

On the internal and external syntax of adverbial clauses in Faroese: causal and temporal clauses*

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Abstract

Recent and current research into the syntax of adverbial clauses has been investigating their external syntax (in particular where they attach to their host clause), their internal syntax (in particular whether or not they exhibit certain “root phenomena,” including V2), and how these two aspects may be connected. This paper investigates how some of these issues play out in causal and temporal adverbial clauses in Faroese. We draw on existing work on causal clauses in Icelandic, and demonstrate that Faroese also exhibits a correlation between attachment site, type of causal interpretation, and the possibility of argument fronting within the adverbial clause. We then turn to temporal clauses to investigate the hypothesis that the constraints on argument fronting are due to A'-movement within the adverbial clause. We show that there is positive evidence for the existence of such A'-movement only in a subset of temporal clauses (extending observations that have been made for other languages), posing a challenge for the intervention account of this restriction in adverbial clauses.

1 Introduction

There is a growing body of research into the syntax of adverbial clauses, which has been investigating both the external and the internal syntax. Questions that arise for the former include in particular where exactly adverbial clauses occur within the structure of their matrix clause, and what—if any—the semantic and/or pragmatic consequences of different attachment sites are. Questions that arise for the latter have tended to focus on the reasons for the distribution of “root” and “non-root” phenomena in adverbial clauses. As is typical, our understanding of these issues has been increasing with research into crosslinguistic similarities and differences.

In this paper, we aim to contribute to this enterprise by investigating these issues as they present in the syntax of Faroese. As this language has been less comprehensively described than a number of the other Germanic languages, we begin in Section 2 with a brief overview of some of the main types of adverbial clauses in Faroese. We show how the distribution of restrictions

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on argument fronting in this language supports at least a two-way distinction between Central Adverbial Clauses (CACs) and Peripheral Adverbial Clauses (PACs), as in Haegeman (2012). In Section 3 we then focus on one type of causal adverbial clause introduced by *av-tí-at*. We show that consideration of a wider range of data—including, importantly, differences in interpretation—requires a three-way rather than two-way distinction between types of causal adverbials, as argued also for Icelandic in Angantýsson and Jędrzejowski (2023), drawing on Haegeman (2010, 2012) and Frey (2016).

One of the syntactic diagnostics that we discuss in Sections 2 and 3, and that has been much relied on in distinguishing between the different types of adverbial clauses, is the (un)availability of argument fronting. Drawing in particular on the analysis of temporal adverbial clauses going back to Geis (1970), Larson (1983), according to which these adverbial clauses are relatives, derived by *A'*-movement, Haegeman has argued that the blocking of argument fronting in central adverbials is an intervention effect. In Section 4 we investigate this question in the Faroese data, looking in more detail at some of the subtypes of temporal clauses and probing their similarity to relatives.

Finally, in Section 5 we summarise the results from Sections 3 and 4, including the questions that they raise when taken together, particularly concerning the analysis of restrictions on root phenomena—including argument fronting—as intervention effects.

2 A short overview of adverbial clause types in Faroese

According to Haegeman’s (2012) typology, central adverbial clauses are those that disallow argument fronting in English while some permit adjunct fronting. Peripheral adverbial clauses on the other hand allow both argument and adjunct fronting. Table 1 illustrates these two adverbial clause types.

In this section we experiment with argument fronting in various types of CACs and PACs in Faroese. For a similar overview of fronting in adverbial clauses in Icelandic, see Angantýsson and Jonas (2016, 2020). Let us first consider argument fronting in **temporal central adverbial clauses** introduced by *áðrenn* ‘before’ (1) and *tá ið* ‘when’ (2), compared with such fronting in a **contrastive peripheral adverbial clause** introduced by *meðan* ‘while’ (3):

- (1) a. Eg las aðru bók hennara **áðrenn** eg las ta fyrstu.
 I read second book her before I finished the first one
 ‘I read her second book before I finished the first one.’
- b. *Eg las aðru bók hennara **áðrenn** ta fyrstu endaði eg.
 I read second book her before the first one finished I
Literally: ‘I read her second book before the first one, I finished.’

Table 1: Adverbial clause types, based on (Haegeman 2012:p. 163, Table 4)

CACs		PACs	
<i>before/after/until</i>	(event time)	—	
<i>when</i>	(event time)	<i>when</i>	(contrast)
<i>since</i>	(event time)	<i>since</i>	(premise/cause)
<i>while</i>	(event time)	<i>while</i>	(concessive)
<i>if</i>	(event condition)	<i>if</i>	(conditional assertion)
—		<i>although</i>	(concessive)
—		<i>whereas</i>	(concessive)
<i>so that</i>	(purpose)	<i>so that</i>	(result)
<i>because</i>	(event cause/reason)	<i>because</i>	(rationale)

- (2) a. **Tá ið** hon byrjaði at skriva sínar vanligu greinar aftur helt eg at hon fór at
 when she began to write her regular columns again thought I that she would
 verða nógðari.
 be happier
 ‘When she started to write her regular columns again, I thought she would be happier.’
- b. ?**Tá ið** sínar vanligu greinar byrjaði hon at skriva aftur helt eg at hon fór at
 when her regular columns began she to write again thought I that she would
 verða nógðari.
 be happier
Literally: When her regular columns she started to write again, I thought she would be
 happier
- (3) a. Studentarnir bílögdu nýggj eintøk **meðan** teir høvdu tey gomlu lættliga kunnað
 students.the ordered new copies while they had the old.ones easily could
 brúkt.
 used
 ‘The students ordered new copies while they could easily had used the old ones.’
- b. Studentarnir bílögdu nýggj eintøk **meðan** tey gomlu høvdu teir lættliga kunnað
 students.the ordered new copies while the old.ones had they easily could
 brúkt.
 used
Literally: ‘The students ordered new copies, while the old ones they could easily have
 used.’

The central temporal adverbials (CACs) in (1b) and (2b) disallow or degrade argument fronting. On the other hand, argument fronting in the clause introduced by *meðan* ‘while’ in (3b) is fully grammatical. On the basis of the interpretation, this clause is a peripheral adverbial clause (PAC). At least on its most salient reading, it does not specify the time during which the event in the main clause took place, but has a “concessive” reading; it makes a statement that is intended to contrast with the one in the main clause. The fact that it allows argument fronting is therefore consistent with Haegeman’s typology.

In (4) we have **conditional** *um*-clauses of two types: an **event conditional** (CAC) in (4a), and a **conditional assertion** (PAC) in (4b). In the event conditional, as expected, argument fronting is not possible. It improves in the conditional assertion, although it is not perfect, at least not this particular example.

- (4) a. **Um** tú dumpar til hesa próvtøkuna klárar tú ikki skeiðið.
if you fail on this exam finish you not course.the
‘If you fail this exam you can’t finish the course.’
- b. ***Um** til hesa próvtøkuna tú dumpar kanst tú ikki klára skeiðið.
if on this exam you fail, can you not finish course.the
Literally: If this exam you fail, you can’t finish the course.
- c. ?**Um** til hesa serstöku próvtøku dumpar Haraldur, hví skuldi hann tá hildið fram?
if on this special exam fails Harald, why would he then go on
Literally: If this special exam Harald fails, why should he continue?

