

The Syntax and Semantics of Scottish Gaelic *A' Dol a^L*

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We claim that the ‘going to’ (*a' dol a^L*) construction in Scottish Gaelic has undergone a reanalysis from an embedding verb-of-motion construction into an aspectual particle functional head, which expresses simple prospective aspect in meaning (locating the time of the event not after speech time (like future tense), but after the time already established by tense). In so doing it fills a gap in the paradigm of aspectual particles. *A' dol a^L* is permitted in all three tenses, but not with other aspectual particles. In these ways *a' dol a^L* parallels the behavior of the imperfective particle *a'* and perfect particle *air*. We take these facts to indicate that *a' dol a^L* represents a distinction in aspect rather than tense. Using a number of constituency tests, we also show that despite its surface similarity to a complex embedding structure, it actually behaves like a single particle.

Introduction

In English, the ‘be going to’ construction represents a means of expressing future intent. Scottish Gaelic has a similar construction (exemplified in (1)):³

- (1) Tha mi a' dol a^L dh'ithe cèic
be.PRES I PROSP eat.VN cake
‘I’m going to eat cake.’⁴

However, the Gaelic example exhibits some important syntactic and semantic differences from its English counterpart. Our goal in this paper is to present a theoretically informed description of the unique properties of the syntax and semantics of the Scottish Gaelic *a' dol a^l* construction.

The Scottish Gaelic construction critically involves the use of the complex of markers *a' dol a^l*. On the surface, this construction seems to be made up of multiple functional and lexical items: the progressive marker *a' /ag*, the verb *dol* 'go', and another particle *a^l*. On the surface at least, the English equivalent 'going to' construction appears to be syntactically bi-clausal with a progressive *go*-verb taking a non-finite complement clause expressing the main action of the expression. We claim that despite surface appearances, the Scottish Gaelic construction is effectively monoclausal. We argue that the sequence [*a' dol a^l*] has undergone a process of grammaticalization and reanalysis into a single functional category that expresses (unrestricted) prospective aspectual semantics (conveying that the event will occur after the time that is the topic of the sentence, but not how far after that time). This explains the absence of a range of ambiguity that would otherwise be predicted and is consistent with a number of constituency tests. Relatedly, on a syntactic level the [*a' dol a^l*] head parallels the aspect particles *air* (perfect), *as dèidh* (restricted perfect), *gu* (restricted prospective), and *a' /ag* (progressive). We argue that *a' dol a^l* does not involve a multiclausal structure, but is expressed as a single clause like the other aspectual heads, as in (2):

- (2) [TP [T Tha] [AgrSP mi [L_{AspP} [L_{Asp} a' dol a^l] [vP [vP dh' ithe cèic]]]]]]

A' dol a^l is one of several possible instantiations of the Asp (Aspect) functional head in the language. Interestingly, while its semantics are most similar to that of the other prospective particle, *gu*, its syntax most closely parallels the progressive particle *a' /ag* (the particle contained in the construction that gave rise to the *a' dol a^l* construction).

We start this article by introducing the reader to the semantics of the *a' dol a^l* construction, arguing that it is not a marker of tense but aspect, that it expresses a prospective aspect, and that this aspect is not limited to a near time. Then in section 2, we turn to the syntax of the construction. We show that unlike its cognate construction in Irish, the *a' dol a^l* sequence has been grammaticalized into a single head, and that the *a^l* by itself does not by itself express the aspect.

1. What does [*a' dol a'*] mean?

We claim that *a' dol a'* instantiates prospective aspectual meaning, conveying that the event in question will take place after the time the sentence is making a statement about. This is different from the future tense, which relates that the event will take place after the time the sentence is uttered. In (neo) Reichenbachian terminology, aspect relates *event time* (the time the event or state goes on for) and *reference time*⁵ (the time about which an assertion is being made). Prospective aspect locates event time after reference time. Just as future tense could be characterized as the ‘reverse’ of past tense, prospective aspect can be seen (Binnick 1991, Joos 1964) as the ‘reverse’ of perfect aspect (e.g., English *I have eaten*), which locates event time prior to reference time. English *be going to* and *be about to* have sometimes been characterized as markers of prospective aspect or something like it (e.g. Comrie 1976, Wekker 1976, Dahl 1985). As we show, *a' dol a'* in fact more clearly patterns as a prospective than *going to* does in English. It should be noted that Cram (1983) and Ramchand (1993) use ‘prospective’ to describe the particle *gu* in Gaelic; we alter this terminology slightly (referring to *gu* as a ‘restricted prospective’) because while *a' dol a'* places no requirements on how far past the reference time the event time must be, *gu* does — it is more like English *be about to*, where the event must be happening in the near future.

1.1 [*a' dol a'*] marks an aspect not a tense

A morphosyntactic distinction of aspect (rather than tense) should be able to co-occur with past, present, and future tenses; and it should not be able to occur with other aspectual marking without an intervening ‘be’ verb. These properties hold of *a' dol a'*, as seen in (3) and (4), respectively. (Note that for the moment, we will assume that the whole complex [*a' dol a'*] is the relevant element for analysis, and not just the second *a*; our gloss of PROSP reflects this assumption. We return to defend this claim below in section 2.) Note that while English *will be going to* is rather unnatural for most (American) English speakers, the Gaelic equivalent is completely natural.

- (3) Bha/tha/bithidh Calum a' dol a' phòsadh Màiri.
 be.PAST/be.PRES/be.FUT Calum PROSP marry.VN Màiri
 ‘Calum was/is/will be going to marry Màiri.’⁶

A' dol a^L does not co-occur with other aspect heads (4), unless supported by a *b(h)ith* auxiliary (making a multi-clausal structure). The sentence in (5) shows a case where *bhith* supports a second aspect, headed by the progressive *a' /ag*.

- (4) *Tha Iain air a' dol a^L sgriobhadh.
 be.PRES Iain PERF PROSP write.VN
 *‘[Iain has going to write.]’
- (5) Tha Iain a' dol a^L bhith ag ithe marag a-màireach.
 be.PRES Iain PROSP be.VN PROG eat.VN pudding tomorrow
 ‘Iain is going to be eating pudding tomorrow.’

