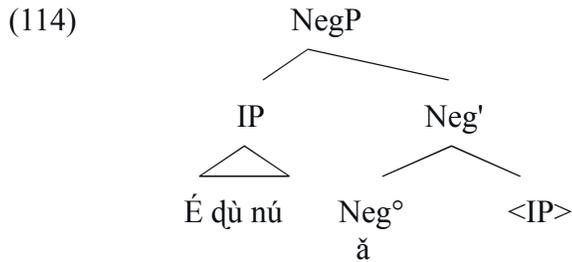
      This positioning of NegP is based on data from various Gbe languages in which the negative marker appears amongst various particles with meanings uncontroversially linked to the left periphery, such as focus (Rizzi 1997). Consider the following example from Fongbe. The bracketed section marks TP, while the bolded elements demonstrate the various left-peripheral particles.
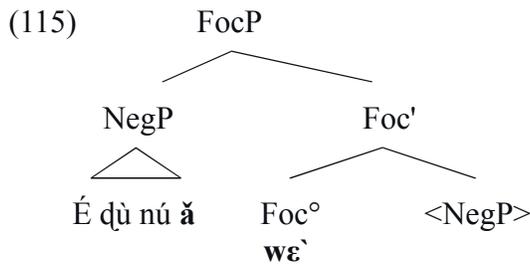
(113) [É   ɖù nú]   **ǎ**   **wɛ̀ à?**
     3SG eat thing NEG   FOC INTER
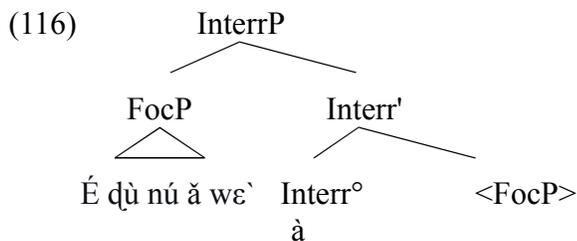   "Is it that s/he has not eaten?"   Aboh (2010: 132)

For examples such as (113), Aboh proposes that the order of the final left peripheral functional heads results from a "roll-up" derivation, with successive phrases raising to the specifier of the phrase which immediately dominates it. With this in mind, in order to yield the correct surface order, the Merge position of functional heads requires that FocP dominate NegP. First, the entire TP, shown in brackets in (113), raises to the specifier of NegP. Note that in the following tree in (114) I do not show an overt FinP between NegP and IP, as there is no overt Fin° in (113), but I assume that the following structure is a shorthand for one involving such a projection.

(114)

```
                    NegP
                  /      \
               IP          Neg'
              / \         /     \
         É ɖù nú      Neg°        <IP>
                       ă
```

       Next, NegP raises to the specifier of FocP, as in (115).

(115)

```
                  FocP
                /      \
           NegP          Foc'
           / \          /    \
      É ɖù nú ă      Foc°      <NegP>
                      wɛ̀
```
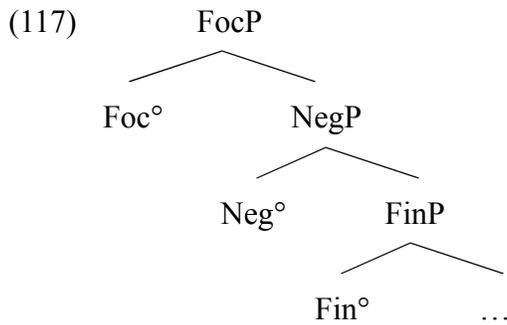
       Finally, the entire FocP raises to the specifier of a projection InterrP, which is immediately dominated by ForceP, that is headed by the interrogative particle *à* in (113) (Aboh 2010, pg. 117).