The **concessive** adverbial clauses in (5) allow argument fronting very easily, and so do the (intended) **purpose** clauses in (6) and the **result** clause in (7):

- (5) a. Eg las ikki aðru bók hennara lidna **tó at** fyrstu bókina dámði mér
I read not second book her finished although first book.the pleased me
væl.
well
‘Literally: I didn’t finish her second book although the first book, I really enjoyed.’
- b. Elin segði at bókin sum heild var heldur keðilig **hóast** einstakar kapitlar
Elin said that book.the in whole was rather boring although some chapters
kundi hon avgjört hugsað sær at lisið aftur.
could she well think herself to read again
Literally: ‘Elin said that the book as a whole was rather boring although some selected chapters she could imagine herself reading again.’
- (6) a. Eg las aðru bók hennara gjølla **so at** eg kundi skilja ta fyrstu
I read second book her carefully so that I could understand the first one
ordiliga.
properly
‘I read her second book carefully so that I could understand the first one properly.’

- b. Eg las aðru bók hennara gjølla **so at** ta fyrstu kundi eg skilja
 I read second book her carefully so that the first one could I understand
 ordiliga.
 properly
Literally: I read her second book carefully so that the first one I could understand
 properly.

- (7) Eg misti samband við studentaskúlavinir mínar **so at** fæstu teirra sá eg aftur.
 I lost contact with college friends my so that fewest of them saw I again
Literally: 'I lost contact with my college friends, so that most of them I didn't see again.'

Overall, there is a clear contrast between central and peripheral clauses with respect to the possibility of argument fronting. The apparent exception is the acceptability of fronting in the purpose clause (6b) which should be a CAC in Haegeman's typology. Similar facts hold true for Icelandic (see Angantýsson and Jonas 2016). This may be because the example can actually be interpreted as a result clause, rather than purpose. That seems a possible parse of the sentence in English, and according to one of our language consultants this holds true for Faroese as well (Annika Simonsen, p.c.).

3 Causal clauses

3.1 Different interpretations of causal clauses in Faroese

According to Sweetser, causal clauses can be interpreted on three cognitive levels (Sweetser 1990:p. 77, ex. 1a–c):

- (8) a. John came back because he loved her.
 b. John loved her, because he came back.
 c. What are you doing tonight, because there's a good movie on.

In the content or eventuality domain (8a) the proposition embedded in the causal clause is interpreted as a fact causing another fact (eventuality-related causal clause = **ERC**). In the epistemic domain (8b), the speaker specifies the reason for why he or she thinks the matrix clause is true (evidential causal clause = **EC**). Finally, the speech act causal clause in (8c) reveals the motivation for why the speaker is performing a speech act; it gives the cause of the speech act associated with the matrix clause (speech act related causal clause = **SAR**).

Based on Angantýsson and Jedrzejowski's (2023) analysis of *af-því-að*-clauses in Icelandic we adopt the following two main hypotheses regarding the status of causal *av-tí-at*-clauses in Faroese:

H1: Semantically, *av-tí-at*-clauses can be interpreted as eventuality related (ERC), evidential (EC) and speech act related (SAR) causal clauses.

H2: Syntactically, *av-tí-at*-clauses can be analyzed as

- (a) central adverbial clauses (interpreted as ERCS throughout),
- (b) peripheral adverbial clauses (interpreted as ERCs or as ECs),
- (c) disintegrated adverbial clauses (not restricted to any particular semantic interpretation).

Bringing together H1 and H2, we argue that

- *av-tí-at*-clauses are not restricted to any particular semantic interpretation
- they can attach—depending on their interpretation—at three distinct structural heights with regard to the host clause: i) Tense Phrase (TP), ii) Judge Phrase (JP), and iii) Act Phrase (AP)
- they can only be eventuality related if they attach at the TP level, whereas higher merge positions allow additional interpretations: epistemic or/and speech act related.

According to our consultants, *av-tí-at*-clauses in Faroese can be employed as all of ERCs, ECs and SARs, but note the obligatory absence of *av* in the SAR in (9c).¹ The initial categorisation of these three clauses is made on the basis of their interpretations. In (9a) the causal clause is eventuality-related (ERC): it gives the reason for the event denoted by the main clause to have taken place. In (9b) the causal clause is evidential (EC): it gives evidence supporting the truth of the statement in the main clause. In (9c) the causal clause is speech-act related (SAR): it gives the motivation for speech act corresponding to the clause it modifies (e.g. in this case it explains why the speaker is asking the question).

- (9)
- a. Jón kom aftur, (av) tí at hann elskaði hana
Jón came back because he loved her
'Jón came back because he loved her.'
 - b. Jón elskaði hana, (av) tí at hann kom aftur.
Jón loved her because he came back
'John loved her, because he came back.'
 - c. Hvat gert tú í kvøld, (*av) tí at tað er ein góður filmur í biografínum.
what do you tonight because there is a good film in the cinema
'What are you doing tonight, because there's a good film on at the cinema?'

Examples (9a–c) are exactly comparable to (8a–c) in English, strongly supporting H1.

¹As far as we are aware, *at* is optional in all three types of these causal clauses in Faroese; we don't note this specifically in the examples.

3.2 The external syntax of *av-tí-at*-clauses in Faroese

Frey (2016) discusses four syntactic tests for the degree of integration of *weil* ‘because’ clauses in German:

- (i) binding
- (ii) prefield position
- (iii) embeddability (attachment to a *that*-clause)
- (iv) V-to-C movement in the subordinate clause.

We discuss these in turn. In relation to the fourth test, we explore the possibility of the exceptional *V_{fin}-Adv* order in subordinate clauses. Since *subject – finite verb (V_{fin}) – sentence adverb*, which is the default word order in main clauses, is quite difficult in non-V2 contexts in modern Faroese, we hypothesize that this word order will be most acceptable in SARs (presumably most similar to main clauses), less so in ECs (more embedded than SARs) and least acceptable in ERCs.

The first test concerns quantifier relations in Faroese *av-tí-at*-clauses and the distinction between ERCs (eventuality related), on the one hand, and ECs (epistemic) and SARs (speech-act related), on the other. It is a well-established observation that a quantifier can bind an agreeing pronoun occurring in the subordinate clause iff the quantifier c-commands the pronoun. In consequence, if causal clauses attach at different structural heights, they are expected to differ with regard to binding. This expectation is borne out in Faroese, as the following data illustrate:²

- (10) a. Næstan hvør einasti luttakari_i var bleikur (av) tí at hann_i var bangin.
 nearly every single participant was pale because he was afraid
 ‘Nearly every single participant_i was pale because he_i was afraid.’
- b. *Næstan hvør einasti luttakari_i má vera sjúkur, (av) tí at hann_i er bleikur.
 nearly every single participant must be sick because he is pale
Intended: ‘Nearly every single participant_i must be sick, because he_i is pale.’
- c. *Næstan hvør einasti luttakari_i er sjúkur, (av) tí at tú altíð ert so áhugaður í
 nearly every single participant is sick because you always are so interested in
 honum_i.
 him
Intended: ‘Nearly every single participant is sick, since you are always so interested
 in him_i.’

