Non-Linear Contextual Allomorphy in Scottish Gaelic (and Irish)

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February 19TH, 2016, SMircle @ Stanford (Not Under Redwoods)

(1) Allomorphy: The phenomenon by which the shape of a linguistic object changes in a way which cannot be derived through the regular phonology of the language.

(2) Not Allomorphy
a. dog -[z]
b. cat -[s]
c. beach -[oz]

(3) Allomorphy
a. ox -[ɛn]
b. fish -[∅]

(4) Contextual Allomorphy: The phenomenon by which the shape of a linguistic object changes due to the presence of another linguistic object in a way which cannot be derived through the regular phonology of the language.

• Why study contextual allomorphy?
  – It is pervasive in natural languages.
  – It doesn’t seem to ‘do’ anything - programming languages never have anything like it.
  – Questions of locality arise in important ways; ‘How close do two linguistic objects need to be in order for contextual allomorphy to be triggered?’
    * a. $\alpha \sim \beta$
      Linear adjacency (Embick, 2010; Bobaljik, 2012)?
    * b. $\alpha$
      In single head, not linearly adjacent (Bobaljik, 2000)?
    * c. $\alpha P$
      XP boundary (Bobaljik, 2012; Bobaljik and Harley, To Appear)?
    * d. $\alpha \beta$
      In single head, structurally adjacent, not linearly?

*Thanks are due, first and foremost, to the native Gaelic and Irish speakers, and my dear friends, who helped me along the way, particularly Eilidh Rankin, Eilidh Sgaimsear, and Eilidh Nic Dhonnchaidh on the Scottish side and Ailbhe Ní Ghallachóir, Conal McShane, Póilín Ní Ghallachóir, and Annie Conner on the Irish side. Taing mhòr is due to the Gaelic teachers at the Sabhal Mòr Ostaig for kindly and patiently teaching me their language, especially Iain Urchardan, Cailean Methven, Muriel Fisher, and Beathag Morrisidan. Any errors are, of course, my own. On the theoretical end, many thanks are due to Jim McCloskey, Jorge Hankamer, Claire Halpert, Brooke Larson, Ivy Sichel, and Itamar Kastner for listening to me ramble about this stuff.

¹Note that these works specifically argue against this kind of allomorphy occurring.
• The goal of this talk is to argue for (d), in which *structural adjacency within a complex head* is what is important, not linear adjacency, contra Embick (2010); Bobaljik (2012); Bonet and Harbour (2012), *inter alia*, but consistent with Radkevich (2011); Bobaljik (2000).

• The evidence for this position come from the Scottish Gaelic² verbal complex.
  – The future suffix has three allomorphs: -idh [i], ∅, and -eas [æs].
  – Allomorphy is determined by the C on the other side of the verbal complex, always separated by the verbal root.

(5) **Scottish Gaelic Future Suffix Allomorphy**

a. ũ P`og -aidh mi mo luaidh anochd.
   kiss -FUT I my love tonight
   ‘I will kiss my love tonight.’

b. Cha ph`og -∅ mi mo luaidh anochd.
   NEG kiss -FUT I my love tonight
   ‘I will not kiss my love tonight.’

c. Ma ph`og -as mi mo luaidh anochd.
   if.REAL kiss -FUT I my love tonight
   ‘If I kiss my love tonight . . . ’

• But before we get there, we have some work to do:
  – §1 lays out the basics of the Scottish Gaelic verbal complex.
  – §2 introduces complementizers, particularly the ‘classes’ of complementizers.
  – §3 discusses the puzzle of how the Gaelic verbal complex is formed, by way of comparison to Irish C-lowering (McCloskey, 1996). I develop a passing observation of Adger (1997), who first reported that C-lowering does not seem to occur in Gaelic.
  – §4 attempts to extend the analysis developed for Gaelic to very similar, and obviously historically related data in Irish, with limited success, as the data are stranger.
  – §5 marks the end of me rambling to you about Gaelic (aka the conclusion).

1 **The Basics of the Scottish Gaelic Verbal Complex**

• Minimally: √root + v.

• Gaelic has an overt and productive exponent of v.

(6) a. beò ∼ beóth -aicn
   alive alive -v
   ‘alive ∼ enliven, arouse’

b. dearg ∼ dearg -aicn
   red red -v
   ‘red ∼ redden’

c. cuimhne ∼ cuimhn -icn
   memory memory -v
   ‘memory ∼ remember’

d. Gàidhlig ∼ Gàidhlig -icn
   Gaelic Gaelic -v
   ‘Gaelic ∼ Gaelicize’

²Note that the language is called Gaelic [gælik]. [gõlik] refers to northern (Ulster) dialects of Irish, or is used a blanket term for all descendants of Old Irish (the ‘Gaelic [gõlik] languages’) - Irish, Scottish Gaelic, and Manx.
Tense in Gaelic is painfully boring, morphologically speaking.