(116)

```
                InterrP
              /        \
          FocP          Interr'
          / \          /      \
   É ɖù nú ă wɛ̀   Interr°      <FocP>
                    à
```
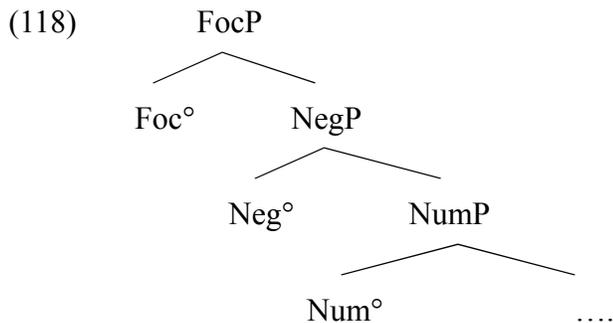
In (116), we can see that this derivation has yielded correct surface order of (113).
       Thus, we now have derived the structure in (112), reproduced below in (117).

(117)

```
            FocP
           /    \
        Foc°    NegP
               /    \
            Neg°    FinP
                   /    \
                Fin°     …
```

If we follow Aboh's (2004) intuition that DP mirrors CP (see Koopman 2005 for a similar intuition), we expect to find a DP-internal NegP located between NumP and FocP.

(118)

```
            FocP
           /    \
        Foc°    NegP
               /    \
            Neg°    NumP
                   /    \
                Num°     ….
```
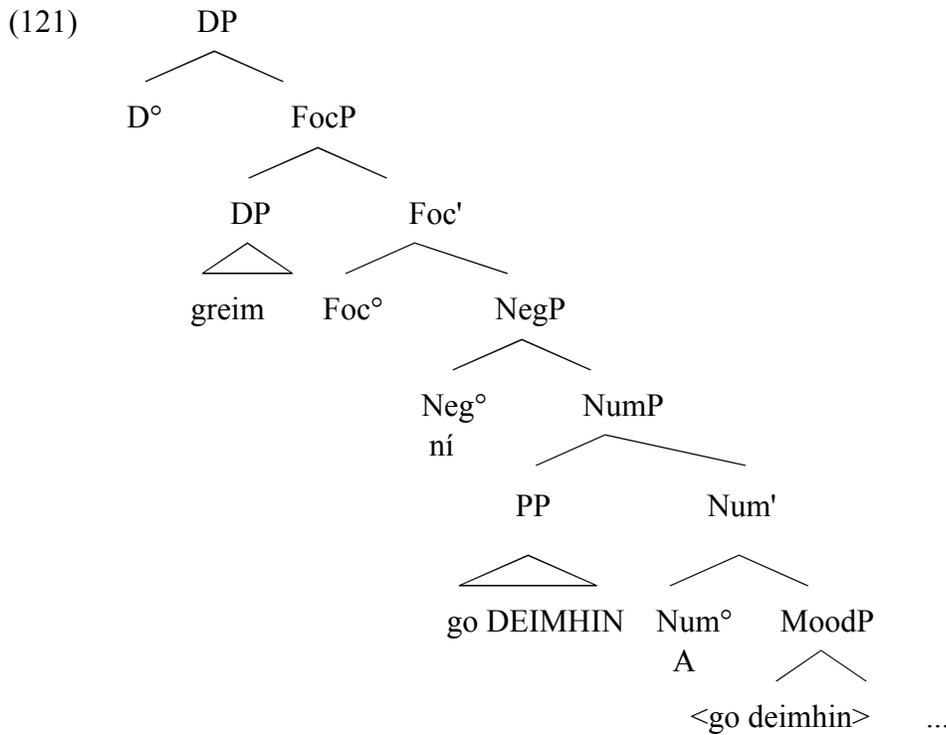
However, is this where we find negation in the Irish relative clause structure? This is easily tested, as the structure in (118) makes the strong prediction that elements can be topicalized or focused to the left of negation. It turns out that this is empirically true.

(119) and (120) demonstrate a construction which McCloskey (1996b) calls "Narrative Fronting." This construction involves movement of an element to the left of the negative marker "for purposes of emphasis" (McCloskey 1996b: 77). Given the semantics of this construction, I take it to be movement to Spec,FocP. (119) shows this construction in a matrix clause, while (120) demonstrates it in an embedded clause.