²We translate *av tí at* as *since* in the examples where it introduces a speech-act related (SAR) causal clause, as in English it can be difficult to get this interpretation with *because*. Recall that in this interpretation, the adverbial clause gives the reason for the speech act (typically, where the main clause is a statement, this means that the SAR causal adverbial is explaining why the speaker thinks their statement is relevant to their interlocutor).

Thus, Faroese, like German and Icelandic, allows variable binding into the ERC, as in (10a), while the EC, (10b), and the SAR, (10c), disallow such binding.

The second test regards the prefield position of the matrix clause and the special status of speech act related causal clauses (SARs) as opposed to the two other clause types:

- (11) a. (Av) tí at hon er sjúk, er Maria ógvuliga bleik.
because she is sick is Maria very pale.
Because she is so sick, Maria is very pale.
- b. (Av) tí at hon er so bleik, man Maria vera sjúk.
because she is so pale must Maria be ill
'Because she is so pale, Maria must be ill.'
- c. *(Av) tí at tú altíð ert so áhugaður í henni, er Maria sjúk.
because you always are so interested in her is Maria sick
Intended: 'Since you are always so interested in her, Maria is ill.'

Both the ERC in (11a) and the EC in (11b) can easily occupy the prefield position of the matrix clause, but the SAR in (11c) cannot be a part of the matrix clause. Again, this is the same pattern as in Icelandic.

The **third** test also concerns the special status of speech act related causal clauses (SARs):

- (12) a. Petur segði Mariu, [_{CP} at hon var so bleik, [_{CP} (av) tí at hon var so bangin]].
Petur told Maria that she was so pale because she was so frightened.
'Petur told Maria that she was so pale because she was so frightened.'
- b. Petur segði Mariu, [_{CP} at hon mundi vera sjúk, [_{CP} (av) tí at hon var so bleik]].
Petur told Maria that she must be sick because she was so pale
'Petur told Maria that she must be sick, because she was so pale.'
- c. *Petur segði Mariu, [_{CP} at Fríðrik var argur, [_{CP} (av) tí at hon altíð var so
Petur told Maria that Fríðrik was annoyed because she always was so
áhugað í honum]].
excited for him
'Petur told Maria that Fríðrik was annoyed, since she always was so excited to see
him'

As in German and Icelandic, SARs in Faroese—contrary to the other two types—cannot be **embedded** along with a selected *that*-clause.

The **fourth** test concerns the relative order of the finite verb and a sentence adverb like negation in different types of causal clauses in Faroese (in all cases, the default order would be *adverb–finite verb*).

- (13) a. ?Jón spyr og spyr, [_{CP} (av) tí at hann veit ikki].
Jón asks and asks because he knows NEG
'Jón asks and asks because he doesn't know.'

- b. ?Jón man vita alt um málið, [_{CP} (av) tí at hann spyr ekki].
 Jón must know everything about case.the because he asks NEG
 ‘Jón must know everything about the case, because he doesn’t ask.’
- c. Ætlar tú einsamallur í biograf, [_{CP} (*av) tí at tú spurði ekki, um eg vildi
 intend you alone to cinema because you asked NEG if I wanted
 koma við].
 come.INF with
 ‘Are you going to the cinema on your own, because you didn’t ask if I wanted to come
 along?’

“Icelandic-like” *Vfin*–Adv order of this type is difficult or impossible in non-V2 contexts. The prediction that this order should be easiest to get in disintegrated adverbial clauses like (13c) is borne out. The epistemic adverbial clause in (13b) is somewhat degraded and the same holds true for the eventually related one in (13a). Thus, apparently, we have an additional test providing fine-grained distinctions between adverbial clauses in an asymmetrical V2 languages like Faroese, i.e. central/peripheral clauses on the one hand and disintegrated clauses on the other hand.³

Based on we have seen so far, we can recapitulate our observations as in Table 2.

Table 2: Selected properties of causal *av-tí-at*-clauses in Faroese

	causal clause type	binding	prefield position	embeddability	<i>Vfin</i> –Adv order
1.	eventuality related	+	+	+	-
2.	epistemic	-	+	+	?/+
3.	speech act related	-	-	-	+

Following and extending the analysis of adverbial clauses developed by Haegeman (2003, 2010, 2012), Frey (2016, 2023) proposes to analyze the three different causal clauses along the lines of Table 3.

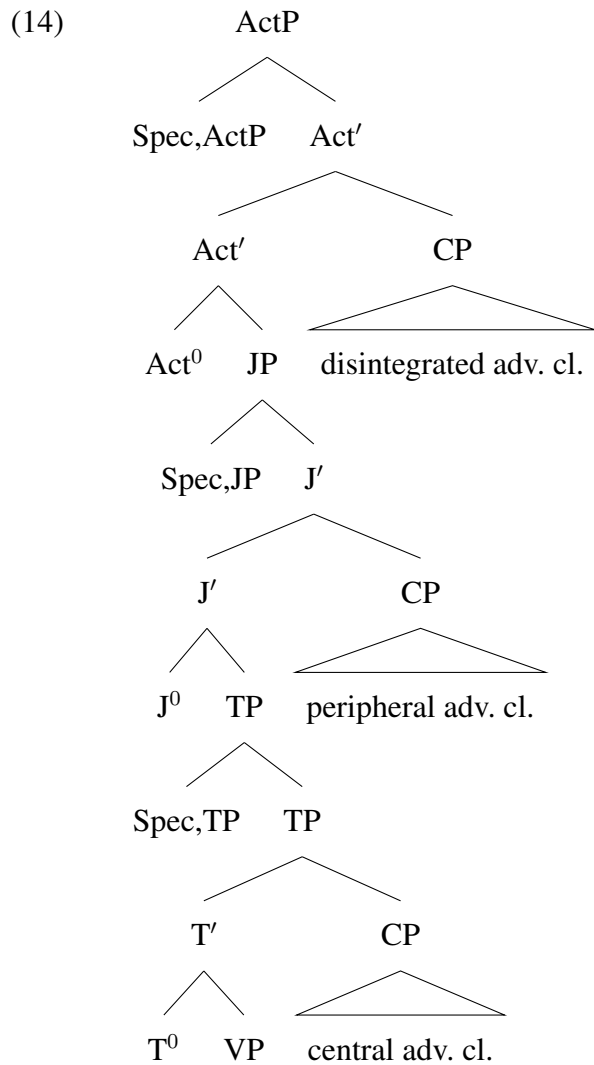
Whereas **central** adverbial clauses are claimed to depend on the illocutionary force of the matrix clause, be part of it and attach at the **TP** level, **peripheral** adverbial clauses are associated with the high functional projection **ForceP/JP** and possess their own illocutionary force. Disintegrated adverbial clauses always have independent illocutionary force, are not part of the syntactic structure of the host clause, are true orphans in the sense of Haegeman (2009), and combine with the matrix clause by establishing a rhetorical discourse relation.