(8) **Scottish Gaelic Verbal Paradigm** - cuir 'put'

<table>
<thead>
<tr>
<th></th>
<th>Future</th>
<th>Past</th>
<th>Conditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>cuir-<em>idh</em> mi</td>
<td>chuir mi</td>
<td>chuir-<em>inn</em></td>
</tr>
<tr>
<td>2sg</td>
<td>cuir-<em>idh</em> tu</td>
<td>chuir thu</td>
<td>chuir-<em>eadh</em> tu</td>
</tr>
<tr>
<td>3sg</td>
<td>cuir-<em>idh</em> e/i</td>
<td>chuir e/i</td>
<td>chuir-<em>eadh</em> e/i</td>
</tr>
<tr>
<td>1pl</td>
<td>cuir-<em>idh</em> sinn</td>
<td>chuir sinn</td>
<td>chuir-<em>eamaid</em></td>
</tr>
<tr>
<td>2pl</td>
<td>cuir-<em>idh</em> sibh</td>
<td>chuir sibh</td>
<td>chuir-<em>eadh</em> sibh</td>
</tr>
<tr>
<td>3pl</td>
<td>cuir-<em>idh</em> iad</td>
<td>chuir iad</td>
<td>chuir-<em>eadh</em> iad</td>
</tr>
</tbody>
</table>

- There’s no morphological present - the morphological future fills this function.
  - It would probably be best to call this a past/non-past system, but there is a morphological present construction, it is just restricted to a periphrastic progressive construction with *tha ‘is.‘

(9) a. **Tha** mi a’ faicinn nam bò.
  be.PRES I seeing the.GEN.PL COW.GEN.PL
  ‘I am seeing the cows (right now).’
  b. **B -idh** mi a’ faicinn nam bò.
  be -FUT I seeing the.GEN.PL COW.GEN.PL
  ‘I see the cows (habitually)’ ~ ‘I will be seeing the cows.’
  c. **Chi** mi na ba.
  see.FUT I the.PL COWS
  ‘I see the cows (habitually)’ ~ ‘I will see the cows.’

- The morphological past is marked through initial consonant mutation most of the time; no suffix occurs.
- Verbs are never conjugated for person, except in the first person conditional, which show the McCloskey and Hale (1984) pattern.²
- It also goes in about the spot we’d expect.

(10) a. chuir-*ich* -inn
  memory -v -1SG.COND
  ‘I would remember’
  b. Gàidhlig -ich -idh
  Gaelic -v -FUT
  ‘…will Gaelicize…’

(11) T

v
\( \sqrt{ \text{ROOT} } \)
\( v -idh \)

Gàidhlig -ich

- There’s only one hiccup - there seems to be some affix specific linearization (Embick and Noyer, 2007).
- In the past tense, the morpheme ‘*do*’ appears between the verbal root and certain complementizers.

(12) Cha **do** chuirmn -*ich* . . .
  NEG do remember -v
  ‘… did not remember . . .’

³For those not familiar, this means that these endings never occur with an overt pronoun, and failure to use these special endings results in ungrammaticality.

(i) a. Cheann -*aich* -inn
  (*‘mi* taigh.
  buy -v -1SG.COND I house
  ‘I would buy a house.’
  b. *Cheann -*aich* -eadh* mi taigh.
  buy -v -COND I house
  Intended: ‘I would buy a house.’

⁴To be qualified shortly.
• I’ll assume that the simplest solution - do is just T linearized to the left.

\[
\begin{array}{c}
T \\
\text{T do} \\
\text{chuimhn- ich} \\
\end{array}
\]

2 Complementizers and the Verbal Complex

• Complementizers are crucial to understanding the morphology of the Scottish Gaelic verbal complex.

• There are two classes of complementizers, which I refer to as ‘triggering’ and ‘non-triggering’ complementizers⁵.

(14) The Classes of Gaelic Complementizers

<table>
<thead>
<tr>
<th>Non-triggering Complementizers</th>
<th>Triggering Complementizers</th>
</tr>
</thead>
<tbody>
<tr>
<td>a [‘a’ - Relativizer #1]</td>
<td>an [‘an’ - Relativizer #2]</td>
</tr>
<tr>
<td>na Free relatives</td>
<td>cha Root negation</td>
</tr>
<tr>
<td>ma Reals conditionals</td>
<td>an Q</td>
</tr>
<tr>
<td>nach Embedded negation</td>
<td>gun Embedded declaratives</td>
</tr>
<tr>
<td>mun ‘before’</td>
<td>mur(a) Negative conditionals</td>
</tr>
<tr>
<td>nan Irrealis conditionals</td>
<td></td>
</tr>
</tbody>
</table>

• There doesn’t seem to be any obvious morphosyntactic or phonological criteria which control these groupings.

• But why do we need these groups?

2.1 Criterion #1: do

• As mentioned above, do appears between certain complementizers and verbs in the past tense.

• Specifically, triggering complementizers.

(15) a. (*‘Do) phog mi mo luaidh araoir.
            past kiss I my love last.night
‘I kissed my love last night.’

b. Cha’ *‘(do) phog mi mo luaidh araoir.
            neg past kiss I my love last.night
‘I did not kiss my love last night.’

c. Ma’ (*‘(do) phog mi mo luaidh araoir, chan’ eil cuimhn’ agam air.
            if.real past kiss I my love last.night neg be.pres.dep memory at.me on.it
‘If I kissed my love last night, I don’t remember it.’

⁵A full explanation of the distribution of ‘a’ and ‘an’ is beyond the scope of this discussion. They are the Gaelic reflex of Irish’s a’ and a’, although not comparable to the Irish besides historically. See McCloskey (2002) for an explanation and analysis of the Irish data, and Appendix A for an explanation of the Gaelic.

Also it may be possible to reduce these classes to just one special case. The free relative marker na and the realis conditional ma may be composed of some element in addition to ‘a’, the first relativizer. But even if this decomposition were possible, the argument about non-linearly conditioned contextual allomorphy is unaffected.
2.2 Criterion #2: The Dependent/Independent Alternation

(16) The Dependent/Independent Alternation: A pattern of contextual allomorphy exhibited by certain verb stems when they occur in a verbal complex with a triggering complementizer.

