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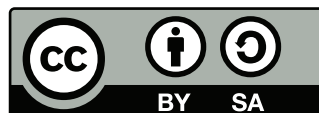
The Encoding of Negation in Modern Irish: Negation at the Layered Structure of the Clause and Noun Phrase

Brian Nolan

Institute of Technology Blanchardstown Dublin, Ireland

Abstract

Modern Irish utilises a variety of ways to express and encode negation on the clause and noun phrase. Additionally, negation can be realised not just over the lexical verb within the clause, but also on the auxiliary verb and copula. Each of these realisations of negation has scope considerations and morphosyntactic consequences that are interesting within an RRG account. In particular, negation within the layered structure of the clause (LSC) is sensitive to tense and a past vs. non-past distinction seems to be significant. This may be due to a realis/irrealis distinction. In this paper therefore we explore and characterise the morphosyntactic realisation of negation within the clause, over auxiliary verb constructions and copula clauses, and also as it is found within the layered structure of the noun phrase (LSNP). The general form of encoding negative polarity in a clause involves a negative particle plus a matrix verb (allowing for past or non-past tense distinction), or a negative form of the copula. In many instances, the tense and NEG operators in the LSC are directly encoded in the AUX and marked accordingly in morphosyntax. We discuss the scope of negation within the LSC and the LSNP. We outline morphological and analytical negation and the range of negative polarity particles that are deployed within the construction to encode negation along with the functional differences of each within an RRG characterisation. Within RRG, negation, tense and realis/irrealis are encoded as operators on the clause. Negation is also encoded on the LSNP as an operator.

1 Introduction

Negation is a subject of considerable interest cross linguistically (Horn 2011; Miestamo 2005 and 2010). This paper is concerned with the way in which Modern Irish utilises a variety of ways to express and encode negation on the clause, noun phrase and on the word whether this is a nominal or verb (lexical, auxiliary or copula). We therefore examine the encoding of negation in the layered structure of the clause (LSC), the layered structure of the noun

phrase (LSNP) and the layered structure of the word (LSW) in so far as it occurs in Irish. Our theoretical paradigm of choice is Role and Reference Grammar [RRG] as it is a theory of grammar that characterises the interaction of morphosyntax, semantics and pragmatics in grammatical systems.

RRG is a monostratal theory that posits a single syntactic representation for a sentence, linked directly to a semantic representation by means of a bi-directional linking algorithm. The syntactic representation of clause structure in RRG is called the layered structure of the clause (LSC). Modifying each of the layers of the clause are operators and these include grammatical categories like tense, aspect, modality, negation and illocutionary force. A clause consists of the core and the periphery, that is, the predicate, its arguments and the non-arguments. Clauses are considered to have a layered structure and each layer is semantically motivated. These operators all add additional specification to the event, state, process or action (*Aktionsarten*/event structure) of the predication indicated by the verb. The various scope levels of the operators are indicated as they are conceptualised in the RRG model in Figure 1.
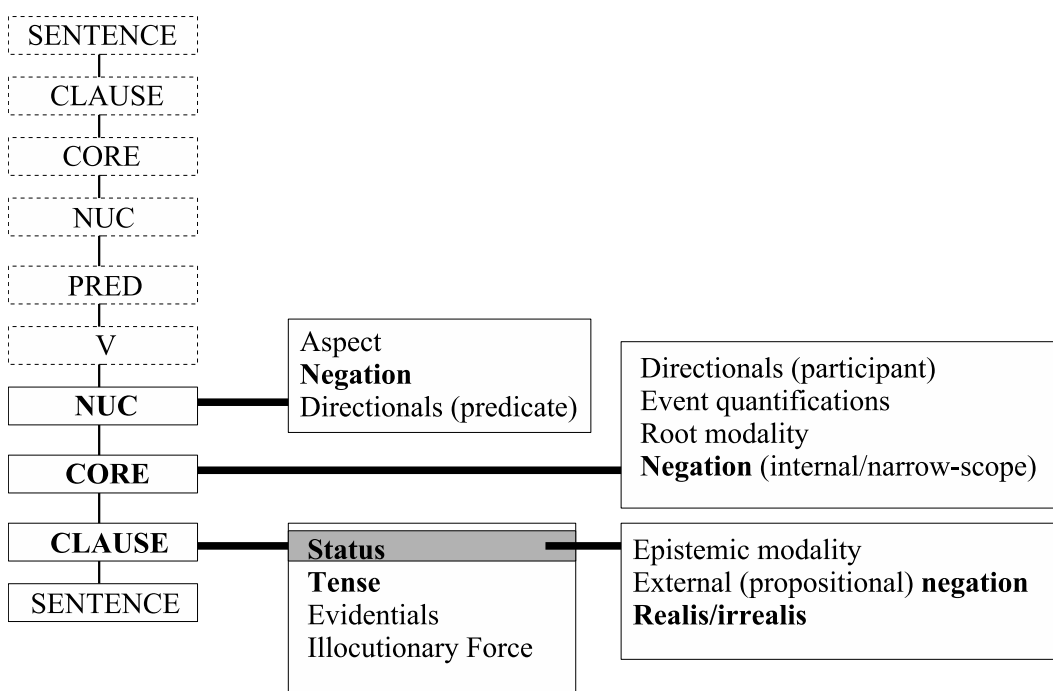

Fig. 1: The operator projection within the different levels of the layered structure of the clause (adapted from Van Valin 2005: 12)

Negation is the only operator that occurs at all three levels (Van Valin 2005: 9). Nuclear negation has only the nucleus in its scope, core negation has one or more core arguments (and possibly also the nucleus) in its scope, and clausal negation has the entire clause in its scope. Operators in the NP follow the same iconic ordering constraint as operators within the clause.

Adjectives are constituents of the nuclear$_N$ periphery whose position is constrained by the iconicity principle and, as such, they must occur closer to the nominal nucleus than core$_N$ and NP-level operators and modifiers.

Languages normally do not have all of these operators as grammatical categories; the ones considered to be 'universal' are illocutionary force and negation. Aspect is a common inherent verbal category. Its function is to highlight the internal temporal unfolding of the predication. Aspect indicates whether an event, state, process or action denoted by a verb is completed or unfolding. The 'perfective'/'imperfective' distinction is related to aspect. Tense indicates the time of the predication in relation to some particular moment and, in the morphology of languages cross linguistically, at least three tenses of past, present and future are usually distinguished. As operators, tense and status situate the proposition expressed by the clause within a temporal and realis/irrealis context. Typologically, we expect that the order of certain affixes in a word would reflect the order of related syntactic operations (cf. The Mirror Principle of Baker 1985: 375). That is, we would expect that the categories more relevant to the verb would occur closer to the stem than those that are less relevant. We do see some evidence of this in the encoding of negation. We can observe this with both the layered structure of the clause and the noun phrase with the respective operator projections.