1.2 [*a' dol a^L*] is prospective

We claim that *a' dol a^L* instantiates *prospective* aspect. That is, it locates an eventuality subsequent to some other point. Future tense says that the time being talked about (the reference time) is subsequent compared to the time of utterance or speech. Prospective aspect, by contrast, locates the time of the event subsequent to some identified reference time – not necessarily the speech time. So, in any prospective sentence, the eventuality does not occur until after the time anchored by the tense (i.e. reference time/RT). This means that a prospective (*a' dol a^L*) can talk about a time that is in the past compared to speech time, while referencing an event after that time. The occurrence of such an event before speech time is not entailed by a past prospective, and thus can be cancelled as seen by the continuation in (6):

- (6) Bha i a' dol a^L dhol dhan a' bhaile an dè...
 be.PAST 3SF PROSP go.VN to the town yesterday
 ‘She was going to go to town yesterday...’

#There had been a going-to-town event by her at RT, as shown by the following possible completion of the sentence:

- ... ach cha robh tide aice.
 ... but not be.PAST.DEP time at.3SF
 ‘... but she didn’t have time.’

We can also see that *a' dol a^L* is clearly not a non-specific future adverbial (like, e.g., *a dh'aithghearr* 'soon'). First, we can see in (7–8) that *a dh'aithghearr* 'soon' cannot co-occur with other future adverbials, whether or not *a' dol a^L* is present:

(7) Tha mi a' fàgail a dh'aithghearr (*ann an ceann còig
 be.PRES 1S A' leave.VN PRT soon in head five
 mionaid).
 minute
 'I'm leaving soon (*in five minutes).'

(8) *Tha mi a' dol a dh' fhàgail a dh'aithghearr ann an ceann còig
 be.PRES 1S PROSP leave.VN PRT soon in head five.
 mionaid.
 minute
 *'I'm going to leave soon in five minutes.'

In contrast, notice in (9–12) that *a' dol a^L* can co-occur with future adverbials, both specific (9–11) and non-specific (12):

(9) Tha e a' dol a^L phòsadh an ath sheachdain.
 be.PRES 3SM PROSP marry.VN the next week
 'He is going to get married next week.'

(10) Tha mi a' dol a^L dh' fhàgail a-màireach.
 be.PRES 1S A' go.VN PRT leave.VN tomorrow
 I am going to leave tomorrow.'

(11) Nuair a ruigeas tu a-màireach, bithidh mise a' dol a
 when WH arrive.RF 2S tomorrow be.FUT 1S.EMPH PROSP
 dh' fhàgail.
 leave.VN
 'When you arrive tomorrow, I will be going to leave.'
 (i.e., as in 'I will be about to leave'; not a purpose clause.)

- (12) Tha mi a' dol a dh' fhàgail a dh' aithghearr.
 be.PRES 1S PROSP leave.VN PRT soon.
 'I'm going to leave soon.'

1.3 [*a' dol a'*] shares characteristics with perfects

A' dol a' patterns semantically with perfect aspect in several ways (despite the fact that the progressive marker *a'/ag* seems to be present in the construction historically). It shares many of the semantic characteristics that have been noted for perfects in English (with the appropriate adjustments for the prospectivity rather than retrospectivity). From a theoretical standpoint, prospectives 'group' with perfects in that they locate event time in a precedence relation with reference time. This is in opposition to progressives, imperfectives, and perfectives, which establish an inclusion relation between the two times. (See Reed 2012, Demirdache & Uribe-Etxebarria 2000 et seq. for related views.) The separation of event and reference times, regardless of what order they are in, means that each can be separately referenced (via adverbial modification, etc.).

Several accounts of the (past) perfect in English (Hornstein 1990, McCoard 1978, Comrie 1985, Klein 1992, Michaelis 1994) and in Scottish Gaelic (Reed 2012) discuss its ability to occur with adverbials in two positions with particular results: Clause-final adverbials allow both event time (ET) and reference time (RT) readings, while clause-initial adverbials allow only a reference time reading. In (13a) we see that a sentence with a clause-final adverbial is ambiguous between ET and RT readings; (13b–c) disambiguate the two readings.

- (13a) Bha Calum air a' bhùth fhàgail aig meadhan-latha.
 be.PAST Calum PERF the.SF shop leave.VN at mid-day
 'Calum had left the store at noon.' (RT or ET reading — either 'at noon' refers to the time under discussion, and Calum has already left by then, or his leaving was at noon.)
- b) Bha Calum air a' bhùth fhàgail mar tha aig
 be.PAST Calum PERF the.SF shop leave.VN already at
 meadhan-latha.
 mid-day

‘Calum had left the store already at noon.’ (RT reading — Calum left before noon.)

- c) Bha Calum air a’ bhùth fhàgail dìreach aig
 be.PAST Calum PERF the.SF shop leave.VN directly at
 meadhan-latha, agus bha Iain air a’ bhùth fhàgail
 mid-day and be.PAST Iain PERF the.SF shop leave.VN
 aig uair.
 at one

‘Calum had left the shop precisely at noon, and Iain had left at 1.’ (ET reading — Calum’s leaving was at noon, and Iain’s was at 1.)

A sentence with a clause-initial adverbial, however, can only have a reference time reading, as seen in (14):

- (14) Aig meadhan-latha, bha Calum air a’ bhùth fhàgail
 at mid-day be.PAST Calum PERF the.SF shop leave.VN
 (mar tha).
 (already)
 ‘At noon, Calum had left the store (already).’

As seen in the examples in (15–17), the same phenomena hold for (past) *a’ dol a^l*. With a clause-final adverbial, either reading is available – (15) is ambiguous between the two readings, while (16) and (17) disambiguate with additional material.

- (15) Bha Calum a’ dol a^l phòsadh Màiri aig meadhan-latha.
 be.PAST Calum PROSP marry.VN Màiri at mid-day
 ‘Calum was going to marry Màiri at noon.’ (ET or RT interpretation available – i.e., either the wedding will take place at noon, or we don’t know when the wedding will be, but we’re reporting about the state of affairs at noon.)