These ideas, together with the proposals in Krifka (2023), lead to the prediction that speech act-related causal clauses (SARs) should attach as ActP modifiers, epistemic causal clauses (ECs) as JP or ActP modifiers, and eventuality-related causal clauses (ERCs) as TP, JP, or ActP modifiers:

³It should be noted that there is some evidence that *Vfin*–Adv order may be more acceptable in causal clauses in Faroese than might be expected. See Heycock et al. (2012) for data and discussion.

Table 3: Causal clauses, their syntactic status and possible interpretations in Frey (2016, 2023)

	adverbial clause type	possible interpretation	attachment height	
			Frey (2016)	Frey (2023)
1.	central adverbial	content	TP	TP
2.	peripheral adverbial	content, epistemic	ForceP	JP
3.	disintegrated dependent	content, epistemic, speech act related	outside the matrix clause structure	outside the matrix clause structure



If causal clauses are base-generated in the dedicated functional projections, they are expected to

host adverbial modifiers associated with the particular functional projections. Angantýsson and Jedrzejowski (2023) argue that this prediction is borne out in Icelandic. This needs to be tested for Faroese as well but it is beyond the scope of this article.

3.3 Causal ‘*av tí at*’ clauses: conclusion

In this section, we investigated the syntax of causal clauses in Faroese introduced by the morphologically complex complementizer(s) (*av*) *tí at*. Semantically, we showed that *av-tí-at*-clauses are not restricted to any particular causal interpretation in terms of Sweetser’s (1990) classification, with the exception that *av* is obligatorily absent in speech-act related causal clauses (SARs). Correspondingly, *av-tí-at*-clauses can give rise to a content, an epistemic or a speech act related interpretation, which are encoded in the grammar and do not come about just via pragmatic reasoning. Syntactically, *av-tí-at*-clauses can be analyzed as central, peripheral or disintegrated adverbial clauses, attaching at three distinct structural heights: TP, JP and ActP.

4 Temporal clauses

In contrast to causal adverbial clauses, the background assumption in the current literature concerning the 3-way distinction discussed above is that temporal adverbial clauses are always **central** adverbials (CACs). While (!) certain conjunctions that can introduce temporal adverbials can also have epistemic or speech-act related interpretations, when they do, the adverbial clause no longer gets a temporal interpretation. Cases in Faroese (as in related languages) include *meðan* ‘while’ and *síðan* ‘since.’

As noted above, one diagnostic for CACs is that they do not allow argument fronting. As Haegeman (2009) has documented for the corresponding sentences with English *while*, it is particularly striking that such fronting is possible when *meðan* is used in a non-temporal sense (introducing a peripheral adverbial clause (PAC)) but blocked when in its temporal sense. We repeat the earlier examples of Faroese temporal clauses here, showing their resistance to argument fronting:

- (15) a. Eg las aðru bók hennara **áðrenn** eg las ta fyrstu.
 I read second book her before I finished the first one
 I read her second book before I finished the first one.
- b. *Eg las aðru bók hennara **áðrenn** ta fyrstu endaði eg.
 I read second book her before the first one finished I
 Literally: ‘I read her second book before the first one, I finished.’

- (16) a. **Tá ið** hon byrjaði at skriva sínar vanligu greinar aftur helt eg at hon fór at
 when she began to write her regular columns again thought I that she would
 verða nógdari.
 be more happy
 ‘When she started to write her regular columns again, I thought she would be happier.’
- b. ?**Tá ið** sínar vanligu greinar byrjaði hon at skriva aftur helt eg at hon fór at
 when her regular columns began she to write again thought I that she would
 verða nógdari.
 be more happy
 Literally: ‘When her regular columns she started to write again, I thought she would
 be happier.’

The ungrammaticality or marginal status of the examples of fronting in (15b) and (16b) contrasts with the grammaticality of such fronting in a PAC such as we see in (17), where *meðan* ‘while’ can be interpreted in a non-temporal sense:

- (17) a. Studentarnir bílögdu nýggj eintøk **meðan** teir høvdu tey gomlu lættliga kunnað
 students.the ordered new copies while they had the old.ones easily could
 brúkt.
 used
 ‘The students ordered new copies while they could easily had used the old ones.’
- b. Studentarnir bílögdu nýggj eintøk **meðan** tey gomlu høvdu teir lættliga kunnað
 students.the ordered new copies while the old.ones had they easily could
 brúkt.
 used
 Literally: ‘The students ordered new copies, while the old ones they could easily have
 used.’

Of course this gives rise to the question of why the diagnostic works. That is, why is fronting of an argument blocked in a CAC? One strand of argumentation here is inspired specifically by already existing analyses of the internal structure of temporal adverbial clauses.

Since the seminal dissertation of Geis (1970), and subsequent work by Larson (1983), it has been very widely agreed in the syntactic literature that English *when*-adverbial clauses are essentially free relatives, formed by A'-movement of *when* as a temporal operator. Some of the strongest motivation for this is Geis's observation that such clauses can be ambiguous, in a way that such an analysis predicts, given the possibility of cyclic A' movement:

- (18) Jo arrived when I said that she would arrive.
Ambiguous between
 Jo arrived when_i [I said t_i [she would arrive]] (Jo arrived as I spoke)
 Jo arrived when [I said [she would arrive t_i]] (Jo arrived according to my projection)

Further, and crucially, the “low” reading that is derived by movement from an embedded clause is blocked by syntactic islands, again as expected if A' movement is involved. Thus (19) is unambiguous, contrasting with (18), because in (19) the low reading would require there to have been A' movement from within *the claim she would arrive*, but this is a complex NP island which is expected to block such movement.

- (19) Jo arrived when I made the claim she would arrive.
Unambiguous: Jo arrived as I made the claim

Although temporal clauses introduced by *before* and *after* do not have the surface form of free relatives, they show the same ambiguity, and the same island effects, and therefore have been analysed also as involving A' movement, in this case of a null operator of some kind:

- (20) Jo arrived before/after I said she would arrive
Ambiguous between
 Jo arrived before/after \emptyset_i [I said t_i [she would arrive]]
 (Jo arrived before/after I spoke)
 Jo arrived before/after \emptyset_i [I said [she would arrive t_i]]
 (Jo arrived before/after the time that I had projected)

- (21) Jo arrived before/after I made the claim she would arrive.
Unambiguous: Jo arrived before/after I made the claim.

The involvement of A'-movement in these clauses was used in Haegeman (2009, 2010)—and much work following her lead—as an explanation for why these clauses do not allow for topicalization of arguments (and some other types of movement). Any such movement would create an **INTERVENTION EFFECT**, preventing the movement of the temporal operator. As discussed in Heycock (2017), this is an elegant account of the ungrammaticality of topicalization in temporal clauses which relies almost entirely on widely accepted and independently motivated proposals (the involvement of A' movement in temporal clause construction and in topicalization, and the existence of intervention effects on A'-movement).