In the layered structure of the noun phrase (Van Valin 2005: 24), there is a nominal nucleus and a nominal core consisting of the nucleus itself and associated arguments. The NP level corresponds to the clause/sentence levels of the layered structure of the clause. Each of these has a periphery. Nominal aspect concerns whether the referent entity is an individual, parts of an individual, a set of individuals, or a sortal kind. Core$_N$ operators are to do with quality with respect to number, qualification and negation while the NP operators relate to definiteness and deixis, locating the NP in a discourse situation. The operators for the NP are indicated in Figure 2. The formulation of the layered structure of the noun phrase within RRG (Van Valin 2005: 24, see also Van Valin & LaPolla 1997) owes much to the work of Rijkhoff (2002).

```
                        NP
                       ╱ │
                      ╱  │
          (NPIP)   COREₙ (  ◄─────────── PERIPHERYₙ )
             │        │ ╲
             │        │  ╲
          NP/ADV    NUCₙ   PP
                      │
                      │
                      N                        PP/ADV
                      │
                      │
         NASP ──►   NUCₙ
                      │
                      │
         NUM ──►    COREₙ
                      │
                      │
         QNT ──►    COREₙ
                      │
                      │
         NEG ──►    COREₙ
                      │
                      │
         DEF ──►      NP
                      │
                      │
         DEIC ──►     NP
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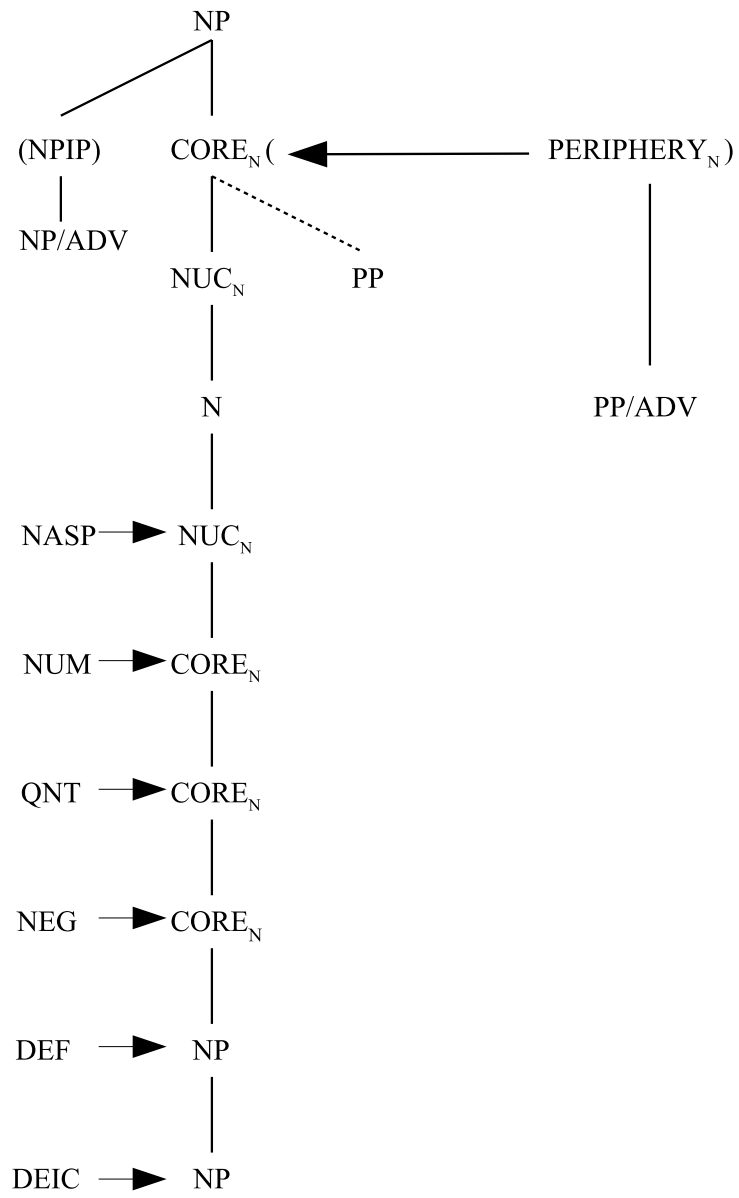
Fig. 2: The general schema for a layered structure of the noun phrase (from Van Valin 2005)

2 Expressing negative polarity on the Irish clause

A negative clause is one which makes an assertion that some event, situation or state of affairs does not hold. Irish has several interesting ways of expressing negative polarity in the clause, but does not have a single word that means 'yes' or 'no' while having strategies that arrive at the same result whether positive or negative. In particular, the language makes a distinction on the forms used according to whether a clause contains a lexical matrix verb, the auxiliary form of the verb 'to be', or is a copula clause. Within a clause, a further distinction is made based on whether the verb encodes past tense or not. We find that Modern Irish uses lexical, morphological, and analytical means to encode negation. At the level of the lexical verb, Modern Irish can employ morphological prefixes, as in examples (1)–(2), to encode negation on the verb within the layered structure of the word (LSW). This encodes negation on the verb nucleus and represents an instance of morphological negation. In contrast, lexical negation describes a situation whereby a negative concept is embedded in the lexical semantics of a verb (3).

(1)   **dí**: NEG + lexical V → NEG.V [morphological negation]

    díscaoil   V 'unloose'
    díphacáil   V 'unpack'
    díphlugáil   V 'unplug'
    díghreamaigh   V 'unstick'
    díliostáil   V 'unsubscribe'
    dícheangail   V 'untie'
    díchornaigh   V 'unwind'
    díthocraisigh   V 'unwind'
    díscoir   V 'unyoke'

(2)   **do**: NEG + LEXICAL ITEM$_{TYPE}$ → 'un-/non-'V$_{TYPE}$ [morphological negation]

    doicheallaigh   V 'unwilling/balk' [vs. cealaigh V 'cancel', 'rescind, 'remove']

(3)   Lexical negation
    a. *fásaigh*   v. 'empty/lay waste/desert'
    b. *folmhaigh*   v. 'empty/exhaust/discharge/purge/evacuate/devastate'
    c. *bánaigh*   v. 'empty/clear out/devastate/lay waste'

The general form of encoding negative polarity in a clause involves analytical negation consisting of a negative particle plus a *matrix* verb (allowing for past or non-past tense distinction), a negative form of the *auxiliary*, or a negative form of the *copula*. Different forms too of a negative particle occur with an *imperative* clause. Additionally, negation is morphologically

supported in *question* and *conditional* forms of a clause. The particles that are used to encode negative polarity include (4), for the verb and clause (see also Figure 3).