(17) The Independent/Dependent Alternation in Modern Scottish Gaelic

<table>
<thead>
<tr>
<th>Citation Form</th>
<th>Independent Form</th>
<th>Dependent Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>bi ‘be’</td>
<td>bha</td>
<td>robh</td>
</tr>
<tr>
<td>[pi]</td>
<td>[va]</td>
<td>[ro]</td>
</tr>
<tr>
<td>rach ‘go’</td>
<td>chaidh</td>
<td>deach</td>
</tr>
<tr>
<td>[rax]</td>
<td>[xa]</td>
<td>[d3ax]</td>
</tr>
<tr>
<td>faic ‘see’</td>
<td>chunnaic</td>
<td>faca</td>
</tr>
<tr>
<td>[fuic]</td>
<td>[xu.nk]</td>
<td>[fa.xka]</td>
</tr>
</tbody>
</table>

Past Tense Alternations

<table>
<thead>
<tr>
<th>Citation Form</th>
<th>Independent Form</th>
<th>Dependent Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>d`ean ‘do, make’</td>
<td>ni</td>
<td>d`ean</td>
</tr>
<tr>
<td>[’d3i.on]</td>
<td>[ni:]</td>
<td>[’d3i.on]</td>
</tr>
<tr>
<td>faigh ‘get, find’</td>
<td>gheibh</td>
<td>faigh</td>
</tr>
<tr>
<td>[fai]</td>
<td>[jcv] or [jo]</td>
<td>[fai]</td>
</tr>
<tr>
<td>abair ‘say’</td>
<td>their</td>
<td>abair</td>
</tr>
<tr>
<td>[’apri]</td>
<td>[heri]</td>
<td>[’apri]</td>
</tr>
<tr>
<td>thoir ‘give, take’</td>
<td>bheir</td>
<td>thoir</td>
</tr>
<tr>
<td>[ho:ri]</td>
<td>[vri]</td>
<td>[ho:ri]</td>
</tr>
<tr>
<td>faic ‘see’</td>
<td>chi</td>
<td>faic</td>
</tr>
<tr>
<td>[fuic]</td>
<td>[ci:]</td>
<td>[fuic]</td>
</tr>
</tbody>
</table>

Future Tense Alternations

<table>
<thead>
<tr>
<th>Citation Form</th>
<th>Independent Form</th>
<th>Dependent Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>bi ‘be’</td>
<td>tha</td>
<td>bheil/eil</td>
</tr>
<tr>
<td>[pi]</td>
<td>[ha]</td>
<td>[vel]/[el]</td>
</tr>
</tbody>
</table>

Present Tense Alternations

- There is no way to get from the dependent form to the independent form of vice versa.
  - Therefore, I will consider this true suppletion.
  - To avoid wading into the debate of whether or not Root suppletion is possible (see Marantz 1997; Harley and Noyer 1998a; Embick and Halle 2005 for the view that it is not, and Haugen and Siddiqi (2013); Merchant (2015); Gribanova (To Appear) for the view that it is), here I will simply assert that this is Root suppletion6.

(18) ✓ Dependent Form

a. Chan’ fhaic mi am b`ata.
   NEG see.fut.IND 1 the boat
   ‘I won’t see the boat.’

b. *Cha’ chi mi am b`ata.
   NEG see.fut.IND 1 the boat
   Intended: ‘I won’t see the boat.’

(19) x Dependent Form

a. Chi mi am b`ata.
   see.fut.IND 1 the boat
   ‘I will see the boat.’
   With C6

b. Ma’r chi mi am b`ata.
   if.real see.fut.IND 1 the boat
   ‘If I see the boat…’
   Without C6

c. *Faic mi am b`ata.
   see.fut.IND 1 the boat
   Intended: ‘I will see the boat.’
   Without C6

d. *Ma’r faic mi am b`ata.
   if.real see.fut.IND 1 the boat
   Intended: ‘If I see the boat…’
   With C6

---

6The reasoning for this is that there is no evidence that these elements constitute members of the ‘functional vocabulary’ for most of these Roots. To use such a label for all of these roots besides bi ‘be’ and rach ‘go’ would be to render the term meaningless.
• In (18-19), we see the basic pattern.
  – C\textsuperscript{T} → Dependent Form
  – Lack of C\textsuperscript{T} → Independent Form
  • Therefore, we need to formally distinguish C\textsuperscript{T} from C\textsuperscript{NT} here too.

2.3 Criterion #3: Future Tense Allomorph Selection

• We have already seen that the future suffix has three contextual allomorphs.

\begin{tabular}{|c|c|}
\hline
\textbf{C} & \textbf{Future Allomorph} \\
\hline
∅ & -idh \\
\hline
C\textsuperscript{T} & ∅ \\
\hline
C\textsuperscript{NT} & eas \\
\hline
\end{tabular}

\begin{enumerate}
\item Now, are we sure that this is all allomorphy of a single node?
\item There is good evidence that there is.
• First, notice that the future verbs which undergo the dependent/independent alternation do not take the -eas when the follow a C\textsuperscript{NT}.
  – Recall that these will all be in their independent forms, as non-triggering complementizers fail to trigger dependent forms.
\end{enumerate}

\begin{enumerate}
\item an ::= (\textbf{\textsuperscript{-eas}}) tu do lánh dhomh, dannis -aidh mi leat.
  \textit{if.real give.fut.indep -fut you your hand to.me dance -fut I with.you}
  ‘If you give me your hand I’ll dance with you.’
\item an càrr a\textsuperscript{NT} gheibh (\textbf{\textsuperscript{-eas}}) e airson a latha-breith
  \textit{the car ’a get.fut.indep fut he for his birthday}
  ‘the car that he will get for his birthday’
\item Ni \textit{do.fut.indep I =emp free.rel do.fut.indep -fut you =emp}
  ‘I’ll do whatever you’ll do.’
\end{enumerate}