However, the fact that English *when*, *before*, and *after* temporal clauses involve A' movement does not entail that the same is necessarily true for all temporal clauses, whether in English or in other languages. And indeed a growing collection of papers have argued that some temporal adverbial clauses in other languages may fail to show evidence of A'-movement. In most of the cases discussed, there is a contrast within the language: i.e. some temporal clauses may allow “low” readings while others do not. See e.g. Lipták (2005) and Ürögdi (2009) on Hungarian, Stephens (2006) on Norwegian, Oda and Tatsumi (2017) on Japanese, Yip (2021) on Cantonese, Yip and

Chen (2022) on Mandarin.

This then is one question that we have been beginning to probe within Faroese: namely, what evidence do we find in Faroese concerning the **internal** structure of temporal adverbials, and does that correlate with their resistance to argument fronting?

4.1 Overview of Faroese temporal adverbial clauses

Given that there is limited availability of documentation on the syntax of Faroese, we begin with an overview of some of the most common elements introducing temporal adverbial clauses in Faroese. Unless indicated otherwise, all take finite complements. For further exemplification, see Thráinsson et al. 2012:318–319, from which some of the following examples are taken.

tá (ið) ‘when’

- (22) Jón flutti til Reykjavíkar, **tá (ið)** hann var 10 ára gamal.
 Jón moved to Reykjavik when that he was 10 years old
 ‘Jón moved to Reykjavik when he was 10 years old.’

nú (ið) ‘now that’

- (23) **Nú ið** hann sær hana, minnist hann alt aftur.
 now that he sees her remembers he everything again
 ‘Now that he sees her, he remembers everything again.’ [Thráinsson et al. 2012:318⁴]

*áðrenn (at)*⁵ ‘before’

- (24) Eg ætlaði at rudda, **áðrenn** gestirnir koma.
 I intended to clean.up before guests.the arrive
 ‘I intended to clean up before the guests arrived’

innan ‘before’

- (25) Eg verði liðugur, **innan** tú kemur.
 I become ready before you arrive
 ‘I will be done (ready) before you arrive’ [Thráinsson et al. 2012:319]

fyr enn ‘until’ (note that *fyr enn* is always a Negative Polarity Item; it cannot be used to translate English *until* in positive contexts, as for example in *I was here until she arrived*)

⁴This example is translated in Thráinsson et al. (2012) as ‘When he sees her, he remembers everything again,’ but *nú ið* seems to be closer to ‘now that’ in its interpretation, which retains at least some of the deictic interpretation of *nú* ‘now’. Thus, while it could be translated as ‘when’ in this example, it is impossible if the event in the adverbial clause has not actually taken place (e.g. it could not be used to translate ‘when’ in a sentence like ‘Please say hello when you see her.’)

⁵The inclusion of *at* may be more common in spoken than in written Faroese (Hjalmar Petersen, pc.)

- (26) Einki er liðugt **fyrir enn** alt er liðugt.
 nothing is completed until everything is completed
 ‘Nothing is completed until everything is completed.’

eftir (at) ‘after’ (note that, unlike *innan* or *áðrenn* ‘before’, *eftir* can select either a finite or an infinitival clause)

- (27) a. Tær tosaðu leingi saman, **eftir (at)** hann fór.
 they talked long together after that he left
 ‘They talked together for a long time after he left.’
- b. **Eftir at** hava ligið í Skopun mestsum allan dagin við tekniskum breki, kundi Teistin umsíður klokkan 17.30 loysa og fara í sigling aftur.
 after to have.INF lain in Skopun almost all day with technical fault could Teistin around o’clock 17.30 untie and go to sailing again
 ‘After having lain in Skopun all day with a technical fault, at around 17.30 Teistin could set sail again.’

frá tí at ‘since’

- (28) Nógv er broytt, **frá tí at** handilin var stovnaður.
 much is changed since business.the was founded
 ‘Much has changed since the business was founded.’

síðan ‘since’

- (29) Eg havi einki hoyrt frá honum, **síðan** hann fór.
 I have nothing heard from him since he left
 ‘I haven’t heard anything from him since he left.’

(best/beint/alt fyri eitt) sum ‘(just) as’

- (30) a. **Sum** tíðin gongur, skiftir fokus so líðandi frá bjargingararbeiði til...
 as time.the goes shifts focus so gradually from rescue.work to
 ‘As time passes, focus shifts from the work of rescue to ...’
- b. Han ringdi **beint sum** vit skuldu seta okkum til borðs.
 he rang just as we should set us to table
 ‘He phoned just as we were about to eat.’

*meðan (ið)*⁶ ‘while’

- (31) Lærarin fyrireikaði seg, **meðan** næmingarnir ikki vóru í húsinum.
 the.teacher prepared self while students.the not were in building.the
 ‘The teacher got ready while the students were not in the building.’

⁶The variant with *ið* is more typical of the spoken than the written language; there is no discernible difference in meaning (Hjalmar Petersen, pc.).

til ‘until’

- (32) Teir gingu áfram, **til** teir komu at ánni.
 they walked onward until they came to river.the
 ‘They walked on until they came to the river.’

ferð ‘time, occasion’

- (33) a. Eg bleiv dýggjvátur **ta ferðina** eg fór til Glasgow utan regnjakka.
 I became soaked that time I went to Glasgow without raincoat.
 ‘I got soaked the time I went to Glasgow without a raincoat.’
 b. Hon rennur yvir til hurðina, **hvørja ferð** hurðarklokkan ringir.
 she runs over to door.the, every time doorbell.the rings
 ‘She runs to the door every time/whenever the doorbell rings.’

A number of these clause-introducing “conjunctions” are also prepositions that can combine with DPs: this is true at least for *áðrenn* ‘before,’ *eftir* ‘after,’ *innan* ‘before,’ *meðan* ‘while, during,’ *síðan* ‘since,’ *til* ‘until.’ *Fyrr enn* ‘until’ is formally a comparative form, again it can occur also with DPs. Some also appear without complements, functioning as adverbs: at least *síðan* ‘since’, *áðrenn* ‘before,’ *meðan* ‘while, in the meantime,’ *eftir* ‘after(wards)’

4.2 Internal syntax of temporal adverbial clauses

4.2.1 Background: temporal clauses formed by A'-movement of a temporal operator

As mentioned above, Haegeman (2009, 2010) has argued that the ungrammaticality of argument fronting (and by extension *Vfin*–Adv order) in temporal—and other—central adverbial clauses (CACs) is an intervention effect: the A'-movement involved in argument fronting / V2 blocks the movement of the temporal operator. A problematic case for this view (acknowledged in Haegeman 2009) is that of temporal *while* clauses in English. These disallow fronting of arguments, but also do not allow for the “low” readings that are found in *when/before/after* clauses (i.e. they show no evidence for A'-movement of an operator). Thus although (34b) is grammatical on the non-temporal PAC reading, it cannot have the “low” temporal reading (I met her during the time of her purported stay in Paris) that is available in the minimally contrasting *when*-adverbial in (34a).

- (34) a. I met her in London when the police claim she was in Paris
 b. I met her in London while the police claim she was in Paris.