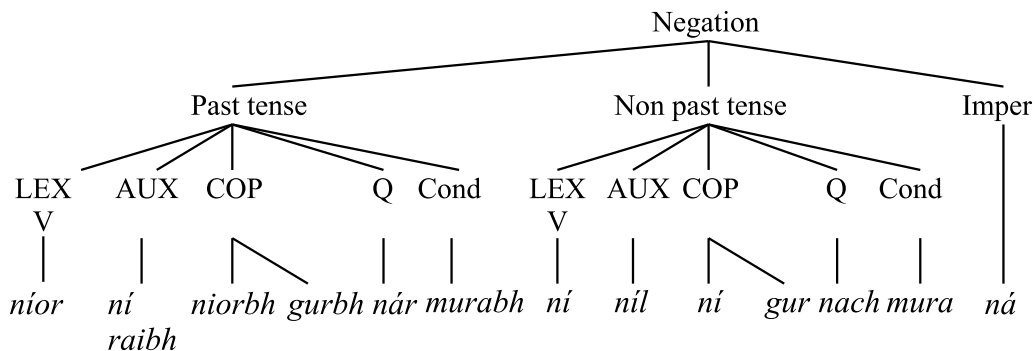

Fig. 3: The taxonomy of negation in Modern Irish

We will see that the encoding of negation on the clause is symmetric in that it always pivots on the past/non-past distinction. By symmetric we mean that the clause structure is the same for the encoding of (positive and) negative polarity with the exception of the form of the negative particle (5).

(4)   The negative polarity particles on the clause in analytical negation

Clause	The clausal environment of negation
Ní 'not'	1. Form of NEG used with all *non-past* tense *matrix* verbs
Níor 'not'	2. Form of NEG used with past tense *matrix* verbs
Ní raibh 'not' AUX	3. Negative form of past tense AUX
Níl 'not' AUX	4. Negative form of *non-past* tense AUX
Nach 'not'	5. Form used in Qs with *non-past* tense matrix verbs
Nár 'not'	6. Form used in Qs with past tense matrix verbs
Nár 'not'	7. Form used in *present subjunctive* matrix verbs
Mura 'if..not'	8. Used in *conditional* clauses with *non-past* tense matrix verbs
Murar 'if..not'	9. Used in *conditional* clauses with past tense *matrix* verbs
Ná 'not'	10. Form of NEG used only in *imperative* mood

(5) Example of negative encoding on verb *éirigh* 'rise'

     a.   *Positive encoding*

Past Tense	*éirigh sé*	he rose.

     b.   *Negative encoding*

Past Tense	*níor éirigh sé*	he didn't rise.
Present Tense	*ní éiríonn sé*	he won't rise.
Future Tense	*ní éireoidh sé*	he will not rise.
Past Habitual	*ní éiríodh sé*	he didn't rise.
Conditional Mood	*ní éireodh sé*	he used to not rise/he didn't use to rise.
Imperative	*ná héirigh*	Don't not rise!/Don't rise!
Present Subjunctive	*nár éirí sé*	. . . he may not rise.

3 Negative polarity in clauses with matrix verbs

In this section, we explore the form of the negative used with matrix verbs. We find that a symmetry exists that is based on the past/non-past distinction.

3.1 *Nior*-Form of NEG used with past tense matrix verbs

In examples (6)–(8), we can see that the negative particle *níor* is used to flag negation on the clause. The matrix verb is in the past tense in these examples.

(6)   *Níor chreideas*   *é.*
     NEG believe.V-PST+1SG 3SG.M.ACC
     'I did not believe it/him.'

(7)   *Níor tháinig*   *Cáit*   *fós.*
     NEG arrive.V-PST Kate.N yet.ADV
     'Kate did not arrive yet.'

(8)   *Níor cheannaig*   *mé*   *an*   *t-asal*
     NEG bought.V-PST 1SG.NOM the.DET donkey.N
     'I did not buy the small black donkey.'
     NEG'[**do'**(I, [**buy'**(I, the donkey)])]

Example (9) is especially interesting in that it contains a negative encoding on the clause and, additionally, a noun with the lexicalised meaning of 'nothing'. The effect of both these together creates an ambiguity that intersects with quantification, in particular, the existential quantifier.

(9) *Níor dhúirt   Patsy   faic.*
     NEG say.V-PST Patsy.N nothing.V
     LIT: 'Patsy did not say nothing'
     'Patsy did not say anything.'

3.2 *Ní*-Form of NEG used with all non-past tense matrix verbs

In examples (10)–(11), we can see that the negative particle *ní* is used to flag negation on the clause. The matrix verb is in non-past tenses in these examples.

(10) *Ach ag   stáisiún na Carraige Duibhe, ní   bhogfadh   sí*
      PART at:PREP station.N DET Blackrock.N,   NEG move.V-FUT 3SG.F.NOM
      as   a   suíochán.
      from:PREP ADJ.POSS.F seat.N
      'But, at Blackrock station, she would not move from her seat.'

We see in (11) the intersection of negation at clause level and nominal level with quantification. In English, we must represent <NEG (anyone)> as 'no one'. That is, as <NEG (N)>.

(11) *Ní éireodh   éinne,   fear   nó páiste.*
      NEG rise.V-PRS anyone.N man.N or child.N
      LIT: 'anyone did not rise, man or child'.
      'No one rose, man or child.'

The Irish nominal *einne* 'anyone' represents a generic existential quantifier and, typical of languages generally, this interacts with negation as <NEG (N)>.

3.3 Negation used in clauses with auxiliary verbs

In auxiliary verb clauses, we also find that a symmetry exists across the past/non-past distinction (Table 1). We show predicative, attributive and the *níl ach* 'only' construction, with past tense in (13) to (14) and present tense in (15) to (18). The predicative uses shown are also present tense and so, as expected, have *níl* encoding negation.