• Oda (2012)'s insight for Irish: depedent/independent alternating verbs are \textit{portmanteaux}.
  – Virtually any theory of portmanteaux will work here:
    * DM’s Fusion (Maranz, 1984; Halle and Marantz, 1993; Harley and Noyer, 1999)
    * Insertion at Non-Terminal Nodes (Neeleman and Szendrői, 2007; Caha, 2009; Radkevich, 2010)
    * Spanning (Williams, 2003; Svenonius, 2012; Merchant, 2015)
Sample VE for Dependent/Independent Form

a. $\langle \sqrt{SEE} + v + T:[FUT] \rangle \Leftrightarrow \text{ch`ı}$
   Independent Form
b. $\langle \sqrt{SEE} + v + T:[FUT] \rangle \Leftrightarrow \text{faic} / C^\gamma$
   Dependent Form

- The pattern in (22) can be understood intuitively and simply if all of the morphemes in (20) are exponents of the same head, specifically $T:[FUT]$.

- Assuming VEs like (23), none of these morphemes (-idh, -eas) can be inserted with independent forms because $T:[FUT]$ is already exposed within the portmanteau.

- No further restrictions on the morpheme -eas need to be stipulated, as these effects can fall out of general principles (preference for portmanteaux) if all the endings in (20) are exponents of the same morpheme ($T:[FUT]$).

- This does not seem to be a unique property of dependent/independent verbs.
  - Two other verbs (24-25) do not take the usual future tense suffix -idh.
  - These two verbs also do not take -eas, despite them not undergoing the dependent/independent alternation.

(24) th`eid 'will go'

a. Th`eid (*-idh) mi dhachaigh.
   go.FUT -FUT I home
   'I will go home.'

b. Ma`n th`eid (*-eas) mi dhachaigh.
   if.REAL go.FUT -FUT I home
   'If I go home...'

c. Cha` t`eid mi dhachaigh.
   NEG go.FUT I home
   'I won’t go home.'

(25) thig 'will come'

a. Thig (*-idh) mi dhachaigh.
   come.FUT FUT I home
   'I will come home.'

b. Ma`n thig (*-eas) mi dhachaigh.
   if.REAL come.FUT -FUT I home
   'If I come home...'

c. Cha` tig mi dhachaigh.
   NEG come.FUT I home
   'I won’t come home.'

- We can apply the same portmanteaux technology here, deriving the same welcome result.

- Same type of entries as in (23), just without the dependent contextual allomorph.

(26) a. $\langle \sqrt{GO} + v + T:[FUT] \rangle \Leftrightarrow \text{th`eid}$
   b. $\langle \sqrt{COME} + v + T:[FUT] \rangle \Leftrightarrow \text{thig}$

2.4 Interim Summary #1

- The Scottish Gaelic clause, as reflected in its verbal morphology, is pretty straightforward.

- Two classes of complementizers: triggering and non-triggering.

- Future suffix allomorphy determined by complementizer class.
• But remember, C is always on the opposite side of the verbal complex from T:[FUT].
• Therefore, this contextual allomorphy is necessarily non-linearly conditioned.

(28) VE$s for Gaelic Future Suffix
a. \(<T:[FUT]> \leftrightarrow [i] -idh\)

b. \(<T:[FUT]> \leftrightarrow [\bar{o}s] -eas / c^N_T \)

c. \(<T:[FUT]> \leftrightarrow / c^T \)

• Now the question become “What do we mean with ’____’ in the VEs in (28)?”
• First, we must examine the morphological structure of the Gaelic verbal complex, which is easier said than done.

3 How Is the Gaelic Verbal Complex Built?

• The best way to begin exploring these questions is by comparing Gaelic to its very close sibling, Irish.
• Irish’s verbal complex has been very well explored (McCloskey, 1996, 2007; McCloskey et al., 2014; Oda, 2012; Acquaviva, 2014), but as noted in passing in Adger (1997), Gaelic’s verbal complex seems to be different.

• Irish = C-lowering

(29) ...go gceann -ai -onn...Irish
(30) Irish C-lowering

```
\[ C' \]
\[ C \]
\[ \vdash \]
\[ go \]
\[ TP \]
\[ T \]
\[ v \]
\[ v \]
\[ \sqrt{ } \]
\[ \sqrt{ } \]
\[ \sqrt{ } \]
\[ \sqrt{ } \]
\[ \sqrt{ } \]
\[ ceann-\]
\[ -ai \]
\[ -onn \]
\[ T \]
```

• Crucially, all of the evidence which points to C-lowering in Irish suggests its absence in Gaelic.

3.1 NPI Fronting

• In Irish, you can front NPIs to the left of their licensors.

(31) Greim ar bith ní fhuil sé a ithe _____ Irish
bite any NEG is he eat.PROG
‘Not a bite is he eating.’

• Proposing that NPIs must be c-commanded by their licensors in the syntax, McCloskey (1996) proposes C-lowering.

(32)

\[ \text{Ní greim ar bith fhuil sé a ithe} \rightarrow \text{greim ar bith ní fhuil sé a ithe}. \]
• NPI fronting is severely ungrammatical in Scottish Gaelic.