- (16) Bha Calum fhathast a' dol a^L phòsadh Màiri aig
 be.PAST Calum still/yet PROSP marry.VN Màiri at
 meadhan-latha, ach aig uair gabh e an t-eagal.
 mid-day but at hour take.PAST 3SM the fear
 ‘Calum was still going to marry Màiri at noon, but [then] at one he
 got scared.’

(RT interpretation – i.e., ‘Calum was, as of noon, planning to marry
 Màiri [at some time], but at one he got scared.’)

- (17) Bha Calum a' dol a^L phòsadh Màiri dìreach aig
 be.PAST Calum PROSP marry.VN Màiri directly at
 meadhan-latha, sin an uair a bha an solas nas
 mid-day that the hour WH was the light COMPR
 fhearr anns an eaglais.
 good.COMPR in.the the church
 ‘Calum was going to marry Màiri at noon – that was when the light
 was better in the church.’ (ET interpretation)

With a clause-initial adverbial, on the other hand, only the reference time
 reading is possible – the wedding can’t be happening precisely at noon:

- (18) Aig meadhan-latha bha Calum a' dol a^L phòsadh Màiri,
 at mid-day be.PAST Calum PROSP marry.VN Màiri
 ach aig uair gabh e an t-eagal.
 but at hour take.PAST 3SM the fear
 ‘At noon, Calum was going to [i.e. planning to] marry Màiri, but at
 one he got scared.’ (RT interpretation)

- (19) *Aig meadhan-latha bha Calum a' dol a^L phòsadh Màiri, sin
 at mid-day be.PAST Calum PROSP marry.VN Màiri that
 an uair a bha an solas nas fhearr anns an
 the hour WH be.PAST the light COMPR good.COMPR in.the the
 eaglais.
 church

*‘At noon Calum was going to marry Màiri—that was when the light was better in the church.’ (ET interpretation)

Compare these examples to a past perfective in English (the same pattern holds with the simple past in Scottish Gaelic). Both ‘John left the store at noon’ and ‘at noon, John left the store’ have only one reading. Event and reference times are both ‘at noon’, as perfective aspect does not separate these two times. Again, the similarity between the perfect and the prospective (to the exclusion of the perfective) is that they both separate reference and event times, such that one or the other can be focused on.

By a number of tests then, we have shown that *a' dol a^l* conveys prospective aspect, reflecting a temporal subsequence relationship where the event described by the main verb follows an established reference time. We have also shown that *a' dol a^l* patterns with the perfects in the language in several ways. In section 1.4, we provide a formalization of this descriptive claim.

1.4 The semantics of prospectivity

We claim that *a' dol a^l* represents a prospective aspectual distinction that locates an event time fully after reference time – that is, reference time fully precedes event time. We assume these times to be intervals rather than points (following Bennett & Partee 1972/1978, Dowty 1979), and define ‘fully precedes’ for intervals in (20).

- (20) An interval *fully precedes* (<) another if the final moment of the first precedes (and is not identical to) the initial moment of the second.

$RT < ET$ iff $R_{\text{final}} \preceq E_{\text{initial}}$ (R_{final} = final moment in RT, E_{initial} = initial moment in ET).

This definition rules out all cases of overlap of the two times, including the case in which the final moment of the reference time is coextensive with/identical to the initial moment of the event time. We adopt this position due to the fact that we do not seem to see any truly ‘universal’ readings of *a' dol a^l*. Now we arrive at the denotation of *a' dol a^{l7}* (with the definition of interval precedence below)

$$(21) \llbracket A'_{\text{DOL}} a^t \rrbracket = \lambda P_{(vt)} \cdot \lambda t_{(i)} \cdot \exists e: [t < \tau(e) \ \& \ P(e)]^8 \\ (t < \tau(e) \text{ if there is no } t' \subset \tau(e), \text{ s.t. } t' < t_{\text{final}} \text{ or } t' = t_{\text{final}})$$

P is a predicate of events, t is the reference time (bound by tense), e is an eventuality, and τ is Krifka's (1998) runtime function (which takes an event and returns the time over which the event extends). $A'_{\text{DOL}} a^t$ is an instantiation of Asp, which is a predicate of type $\langle\langle v, t \rangle, \langle i, t \rangle\rangle$. It composes with vP (type $\langle v, t \rangle$, a predicate of events) and returns a property of times that returns 'true' if and only if the reference time (i.e., the time it takes as an argument) fully precedes ($<$) the runtime of the event. Essentially, $a'_{\text{DOL}} a^t$ establishes that an event takes place after the tense-delineated time. This makes $a'_{\text{DOL}} a^t$ a marker of an aspect that is like the perfect, in that reference and event times are 'separate' from one another, giving rise to data like those in (15–19) above. Of course, with prospective aspect reference time precedes event time, which is the opposite order from that conveyed by perfect aspect. In this way, prospective and perfect aspects can be seen as members of a pair (differing in the order of the times), in the same way one might take perfective and imperfective to be members of a pair (as in Demirdache & Uribe-Etxebarria's 2000 et seq. framework, differing in which time is contained by the other).

Approaching aspectual distinctions from this perspective, one might be tempted to say that prospective and perfect aspects are the only logically possible ones in their grouping – speaking in terms of precedence and subsequence, reference time can either precede or follow event time. However, Gaelic shows us that this is not the case. It is also possible to grammatically encode variations on these aspects. We address the variant on prospective aspect in the next section.

1.5 The difference between $a'_{\text{DOL}} a^t$ and *gu*

One challenge to the claim that $a'_{\text{DOL}} a^t$ is a prospective marker is the existence of another prospective aspect marker in the language: *gu*. Adger (1994) identifies *gu* as a marker of 'E>R' (essentially a prospectivity marker).⁹ *Gu* does have a meaning similar to that of $a'_{\text{DOL}} a^t$ – it conveys that reference time precedes event time, as in (22):

- (22) Tha mi gu litir a sgrìobhadh.
 be.PRES 1S GU letter TRAN write.VN
 ‘I am about to write a letter.’