(119) **Sagard amháin ní**   tháinig de chómhair fhéasta an   Rí.
      priest   one   NEG   came   near   feast   the King.GEN
      "Not one priest came near the King's feast."   McCloskey (1996b: 77)

(120) Dá n-ósclódh sé a   bhéal **greim nach**   bhfaigheadh sé.
      if open.COND he his mouth bite   NEG.EMB   get.COND   he
      "If he opened his mouth, not a bite would he get."   McCloskey (1996b: 80)

In (119), we see that there is in fact a focus position to the left of matrix negation, while in (120) we see a similar position in embedded negation. Thus, the prediction made above bears out: Irish does have a focus position to the left of negation. This is good evidence that Aboh's (2004, 2010) adjusted Extended D Domain shown above in (118) is the most accurate way to account for the structure of the Irish relative. Thus, we have our final derivation for the Irish embedded relative clause. The tree in (121) shows the bolded section of (120) above.

(121)

```
                    DP
                  /    \
                D°      FocP
                       /    \
                     DP      Foc'
                    /\      /    \
                  greim   Foc°    NegP
                               /      \
                            Neg°       NumP
                             ní       /    \
                                    PP      Num'
                                   /\      /    \
                            go DEIMHIN  Num°    MoodP
                                         A      /\
                                           <go deimhin>   ...
```

4.   Lingering Issues

For what follows I shall make a distinction between two kinds of relatives. The first is what I shall call "embedded relatives." Embedded relatives are structures such as (121) in which the head of the relative *go DEIMHIN* "in fact" raises only as high as Spec,NumP. The second kind of relative clause structure is the "non-embedded relative." In this kind of structure, descriptively a more usual relative clause, there is evidence that the head of relative clauses raises higher than Spec,NumP. The first piece of evidence for this is that in non-embedded relative clauses both the head of the relative and the relative pronoun are phonologically overt, as in (122).

(122) **An   leabhar a**   tá ar an   bhord.
　　　 the   book   REL   is on the table
　　　 "The book that is on the table"

This is evidence that the head of the relative *an leabhar* "the book" is higher than Spec,NumP because if this phrase were occupying Spec,NumP, only either the head of the relative *an leabhar* "the book" or the head of NumP *a* would be allowed to be phonologically overt. Otherwise a Generalized Doubly Filled Comp Filter violation would occur. As both are overt, the head of the relative in (122) must be higher than Spec,NumP.

Additional evidence that heads of non-embedded relatives occur higher than Spec,NumP comes from the placement of negation in relatives such as (123). First, recall that in the structure proposed here NegP immediately dominates NumP, as discussed above. Now, consider what happens when the relative clause in (123) is negated.

(123) An   leabhar **nach**   bhfuil ar an bhord.
      the   book   NEG.REL is   on the table
      "The book that is not on the table."