(33)  \[NPI Fronting\]
   a. ‘Duine sam bith chan fhaca mi!’
      person any \[neg\] see.PAST.DEP I
      Intended: ‘Not a single person have I seen!’
   b. ‘C`ail cha do rinn mi air mo shaor-l`aithean.
      cabbage \[neg\] PAST do.PAST I on my vacation
      Intended: ‘Not a single thing did I do on my vacation.’

3.2 Leftward TP Adjuncts
   • In Irish, TP adjuncts can be fronted to the left of the complementizer\(^7\).

(34)  \[Deiris \(C_P[ an \text{ch`ead Nollaig eile} \) go dtiocfadh \(se\) anios].\]
      say.3PL.PAST.HAB the first Christmas other c come.COND he up
      ‘They used to say that next Christmas he would come up.’

   • These again McCloskey derives through the same process of C-lowering.

(35)  Deiris \[\text{go an ch`ead Nollaig eile} \] dtiocfadh... \[\rightarrow\] Deiris \[\text{go an ch`ead Nollaig eile} \] go dtiocfadh...

   • Leftward embedded adjuncts of this type are as ungrammatical in Gaelic as they are in English.

      say.PAST they next Christmas c return.COND he
      Intended: ‘They said that next Christmas he’d come back.’

3.3 Negation and Disjunction
   • Negation scopes of disjunction in Irish, so even though (20) looks like it means \(\neg(p \lor \neg q)\), it actually means \(\neg(p \land \neg q)\)

(37)  \[\text{[N`ig} \text{ or ith} \text{ me pr`ata`i} \text{n`a} \text{ [n`ig or ol} \text{ me deoch}.] \]
      \[\text{neg-r eat.PAST I} \text{ potatoes or neg-r drink.PAST I} \text{ drink}\]
      ‘I didn’t eat potatoes \text{and} I didn’t drink a drink.’

   • We can get this easily, as well as the fact that the word for ‘or’ \(n`a\) is used, not ‘and’ \text{agus} if we say that this actually means \(\neg(p \lor q)\), and then negation lowers into into conjunct in the post-syntax.

(38)  Nior \[\text{[ith me pr`ata`i} \text{n`a} \text{[ol me deoch}] \] \[\rightarrow\] Nior \[\text{[n`ior ith me pr`ata`i} \text{n`a} \text{[n`ior ol me deoch}] \]

   • Scottish Gaelic has no such interaction between negation and disjunction, even when the right context is provided.
   
   • (39b) is the crucial example; (39a) and (39c) provide a context meant to bias the speaker towards positing \(\neg(p \lor q)\).

(39)  a. ‘Thuirtdo sheannhair gu robh feum agad rudeigin ithe mus deach thu dhachaigh, ach said your grandmother c be.PAST.DEP need at.you something eat.NONFIN before go.PAST.DEP you home but cha robh an t-acras ort.
      \[\text{neg be.PAST.DEP} \text{ the hunger on} \text{you}\]
      ‘Your grandmother told you that you needed to eat something before you went home, but you weren’t hungry.’

---
\(^7\)This does not seem to be any kind of focus construction - my speakers report that these feel like an optional stylistic variant.
b. 'Cha do dh’ith thu an t-iasg neo cha do dh’ol thu am bainne...
Intented: 'You didn’t eat the fish or drink the milk.'
c. . . oir bha thu direach airson dol dhachaigh.
‘. . . because you just wanted to go home.’

3.4 Returning to Locality

• Contextual allomorphy is only possible within a morphological word understood to be a complex head with no separating XP boundaries (Bobaljik, 2012; Bobaljik and Harley, To Appear).

• We need some way of turning Gaelic’s hierarchical structure in (35) into something resembling the structure made by C-lowering in Irish (36).

(40) What We Want in Gaelic
(41) Verbal Complex in Irish

• Ideas on how to do this?

• For now, let us just assume that, by hook or by crook, our complex head is formed.

BUT ARE WE MISSING THE POINT HERE?

• Let us think about the structure of Gaelic clauses we proposed:

(42) CP

• What we see is C triggering allomorphy on the head of its complement, T.

THIS ALLOMORPHY IS EXTREMELY LOCAL, JUST NOT LINEARLY.

• Therefore, let us make the following claim:

STRUCTURAL ADJACENCY IS ADJACENT ENOUGH FOR CONTEXTUAL ALLOMORPHY LICENSING.

(43) Structural Adjacency: Two nodes α and β are structurally adjacent if α selects for β or a phrase headed by β.

• This definition should be massaged slightly, because it currently predicts patterns of allomorphy which, as noticed by Svenonius (2012) and Merchant (2015), do not seem to occur.

– V → C (think that. . . ~believe whump. . .)
– V → D (kiss a dog ~ hug blurp dog)8

• If we think these apparent gaps in the allomorphy typology are significant, we’ll presumably want to account for them.

• Thankfuly, the Gaelic cases let us do this in the maximally local way.

\[(44)\] A node \(\alpha\) may trigger allomorphy on a node \(\beta\) if:

a. \(\alpha\) and \(\beta\) are structurally adjacent (38).

b. \(\alpha\) and \(\beta\) are within the same extended projection (Grimshaw, 2000, 2005).

• We probably want the extended projection condition to hold across the morphology though (Williams, 2003; Bye and Svenonius, 2010; Svenonius, 2012; Merchant, 2015).