However, unlike *a' dol a^L*, *gu* places a restriction on how far event time is from reference time – it conveys that event time follows reference time closely. What counts as ‘closely’ following depends on the predicate in question, similar (but not identical) to the restrictions on *about to* in English:

- (23) #Tha Iain gu taigh a thogail ann an còig bliadhna.
 be.PRES Iain GU house TRAN build.VN in five year
 #‘Iain is about to build a house five years from now.’

- (24) Tha e gu ceumnachadh ann am mìos.
 be.PRES 3SM GU pace/graduate.VN in month
 ‘He is about to graduate in a month.’

- (25) Tha Iain gu bhith trang a-màireach.
 be.PRES Iain GU be.VN busy tomorrow
 ‘Iain is about to be/going to be busy tomorrow.’

As these examples show, the restrictions on *gu* are dependent on the predicate in question. A time span like five years is too long in general, but a time span like a month is allowable for an eventuality that happens rarely (as in 24).

Gu is thus the forward-looking equivalent to the recent/after-perfect (marked by *as dèidh*) – in other words, a proximate prospective. *A' dol a^L*, by contrast, is a more general, non-restricted, prospective marker. We can formalize this distinction by restricting the distance between event and reference times to a contextually-determined small quantity (labelled ϵ_c), but keeping the rest of the formula the same:

- (26) $[[GU]] = \lambda P_{(vt)}. \lambda t_{(t)}. \exists e: [t < \tau(e) \ \& \ P(e) \ \& \ \exists \epsilon_c: [0 < |t - \tau(e)| < \epsilon_c]]$
 ($t < \tau(e)$ iff there is no $t' \subset \tau(e)$, s.t. $t' < t_{\text{final}}$ or $t' = t_{\text{final}}$)

Like *a' dol a^L*, *gu* instantiates Asp and composes with vP. Both *a' dol a^L* and *gu* establish that an event takes place after the reference (tense-delineated) time.

Gu additionally relates that the interval between the reference time and the event time is shorter than some amount (ϵ) that will be determined by the context.

Thus Gaelic has not one but two prospective markers: *a' dol a^L* for unrestricted prospective aspect and *gu* for restricted prospective aspect.

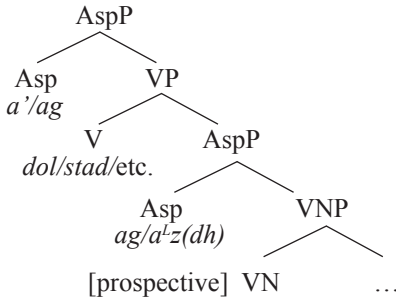
2. The syntax of *a' dol a^L*

Next we turn to the syntax of the *a' dol a^L* construction. We argue that despite the fact that the orthography and historical origin of this particle would lead the reader to treat it as three separate heads (i.e., morphologically decomposable into PROG + go.VN + a^L (dh')), it has been grammaticalized into a single aspectual functional head, albeit a morphologically complex one. Let us start, however, with the null hypothesis that this item really is morphologically decomposable into three heads. One version of this was suggested to us by Jim McCloskey (p.c.) building on McCloskey's (1983) analysis for Irish. We call this analysis: The Complement Hypothesis.

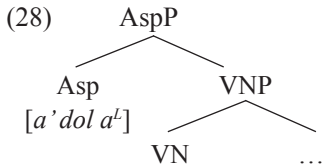
Gaelic has a number of different particles – all written as either *a* or *a'* – which precede verbal nouns. The second one in the *a' dol a^L* construction is typically called the 'infinitive' marker in the descriptive literature on Gaelic. It is different from the leniting particle that typically precedes verbal nouns in non-finite 'inverted nominal' constructions. It is distinguished from that particle not only by leniting the following consonant but by prefixing *dh'* ([ʧ]) before verbs beginning with vowels or *fh*.

McCloskey suggested to us that the *a^L* (*dh'*) particle is itself the prospective aspect head (rather than the complex *a' dol a^L*). Under this view, it is a cousin to *a'ag* 'PROG', differing from this particle in that it expresses prospective rather than progressive/imperfective aspect. It often functions as a complement to certain embedding verbs, such as 'going', 'stopping', etc. but need not do so. The structure of AspP under this view would be as follows:¹⁰

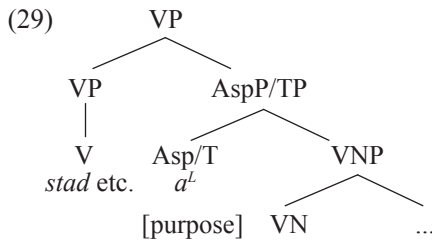
(27) AspP under the Complement Hypothesis



We call our alternative view: The Complex Aspect Head Hypothesis. Under this hypothesis, the [*a' dol a^L (dh)*] complex has been reanalysed as a single aspectual head with prospective semantics:



We distinguish a third structure for both languages, which expresses a ‘purpose clause’ interpretation for these sentences. Critically, as we will show below, this structure is excluded with [*a' dol a^L*] constructions in Scottish Gaelic, but allowed in Irish. This structure has the purpose clause adjoined to the VP (Heuttner 1989). We are agnostic as to the category of the *a^L* in purpose clauses, so diagram it here as AspP/TP.



In the next sections, we explore data from Irish and Gaelic and discuss their implications for these two hypotheses.

2.1 Ulster Irish

Irish has a construction very similar to the *a' dol a^l* construction. First, consider the following data from Ulster Irish:¹¹

- (30) Tá mé ag gabhail a dh' ithe greim bidh.
 be.PRES 1S PROG go.VN PRT eat bite food.GEN
 'I'm going to eat a bite of food.'

Irish

If *a^l* is the prospective marker by itself, as suggested by the Complement Hypothesis, it should appear with a variety of embedding predicates, not just *dul/gabhail/dol* 'go'. This is clearly true in Irish. The following sentences all have prospective interpretations. Note that in some of the following constructed examples, purpose clause interpretations are not natural, but in others it is acceptable.