We can then ask how Faroese fits into this picture? Do we find similar evidence for A' movement in some or all temporal clauses? If we do, do we also find similar disconnects between the diagnostics for CAC status and evidence for A' movement within the adverbial clauses?

4.2.2 Faroese temporal clauses with the form of relatives

Some Faroese temporal clauses appear to have the syntax of headed relatives, where the head is itself a time adverbial. This is the case for *tá* (*ið*), and *nú* (*ið*): *tá* appears elsewhere as an adverb meaning ‘then’, *nú* as ‘now’, and *ið* seems to be a complementiser mainly limited to relative clauses (and embedded interrogatives). Unsurprisingly, then, we find the same kind of ambiguity in *tá* (*ið*) time adverbials as has been found in such clauses in other languages, so (35) can mean either that he left at the time of speaking, or the projected time of leaving.

- (35) Hann fór, **tá** (**ið**) eg segði, hann skuldi fara.
 he left when (that) I said he should leave
 ‘He left when I said he should leave’

Note that *meðan* ‘while’—which, as mentioned above, in Faroese can also be used without modification as a temporal adverb—can also optionally be followed by *ið*, thus suggesting that it may also be followed by a relative clause. *Meðan* in its temporal use does not allow argument fronting, as shown in (36):

- (36) *Maria gekk til tímar **meðan** TÍNA bók brúktu tey men ikki meðan MÍN varð brúkt.
 Mary went to classes while your book used they but not while mine was used
Literally: ‘Mary went to classes while your book they used, but not while mine was used.’

Nevertheless, it seems that *meðan* even in its temporal use does not allow long-distance readings, like English temporal *while*, and contrasting with *tá* (*ið*) ‘when’ (Hjalmar Petersen, pc.). See for example the contrast between the (a) and (b) examples in (37)–(38)

- (37) a. Eg var í sjónleikarahúsinum, **tá** (**ið**) løgreglan sigur, morðið hendi.
 I was in theatre.the when (that) police.the says murder.the happened
 ‘I was in the theatre when the police say that the murder happened.’
Can mean: ‘I was in the theatre at the time that the police claim was the time of the murder.’
- b. Eg var í sjónleikarahúsinum, **meðan** (**ið**) løgreglan sigur, morðið hendi.
 I was in theatre.the while (that) police.the says murder.the happened
 ‘I was in the theatre while the police say that the murder happened.’
Cannot mean: ‘I was in the theatre at the time that the police claim was the time of the murder.’

- (38) a. Eg sá ikki Mariu í Berlin, **tá (ið)** hon sigur, at hon var har.
 I saw NEG Maria in Berlin when (that) she says that she was there
 ‘I didn’t see Maria in Berlin when she says that she was there.’
Can mean: ‘I didn’t see Maria in Berlin at the time that she claims was the time of her visit there.’
- b. Eg sá ikki Mariu í Berlin, **meðan (ið)** hon sigur, at hon var har.
 I saw NEG Maria in Berlin while (that) she says that she was there
 ‘I didn’t see Maria in Berlin while she says that she was there.’
Cannot mean: ‘I didn’t see Maria in Berlin during the time that she claims was the time of her visit there.’

As discussed above, in English also, temporal *while* clauses disallow ‘embedded root phenomena’ like other CACs, but do not allow long-distance readings, suggesting that their derivation does not involve *A'* movement. In Faroese the disconnect is even more remarkable, in that, as far as we can tell as this point, both the type of complementizer and the blocking of argument fronting suggest the involvement of *A'*-movement, making the absence of long-distance readings now doubly mysterious.

Temporal clauses with *ferð* ‘time, occasion’ also seem to have the form of relative clauses. These will be discussed separately in Section 4.2.5 below.

4.2.3 Temporal clauses introduced by *sum*

Temporal clauses may also be introduced by *sum*, possibly best translated as ‘as.’ Outside of temporal clauses, *sum* can appear in relatives as in (39a), alternating with *ið*, but it also occurs in a range of other constructions with a range of other meanings, including simulatives (Treis and Vanhove 2017; Massala 2023) as in (39b):

- (39) a. ... vátir og kaldir regndropar, sum ísa klæðini
 wet and cold raindrops that freeze clothes
 ‘... wet and cold raindrops that cover your clothes with ice’
- b. Hann rann, sum hann var óður
 he ran as he was mad
 ‘He ran like a madman.’ [Sprotin]

It can introduce what appear to be relatives headed by some word with a temporal reference, although it is hard to know whether here the *sum* clause is modifying *dagin* ‘day’ or is an independent adverbial clause:

- (40) ein dagin, sum teir vóru úti á havi, kom stormur inn
 one day as/that they were out at sea came storm in
 ‘One day, while they were out on the open sea, a storm broke.’ (Sprotin)

In the absence of a noun to modify, *sum* can introduce temporal adverbials, either on its own or in combination with *best*, *beint*, or *alt fyri eitt* as in the examples given above in (30). It is not clear what the internal syntax of such cases should be. Preliminary evidence suggests that operator movement is involved. For example, (41) is possible in the given scenario (Hjalmar P. Petersen, p.c.). This is a “long distance” reading presumably due to A'-movement in the temporal clause:

- (41) *Situation*: Two people working at the parliament are discussing the arrangements for the arrival of King Charles III. They were told he would arrive at exactly 3 o'clock. The manager wants the worker to open the door at exactly that time. The manager can say:

Tú skuldi latið portrini upp **beint sum** tað varð sagt okkum, at Karl kongur
 you should open the.door up just as it was told us that Charles king
 skuldi koma.
 should come
 'Open the door just when we were told that King Charles will arrive.'

Similarly, (42) can have the reading that King Charles arrived just at the time predicted, again implying A'-movement of some operator from the embedded clause.

- (42) Karl kongur kom beint sum tú hevði sagt mær, hann skuldi koma.
 Charles king came just as you had told me he should come
 'King Charles arrived exactly when you had told me he would arrive.'

4.2.4 Faroese *áðrenn* 'before' and *eftir* 'after' temporal clauses

Temporal clauses introduced by *áðrenn* (*at*) 'before' and *eftir* (*at*) 'after' do not include anything that has the outward form of a relative; they seem to consist of a declarative clause, optionally introduced by the declarative complementizer *at*, following a preposition. However, they too show evidence of A' movement.

- (43) a. Hon kom **áðrenn** tú segði mær, hon skuldi koma.
 she came before you told me she should come
 'She arrived before you told me she would arrive.'
Faroese sentence is ambiguous, just as the English translation
- b. Hann kom, **eftir at** tú segði, hann skuldi koma
 he came after that you said he should come
 'He arrived after you said he would arrive.'
Faroese sentence is ambiguous, just as the English translation

As has been argued for English (see for example Larson 1990), it is possible to propose the movement of a silent operator here (and possibly also the existence of a silent nominal head—although this would make it surprising that the complementizer *ið* is not possible in these cases). We expect

argument fronting also to be blocked, and this appears to be the case, as evidenced by (1b) above, repeated here as (44):

- (44) *Eg las aðru bók hennara **áðrenn** ta fyrstu endaði eg.
 I read second book her before the first one finished I
Literally: ‘I read her second book before the first one, I finished.’