– The notion of ‘wordhood’ found in Bobaljik (2012); Bobaljik and Harley (To Appear) would do the same work here, assuming that word-building processes like head-movement and post-syntactic PF adjustments are restricted to extended projections.

• Also note that (38) is very weakly stated.

– We have no reason to think that all contextual allomorphic processes are uniform.

– Therefore, it is purposefully stated as a sufficient, though not necessary, condition.

– This can let us have our cake and eat it too by allowing these cases as well as other cases where it looks like linear adjacency is king (Chung, 2007; Ostrove, 2015).

– Structural adjacency → Allomorphy is possible, but Allomorphy → Structural Adjacency

3.5 Interim Summary #2

• Future suffix allomorphy in Scottish Gaelic provides evidence that linear adjacency cannot be the whole story in contextual allomorphy licensing.

• Thankfully, the allomorphy in Gaelic is constrained enough that we don’t need to default to a morphological free-for-all.

• STRUCTURAL ADJACENCY

4 (And Irish)

• Now that we’ve seen the Gaelic data, let us compare it to Irish.

• Without delving too deep into Irish verbal morphology, Irish shows morphology which is very similar to Gaelic’s, and clearly historically related.

4.1 -feas in Irish

• Irish has a piece of verbal morphology, -feas [æs], which is clearly related to Gaelic -eas [æs] which we’ve talked about.

• In Gaelic though, we saw the cut for triggers of -eas had to do with morphological class.

• Irish clearly has the same classes of complementizers, but -feas licensing does not fall along those lines.

– It occurs only in relative clauses, and specifically relative clauses which have a gap (McCloskey, 2002).

• Reporting on -feas in Irish is actually quite difficult.

– It is not a part of the standardized language.

– Native speakers are often reluctant to report on it; it’s often not reported in descriptive literature either.

– It is heavily stigmatized as ‘dialectal.’

8Assuming we don’t want to think that quirky/inherent case is precisely this.
– It is rarely, if ever, written by educated native speakers, even if they’re explicitly instructed to provide ‘dialectal forms.’
– Its behavior is highly variable across dialects.
– **but** it’s incredibly common in the spoken language and dates all the way back to Old Irish.

(45) **Speakers Surveyed**

<table>
<thead>
<tr>
<th>Gaeltacht</th>
<th>Gender</th>
<th>Age</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaeltacht Lár, Co. Donegal</td>
<td>Male</td>
<td>32</td>
<td>Finished PhD; Ollscoil Uladh</td>
</tr>
<tr>
<td>Tory Island, Co. Donegal</td>
<td>Female</td>
<td>41</td>
<td>PhD student; Ollscoil Uladh</td>
</tr>
<tr>
<td>Ráth Chairn, Co. Meath</td>
<td>Female</td>
<td>21</td>
<td>Works in a Gaelscoil</td>
</tr>
<tr>
<td>Gaorth Dobhair, Co. Donegal</td>
<td>Female</td>
<td>26</td>
<td>PhD student; NUIG</td>
</tr>
</tbody>
</table>

(46) **-feas Tokens**

<table>
<thead>
<tr>
<th>Gaeltacht</th>
<th>Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lár</td>
<td>9</td>
</tr>
<tr>
<td>Tory</td>
<td>6</td>
</tr>
<tr>
<td>Ráth Chairn</td>
<td>3</td>
</tr>
<tr>
<td>Gaorth Dobhair</td>
<td>0</td>
</tr>
</tbody>
</table>

4.2 **Quick Rundown of How Relative Clauses in Irish Work**

- Since the earliest generative work on Irish, as well as for as long as there has been descriptive literature on the language, the existence of two relative clauses has been acknowledged.

(47) **Irish Relatives**

<table>
<thead>
<tr>
<th>What C?</th>
<th>Direct Relative</th>
<th>Indirect Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( a^\ell )</td>
<td>( a^\ast )</td>
</tr>
<tr>
<td>Gap?</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Resumptive?</td>
<td>×</td>
<td>✓</td>
</tr>
</tbody>
</table>

(48) **Direct Relative**

- an ghrisearch \( a^\ell \) goid na siogai __________ the girl ‘\( a^\ell \)’ stole the fairies
- ‘the girl who the fairies stole.’

(49) **Indirect Relative**

- Sin é an buachaill \( a^\ell \) bhris -fidh ___ a chuid breágán ar fad. ‘That’s the boy who will break all his toys.’
- Sin i an chearc \( a^\ell \) bhéar -fhaid __________ an méid is mó uibheacha. ‘That’s the chicken that will lay the most eggs.’
- Sin é an bóthar \( a^\ell \) shiúl -aim __________ gach lá le dul ar scoil. ‘That’s the road I walk every day to get to school.’

(50) **Indirect Relatives**

- Phós cara liom caílín, \( a^\ell \) bhfuil fuath ag \( a_i \) deirfiúr orm. ‘My friend married a girl whose sister hates me.’
- Seo e an tábla, \( a^\ast \) n-ith -eann muid an dimnèir \( aige \). ‘This 3SG.MASC the table ‘\( a^\ast \)’ eat -\( a^\ast \) the dinner at.him ‘That’s the table we eat dinner at.’
- Is í an bhó, \( a^\ast \) mbeidh an méid is mó bainne \( aici \), an mhí seo. COP 3SG.FEM the cow ‘\( a^\ast \)’ be.FUT the amount milk at.her the month this ‘She’s the cow that will have the most milk this month.’

- All of the speakers asked maintained the distinction between the two types of relative clauses.