- (31a) Thosaigh mé a dh'ithe mo dhinnéar.
 begin.PAST 1S PRT eat.VN my dinner
 'I began eating/to eat my dinner.'

Irish

- b) Stad mé a dh'ithe mo dhinnéar.
 stop.PAST 1S PRT eat.VN my dinner
 'I stopped eating/to eat my dinner.'

Irish

- c) Lean mé orm a dh'ithe mo dhinnéar.
 follow.PAST 1S on.1S PRT eat.VN my dinner
 'I went on to eat my dinner/I went on eating my dinner.'

Irish

- d) Shuigh mé a dh'ithe mo dhinnéar.
 sit.PAST 1S PRT eat.VN my dinner
 'I sat down to eat my dinner.'
Irish

While sentences (31b) and (31d) and their English equivalents have both fairly natural prospective and purpose clause/intent interpretations, (31a) and (31c) and their English equivalents lend themselves primarily to a proseplicative-like interpretation. Interpretations of intent are harder (although possible with enough context). McCloskey notes, however, that in the sentences in (32) agentive purpose clause interpretations are simply impossible, since there are no agents in these sentences.

- (32a) Nuair a thosaigh na daoine a dh'éirí líonmhar i Rinn na Feirste.
 C begin.PAST the people PRT become.VN numerous in RnF
 'When the people began to become more numerous in Rannafast.'
 (NBMO026)
Irish

- b) Thoisigh an tráthnóna a dh'éirí dorcha.
 begin.PAST the evening PRT grow dark
 'The evening began to grow dark.' (NBMO220)
Irish

- c) Bhí imnidhe ag toiseacht a theacht air.
 be.PAST worry PROG begin.VN PRT come on.3SM
 'He was beginning to get worried.' (OMGS1172)
Irish

This means that these sentences have only prospective interpretations, no matter what the matrix verb is. This is true no matter what the embedding verb is. It does not appear to be tied to 'go'.

Further, consider sentences like (33), which eschews a purpose clause interpretation. Because the negative polarity item (NPI) *ar chor ar bith* is licensed by *stad*, it cannot be adjoined to the VP in a purpose clause structure (see 29 above) as the negative verb would not license the NPI. As

a consequence sentences like (33) allow only prospective readings, despite lacking a ‘go’ verb.

- (33) Stad mé a theagasc Gaeilge ar chor ar bith dó.
 stop.PAST 1S PRT teach.VN Irish at all to-him
 ‘I stopped teaching him Irish at all.’ (*not* ‘I stopped to teach him Irish’) (MBF027) *Irish*

So in Irish, prospective meaning is *not* tied to the matrix verb. Several different matrix verbs allow (and in some cases require) a prospective interpretation. This all suggests that in Ulster Irish, the *a^L* (*dh*’) by itself is the prospective aspect marker, and the fact that it is a complement to *ag dul/ag gabhail/a’ dol* is a part of a larger pattern of subordination.

2.2 Glendale Scottish Gaelic *a^L* (*dh*’)

We agree that the facts above in section 2.1 point to a Complement Hypothesis analysis for (Ulster) Irish. However, we claim that this is not the right view for Scottish Gaelic (at least our primary consultant’s dialect). Instead we believe the complex head hypothesis provides a better account of Gaelic’s facts.

First, it is important to note that Scottish Gaelic, like Irish, does allow purpose clause interpretations of *a^L* (*dh*’):

- (34) A dh’ithe cèic ’se a bhith beò.
 PRT eat.VN cake COP.3SM PRT be.VN alive
 ‘To eat cake is to live.’
purpose clause interpretation

However, the purpose clause interpretation is *not* available with *a’ dol* in Glendale Gaelic (we limit our claims here to Glendale because MacAulay (1992: 186) asserts that this interpretation is available for his speakers. Our consultants vehemently disagree with his reported judgements).¹²

In English, *be going to* clauses are ambiguous between purpose and prospective readings:

- (35) I'm going to eat some cake.
 i) 'I'm travelling there in order to do some cake eating.'
 ii) 'There is cake-eating in my future.'

However, 'be going to' clauses are not ambiguous in Gaelic.

- (36) Tha mi a' dol a^L dh'ithe cèic.
 be.PRES 1S PROSP eat.VN cake
 i) *'I'm travelling in order to do some cake eating.'
 ii) 'There is cake-eating in my future.'

Our native speaker reports that any 'going' motion is excluded with (36). In order to get the motion + purpose interpretation, a locative must be used:

- (37) Tha mi a' dol ann a dh'ithe cèic.
 be.PRES 1S PROG go.VN there PRT eat.VN cake
 'I'm going there in order to eat cake.' (*purpose clause interpretation*)

Interestingly, when the verb 'go' is not in its *a' dol* form, but in a different form (e.g. the preterite), then the purpose clause interpretation becomes the preferred one. Contrast (38) with (39). (38) only allows a purpose clause reading. (39) only allows a prospective reading.

- (39) Chaidh mi a^L dh'ithe cèic.
 go.PAST I PRT eat.VN cake.
 'I went in order to eat cake.' (There must be physical going; i.e. purpose clause)

- (40) Bha mi a' dol a^L dh'ithe cèic.
 be.PAST I PROSP eat.VN cake
 'I was going to eat cake.'¹³ (There cannot be physical going; i.e. not a purpose clause)

In direct contrast to the Irish facts discussed in section 2.1, the verbs *stad* 'stop' and *suidhe* 'sit' behave like past tense 'go' above and have only intent/

purpose clause interpretations. This is true whether a periphrastic or a basic construction is used.