Note the placement of the head of the relative *an leabhar* "the book" to the left of the negative marker
nach. Assuming that what has been discussed here is on the right track, NegP immediately dominates
NumP, and *nach* is composed of a Neg° *ní* and the phrase *go DEIMHIN* "in fact," which occupies
Spec,NumP. As the head of the relative *an leabhar* "the book" is to the left of negation and not to the
right, this indicates that the head of the relative is higher than Spec,NumP.
　　　　Now we have seen two conflicting sets of data. First, we have evidence that the phrase *go
DEIMHIN* "in fact," which heads the embedded relative clause, only raises as high as Spec,NumP. This
evidence is the availability of a topic position to its left, as well as its lower position relative to
negation. Second, as we have just seen, there is evidence that the heads of relatives such as (122) raise
higher than Spec,NumP. This evidence is that both the head of the relative and Num° are pronounced,
indicating that the head of the relative is not in Spec,NumP, per the Generalized Doubly Filled Comp
Filter. Additionally, we have seen that heads of non-embedded relatives occur to the left of negation
(123). Thus we have evidence that *go DEIMHIN* "in fact" occupies a lower position than that occupied
by heads of classic relatives.
　　　　Assuming a raising analysis of the relative, we can posit a broad question as to why there are
two distinct positions for heads of relatives to raise to. Or, stated more accurately, what blocks the
raising of *go DEIMHIN* "in fact" to the higher position occupied by heads of non-embedded relatives?
First, we must explicitly identify the position of more usual heads of relatives, such as *an leabhar* "the
book" in (122) and (123).
　　　　As we have stated above, the position of heads of non-embedded relatives must be higher than
Spec,NumP. Additionally, these elements must be higher than Spec,NegP, as evidenced by both the
head of the relative and the negative marker *ní* being phonologically overt. In the structure developed
above in (121), there are three potential specifier positions to the left of Spec,NegP: Spec,FocP,
Spec,TopP, and Spec,DP. Given that heads of non-embedded relatives have no observable discourse
prominence features, Spec,FocP and Spec,TopP can be ruled out as possible landing sites. This leaves
Spec,DP as the surface position for these elements.
　　　　Returning to why *go DEIMHIN* "in fact" would be blocked from raising to this position, the
most obvious answer is that in utterances headed by *go DEIMHIN* "in fact," Spec,DP is already
occupied. However, what is this position occupied by?
　　　　In certain instances, we find an overt pronominal *é* "it" appearing before the phrase *go deimhin*.
This "extra" pronoun has been proposed to be some kind of anaphoric element which is co-referential
with the embedded clause (McCloskey 1996a).

(124) Rinne mé **é go** mbeadh cailíní áille   mar tusa ag scríobh teachtaireachtaí chugam ar YouTube[5].
      did   I   it *go* be.COND girls beautiful like you at writing messages   to.me   on YouTube
      "I did it (so) that beautiful girls like you would write me messages on YouTube."

---

5   Found via a Google seach conducted on December 2nd, 2012 at http://www.youtube.com/watch?v=RgB1ll8gzX8.

(125) Cha-r   admhaigh mé **é go** raibh sé 'nadhiaidh mo chroí.

      NEG[6]-ASP   confessed I   it *go* was   he after   my heart

      "I did not confess it that he was after my heart."

In (124) and (125) we see the relevant construction in which a pronominal *é* "it" precedes *go*, taken to represent a larger construction with the phrase *go DEIMHIN* "in fact" occupying Spec,NumP.

      A natural way to account for data such as (124) and (125) is to say that this pronominal *é* "it" occupies Spec,DP. Thus, this position is unavailable for *go DEIMHIN* "in fact," and it must remain in the lower position of Spec,NumP. We can expand this argument to say that no such pronominal occupies Spec,DP in classic relative clauses as in (122) and (123), which is why these heads of relatives are permitted to raise to this position.

      Additionally, it is important that this pronominal *é* "it" in examples (124) and (125) likely Merges in Spec,DP. First, this element is not interpreted in the lower clause, but in the higher clause. Second, positing that this pronominal *é* "it" Merges in Spec,DP as opposed to raising to this position allows us to avoid a Minimal Link Condition violation. This MLC violation would result from the phrase *go DEIMHIN* "in fact" occupying Spec,NumP, which would prevent an element originating lower in the clause from raising cyclically to Spec,DP, as this position is already occupied and thus unavailable.

      Moreover, claiming that this pronominal element *é* "it" is phrasal allows us to account for other data in which we see what is obviously a phrase in this position, such as (126).
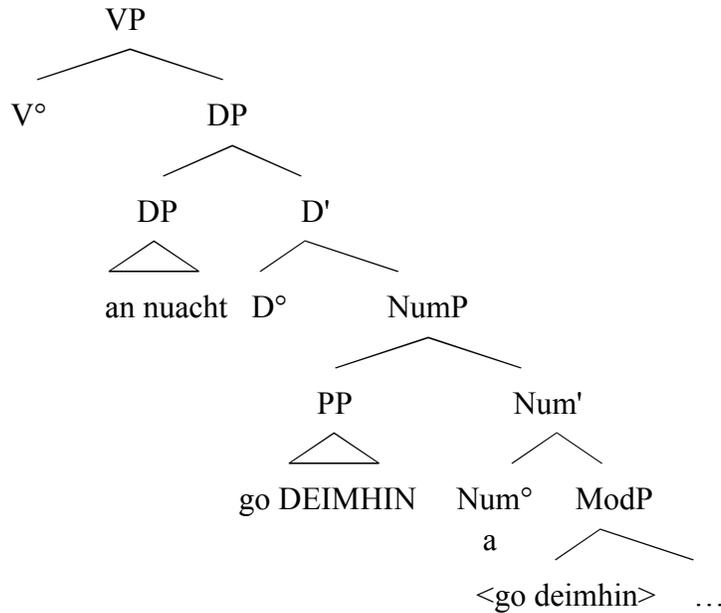
(126) Chuala mé **an nuacht go** bhfuair Christopher Nolan bás...[7]

