



Intervals and the nature of the perfect

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Overview

- Recent work (e.g. Botne 2000 and f., Cable 2013, Mucha 2015, Tallman & Stout 2018) has begun to more closely investigate tense systems that seem to employ multiple degrees or gradations of tense
- Scottish Gaelic (*Gàidhlig*, 'SG') encodes gradations of aspect

Overview

- I have argued elsewhere (Schreiner & Carnie 2016) that SG marks two degrees of prospective aspect
 - $a' \text{ dol } a \cong \text{'going to } V\text{'}$
 - $gu \cong \text{'about to } V\text{'}$

Overview

- Today I will show that SG also marks two degrees of perfect aspect
 - *air* \cong 'have Vd'
 - *as dèidh* \cong 'have recently Vd' (not quite, as we'll see)

Overview

(1) Bha/tha/bithidh i air fàgail.

be.PAST /be.PRES/be.FUT 3SF AIR leave.VN

‘She had/has/will have left.’

(2) Bha/tha/bithidh i as dèidh fàgail.

be.PAST/be.PRES/be.FUT 3SFAS DÈIDH leave.VN

‘She had/has/will have (just/recently) left.’

Overview

- While *air* acts much like the English perfect, *as dèidh* places an additional restriction on the interval between event and reference times
- The existence of such distinctions points to the need for further explanation from our theories

Overview

- What can a perfect be?
- How can we capture this distinction within Distributed Morphology?

Outline

1. Scottish Gaelic
2. *As dèidh* marks a perfect aspect
3. The meaning of *as dèidh*
4. A featural account
5. Implications

Scottish Gaelic

Scottish Gaelic

- Goidelic branch
- Highlands and Islands
- ~57,400 speakers (2011, none monolingual)
- Endangered but undergoing revitalization efforts

Scottish Gaelic

- VSO order

(3) Chunnaic mi Mairi dà thuras.

see.PAST 1s Mairi two time.s

‘I saw Mairi two times.’

Scottish Gaelic

- Several other aspect markers are syntactically parallel:

(4) Bha mi gu litir a sgrìobhadh.

be.PAST 1s GU letter AGRO write.VN

‘I was about to write a letter.’

(5) Bha mi a’ dol a sgrìobhadh litir.

be.PAST 1s A’ DOL A write.VN letter

‘I was going to write a letter.’

Scottish Gaelic

(6) Bha mi a' sgrìobhadh litir.
be.PAST 1s A' write.VN letter
'I was writing a letter.'

Scottish Gaelic

- *Air* is analyzed as a perfect marker by Ramchand (1993)
 - She ascribes a more limited range of meanings to it than we see here
- I have shown that it shows behavior very similar to that of the English perfect (Reed 2012)
- I assume these particles (*gu*, *a' dol a*, *air*, *as dèidh*, *a'*, \emptyset) compete for insertion into the Aspect head

Establishing perfect
meaning

Establishing perfect meaning

- In anteriority theories of perfects, the perfect says that event (/situation) time precedes assertion (/reference/topic) time (Reichenbach 1947, Binnick 1991, Hornstein 1990, Klein 1992, Smith 1997, Higginbotham 2009, Demirdache & Uribe-Etxebarria 1997 and f., et al.)

$$(7) \text{ PERFECT} = \lambda P_{(vt)}. \lambda t_{(i)}. \exists e: [\tau(e) < t \ \& \ P(e)]$$

Establishing perfect meaning

- **‘Extended now’ theories** (e.g., Bennett & Partee 1972, McCoard 1978, Dowty 1979)
 - The perfect locates an event within a time span that stretches from sometime in the past up to speech time/the present
- **‘Perfect Time Span’** (Iatridou, et al. (2001), Pancheva & von Stechow (2004))
 - PTS: left bound introduced by a perfect-level adverbial (overt or understood); right bound is assertion time
 - Event must take place within the PTS for a perfect sentence to hold true

Establishing perfect meaning

- Is it similar to an English perfect?
 - Distributionally aspectual
 - Infelicitous with past positional adverbials (cf. German)
 - Comrie 1976, McCoard 1978, Hornstein 1977, Dowty 1979, Klein 1992, Giorgi & Pianesi 1998, Musan 2001, Pancheva & von Stechow 2004, among others
 - Readings vary with different adverbial positions
 - e.g., Hornstein 1990, McCoard 1978, Comrie 1985, Klein 1992; see also Michaelis 1994
 - Experiential, resultative, and universal readings

Establishing perfect meaning

- Distributionally aspectual, not tense:

(8) Bha/tha/bithidh Calum as dèidh dannsadh.

be.PAST/be.PRES/be.FUT Calum AS DÈIDH dance.VN

‘Calum had/have/will have just/recently danced.’