- (41) Stad sinn a dh'ithe cèic.
 stop.PAST 1P PRT eat.VN cake
 'We stopped in order to eat cake.' / *'We stopped eating cake.'
 (purpose clause only)

- (42) Bha sinn a' stad a dh'ithe cèic.
 be.PAST 1P PROG stop.VN PRT eat.VN cake
 'We stopped in order to eat cake.' (purpose clause only)

- (43) Shuidh mi a dh'ithe mo dhinnear.
 sit.PAST 1S PRT eat.VN my dinner
 'I sat in order to eat my dinner.' / *'I sat eating my dinner.' (purpose clause only)

In order to get the non-purpose clause interpretations for 'stop' and 'sit', we have to use a different construction – the past tense of the verb in question, plus the progressive particle and the other verb (here, 'eat') in the verbal noun form.

- (44) Sguir¹⁴ sinn ag ithe cèic.
 stop.PAST 1P PROG eat.VN cake
 'We stopped eating cake.' / *'We stopped in order to eat cake.'
 (non-purpose interpretation)

- (45) Shuidh mi ag ithe cèic.
 sit.PAST 1S PROG eat.VN cake
 'I sat eating cake.' / *'I sat in order to eat cake.' (non-purpose interpretation)

Recall that in Ulster Irish non-agentive predicates like 'begin' and 'start' can be paired with *a^l* + (*dh*) where they can receive prospective interpretations (see above). This is impossible in Glendale Gaelic. 'Begin' and 'start' can only be used with a progressive or perfect complement:

- (46) *Thòisich mi a dhannsadh a-rithist.
 begin.PAST 1S PRT dance.VN again
 Intended: 'I began to dance again.'
- (47) Thòisich mi a' dannsadh a-rithist.
 begin.PAST 1S PROG dance.VN again
 'I began dancing again.'
- (48) *Bha sinn a' tòiseachadh a dh'ithe cèic.
 be.PAST we PROG start.VN PRT eat.VN cake.
 Intended: 'We were starting to eat the cake.'
- (49) Bha sinn a' tòiseachadh air cèic ithe.
 be.PAST 1P PROG start.VN PERF cake eat.VN
 'We started to eat cake.' Lit. 'We were starting have eaten cake.'
 or 'We were starting on eating cake.'

With clear non-agentive subjects (cf. Irish example (32) above), *a'* + (*dh*) yields total ungrammaticality (50, 52), while the progressive particle yields grammatical sentences (51, 53):

- (50) *Thòisich a' mhuir a dh'fhàs dorcha.
 begin.PAST the sea PRT grow.VN dark
 Intended: 'The sea began to grow dark.'
- (51) Thòisich a' mhuir a' fàs dorcha.
 begin.PAST the sea PROG grow.VN dark
 'The sea began growing dark.'
- (52) *Thòisich àireamh-shluaigh an Ath-Leitheann a dh'fhàs
 begin.PAST population the Broadford PRT grow
 nas motha.
 COMPR bigger
 Intended: 'The number of people in Broadford began to grow bigger.'

- (53) Thòisich àireamh-shluaigh an Ath-Leitheann a' fàs nas
 begin.PAST population the Broadford PROG grow COMPR
 motha.
 bigger
 'The number of people in Broadford began growing bigger.'

It seems clear that traditional descriptions (e.g. Black 2006 and Byrne 2002) of the Scottish Gaelic a^L (*dh*) particle, when alone, are correct: its function is to mark intent or purpose and not prospectivity. It specifically requires $a'dol$ to get a simple prospective reading (and no motion is allowed with $a'dol$). This behaviour is clearly explained if speakers have reanalysed $a'dol a^L$ into a single grammatical item rather than treating it as a subordinating predicate.

Perhaps the most important piece of evidence in favour of the grammaticalized complex head analysis is the prediction it makes about the availability of readings. The complex head analysis predicts that the purpose clause interpretation will be obligatorily absent from $a'dol a^L$ constructions. In the complex head analysis, the a^L morpheme is part of the $a'dol a^L$ head, and as a consequence it cannot be interpreted as the purpose clause marker. By contrast, the complement analysis, where a^L is separate from $a'dol$, predicts that the independent a^L should be open to either interpretation, paralleling exactly the Irish facts, where it permits ambiguity. However, note that in Scottish Gaelic, there is no ambiguity. When the a^L is paired with $a'dol$, we get only prospectivity. When it is paired with any other embedding verb, we get only purpose clause interpretations. This demonstrates that in Scottish Gaelic, a^L does not by itself mark prospectivity. The complex head analysis for Gaelic predicts the difference in availability of interpretations between the two languages. The complement analysis would predict that the same readings would be available in both languages.

2.3 The constituency of $a'dol a^L$ (*dh*)

If [$a'dol a^L$] is a head (as we claim in the Complex Head Hypothesis), it should behave like an aspect head with respect to constituency tests.

2.3.1 Clefting

If the particle a^L (*dh*) forms a constituent with the VN, then it should be able to be clefted, with that verbal noun, just like other particles. If it forms a

constituent with [*a' dol*] then it should resist clefting. As seen in (54), the *a' dh* +VN cannot be clefted when combined with prospective *a' dol*. (54a) shows the cleft of a PP complement of the main verb meaning 'go'. (54b) shows a non-clefted *a' dol a^L* sentence. (54c) shows that the cleft of the *a^L*+embedded verb is impossible. Clefting of a purpose clause (54d & e) is not perfect (it requires special context to license the cleft), but it contrasts significantly with the ungrammatical form in (54c).

(54a) 'S ann a Glaschu a tha Màiri a' dol.
 COP in.3SM to Glasgow WH be.PRES Màiri PROG go.VN
 'It's to Glasgow that Màiri is going.' (clefting the PP complement of *go*)

b) Tha Màiri a' dol a bhàthadh!
 be.PRES Màiri PROSP drown.VN
 'Màiri is going to drown!'

c) *'S ann a bhàthadh a tha Màiri a' dol!
 COP in.3SM PRT drown.VN WH be.PRES Màiri PROG go.VN
 *'It's to drown that Màiri is going!'

d) ?'S ann a dh'ithe cèic a tha iad a' suidhe.
 COP in.3SM PRT eat cake WH be.PRES they PROG sitting.VN
 'It's to eat cake that they're sitting down.'

e) ?'S ann a dh'ithe cèic a tha Màiri a' dol ann!
 COP in.3SM PRT eat.VN cake WH be.PRES Màiri PROG go.VN there
 ?'It's to eat that Màiri is going there!'