      heard I   the news   *go* got   Christopher Nolan death

      "I heard the news that Christopher Nolan died..."

In (126), we see that the phrase *an nuacht* "the news" occupies what appears to be the same position as the pronominal element *é* "it." This is because they both are in object position with respect to the matrix clause. Additionally they both immediately precede the element *go*. Thus, I likewise propose that the DP *an nuacht* "the news" Merges in the specifier of a larger DP, which serves as the Extended D Domain for the analysis of embedded relatives presented here. Thus, the bolded section in (126) is analyzed as in (127) below.

---

6   The negative marker *cha* used in this example is a dialectal form of the more standard *ní* discussed here. Their respective syntaxes are identical. Additionally, this example is from one version of a folk song entitled "Tá mé i mo shuí"

7   Found at http://www.beo.ie/alt-fuair-christopher-nolan-bas-an-mhi-seo-caite.aspx.

(127)

```
                    VP
                 ／    ＼
              V°         DP
                      ／    ＼
                   DP         D'
                 ／▽＼      ／    ＼
            an nuacht   D°        NumP
                              ／      ＼
                           PP          Num'
                         ／▽＼        ／   ＼
                   go DEIMHIN     Num°    ModP
                                    a    ／   ＼
                                <go deimhin>   …
```

5.   Conclusion

We have seen that what appear to be complementizers in Irish in the classic sense can in fact be reasonably analyzed as larger relative clause structures headed by the prepositional phrase *go DEIMHIN* "in fact." We then provided a syntactic derivation for the Irish relative clause. Ultimately, we examined a language which has a seemingly elaborate complementizer system, and reduced it to a much simpler one involving variations on a single relative clause structure, in support of Kayne (2010).

This suggests that complementizers may never project categories which are distinct from other categories, such as DP or PP. Rather, what have been labeled complementizers in the past are simply the familiar projections DP and PP in misunderstood syntactic environments. Or phrased another way, it may be that the language faculty lacks complementizers as categories distinct from determiners and prepositions.

However, the analysis provided here is not without problems. The issues with this approach can be summarized in two important questions.

The first question is "Why are certain elements silent?" Specifically, in the account above I provide possible explanations as to why the relativizer *a* is silent in the sequence *go DEIMHIN A*, but I have no explanation as to why the noun *deimhin* 'fact' must be silent as well. I do not have an answer to this question besides that the issue of silent elements in general must be the subject of future research. However, I believe that it is worth noting that Kayne (2010) proposes the same silent element for similar English data. Drawing this parallel however does not provide an explanation.

The second question is "What motivates the movement of the phrase *go deimhin* 'in fact' to the left periphery?" Assuming that all movement must be feature driven, it is unclear what feature on Num° could license such a movement. I do not have an explanation to this question.

Work Cited

Aboh, Enoch O. (2004). "Topic and Focus within D." *Linguistics in The Netherlands* 21: 1-12.

Aboh, Enoch O. (2010). "C-Type Negation Markers on the Right Edge." In E.O. Aboh & J. Essegbey (Eds.), *Topics in Kwa syntax* (Studies in natural language and linguistic theory, 78) (pp. 109-139). Dordrecht: Springer

Adger, David, and Gillian Ramchand (2005). "Move and Merge: Wh-Dependencies Revisited." *Linguistic Inquiry* 36.2: 161-93.