Establishing perfect meaning

- Past adverbial infelicity:

(9) Tha lain as dèidh ithe an-diugh (mar tha).

be.PRES lain AS DÈIDH eat.VN today already

‘lain has (recently-)eaten today (already).’

(10) *Tha lain as dèidh ithe an-dè/a-raoir.

be.PRES lain AS DÈIDH eat.VN yesterday/last night

Intended: ‘lain has (recently-)eaten yesterday/last night.’

Establishing perfect meaning

- Ambiguity of adverbial attachment

(11) Bha Calum as dèidh a' bhùth fhàgail
be.PAST Calum AS DÈIDH the.SF shop leave.VN

aig meadhan-latha.

at mid-day

‘Calum had (recently) left the store at noon.’

Establishing perfect meaning

(12) Bha Calum air a' bhùth fhàgail
be.PAST Calum AIR the.SF shop leave.VN

mar tha aig meadhan-latha.

already at mid-day

‘Calum had (recently) left the store already at noon.’ (assertion-time reading)

Establishing perfect meaning

- (13) Bha Calum as dèidh a' bhùth fhàgail
be.PAST Calum AS DÈIDH the.SF shop leave.VN
dìreach aig meadhan-latha, agus bha
directly at mid-day and be.PAST
lain as dèidh a' bhùth fhàgail aig uair.
lain AS DÈIDH the.SF shop leave.VN at one
'Calum had left the store precisely at noon, and
lain had left at 1.' (event time reading)

Establishing perfect meaning

- Experiential reading

(14) Tha mi as dèidh Cher fhaicinn trì
be.PRES 1S AS DÈIDH Cher see.VN three
tursan an t-seachdain seo mar tha.
time.Pthe week PROX already
'I have (recently-)seen Cher three times this
week already.'

Establishing perfect meaning

- Resultative reading

(15) Tha mi as dèidh mo chofaidh a dhòrtadh.

be.PRES 1S AS DÈIDH POSS.1S coffee AGRO spill.VN

‘I’ve (recently) spilled my coffee.’

Establishing perfect meaning

- Universal reading

(16) Tha mi as dèidh fuireach ann an Glaschu
be.PRES 1S AS DÈIDH live.VN in Glasgow

airson ùine mhòr a-nisde.

for timebig now

‘I have lived in Glasgow for a long time now.’

‘I am after living in Glasgow for a long time now.’

The meaning of *as dèidh*

The meaning of *as dèidh*

- So far: *as dèidh* acts like a perfect
- Translated with *just* or *recently*
- What is the difference between (e.g.) *air*, which also passes these perfect “tests”, and *as dèidh*?

The meaning of *as dèidh*

(17) Tha mi air/*as dèidh Cher fhaicinn

be.PRES 1S AIR/AS DÈIDH Cher see.VN

trì tursan na mo bheatha.

three time.P in POSS.1s life

‘I have seen/*recently-seen Cher three times in my life.’

The meaning of *as dèidh*

(18) Tha mi air/(*as dèidh) Cher fhaicinn trì tursan na mo bheatha. Chunnaic mi i dà thuras ann an dà mhìle, agus tha mi as dèidh a faicinn aon turas am bliadhna.

‘I have seen Cher three times in my life. I saw her twice in 2000 and I have recently-seen her once this year.’ [UT: 2011]

The meaning of *as dèidh*

- Which timespan does *as dèidh* care about?
- In the previous examples:
 - the perfect time span is long (left bound is beginning of speaker's life) and
 - the span between event and assertion times is long
- Which one leads to ungrammaticality?