3.3.1 Attributive use of auxiliary verbs and negation

Clause negation and constituent negation interact in interesting and complex ways. In Modern Irish, the clause form based on the auxiliary verb construction is used to analytically negate a constituent. That is, the constructional form of the auxiliary clause for attribution is also used as a device for inner constituent negation. We can see this in the bolded constituents in the example translations (13)–(18).

a.	AUX Verb of 'to be' present tense + ADV|ADJ|PREP + VN clause: *Tá mé …*
b.	Negative AUX of 'to be' present tense + ADV|ADJ|PREP + VN clause: *Níl mé …*
c.	AUX Verb of 'to be' past tense + ADV|ADJ|PREP + VN clause: *Bhí mé …*
d.	Negative AUX of 'to be' past tense + ADV|ADJ|PREP + VN clause: *Ní raibh mé …*

Table 1: The syntactic pattern of the Irish AUX 'to be' over past/present tenses

(12) < TNS {PST|PRS} < NEG **BE'**(LS) > >

(13) *Ní   raibh   Patsy   sa   chistin, ach bhí   an raidió*
NEG BE:AUX-PST Patsy.N in:PREP+DET kitchen.N PART BE:AUX-PST DET radio
ar   siúl.
on:PREP playing:VN

'Patsy was **not in the kitchen** but the radio was on.'

<PST< NEG (**be-at'**(Patsy, kitchen)) > >

(14) *Ní   raibh   an roth   ag   bogadh.*
NEG BE:AUX-PST DET wheel.N at:PREP moving:VN

'The wheel was **not turning**.'

<PST< NEG (**be-at'**(the wheel, [**moving'**]) > >

(15) *Níl   an madadh ag   ithe.*
NEG-BE:AUX-PRS DET dog.N   at:PREP eating :VN

'The dog is**n't eating**/The dog is **not eating**.'

<PRS< NEG (**be-at'**(the dog, [**eating'**]) > >

(16) *Níl   arigead ag   muintir Pháidín.*
NEG-BE:AUX-PRS money.N at:PREP family.N Paidín.N

'Paidín's family do**n't have money**.'

<PRS< NEG (**be-at'**(money, Paidín's family)) > >

(17) *Níl   bean   ag   an   doras.*
NEG-BE:AUX-PRS woman.N at:PREP the:DET door.N

'A woman is **not at the door**. [… it is a man, etc.]'

<PRS<NEG'[**be-at'**(door, woman)] > >

(18) *Níl   lá   deas   ann.*
NEG-BE:AUX-PRS day.N nice:ADJ there:DEM

'The day is **not nice**.'

<PRS<NEG'[**be'**(day, [**nice'**])] > >

3.3.2 Inner negation on embedded auxiliary clause

In (19), we have an embedded auxiliary clause that encodes negation on the constituent. Sometimes negation on the constituent is used to 'fine-tune' negation scope within the clause. Here, we see use of an embedded auxiliary clause construction used to deliver negative scope over the constituents.

(19) *Deir   siad   nach bhfuil   Bríd   ná Máirtín   anseo.*
       Say.V-PST 3PL.NOM NEG BE:AUX-PRS Bríd.N or Máirtín.N here.ADV
       LIT: 'They said that Bríd or Máirtín are not here'.
       'They said that <u>neither</u> Bríd or Máirtín are here.'
       <PST<[say'(x, [<PRS<**NEG** [**be-at'**(Bríd or Máirtín, [**here'**])]] > >

In this example, the translation captures the inner negation within the embedded AUX clause.

3.3.3 Predicative use of auxiliary verbs and negation

Negation is also found with predicative use of auxiliary constructions. We represent two different ways of articulating a predicative construction, all showing negative polarity, with the forms symmetric over the past/non-past distinction.

(20) *Ní **raibh**   tuirseach orm.*
       NEG BE:AUX-PST tired:ADJ on:PREP+1SG
       LIT: 'Tiredness is not on me'
       'I am not tired.'
       <PST< NEG (**feel'**(I, [**tired'**])) > >

   a. *Ní raibh   mé tuirseach.*
       NEG BE:AUX-PST 1SG tired:ADJ

       'I am not tired.'
       <PST< NEG (**feel'**(I, [**tired'**])) > >

   b. *Níl   tuirseach orm.*
       NEG-BE:AUX-PRS tired:ADJ on:PREP+1SG
       LIT: 'Tiredness is not on me'
       'I am not tired.'
       <PRS< NEG (**feel'**(I, [**tired'**])) > >

   c. *Níl   mé tuirseach.*
       NEG-BE:AUX-PRS 1SG tired:ADJ
       'I am not tired.'
       <PRS< NEG (**feel'**(I, [**tired'**])) > >

3.3.4 The níl . . . ach 'only' construction – 'negation . . . but' → 'only'

The negative form of the auxiliary níl, when combined with ach 'but', is used to express the notion 'only' in a NÍL . . . ACH construction. The form used also pivots on the past/non-past distinction and this construction indicates the same symmetry as other clauses for negative encoding.

(21) *Ní   raibh   ach leabhar amháin   agam.*
      NEG BE:AUX-PST BUT book.N one:QTY at:PREP+1SG

      'I had **only** one book.'

(22) *Níl   ach leabhar amháin   agam.*
      NEG-BE:AUX-PRS BUT book.N one:QTY at:PREP+1SG

      'I have **only** one book.'

This also reflects another instance where, at constructional level, the negative auxiliary intersects with qualification to reinforce a particular reading, here encoding the sense of 'only'.

3.4 Negation and the copula

The copula verb types of 'to be' with their schemata are indicated in a generalised form, along with the negative copula forms, in Table 2. Syntactically, while the AUX verb of 'to be' verb takes all tenses, the copula is impoverished in inflection and is never inflected for person. The copula is held to predicate for essential or inherent qualities and generally takes NP predicates. The copula has only two forms for tense: *is* 'be' is the positive polarity unmarked form used for present and future while *ba* 'be' is used for positive polarity past and conditional meanings.

The copula has negative forms: *ní* 'NOT be' in the present, *níorbh* in the past. Embedded negative copulas and negative copula questions take the respective present and past forms: *nach*, *nár(bh)*. We will see examples of these in the next section when we examine negation in relation to questions. The copula may never stand alone in a response to a question, irrespective of whether the polarity of the response is positive or negative. Typically, the copula will co-occur with another constituent, for example, an adjective or pronoun.

(23) *Ní   breá   an lá   é.*
      NEG.COP.PRS fine:ADJ DET day.N 3SG.M.ACC

      'It is not a fine day.'