In Faroese, as noted above, *eftir*—but not *áðrenn*—can be followed by an **infinitival** clause (a similar pattern obtains for their equivalents in Icelandic). On our current evidence, here too the long-distance readings that are the hallmark of A'-movement are possible. Thus, in the following context, both (45a) and (45b) are possible responses:

- (45) *Situation:* Jógvan and Anna need to catch a plane. Jógvan spoke to Anna the previous night, and told her that he would pick her up from her house at 6 am. But in fact he arrived an hour late (at 7am), and they missed the flight. Afterwards Anna’s friend is talking to her and asks ‘So did Jógvan get to your house when he promised?’ Anna can answer:
- a. Nei! Hann kom **ein tíma eftir** hann segdi, hann skuldi koma.
 no he came one hour after he said he would come
 ‘No! he arrived an hour after he said he would come!’
 - b. Nei! Hann kom **ein tíma eftir** at hava sagt, hann skuldi koma.
 no he came one hour after to have said he would come
 No! he arrived an hour after he said (*lit: to have said*) he would come!’

The possibility of a ‘low’ reading with the infinitival temporal clause is perhaps not surprising, given that infinitival clauses in Germanic can often host operator movement. It is however worth noticing a contrast between this case and that of English “clausal gerund” complements to *before*, *after*, and *when*, which, as Johnson (1988) pointed out, exclude long-distance readings. That is, in the context given above, English (46) is anomalous as it can only mean that Jógvan arrived an hour after his conversation with Anna the previous night:

- (46) #No! He arrived an hour after saying he would come!

4.2.5 Quantified temporal clauses and event reference

In order to express a quantified temporal like *whenever*, Faroese makes use of *ferð* ‘time, occasion:’

- (47) Hon rennur yvir til hurðina, hvørja ferð hurðaklokkann ringir.
 she runs over to door.the every time doorbell.the rings
 ‘She runs to the door every time / whenever the doorbell rings.’

Such temporals can also appear unquantified, to refer to a specific time:

- (48) Eg bleiv dýggjvátur ta ferðina eg fór til Glasgow utan regnjakka.
 I got soaked that time.the I went to Glasgow without raincoat
 ‘I got soaked the time I went to Glasgow without a raincoat.’

Typically there is no complementizer or relativizer of any kind following *ferð*, but it is possible, although much less common, with *ið*.⁷ Thus it is reasonable to think that the structure here is again a relative clause modifying the noun *ferð*. Consistently with this, such expressions can also occur in argument positions:

- (49) Minnist tú ta ferðina vit fóru at spamera og tað byrjaði at oysregna?
 remember you that time.the we went to walk and it began to pour
 ‘Do you remember the time we went for a walk and it began to pour?’

Although the dictionary *Sprotin* gives ‘at that time, in those days’ as a possible translation of *tá ferð(ina)*, as far as we can tell, this is not quite correct. For example, it cannot be used to translate (50). Our current hypothesis is that *ferð* has to refer to an event, rather than directly to a time interval, as suggested in Hall & Caponigro 2010 for one reading of English *time*.

- (50) It was 1995. At that time, no one had a mobile phone.

- (51) Tað var í 1995. {Tá / #Ta ferð(ina)} hevði eingin fartelesfon.
 it was in 1995 then that time had no one mobile.phone
 ‘It was 1995. At that time no one had a mobile phone.’

While English can use *time* in this context (but only with a preposition—a bare NP adverb it is also infelicitous here, see Hall and Caponigro 2010) as well as in those in (47)–(49), Faroese is not unusual within the European languages in using a distinct noun when referring to events (cf. French *fois*, Spanish *vez*). In Heycock (2023) it is argued that this is part of a larger picture suggesting that there are syntactic as well as semantic (and lexical!) grounds for distinguishing between temporal expressions that denote time intervals and those that denote events. Rothstein (1995), in the course of a semantic analysis of the quantificational structure of English examples like *The dog barks every time the bell rings*, points out that the time adverbials in such examples, while having the form of relatives, seem to lack the ambiguities/long-distance readings that we have seen are associated with A'-movement. Similar cases have however never been explored (to our knowledge) in any language other than English. While clear test cases are hard to construct, it appears that in Faroese also these ‘event relatives’ are unambiguous, lacking long-distance readings.

Thus, for example, English (52b) is unambiguous, contrasting minimally with (52a)

⁷In some cases it is natural to introduce the clause after *ferð* with *at*. One of our consultants informed us that this would for example be natural in the example in (47), but would be excluded in (48), which instead would be possible with *sum* or *ið* (Annika Simonsen, pc.). This contrast remains to be explored.

- (52) a. We will look out for her on every day when she says she may visit.
 (i) We will look out for her on every day on which she makes an announcement about visiting *or*
 (ii) We will look out for her on every day that she specifies as a potential visiting day
- b. We will look out for her every time she says she may visit.
 (i) We will look out for her on every occasion on which she makes an announcement about visiting

The Faroese example with *ferð* appears to be unambiguous, like (52b) (Hjalmar P. Petersen, Annika Simonsen, p.c.):

- (53) Vit skulu hava eyga við henni hvørja ferð, (ið) hon sigur (frá), at hon kemur á vitjan.
 we should have eye on her every time that she says out that she comes on visit
 ‘We will look out for her every time she says she may visit.’
- (i) We will look out for her on every occasion on which she makes an announcement about visiting

So in an even more striking case than we saw with *meðan*, these examples with *ferð* show that temporal adverbial clauses that seem to have the form of relative clauses nevertheless may not allow long-distance movement of the hypothesized temporal operator.

5 Conclusions and directions for research

In this paper we have presented and analysed aspects of the external and internal syntax of adverbial clauses in Faroese. In our consideration of the external syntax, we have focussed on causal adverbial clauses, as this is a category which has been argued to attach at different heights, with related differences in interpretation. In our discussion of the internal syntax, on the other hand, we have focussed on temporal clauses, as—we argue—these present interesting challenges for accounts of restrictions on the left periphery of such adverbial clauses.

Beginning with issues relating to the subclassification of adverbial clauses and the relation between this and attachment position, we have argued that the syntax and semantics of **causal** *av-tí-at* adverbial clauses in Faroese motivates a three-way distinction (as was also the case for Icelandic) between eventuality related (ERC), evidential (EC) and speech act related (SAR) causal clauses. Relatedly, there are at least three distinct attachment sites for causal adverbial clauses, but there is not a one-to-one mapping between attachment site and interpretation. That is, there seems to be no restriction on how **high** the different types of causal clause can attach, but for each there is a *lower* limit. In contrast to Icelandic, where forms with and without the cognate of *av* seem to be in free variation, in Faroese *av* is excluded from speech act related (SAR) causal clauses.

Consistent with earlier results from other languages, ERCs in particular block argument fronting and—but apparently to a lesser extent—*Vfin*–Adv orders.