The meaning of *as dèidh*

- (19) ✓Trì tursan na mo bheatha tha mi
three time.P in POSS.1s life be.PRES 1s
as dèidh an doras a dhùnadh agus
AS DÈIDH the.SM door AGRO close.VN and
ghabh mi beachd nach robh na
take.PAST 1s observation NEG_COMP be.PAST.DEP the.P
h-iuchraichean agam.
key.P at.1s
'Three times in my life I have just closed the door and
realized I didn't have my keys.'

The meaning of *as dèidh*

- The “restriction” present with *as dèidh* applies to how close the event time is to the assertion time
- The timing is not absolute; acceptability depends on the semantics of the verb phrase and real-world knowledge

The meaning of *as dèidh*

(20) Tha mi dìreach as dèidh ithe.

be.PRES 1S directly AS DÈIDH eat.VN

‘I’ve just eaten recently.’ (infelicitous after a few hours)

(21) Tha mi as dèidh na ‘messages’ fhaighinn.

be.PRES 1S AS DÈIDH the.P messages get.VN

‘I’ve (recently-)done the shopping.’
(infelicitous after about a week)

The meaning of *as dèidh*

- Universal reading?
 - Final moment of event time is coextensive with initial moment of assertion time

The meaning of *as dèidh*

- The interval between event and assertion times: how “long” of a perfect is it?
- “the E_R interval does not have a distinguished status in the perfect” (Iatridou, et al. 2001:158)
- This interval cannot be modified by adverbials (as event and assertion times can be)
- But SG encodes this distinction grammatically

A featural account

A featural account

- If we imagine the denotation of *as dèidh* is something like:

$$(22) \quad \llbracket \text{AS DÈIDH} \rrbracket = \lambda P_{(vt)}. \lambda t_{(i)}. \exists e: [\tau(e) \leq t \ \& \ P(e) \ \& \ [|t - \tau(e)| < \varepsilon_c]]$$

$(\tau(e) \leq t \text{ iff there is no } t' \subset \tau(e), \text{ s.t. } t' < \tau(e)_{\text{final}} \text{ and } t' = t_{\text{init}})$

- Where ε_c is a small amount to be determined contextually

A featural account

- We want anteriority to be represented for both types of perfect
 - They both indicate the same relationship between ET and RT
- And *air* can be used anywhere *as dèidh* can: *as dèidh* is more specific

A featural account

- If the features in the Asp head are responsible for encoding the assertion-event time relationship (e.g., D&UE),
 - we need something to tell us that event time is after assertion time (perfect) and
 - something else to tell us that these two times must be related in a particular way (restricted)

A featural account

- Vocabulary Items competing for insertion into Aspect:
 - [perfect] \leftrightarrow /er/
 - [perfect, restricted] \leftrightarrow /as dèidh/
- In the case that the Asp terminal node is specified for [perfect] and [restricted], *as dèidh* will win (it is the most highly specified).
- If it is only specified for [perfect], *air* will win (*as dèidh* is too highly specified)

A featural account

- The prospective can be treated the same way:

- [prospective] \leftrightarrow /a dol a/
- [prospective, restricted] \leftrightarrow /gu/

A featural account

- Note that it's not the case that *as dèidh* existentially quantifies over a different interval—the interval between event and assertion times falls out of anteriority theories
- Both perfects and prospectives in SG show this two-way distinction, but imperfectives do not: they do not separate event and reference times

A featural account

- So we may want a second feature that is dependent on the presence of one of the aspects that separates event time and assertion time
- One possibility: Feature geometry with hierarchical arrangement à la Cowper (1998 and f.)

A featural account

- One possibility (Schreiner & Carnie (forthcoming)):
 - One feature that encodes separation of event and assertion times [+/-precedence]
 - One feature that encodes anteriority vs. posteriority [+/- reversed]
 - One feature that encodes the restriction that perfects and prospectives can have [+/-restricted]

Summing up

- SG shows “remoteness” distinctions in perfect (and prospective) aspect
- The “recent” perfect is not concerned with recency compared to speech time
- Real-world knowledge is required to judge felicity of *as dèidh* (as it is with resultatives in regular perfects)

Implications

- Irish and Hiberno-English show “after-perfects”
- Other languages may show such distinctions, or even more fine-grained ones (parallel to remoteness distinctions in tense)
- The mechanisms we decide upon for remoteness in tense should ideally be applicable to aspect as well

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