2.3.2 Adverb placement

If [*a' dol a^L*] is an aspect head, it should not be possible to insert an adverb between *dol* and *a^L*. If the *a^L* forms a constituent with the verbal noun, on the other hand, then you should be able to put an adverb in this position. The data below show that with purpose clauses (55–6), adverbs are allowed between the embedding V and the *a^L*, while in prospectives (57–9), adverbs are not allowed between the V and the *a^L*:

- (55) Tha mi a' stad a-rithist a^L dh'ithe cèic.
 be.PRES 1S PROG stop.VN again PRT eat cake.
 'I am stopping again to eat cake.'
- (56) Tha mi a' suidhe a-rithist a^L dh'ithe cèic.
 be.PRES 1S PROG sit.VN again PRT eat.VN cake.
 'I am sitting again to eat cake.'
- (57) *?Tha mi a' dol a-rithist a^L dh'ithe cèic.
 be.PRES 1S PROG go.VN again PRT eat.VN cake.
 'I'm going again to eat cake.' (marginally acceptable with a purpose reading)
- (58) *?Tha iad a' dol, tha mi cinnteach, a dh'ithe cèic
 be.PRES they PRT go.VN be.PRES I certain, PRT eat.VN cake.
 'They're going, I'm sure, to eat cake.' (marginally acceptable with a purpose reading)
- (59) Tha mi a' dol a^L dh'ithe cèic a-rithist.
 be.PRES 1S PROSP eat.VN cake again
 'I'm going to eat cake again.'

These facts are predicted by the complex head hypothesis and not by the complement hypothesis. Under the complex head hypothesis, the Asp head cannot be interrupted by an adverb, as it is a single syntactic unit. In the complement hypothesis, an adverb could adjoin to the Aspect head that is a complement to the verb.

2.3.3 Pronominal inflection

The phenomenon discussed in this section is not a test of constituency per se, but a demonstration that the *a^L* particle in the *a dol a^L* construction has an unexpected pattern of inflection, and is consequently morphologically distinct from the *a^L* found in other contexts in Gaelic. Particles and prepositions in Gaelic inflect for person and number if their object is pronominal. If the *a^L* in [*a' dol a^L*] is the same as the *a^L* in purpose clauses, we would expect the same

morphological expression of pronominal inflection in both purpose clauses and prospectives.

With most embedding predicates, the *a^L* particle (in its use as a purpose clause marker) inflects like a possessive pronoun:

(60) Forms of the possessive pronoun

	Singular	Plural
1st	mo ^L	ar ^N
2nd	do ^L	ur ^N
3masc	a ^L	an/am
3fem	a ^H	

By contrast, the particle in the [*a' dol a^L*] construction always inflects using the possessive inflected form of the preposition *ag* ‘at’:

(61) Forms of *a'ag* inflected for the possessive pronoun¹⁵

	Singular	Plural
1st	'gam ^L	'gar ^N
2nd	'gad ^L	'gur ^N
3masc	'ga ^L	'gan/'gam
3fem	'ga ^H	

- (62) Bha mi a' dol ga ithe.
 be.PAST 1S PROG GO.VN PRT.3SM eat.VN
 ‘I was going to eat it.’ (prospective reading only)

This form is impossible with any other embedding predicate:

- (63) *Shuidh mi ga ithe.
 sit.PAST 1s PRT.3SM eat.VN
 Intended: ‘I sat to eat it.’

- (64) Shuidh mi airson a ithe.
 sit.PAST 1s for its eat.VN
 ‘I sat to eat it.’

This difference in pattern is completely unexpected under the complement hypothesis, where the two structures would be identical. If [*a' dol a^L*] is a single grammaticalized head it is not unexpected that it would have a different inflectional pattern from other complements marked with *a^L*.

2.3.4 An ellipsis in younger people's speech

If the *a^L* is a clitic to the verbal noun, as is claimed under the complement hypothesis, then any ellipsis process should delete it along with the verbal noun. In the speech of younger speakers, there is a responsive ellipsis like the following in (65). The particle survives (and apparently cliticizes to the left). This is only acceptable in the speech of younger speakers.

- (65) *Mother:* Ith do dhinnear!
 eat.IMP POSS.2s dinner
 ‘Eat your dinner!’

- Child:* Tha mi a' dol ga!
 be.PRES 1s PROG go.VN ga
 ‘I’m going to!’

Again this pattern is unexpected under the complement hypothesis, but is the predicted pattern if [*a' dol a^L*] is a single reanalysed particle, as the particle is outside the elided VP.

To summarize what we have argued in section 2: despite apparently being morphologically composed of the progressive marker and the verb ‘go’ plus a particle, [*a' dol a^L*] lacks any ‘motion’ requirement in Gaelic.

The *a^l* particle, when by itself, is limited to purpose clause interpretations in the language. Evidence from clefting, adverb placement, ellipsis, and pronominal forms suggests that the Complex Head Hypothesis, where *a' dol a^l* has been reanalysed into a single head, is correct.¹⁶ This is consistent with a restriction on the range of interpretations available in Gaelic, but not in Irish. The semantics of [*a' dol a^l*], too, supports the Complex Head Hypothesis. Under a decomposed analysis, we would expect [*a^l*] as a separate head to be contributing independently to the semantics. However, we know of no convincing semantic evidence that [*a' dol a^l*] carries any added meaning that would point to such a contribution when compared, for example, to the other prospective particle, *gu* (as discussed in section 1.5). In fact, the opposite is true: *gu* carries the additional requirement that the event time be close to the reference time. The complex head hypothesis, on the other hand, predicts a unitary prospective semantics to arise from the contribution of the Aspect head, and that is what we see.

3. Conclusions

We have argued here that [*a' dol a^l*] represents a prospective aspect marker, conveying that the event time of the proposition follows the reference time, and is unrestricted with respect to the distance between those two times. The particle *gu* also conveys prospective semantics, but carries with it a restriction on the length of the interval between event and reference times. We have argued that, syntactically, [*a' dol a^l*] has been grammaticalized into an Aspect head that takes a VN complement, unlike its cognate in Irish, thus explaining its restricted interpretations and various otherwise puzzling constituency properties.