---

9Although the system was slightly collapsed with the Ráth Chairn speaker, but this is normal and expected in traditional Connacht varieties, such as hers.
4.3 So where do we get -feas?

4.3.1 The Tory & Ráth Chairn Speakers

- For these two speakers, -feas follows the expected pattern:
  - It occurs only in direct relatives.
  - It is an optional variant of the future suffix -fidh.
  - The Tory speaker allows -feas to 'replace' the present suffix -eann too.

(51) Ráth Chairn Speaker

a. Sin an fear a dhíol -fas ____ an mó carranna an tseachtain seo.
   that the man 'a' sell -feas the most cars this week
   'That's the man who will sell the most cars this week.'

b. Sin i an chearc a cheap -ann siad a bhéar -fas ____ an mó uibheacha.
   that 3G.FEM the chicken 'a' think -pres they 'a' lay -feas the most eggs
   'That's the chicken that they think will lay the most eggs.'

c. Sin an cailín a gheid -feas na sioga ____.
   that the girl 'a' steal -feas the fairies
   'That the girl who the fairies will steal.'

(52) Tory Speaker

a. Sin an fear a dhíol -fas ____ an méid is mó carranai an tseachtain sea.
   that the man 'a' sell -feas the biggest cars the week this
   'That’s the man who will sell the biggest cars this week.'

b. Sin an chearc a mheas -ann siad a chu rit -fas ____ an méid is mó uibheacha.
   that the chicken 'a' think -pres they 'a' put -feas the amount biggest eggs
   'That’s the chicken that they think will lay the most eggs.'

c. Sin an ghirseach a gheid -feas na sioganna ____.
   that the girl 'a' steal -feas the fairies
   'That’s the girl who the fairies will steal.'

d. Seo an bhó a chu rit -feas ____ a chos sa bhui céad gach seachtain.
   this the cow 'a' put -feas his foot in the bucket every week
   'This is the cow that puts its foot in the bucket every week.'

e. Seo na fuinneoga a osclo -feas m=athair ____ nuair a thic -fas sé abhaile.
   this the windows 'a' open -feas my=father when 'a' come -fut -feas he home
   'These are the windows that my dad will open when he comes home.'

- It never occurs with indirect relatives.
- It never occurs after the realis conditional má, unlike Gaelic.
- It is totally optional, unlike Gaelic.

(53) a. <T:FUT> ⇔ -fidh

b. <T:FUT> ⇔ -feas / a __

- If we adopt the same structure for Irish that I proposed for Scottish Gaelic, we can understand this pattern as an instance of the same phenomenon.

4.4 The Lár Speaker

- The speaker surveyed from Gaeltacht an Lár, Co. Donegal, provided data which, apparently, have never been observed before.
  - He is a native speaker with a PhD in Irish who uses his Irish every day, strongly prefers to conduct his personal life in Irish, and feels more comfortable expressing himself in Irish than in English.
Basically, he’s as good of a speaker of Irish as you could dream of finding. These data are real.

- First, he maintains the morphological distinction between direct and indirect relatives.

\[(54)\]

(a) Sin an gásúr, \(\text{a}^*-\text{r} \) ghoid mé \(\text{a} \) liathróid.

that the boy ‘\(\text{a}\)’ stole I his ball

‘That’s the boy whose ball I stole.’ \(\text{Indirect Relative}\)

(b) Seo an teach \(\text{a}^* \) cheannó idh sè ___

this the house ‘\(\text{a}\)’ buy -FUT he

‘This is the house that he will buy.’ \(\text{Direct Relative}\)

- Unlike the other speakers, he collapses the morphological distinction between \(\text{a}^*\) and \(\text{a}^\text{g} \) ONLY IN THE PRESENCE OF -FEAS.

- Note that the use of go, the normal complementizer equivalent to English ‘that,’ instead of \(\text{a}^\text{g}\) is incredibly common in traditional Connacht varieties, like that of Ráth Cháirn. Note that go never alternates with \(\text{a}^*\), so we can be sure that this is a morphological direct relative. Also note that caithfidh ‘will throw, will spend’ is often used to mean ‘is necessary’ idiomatically.

\[(55)\]

(a) Sin an caillín, \(\text{a}^*-\text{r} \) gá dom labhairt léi.

that 3SG.FEM the girl ‘\(\text{a}\)’ necessity to.me speak.NONFIN with.her

‘That’s the girl who I need to talk to.’ \(\text{Gaith Dobhair}\)

(b) Sin an gháirseach, \(\text{a}^* \) gcáith-fidh mé labhairt léi,

the the girl ‘\(\text{a}\)’ throw -FUT I speak.NONFIN with.her

‘That’s the girl who I need to talk to.’ \(\text{Tory}\)

(c) Sin i an caillín, go gcáith-fidh mé labhairt léi,

that 3SG.FEM the girl c throw -FUT I speak.NONFIN with.her

‘That’s the girl who I need to talk to.’ \(\text{Ráth Cháirn}\)

(d) Sin i an gháirseach, \(\text{a}^* \) chaith -FEAS mé labhairt léi,

that 3SG.FEM the girl ‘\(\text{a}\)’ throw -FEAS I speak.NONFIN with.her

‘That’s the girl who I need to talk to.’ \(\text{Lár}\)

- What is important about this pattern is what looks like \(\text{a}^*\) is being used in an indirect relative, where \(\text{a}^\text{g}\).