      NEG'[**fine'**(day)]

(24) *Ní   deas   an lá   é.*
      NEG.COP.PRS nice:ADJ the:DET day.N 3SG.M.ACC

      'It is not a nice day.'

      NEG'[**nice'**(day)]

a.	Copula-past tense:	*is* …
b.	Copula-past tense + VN clause:	*Ba*_{cop} + ADJ|N + VN clause
c.	Negative copula present tense + VN clause:	*Ní* … + ADJ|N + VN clause
d.	Negative copula past tense + VN clause:	**Níorbh** … + ADJ|N + VN clause
e.	Copula-past tense + finite clause:	*Ba*_{cop} + *féidir* + finite complement
f.	Negative copula present tense + finite complement clause:	**Ní** … + finite complement
g.	Negative copula past tense + finite complement clause:	**Níorbh** … + finite complement
h.	Copula within a complement clause, present tense:	… *gur* …
i.	Copula within a complement clause, past tense:	… *gurbh* …

Table 2: The syntactic pattern of the Irish Copula 'to be' clause

3.5 The negative forms used in questions

We now examine the negative forms used in the various kinds of question clauses, involving matrix, auxiliary and question clauses, respectively.

3.5.1 Question clauses

A question clause may contain an auxiliary verb, or a lexical verb. There are particular characteristics to each which are important to the clause forms of Irish.

3.5.1.1 Questions with a matrix verb

We look first at questions with a lexical verb. As we see, these are also symmetric and sensitive to the past/non-past distinction.

(25)   Past

    Nár   <u>scríobh</u>   sí   leitir   agat?
    NEG.Q write.V-PST 3SG.F letter.N at:PREP+2SG
    'Did she not write the letter for you?'

(26)   Non-past

    Nach éisteann   sé?
    NEG.Q listen.V-PRS 3SG.

    'Does he not listen?'/'Doesn't he listen?'

3.5.1.2 Questions requiring yes/no response and verb echo forms

In the case of questions with lexical verbs, we should also note that when a question is asked that requires a yes/no response, it is necessary for grammatical acceptability that the matrix verb is repeated in an echo form of the clause along with the appropriate polarity. If the polarity is negative, then a negative particle is also required. There is no clausal form that, as a response to a yes/no question, does not require the echo form with the repeat of the matrix verb and, consequently, the matrix verb is repeated with negative polarity encoded by the presence of a negative particle. These are called echo forms and are used for encoding the appropriate positive or negative polarity. These echo forms are used across all tenses for lexical verbs, the AUX verb of 'to be' and the copula.

(27)   a. *Ar cheannaigh sé   é?*
           Q buy.V-PST   3SG.M 3SG.M.ACC

           'Did he buy it?'

      b. *Cheannaigh!*
           Buy.V-PST

           '(He) bought (it)!' = 'Yes!'

      c. *Níor cheannaigh!*
           NEG buy.V-PST

           '(He) did not buy (it)!' = 'No!'

(28)   a. *An dtiochfá   liom?*
           Q come.V-FUT+2SG with:PREP+1SG

           'Will you come with me?'

      b. *Thiocfainn!*
            Come.V-FUT+1SG

           'I will come (with you)!' = 'Yes!'

      c. *Ní   thiocfainn!*
           NEG come.V-FUT+1SG

           'I will not come (with you)!' = 'No!'

3.5.1.3 Question clause with NEG in auxiliary forms

If the *question* clause employs the *auxiliary* verb then the appropriate negative (or positive) form of the AUX must occur in the response to a question. That is, the tense and NEG operators in the LSC are directly encoded in the AUX.

(29)   a. *Nach   bhfuil   sé   ann?*
         NEG.Q BE.AUX-PRS 3SG.M there:DEM
         'Isn't he there?'

       b. *Tá!*
         BE.AUX-PRS
         LIT: 'Be!'
         = 'Yes!'   [**Positive**]

       c. *Níl!*
         NEG.be.AUX-PRS
         LIT: 'Not be!'
         = 'No!'   [**Negative**]

(30)   *Nach   bhfuil   múinteoir ansin?*
      NEG.Q BE:AUX-PRS teacher.N there.ADV
      'Is there **no teacher** there?'

(31)   *Nach   bhfuil   an   fhuinneog briste?*
      NEG.Q BE:AUX-PRS DET window.N broken.ADJ
      'Isn't the window broken?'/'Is the window **not broken**?'

(32)   *Nach   bhfuil   tú   ag   ól?*
      NEG.Q BE:AUX-PRS 2SG at:PREP drinking:VN
      'Aren't you drinking?' / 'Are you **not drinking**?'

But, interestingly, this particle can also be found on occasion with a question form expressed in the negative with past tense auxiliary verb (33).

(33)   *Nach   raibh   feirmeoir ar bith sa   tír?*
      NEG.Q BE:AUX-PST farmer.N at all in:PREP+DET country.N
      'Was there **no farmer** in the country at all?'

Stating this form of question in the positive has the format shown in (34).

(34)   *An raibh   sé   anseo?*
      Q BE:AUX-PST 3SG.M here:DEIC
      'Was he here?'

3.5.1.4 Question clause with the negative copula

The construction format is symmetric over positive and negative polarity but the morphological form of the negative copula is based on the past/non-past distinction.

(35)   *Nach <u>maith</u>   leat   do   dhinnéar?*
        NEG.Q good:ADJ with:PREP+2SG 2SG-POSS dinner.N
        'Do you not like your dinner?'

(36)   a. *An maith   leat   tae?*
           Q   like.V-PRS with:PREP+2SG tea.N
           'Do you like tea?'

         b. *Is   maith!*
           COP like-PRS
           LIT: 'Be like!'
           = 'Yes!'

         c. *Ní   maith!*
           NEG.COP like-PRS
           LIT: 'Not like!'
           = 'No!'

(37)   a. *Nárbh   amhránaite maithe   iad?*
           NEG.COP singers.N   good:ADJ 3PL
           'Weren't they good singers?'

         b. *Ba   ea*
           COP.PST they!
           'Yes, they are!'

         c. *Níorbh   ea*
           NEG.COP.PST they!
           'No, they are not!'

3.6 Negative conditional clauses with matrix verbs

The *Mura/Murar* 'IF NEG-COND' use in negative conditional clauses of Modern Irish also pivots on the past/non-past tense of the matrix verbs.