Adger, David and Josep Quer (2001). "The syntax and semantics of Unselected Embedded Questions" *Language* 77.1,107-133.

Belletti, Adriana (2004). "Aspects of the low IP area." In *The Structure of IP and CP*. 'The Cartography of Syntactic Structures' vol.2. L. Rizzi ed. OUP.

Campbell, George (1991). *Compendium of the World's Languages*. London: Routledge.

Carnie, Andrew (1997). "Two Types of Non-verbal Predication in Modern Irish." *The Canadian Journal of Linguistics* 42. 1&2; 57-73

Carne, Andrew, Heidi Harley, and Elizabeth Pyatt (1994). "The Resurrection: Raising to Comp, evidence from Old Irish." *Studies in the Linguistic Sceinces* 24.2.

Carnie, Andrew, Heidi Harley, and Elizabeth Pyatt (2000). "VSO Order as Raising Out of IP?" *The Syntax of Verb Initial Languages*. Ed. Andrew Carnie and Eithne Guilfoyle. Oxford: Oxford UP. 39-59.

Chomsky, Noam (2000). "Minimalist inquiries, the framework." In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik,* ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.

Chomsky, Noam (2001). "Derivation by phase." In *Ken Hale: A Life in Language,* ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.

Chung, Sandra and James McCloskey (1987). "Government, Barriers and Small Clauses in Modem Irish".Linguistic Inquiry 18, 173-237.

Cinque, Guglielmo (1999). *Adverbs and Functional Heads: A Cross-linguistic Perspective*. New York: Oxford UP.

Duffield, Nigel (1995). *Particles and Projections in Irish Syntax*. Dordrecht: Kluwer Academic.

Heck, Fabian and Malte Zimmermann (2004). "Remarks on the Phasal Status of DP." Ms., Universität Tübingen, Humboldt-Universität Berlin.

Heck, Fabian, Gereon Müller, and Jochen Trommer (2008). "A Phase-Based Approach to Scandanavian Definiteness Marking." Proceedings of the 26th West Coast Conference on Formal Linguistics, ed. Charles B. Chang and Hannah J. Haynie, 226-233. Somerville, MA: Cascadilla Proceedings Project.

Jayaseelan, K. A (2001). "IP-Internal Topic and Focus Phrases." *Studia Linguistica* 55.1: 39-75.

Kawai, Michiya (2006). "Raising to Object in Japanese: A Small Clause Analysis.""*Linguistic Inquiry* 37.2: 329-39.

Kayne, Richard (1994). *The Antisymmetry of Syntax (Linguistic Inquiry Monograph 25)*. MIT Press.

Kayne, Richard (2010). "Why Isn't *This* A Complementizer?" *Comparisons and Contrasts*. Ed. Richard Kayne. N.p.: Oxford UP.

Kiparsky, P. and C. Kiparsky (1970). "Fact," in M. Bierwisch and K.E. Heidolph (eds.) Progress in Linguistics, Mouton, The Hague.

Kiss, Katalin É (2002). *The Syntax of Hungarian*. Cambridge, UK: Cambridge UP.

Koopman, Hilda. (1997). *The Doubly Filled C Filter, the Principle of Projection Activation, and Historical Change.* Ms. UCLA.

Koopman, Hilda, and Anna Szabolcsi. (2000). *Verbal complexes*. Cambridge, Massachusetts: MIT Press.

Koopman, Hilda (2005). "On the Parallelism of DPs and Clauses: Evidence from Kisongo Maasai." *Verb First: On the Syntax of Verb-Initial Languages*. Ed. Andrew Carnie, Heidi Harley, and Sheila Ann Dooley. Philadelphia: John Benjamins. 281-303.

Legate, Julie (1999). "The Morphosyntax of Irish Agreement." In Karlos Arregi, Benjamin Bruening, Cornelia Krause, and Vivian Lin (eds), *Papers on Morphology and Syntax, Cycle One.* MITWPL.