Turning to temporal clauses, we saw that these are similar in this respect, consistent with the assumption that they attach low. We then focussed on the question of how this restriction on argument fronting might be related to the internal syntax of such clauses. We demonstrated that at least some temporal clauses in Faroese show evidence of A'-movement, i.e. ambiguities arising from the different possible launching sites of movement. These kind of data have been at the heart of the “intervention” theory for limits on the distribution of some kinds of embedded root phenomena, in particular argument fronting and (in modern Faroese) *Vfin*–Adv orders). However, we showed that temporal *meðan* ‘while’ and *ferð* ‘time, occasion’ clauses seem to give rise to the same restrictions on argument fronting, but lack evidence for A'-movement.

This then gives rise to (at least) three questions to pursue in further research. First, what is the exact syntactic structure of temporal adverbial clauses in Faroese that allow long-distance A'-movement? What accounts for the distribution of the different complementisers (?) involved? Second, what is the syntactic structure of temporal adverbial clauses—in Faroese and in other languages—that appear not to allow long-distance A'-movement? And finally, if such temporal clauses do not in fact involve movement, does this undermine the intervention account of why argument fronting (among other phenomena) is blocked in central adverbial clauses (as was already argued on the basis of English *while* clauses in Sawada & Larson 2012). If so, what can replace (or supplement) it?

References

- Angantýsson, Ásgrímur, and Łukasz Jędrzejowski. 2023. Layers of subordinate clauses: A view from causal *af-því-að*-clauses in Icelandic. In *Micro- and macro-variation of causal clauses: Synchronic and diachronic insights*, eds. Łukasz Jędrzejowski and Constanze Fleczonek. *Studies in natural language companion series*, 184–220. Amsterdam: John Benjamins. Chap. 7.
- Angantýsson, Ásgrímur, and Dianne Jonas. 2016. On the syntax of adverbial clauses in Icelandic. *Working Papers in Scandinavian Syntax* 96: 126–139.
- Angantýsson, Ásgrímur, and Dianne Jonas. 2020. Gerð atvikssetninga í íslensku og færeysku / The syntax of adverbial clauses in Icelandic and Faroese. *Íslenskt mál* 41–42: 225–236.
- Frey, Werner. 2016. About some correlations between formal and interpretative properties of causal clauses. In *Co- and subordination in German and other languages*, eds. Ingo Reich and Augustin Speyer. *Linguistische Berichte Sonderheft*, 153–179. Hamburg: Buske.

- Frey, Werner. 2023. On the status of different dependent clauses. In *Propositionale Argumente im Sprachvergleich: Theorie und Empirie / Propositional arguments in cross-linguistic research: Theoretical and empirical issues*, eds. Jutta Maria Hartmann and Angelika Wöllstein. *Studien zur deutschen sprache*. Tübingen: Narr.
- Geis, Michael. 1970. Adverbial subordinate clauses in English. PhD diss, MIT, Cambridge, MA.
- Haegeman, Liliane. 2003. Conditional clauses: external and internal syntax. *Mind and Language* 18: 317–339.
- Haegeman, Liliane. 2009. The movement analysis of temporal adverbial clauses. *English Language and Linguistics* 13 (3): 385–408.
- Haegeman, Liliane. 2010. The internal syntax of adverbial clauses. *Lingua* 120: 628–648.
- Haegeman, Liliane. 2012. *Adverbial clauses, main clause phenomena, and the composition of the left periphery: The cartography of syntactic structures*, Vol. 8. Oxford University Press.
- Hall, David, and Ivano Caponigro. 2010. On the semantics of temporal *when*-clauses. In *Proceedings of SALT 20*, 544–563.
- Heycock, Caroline. 2017. Embedded root phenomena, 2nd edn. In *The Blackwell companion to syntax*, eds. Martin Everaert and Henk van Riemsdijk. Oxford: Blackwell.
- Heycock, Caroline. 2023. When was that (exactly)? Handout of a talk given at the Linguistics and English Language Annual Conference, University of Edinburgh. <https://www.research.ed.ac.uk/en/activities/when-was-that-exactly>.
- Heycock, Caroline, Antonella Sorace, Zakaris Svabo Hansen, Frances Wilson, and Sten Vikner. 2012. Detecting the late stages of syntactic change: The loss of V-to-T in Faroese. *Language* 88 (3): 558–600.
- Krifka, Manfred. 2023. Layers of assertive clauses: Propositions, judgements, commitments, acts. In *Propositionale Argumente im Sprachvergleich: Theorie und Empirie / propositional arguments in cross-linguistic research: Theoretical and empirical issues*, eds. Jutta Maria Hartmann and Angelika Wöllstein. *Studien zur deutschen sprache*. Tübingen: Narr.
- Larson, Richard. 1983. Restrictive modification: Relative clauses and adverbs. PhD diss, The University of Wisconsin-Madison, Madison, WI.
- Larson, Richard. 1990. Extraction and multiple selection in PP. *The Linguistic Review* 7: 169–182.

- Lipták, Anikó. 2005. Relativization strategies in temporal adjunct clauses. *Linguistic Variation Yearbook* 5 (1): 65–117. doi:10.1075/livy.5.04lip.
- Massala, Marta. 2023. A cross-Germanic perspective on simulative clauses: Some thoughts and questions. Handout for a talk given at the 3rd International Conference on Adverbial Clauses, University of Göttingen.
- Oda, Hiromune, and Yuta Tatsumi. 2017. A non-unified analysis of “before” clauses in Japanese. In *Proceedings of Workshop on Altaic Formal Linguistics 12. MIT working papers in linguistics*, 243–254. Department of Linguistics and Philosophy, MIT.
- Rothstein, Susan. 1995. Adverbial quantification over events. *Natural Language Semantics* 3 (1): 1–31.
- Stephens, Nola M. 2006. Norwegian when clauses. In *Proceedings of the LFG06 conference*, eds. Miriam Butt and Tracy Holloway King. CSLI Publications. <https://web.stanford.edu/group/cslipublications/cslipublications/LFG/11/pdfs/lfg06stephens.pdf>.
- Sweetser, Eve. 1990. *From etymology to pragmatics. metaphorical and cultural aspects of semantic structure. Cambridge studies in linguistics*. Cambridge: Cambridge University Press.
- Thráinsson, Höskuldur, Hjalmar P. Petersen, Jógvan í Lon Jacobsen, and Zakaris Svabo Hansen. 2012. *Faroese: An overview and reference grammar*, 3rd edn. Faroese University Press and Linguistic Institute, University of Iceland.
- Treis, Yvonne, and Martine Vanhove, eds. 2017. *Similitive and equative constructions: A cross-linguistics perspective*. Amsterdam: John Benjamins.
- Ürögdi, Barbara. 2009. Temporal adverbial clauses with or without operator movement. In *Adverbs and adverbial adjuncts at the interfaces*, ed. Katalin É. Kiss, 133–168. Berlin: Mouton de Gruyter.
- Yip, Ka-Fai. 2021. Two types of temporal adverbial clauses in Cantonese. Handout for a talk at WCCFL 39, University of Arizona.
- Yip, Ka-Fai, and Zhuo Chen. 2022. Adverbial clauses with and without operator movement. Handout for talk at the 96th Annual Meeting of the LSA.