(38)   **Mura**   *bhfuil   tú anseo,   ní   thiocfaidh   sé   abhaile.*
       If neg-COND BE-AUX-PRS 2SG here:DEM NEG come:V-FUT 3SG.M home:N
       'If you are not here, he won't come home.'

(39) ***Murar***   *féidir*   *leat*   *é*   *a*   *dhéanamh, fág*
      If neg-COND able:ADJ with:PREP+2SG 3SG.M.ACC REL do/make:VN leave:V-IMP

      é.
      3SG.M

      'If you cannot do it, leave it.'

3.7 *Ná* – The form of NEG used only in imperative mood

The unique negative form of the imperative construction is shown in (40)–(43).

(40) *Ná mol!*
      NEG praise.V-IMP

      'Don't praise!'

(41) *Ná fág!*
      NEG leave.V-IMP

      'Don't leave!'

(42) *Ná buail   mé!*
      NEG praise.V-IMP 1SG

      'Don't hit me!'

(43) *Ná bris   na   fuinneogaí.*
      NEG praise.V-IMP DET.pl windows.N.pl

      'Don't break the windows!'

3.8 Negative forms in exclamatory use with adjectives.

The use of the negative in exclamatory clauses with adjectives is sensitive to the past/non-past tense of the underlying verb. Here, we show the format with non-past copula in (44) and (45).

(44) *Nach maith   é!*
      NEG.Q good:ADJ 3SG.M.ACC

      LIT: 'Is he not good!'

      'Isn't he good!' [= 'He is good!']

(45) *Ní   hionann iad!*
      NEG same:ADJ 3PL.ACC

      'They are not the same!'

4 Expressing negative polarity within the Irish noun phrase

As with the clause and the verb forms, Modern Irish has additionally interesting ways of expressing negative polarity on the noun and the noun phrase. The means of encoding negation

on the nominal system include those shown in (46). These consist of a preposition and several morphological prefixes, as well as some lexically negative nouns. We can note that some nouns lexically encode the meaning 'nothing'. These are related to the class of generic nouns, indefinites, negative indefinites and existential quantifiers found in Irish.

(46)   The negative marking on the noun/noun phrase

Noun (phrase)	The nominal environment for negation
Gan 'not=without'	1. *Prepositional* form of NEG used with a *noun phrase*.
faic	2. *Noun* with the lexical meaning of 'nothing'
dada	3. Noun with the lexical meaning of 'nothing'
náid	4. Noun with the lexical meaning of 'nothing'
neamh-	5. *Prefix* on lexical item meaning of 'non'/'un-'/
nea-	6. Prefix on lexical item meaning of 'non'/'un-'/
mi-	7. Prefix on lexical item meaning of 'non'/'un-'/
an-	8. Prefix on lexical item meaning of 'non'/'un-'/
ain-	9. Prefix on lexical item meaning of 'non'/'un-'/
do-	10. Prefix on lexical item meaning of 'non'/'un-'/

Many languages use quantifiers that are inherently negative and that have the potential to interact within the grammar with negative indefinites. English, for example, used 'none', 'nothing' along with some phrases, such as 'not many' that are negated independently. Modern Irish is no different in this regard.

PERSON	*neamhdhuin*	Nobody
TIME	*in aon chor*	Never
PLACE	*in aon áit*	Nowhere
MANNER	*ar chaoi ar bith*	
	ar aon dóigh	No how
NEGATIVE/NO!	*ní hea*	
	is cuma	No (In Irish, based on COPULA!)
THING	*neamhní*	Nothing
	faic	Nothing
	náid	Nothing
	dada	Nothing
	neodar	Nothing
	aon ní	Nothing
	faic na fríde	Nothing at all
NONE	*cuid ar bith*	No part
	aon duine	Any person
	aon rud	Any thing
	aon cheann	Any one
	nóin	None
	lán nó loic	'All or nothing'
ANY	*ar aon chaoi*	In any case
SOME	*roinnt*	Some (people)
	(duine) éigin	Some (person)
	(daoine) áirithe	Some (person)
	cuid (de)	Some (= part of)

Table 3: Inventory of negative indefinites and quantifiers of Modern Irish

4.1 The form of morphological NEG used with a noun

Generally, for morphological negation used on a noun, one may employ several prefixes. The same prefix can also be used with an adjective to encode a negative adjective. These are all instances of morphological negation. When the prefixes used in (47) are employed on a noun, it exhibits negation on the nominal core.

(47) NEG-prefixes + N → 'non-'   [NEG **on** CORE$_N$]

ain-	PREFIX	'non-'
an-	PREFIX	'non-'
do-	PREFIX	'non-'
mi-	PREFIX	'non-'
nea-	PREFIX	'non-'
neamh-	PREFIX	'non-'

(48) *ain*:NEG-prefix + N LEXICAL ITEM$_{TYPE}$ → 'un-/non-' ITEM$_{TYPE}$

ainfhíreán	NM	'unjust person'
ainfhirinne	NF	'untruth'

(49) *ain*:NEG-prefix + ADJECTIVE → 'un-/non-' ITEM$_{TYPE}$

aincheart	ADJ	'unjust'
aineoil	ADJ	'unknown'
aineolach	ADJ	'unknowing'
aineolach ar rud	ADJ	'unlearned of something'
ainfhéichiúnta	ADJ	'unpunctual'
ainfhíor	ADJ	'untrue'
ainfhíréanta	ADJ	'unjust'

(50) *an*:NEG-prefix + LEXICAL ITEM$_{TYPE}$ → 'un-/non-' ITEM$_{TYPE}$

anaithnid	ADJ	'unknown'
anaoibhniúil	ADJ	'unsmiling'

(51) *do*:NEG + LEXICAL ITEM$_{TYPE}$ → 'un-/non-'N$_{TYPE}$