Leu, Thomas (2008). *The Internal Syntax of Determiners*. Doctoral dissertation, New York University.

Massam, Diane (2000). "VSO and VOS: Aspects of Niuean Word Order." *The Syntax of Verb Initial*

Languages. Eds. Andrew Carnie, Eithne Guilfoyle. New York: Oxford UP, 2000. 97-116.

Massam, Diane (2001). "Pseudo Noun Incorporation in Niuean." *Natural Language & Linguistic Theory* 12.1: 153-97.

McCloskey, James (1979). *Transformational Syntax and Model Theoretic Semantics*, D. Reidel Publishing Company, Dordrecht.

McCloskey, James (1996a). "Subjects and Subject Positions in Irish." *The Syntax of the Celtic Languages: A Comparative Perspective*. Ed. Robert D. Borsley and Ian G. Roberts. Cambridge, England: Cambridge UP, 1996. 241-83

McCloskey, James (1996b). "On the Scope of Verb Movement in Irish". *Natural Language and Linguistic Theory* 14:1, 47-104.

McCloskey, James (2002). "Resumption, Successive Cyclicity, and the Locality of Operations." *Derivation and Explanation in the Minimalist Program*. Ed. Samuel Epstein and Daniel Seely. N.p.: Blackwell. 184-226.

McCloskey, James (2005). 'Predicates and Heads in Irish Clausal Syntax,' in *Verb First: On the Syntax of Verb-Initial Languages,* Andrew Carnie, Heidi Harley, and Sheila Ann Dooley, editors, John Benjamins: 155–174

McCloskey, James (2012). "Irish Existentials in Context". *Syntax*, to appear.

Ó, Dónaill Niall, and Bhaldraithe Tomás (2005). De. *Foclóir Gaeilge-Béarla*. Baile Átha Cliath: Gúm.

Oda, Kenji (2005). "V1 and Wh-questions: A Typology." *Verb First: On the Syntax of Verb-initial Languages*. Ed. Andrew Carnie, Shiela Ann Dooley-Collberg, and Heidi Harley. Amsterdam: John Benjamins Pub., 2005. 107-33.

Pollock, Jean-Yves (1989). "Verb Movement, Universal Grammar, and the Structure of IP". *Linguistic Inquiry* 20.3: 365-424.

Postal, Paul (1974). *On Raising*. Cambridge, Mass.: MIT Press

Rizzi, Luigi (1997). "The Fine Structure of the Left Periphery.' In *Elements of Grammar*, Liliane Haegeman, ed., Dordrecht, Boston & London: Kluwer, 281-337.

Rizzi, Luigi (1999). "On the position INT(ERROGATIVE) in the Left Periphery of the Clause," in G. Cinque, G. Salvi, eds., *Current Studies in Italian Syntax,* Elsevier, Amsterdam, 2001, 287-296.

Roberts, Ian (2005). *Principles and Parameters in a VSO Language: A Case Study in Welsh*. Oxford: Oxford UP.

Roberts, Ian (2010). *Agreement and Head Movement: Clitics, Incorporation, and Defective Goals*. Cambridge, MA: MIT Press.

Rosenbaum, P.S. (1967). The Grammar of English Predicate Complement Constructions, The MIT Press, Cambridge, Mass.

Svenonius, Peter (2004). "On the Edge." *In:* D. Adger, C. de Cat and G. Tsoulas, eds, *Peripheries: Syntactic Edges and their Effects.* Kluwer, pp. 261–287.

Travis, Lisa (1984). *Parameters and Effects of Word Order Variation*. Unpublished doctoral dissertation, MIT, Cambridge, MA.

Yocum, Christopher (2011). "Aspect in Old Irish: the Case of 'ro-'." Unpublished, available at http://homepages.inf.ed.ac.uk/v1cyocum/

Zanuttini, Raffaella (2001). "Sentential Negation." *The Handbook of Contemporary Syntactic Theory*. Ed. Mark R. Baltin and Chris Collins. Malden, MA: Blackwell. 511-35