- This is not an isolated example - he demonstrated this pattern with every indirect relative clause with the right tense specification.

\[(56)\]

(a) Sin é an gásúr, \(\text{a}^* \) bh-eas \(\text{a} \) mháthair ag dul faoi scian san otharlann.

that 3SG.FEM masc the boy ‘\(\text{a}\)’ be -FEAS his mother going under knife in the hospital

‘That’s the boy whose mother will be having a surgery in the hospital (going under the knife).’

(b) Sin iad na ba, \(\text{a}^* \) bh-eas \(\text{a} \), gcuid ghama.ne sean go leor le bhilean ar an mhi seo chugainn.

that 3PL the cows \(\text{a}^*\) be -FEAS their share calves old enough to milk.NONFIN on next.month

‘Those are the cows whose calves will be old enough to milk next month.’

- I’m not sure how to go about thinking about this formally.

- Mutual allomorphy?

* \(<\text{T:FUT}> \leftrightarrow \text{-fidh}\)

* \(<\text{T:FUT}> \leftrightarrow \text{-feas} / \text{a}^* \)

* \(<\text{C:OF}> \leftrightarrow \text{a}^\text{g}\)

* \(<\text{C:OF}> \leftrightarrow \text{a}^* / \text{-feas}\)

- Impoverishment?

- But any of these processes will be necessarily non-linearly conditioned, so the main point I wanted to make here still goes through\(^{10}\).

\(^{10}\)The speaker from Lár also has -feas after the present tense analytic suffix -ann.

(i) an buachaill \(\text{a}^* \) bhi -onn -s ag siúl thar mo theach gach lá

the boy ‘\(\text{a}\)’ be -PRES -FEAS walking past my house every day

‘the boy who walks past my house every day.’

I have no idea how to think about these data either.
5 Conclusion

- Non-linearly conditioned contextual allomorphy exists. Sorry.
- Just because it’s non-linear does not mean that it’s non-local.
- Still hyperlocal - between a head and its complement.

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Marantz, Alec. 1997. Stem suppletion, or the arbitrariness of the sign. Talk given at Université Paris 8.


A  

\textit{a} and \textit{an} in Gaelic

- \textit{a} and \textit{an} in Gaelic are the historical equivalent of \textit{a} and \textit{an} in Irish, discussed in §4.
- It’s distribution is dramatically different though. These data are from a young female speaker from northern Skye (Stafainn).
- First, Gaelic largely lacks the resumptive option of Irish. But where it does have it, \textit{a} is always used, never \textit{an}, unlike Irish.

Adger and Ramchand (2005), Adger (p.c.) report that examples like (52a) are judged ‘acceptable’ by some speakers. I have yet to meet such a speaker, although some judge (52a) as “something old people might say.” Everyone is in agreement that (52b) is the most best, most natural way of expressing the idea in Gaelic.

(57)

\begin{itemize}
  \item \textit{a}'s distribution is dramatically different though. These data are from a young female speaker from northern Skye (Stafainn).
  \item First, Gaelic largely lacks the resumptive option of Irish. But where it does have it, \textit{a} is always used, never \textit{an}, unlike Irish.
\end{itemize}

- \textit{a} also occurs with in all CPs through which extraction has occurred. In this environment it alternates freely with the usual complementizer \textit{gu(n)}, which is equivalent to English ‘that’

(58)

\begin{itemize}
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  \item First, Gaelic largely lacks the resumptive option of Irish. But where it does have it, \textit{a} is always used, never \textit{an}, unlike Irish.
\end{itemize}
c. Carson a tha thu a’ smoineachadh gun do ghoth na sitheagan an nighean ?

Why ‘a’ be.pres you thinking c past steal the fairies the girl

‘Why do you think the fairies stole the girl?’

- So when the hell do we get an?
- Whenever a PP is overtly in Spec,CP. That’s it.

(60) C’ait’ an goid -∅ na sitheagan an nighean?
where ‘an’ steal -p fut the fairies the girl
‘Where will the fairies steal the girl?’

- Also, in addition to the ‘resumption’ strategy (53), there is another form of doing PP relatives.
- The preposition associated with the gap site appears in Spec,CP of the highest clause conjugated for its ‘definite’ form (Rouveret, 2011).

(61) a. Sin an nighean ris an robh thu a’ bruidhinn .
that the girl with.def ‘an’ be.past.def you speaking
‘That’s the girl you were talking to.’

b. Sin an tè aig a bheil Gàidhlig .
that the woman at.def ‘an’ be.pres.def Gaelic
‘That’s the woman who has Gaelic.’

c. an seomar an robh an t-sìtheagan .
the room in.def ‘an’ be.past.def the drip
‘the room where the dripping was.’

- Importantly, unlike the Irish in (57a), all intermediate CPs must have a or gu(n); never an.

(62) a. Sin an bhò, a deir m’=athair ‘a’ be.fut the share biggest milk at.him the month this
that the cow ‘a’ says my=father ‘a’ be.fut the share biggest milk at.him the month this
‘That’s the cow that my dad says will give the most milk this month.’

b. Sin an nighean ris an tuirt thu gu robh thu bruidhinn .
that the girl with.def ‘an’ tuirt you said you were speaking
‘That’s the girl who you said you were speaking to.’

c. Sin an nighean ris an tuirt thu a bha thu bruidhinn .
that the girl with.def said you ‘a’ be.past you speaking
‘That’s the girl who you said you were speaking to.’

d. *Sin an nighean ris an tuirt thu an robh thu bruidhinn .
that the girl with.def ‘an’ said you ‘an’ be.past.def you speaking
Intended: ‘That’s the girl who you said you were speaking to.’