do-ríomhchlár	NM	'non-program'[non computer program]
dofheiscint	NF	'unsightliness'

(52) *do*:NEG + LEXICAL ITEM$_{TYPE}$ → 'un-/non-'ADJ$_{TYPE}$

do-inste	ADJ	'untold'
do-iompraithe	ADJ	'non-reversible'
do-mhaite	ADJ	'unjustifiable'
do-úsáidte	ADJ	'unusable'

dobhogtha	ADJ	'unshakeable'
dochaideartha	ADJ	'unsociable'
dochorraithe	ADJ	'unshakeable'
dochosanta	ADJ	'unjustifiable'
dodhíolta	ADJ	'unsaleable'
dofhaighte	ADJ	'unprocurable'
dofhíoraithe	ADJ	'unverifiable'
doimeartha	ADJ	'unplayable'
doléirithe	ADJ	'unplayable'
doléite	ADJ	'unreadable'
doluaite	ADJ	'unspeakable'
domhúinte	ADJ	'unteachable'
donite	ADJ	'unwashable'
doráite	ADJ	'unspeakable'
doreoite	ADJ	'non-freezing'
dosmaoinimh	ADJ	'unthinkable'
dostoptha	ADJ	'unstoppable'
dostróicthe	ADJ	'untearable'

(53)   *mí*:NEG + LEXICAL ITEM$_{\text{TYPE}}$ → 'un-/non-'N$_{\text{TYPE}}$

míbhinneas	NM	'untunefulness'
míbhlastacht	NF	'unsavouriness'
mífholláine	NF	'unwholesomeness'
mífhreagracht	NF	'unresponsiveness'
mímhaise	NF	'unseemliness'
míráth	NM	'unsuccess'
míshuaimhneas	NM	'unrest'

(54)   *mí*:NEG + LEXICAL ITEM$_{\text{TYPE}}$ → 'un-/non-'ADJ$_{\text{TYPE}}$

mí-ordúil	ADJ	'unmethodical'
míbhanúil	ADJ	'unladylike'
míbhinn	ADJ	'unmelodious'
míbhinn	ADJ	'unmusical'
míbhreá	ADJ	'unlovely'
míbhuíoch	ADJ	'unthankful'
mícheolmhar	ADJ	'unmusical'
míchreidiúnach	ADJ	'untrustworthy'
mídheas	ADJ	'unlovely'
mídheas	ADJ	'unpleasant'

(55)   *neamh*:NEG + LEXICAL ITEM_{TYPE} → 'un-/non-'N_{TYPE}

neamhaontach	NM	'non-conformist'
neamhbheith	NF	'non-existence'
neamhchomhlíonadh	NM	'non-compliance'
neamhchomhlíonadh	NM	'non-fulfilment'
neamhchomhraiceoir	NM	'non-combatant'
neamhchríochnú	NM	'non-completion'
neamhdhuine	NM	'nobody'
neamhdhuine	NM	'nonentity'
neamhíoc	NM	'non-payment'
neamhionsaí	NF	'non-aggression'
neamhní	NM	'nonentity'
neamhní	NM	'nothing'
neamhní	NM	'nothingness'

(56)   *neamh*:NEG + LEXICAL ITEM_{TYPE} → 'un-/non-'ADJ_{TYPE}

neamhcheadaithe	ADJ	'unpermitted'
neamhcheangailte	ADJ	'non-attached'
neamhcheirdiúil	ADJ	'unskilful'
neamhcheolmhar	ADJ	'unmusical'
neamhchoimhéadach	ADJ	'unwatchful'
neamhchóir	ADJ	'unjust'
neamhchoitianta	ADJ	'unusual'
neamhchomharsanúil	ADJ	'unneighbourly'
neamhchosúil	ADJ	'unlike'
neamheolach	ADJ	'unversed'
neamheolaíoch	ADJ	'unscientific'
neamhfhileata	ADJ	'unpoetical'
neamhfhíréanta	ADJ	'unjust'
neamhghlic	ADJ	'unsophisticated'
neamhghnóthach	ADJ	'unoccupied'
neamhghrámhar	ADJ	'unloving'
neamhléite	ADJ	'unread'
neamhullamh	ADJ	'unprepared'
neamhullamh	ADJ	'unready'

In other languages, English, for example, 'un-' is largely constrained to adjectival stems and 'non-' usually is restricted to either adjectival or nominal stems. However, Modern Irish is much more diverse in its use of prefixes to encode negation on the nominal.

4.2 Analytical negation with the preposition *gan* 'without'

The preposition *gan* 'without' can be used with a nominal to encode analytical negation over
its object N and is highly productive in usage.

(57) *Bhí   sé   ann   **gan**   fhios.*
       AUX-PAST 3SG.M there:DEM without:NEG knowledge.N
       'He was there without knowledge.'

(58) *gan*:PREP N 'without N'$_{\text{Irish}}$ → 'un-N'

gan ábhar	PREP N	'unjustification'
gan ainm	PREP N	'unnamed'
gan ainmniú	PREP N	'unspecified'
gan áireamh	PREP N	'untold'
gan aithint	PREP N	'unperceived'
gan aithne	PREP N	'unknown'
gan athrú	PREP N	'unvaried'
gan bhearradh	PREP N	'unshaven'
gan bhrath	PREP N	'unperceived'
gan bhrí	PREP N	'unmeaning'
gan bhriseadh	PREP N	'unvanquished'
gan bhuaireamh	PREP N	'untroubled'
gan bhualadh	PREP N	'unsurpassed'
gan bpholladh	PREP N	'un-perforated'
gan buaireamh	PREP N	'unperturbed'
gan chaomhnú	PREP N	'unprotected'
gan cheadúnas	PREP N	'unlicensed'
gan cheist	PREP N	'unquestionable'
gan cheol	PREP N	'unmusical (without music)'
gan chiall	PREP N	'unmeaning'
gan chónaí	PREP N	'unoccupied'
gan chosaint	PREP N	'unprotected'
gan chruthú	PREP N	'unproved'

Additionally, the preposition *gan* 'without' can take scope over the complete noun phrase, as
well as a noun. When it is used with the noun phrase, it takes within its scope the definiteness
operator.

(59) *gan*:PREP NP 'without NP'

(60) **gan**　　　*an　t-airgead*
without:NEG DET money.N

'Without **the money**.'

(61) *Bhí　　sé　　ann　　**gan**　　fhios　　d'éinne　beo　　ná*
AUX-PAST 3SG.M there:DEM without:NEG knowledge.N anyone.N alive:ADJ CONJ

marbh.
dead:ADJ

'He was there **without knowledge of anyone alive or dead**.'

(62)　a.　*An　　dá　　theach　　mhóra*
DET.SG two:NUM house.N.sg big.ADJ.pl

'The two big houses.'

　　b.　***Gan***　　*an　　dá　　theach　　mhóra*
Without:NEG DET.SG two:NUM house.N.sg big:ADJ.PL

'Without the two big houses.'