Notes

- ¹ Our deepest thanks to Muriel Fisher, native speaker consultant extraordinaire. She has the patience of a saint. Thanks also to Heidi Harley, Bridget Copley, Michael Bauer, and Jim McCloskey for in-depth discussion of this material. Thanks also to Jim for sharing data from his Irish database that allowed for

some interesting comparisons to the Gaelic material. A version of this paper was presented to the Celtic Linguistics Conference in Rennes, Brittany in 2012. An anonymous reviewer from the *Journal of Celtic Linguistics* was integral to pushing us to strengthen our evidence and critically evaluate our assumptions. Of course all mistakes and errors are our own. This research was supported in part by a grant from the US National Science Foundation #BCS0639059.

- ² Née and previously published as Sylvia L. Reed.
- ³ Superscript ^L indicates that a particle triggers the lenition mutation.
- ⁴ The following abbreviations and symbols are used: < fully precedes; < is less than; > is greater than; 1, 2, 3 first, second, third persons; ADV adverbializer; AIR regular perfect aspect marker *air* ('on'); COMPR comparative; COND conditional; COP copula; DAT dative; DECL_COMP declarative complementizer; DEP "dependent" verb form; DIST distal (*far*); EMPH emphatic; ET event time; F feminine gender; FUT future tense; GEN genitive; GU restricted prospective aspect marker *gu* ('about to'); M masculine gender; MED medial marker (*middle*); NEG_COMP negative complementizer; P plural number; PERF perfect aspect; PRT particle; PASS passive voice; PAST past tense; PFV perfective aspect; POSS possessive; PRES present tense; PROG progressive aspect marker *a'ag*; PROSP regular prospective aspect marker *a'dol a* ('going to'); PROX proximal marker (*close*); Q question particle; RF relative future verb form; RT reference time; S singular number; TRAN transitivizer; VN verbal noun form; WH wh-complementizer.
- ⁵ *Assertion time* in Demirdache and Uribe-Etxebarria's schema; *topic time* in Klein 1992.
- ⁶ A number of examples in this section are drawn from Reed (2012).
- ⁷ A universal reading of the present perfect is one in which the eventuality holds into utterance time, so, *Mary has lived in this apartment for five years*, on the reading that Mary still lives in the apartment. Something like a universal interpretation seems to be available with *a'dol a^L* as with *be going to*, but as with the English present perfect, it is only available with adverbial modification:
- i) Tha mi a'dol a^L ruith #(airson còig mionaidean eile).
 be.PRES 1S PROSP run.VN #(for five minutes more)
 'I'm going to run [i.e. keep running] #(for five more minutes).'
- We follow Iatridou et al. (2001) in taking the universal reading to arise from the adverbial rather than from the perfect (or in this case, prospective) aspect.
- ⁸ $\llbracket \rrbracket$ is the valuation function; $P_{(vt)}$ is a predicate from events to truth values; $t_{(i)}$ is a time; e is an event; $\tau(e)$ is the runtime function; < signifies 'precedes'.

- ⁹ See Reed (2012) for a discussion of the general aspectual properties of aspectual *gu*. *Gu* also has a modal usage that we don't discuss here. See Cram (1983) and Reed (2012) for discussion. Here we concentrate only on difference between *a' dol a^L* and *gu*.
- ¹⁰ McCloskey hasn't ever drawn a tree like this, but we are giving it this interpretation so that we can compare apples and apples. McCloskey (1983) actually has a very different constituency where the particle and the VN form a V constituent: [_{V[-fin]} PRT VN]. We don't believe that this part of the hypothesis affects our claims.
- ¹¹ All Irish data are from McCloskey, p.c.
- ¹² We can only speculate on the reasons for this difference. It could be dialectal. We suspect it is generational, reflecting a recent grammaticalization. MacAulay's consultants were older than ours. This would be consistent with the data in section 2.3.4, which seem to be restricted to younger speakers.
- ¹³ We can force a purpose clause reading on the progressive *a' dol* form of 'going', but only by adding the preposition *airson* 'for' and using an object shift construction: *Bha mi a' dol airson cèic ithe*.
- ¹⁴ Our speaker also requires a different lexical item for 'stop' here, using *sguir* instead of *stad*.
- ¹⁵ ^L = lenites, ^N = prefix *n-* before vowels, ^H = prefix *h-* before vowels.
- ¹⁶ We know of one piece of data that is an apparent counterexample to our analysis. The Glendale Gaelic data have thus far supported the Complex Aspect Head Hypothesis. However, there are data from this dialect that point in the other direction. Under the complex head hypothesis, we should only be able to conjoin phrases with complete [*a' dol a^L*] sequences, and not just parts thereof. The complex head hypothesis thus incorrectly predicts (i) to be ungrammatical.
- i) Tha mi a' dol a^L dh'ithe cèic agus a^L dh'òl bainne.
 be.PRES IS PROG go.VN PRT eat.VN cake and PRT drink.VN milk
 'I am going to eat cake and drink milk.'

We are puzzled by this fact, as it is inconsistent with the other constituency tests, the limits on interpretation, all of which suggest a reanalysis of *a' dol a^L* into a single aspectual head. An anonymous reviewer suggested to us that these data should make us re-evaluate our analysis. We subsequently investigated the possibility that these data should be taken as key and that Scottish Gaelic was amenable to a complement analysis. We ultimately rejected this approach, however, because it fails to explain the absence of prospective meaning with

verbs other than *a' dol*, the absence of prospective meaning when 'go' is in a different inflected form (such as *chaidh*), and the fact that *a' dol a'* does not allow a purpose/intent complement. The fact that (i) is grammatical with a prospective meaning may well be due to the fact that the grammaticalization of *a' dol a'* into a single head appears to be prevalent among younger speakers and is a relatively recent phenomenon and may be undergoing transition.

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