　　c.　***Gan***　　NP
without N

'**NEG'**[N]'

We have seen examples of lexically negative nouns, morphologically marked negative nouns and analytically marked negative nouns and noun phrases.

(63)　NEG on the NUC_N: [NEG-PREFIX+N]

　　a.　*neamhduine* 'nobody'/'nonperson'

　　b.　*neamhní* 'nonentity'

(64)　NEG on the CORE_N: [GAN 'WITHOUT' N]

　　a.　*gan airgead* 'without money'

　　b.　*gan fhios* 'without knowledge'

(65)　NEG on the NP: [GAN 'WITHOUT' NP]

　　a.　*gan an t-airgead* 'without the money'

　　b.　*gan an dá theach mhóra* 'without the two big houses'

5 Discussion

We have earlier seen examples of negative encoding on the verb and the clause. A negative clause is one which makes an assertion that some event, situation or state of affairs does

not hold. Modern Irish makes a distinction on the forms used according to whether a clause contains a lexical matrix verb, the auxiliary form of the verb 'to be', or is a copula clause.

Within a clause, a further distinction is made based on whether the verb encodes the past tense or not and which may relate to a realis/irrealis sensitivity. *Irrealis* indicates that a certain situation or action is known to have not happened at the time of the speaker talking. With non-past tenses, *irrealis* is used to express something that is not known to be the case in reality. Then, with past tense encoding *realis*, the speaker indicates that something is actually the case (or not, if negated). That is, *realis* strategies express what the speaker considers to be a known state of affairs, broadly as in positive or negative declarative sentences.

We have seen clause negation and constituent negation interact in complex ways. Modern Irish uses the clausal form of the attributive auxiliary construction to attribute negative polarity on a particular constituent. Additionally, negation interacts in many ways with indefiniteness and quantification. We have also examined evidence that Modern Irish employs lexical, morphological and analytical means to encode negation with the appropriate level of scope on the LSC, LSNP and LSW.

(66)   NEG **on** NUC_V: [NEG-PREFIX+VERB]

     a.   ***dí***:NEG + lexical V $\rightarrow$ NEG.V

     b.   ***dí***:NEG + lexical V $\rightarrow$ NEG.VA

     c.   ***dí***:NEG + lexical V $\rightarrow$ NEG.VN

(67)   NEG **on** NUC_N: [NEG-PREFIX+NOUN]

     a.   ***do***:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'N_TYPE

     b.   ***do***:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'V_TYPE

     c.   ***do***:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'ADJ_TYPE

     d.   ***mí***:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'N_TYPE

     e.   ***mí***:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'ADJ_TYPE

     f.   *neamh*:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'N_TYPE

     g.   *neamh*:NEG + LEXICAL ITEM_TYPE $\rightarrow$ 'un-/non-'ADJ_TYPE

We have found in particular that in respect of the noun, negation is found on the nominal nucleus, core and noun phrase. Additionally, we have seen that Irish has a series of generic nouns that function in negative polarity contexts; for instance, *rud* functions both as a negative polarity indefinite ('anything'/'nothing') and as a generic common noun ('thing'), as does *duine* 'person, anyone'.

Therefore, a consequence of this for the RRG model is that with respect to Modern Irish, the model must allow negation to be encoded within the, NUC_N CORE_N and the NP. NEG must also be a possibility at each level in the LSNP operator projection.

(68)   NP, Core$_N$ and Nuclear$_N$ operators for the LSNP of Modern Irish

    Nuclear$_N$ operator
- Nominal aspect
- NEGATION

    Core$_N$ operators
- Number
- Qualification (quantifiers)
- NEGATION

    NP operators
- Definiteness
- NEGATION
- Deixis

This provides evidence that, for modern Irish, encoding of negation can occur at the NUC, CORE and NP levels within the layered structure of the noun phrase. That is, it reflects the negation possibilities found in the LSC where negation can also occur at the three levels. The seemingly 'simple' nature of logical negation as an operator on the LSC or LSNP that reverses positive and negative polarity hides the complex and subtle expression of negation actually found in Modern Irish (see Figure 4). We have found a rich and complex system of negative particles sensitive to the past/non-past distinction; negation over lexical verbs, auxiliary verbs and copulas, morphological and analytical negation interacting with quantifiers. We have also seen evidence of the interaction of negation with other operators, including nominal negation, in non-trivial ways. Lexical negation describes a situation in which the concept of negation is part and parcel of the lexical semantics of a particular verb.
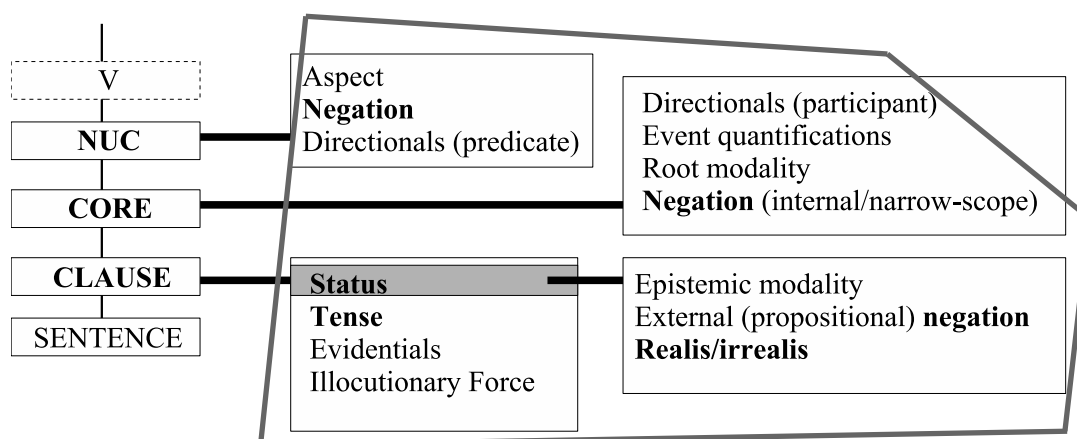

Fig. 4: Map of inter-related clausal negation space in the LSC for Modern Irish

Payne (1985) introduced the notion of standard negation as 'that type of negation which has one function, the negation of the most minimal and basic sentences'. Standard negation is defined as an operator taking sentential scope, typically in the form of a verbal predicate in a declarative clause exploiting the general strategy available in a given language. Negation, however, is not that 'standard', when it shows interaction with realis/irrealis, verbal tense and aspect, and has occurrence in question, existential and copula clauses, and the other various ways we have seen here.

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