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# Syntax and Discourse 

# Case(s) of V3 orders in Icelandic with temporal adjuncts 

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#### Abstract

Although Icelandic is a verb second language (V2), it sometimes allows for deviations from V2; for instance, V1 and V3. In this paper, I look at a type of V3 which consists of an adverbial adjunct occurring in front of wh-questions. I contrast this type with similar instances of V3 found in West Flemish (WF) and Standard Dutch (StD) (see Haegeman and Greco 2018). Assuming that Icelandic makes use of an extended left periphery, I suggest that the Icelandic V3 can be analyzed in a similar way as those in WF and StD, namely that the adverbial adjunct is outside of the regular main clause and that a movement of the finite verb along with a temporal index high into the left periphery licenses an external merger of the adjunct. In instances where V3 with initial adverbial adjunct is not allowed, i.e. to the left of a regular subject-initial sentence, the finite verb stays lower in the left periphery and external merger is not licensed.


## 1 Introduction

Languages that standardly have the finite verb in the second position (V2) occasionally allow for divergence from V2. In these cases, the verb can occur in the first position (V1), in third position (V3), or later in the clause. What these deviations from V2 have in common is that they are highly marked and only found under certain circumstances, discourse contexts or specific syntactic environments.

In this paper I take look at a certain type of V3 order that is allowed in Icelandic, a V2 language (for an overview, see Thráinsson 2007:17-31). The V3 type under discussion here typically occurs in spoken language and consists of a temporal adjunct appearing clauseinitially. This is presented in (1), where the temporal adjunct is underlined and the finite verb of the main cause boldfaced.

| Degar pú | ferð | til | Belgíu | i | sumar, | hvað |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when you | go | to | Belgium | PREP | summer | what |
| cetlarðu |  | að | gera? |  |  |  |
| go.2SG |  | to do |  |  |  |  |
| 'When you go to Belgium this summer, what are you going to do?' |  |  |  |  |  |  |

Similar types of V3 orders are allowed in West Flemish (WF) and Standard Dutch (StD) (see Haegeman and Greco 2018). ${ }^{1}$ This is shown in (2) with an example from WF.

| Als't | geijzeld | is, | ze | risschiert | heur | niet | buiten. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when it | frosty | is | she | risks | her | not | outside |

'When it is frosty, she does not venture outside.' (Haegeman and Greco 2018:2)

I contrast the Icelandic data with data from WF and StD discussed by Haegeman and Greco (2018) and attempt to apply their analysis to Icelandic. Icelandic seems to differ from WF and StD in two ways. Whereas WF and StD allow for this particular type of V3 orders with various types of main clauses, Icelandic only allows for it with wh-questions. Second, in Icelandic it seems like the phenomenon can be embedded, but in WF and StD it is bound to main clauses. Leaving aside the embedded examples in Icelandic, I argue that the main clause V3 with temporal adjuncts can be accounted for in a similar way as the WF and StD data. Following Haegeman and Greco (2018), an external merger of a temporal adjunct is assumed to be licensed through a movement of an element up to the edge of the left periphery, i.e. to ForceP on a split CP account. If movement to the edge of the periphery does not take place, an external merger of a temporal adjunct is not possible. I argue that in Icelandic, movement up to the edge of the left periphery only takes place in $w h$-questions. In other instances, the finite verb stays lower in the clause and hence an external merger cannot take place. This approach demands that Icelandic be regarded as having an articulated CP layer. ${ }^{2}$

The paper is organized as follows. In Section 2.1 I briefly discuss V3 orders in V2 languages. In Section 2.2 I give examples of the relevant facts of West Flemish (WF) and Standard Dutch (StD) as presented in Haegeman and Greco (2018). This is followed by a clause-external account of the initial temporal adjunct which precedes a regular V2 clause (see Haegeman and Greco 2018). Section 3 is devoted to Icelandic. In 3.1 I briefly discuss the position of the finite verb in Icelandic. Section 3.2 deals with two different types of temporal adjunct clauses, the Peripheral Adverbial Clause (PAC) and the Central Adverbial Clause (CAC). Section 3.3 contains some examples of V3 in Icelandic that have a CAC as an initial adjunct. The examples are mainly based on the intuition of the present author, although other Icelandic speakers were regularly consulted. ${ }^{3}$ Section 3.4 highlights the differences between Icelandic on the one hand and WF and StD on the other hand. A provisional analysis for Icelandic is also presented in this section. Finally, Section 4 concludes the paper.

[^0]
## $2 \quad$ V3 in V2 languages - West Flemish and Standard Dutch <br> $2.1 \quad V 2$ and $V 3$

The V2 phenomenon is generally thought to consist of the finite verb occurring after the first constituent of the clause. The surface order of the constituents is often translated into an underlying structure where V2 is described via verb movement, i.e. the verb moves from V to T (and in some instances all the way to C ) on a non-split-CP account (for an overview of Icelandic verb movement, see Thráinsson 2007). The verb-movement account of V2 is necessarily connected to the general description as it is supposed to capture the linear order of constituents. However, describing word order through linear order of constituents and verb movement does not always give the same results. Take for instance (3).
A morgun, bá verður

in tomorrow then will-be | fun |
| :--- |
| 'Tomorrow, it will be fun then.' |

Based on the linear order of constituents, (2) can be regarded an instance of verb third (V3) since the finite verb is preceded by two constituents, namely $p a \dot{a}$ 'then' and á morgun 'tomorrow'. On a verb-movement account, however, (2) might be regarded as conforming to "regular" V2, with the verb in C (assuming that this is the position that the finite verb occupies) and the adverb pá in Spec,CP; the additional adverbial á morgun is then considered to be outside of the regular clause. Of course, this raises the question what a clause is and what it means to be a part of a clause or external to it. I will get back to this question in Section 2.3. For the remainder of the paper, I will use V3 descriptively for utterances that seem to have the finite verb in third position according to the surface order of constituents. Regarding clausal structure, however, the verb can still be thought of as occupying its regular V2 position. Making use of a split-CP layer, the finite verb is assumed to occupy either ForceP or FinP (for discussion on the placement of the finite verb within the left periphery of V2 languages, see Poletto 2002, Wolfe 2016 and others).

## $2.2 \quad V 3$ in StD and WF

Both West Flemish and Standard Dutch are V2 languages. Despite this, there are some instances of V3 word orders with adjuncts occurring clause-initially. The V3 sentences are thought to be confined to specific discourse contexts (Haegeman and Greco 2018), and the constituents that appear at the front of the clause are mainly temporal and conditional adjuncts (Saelens 2014). An example from WF is given in (4). All WF and StD examples are taken from Haegeman and Greco (2018).
(4) $\begin{array}{llllllll}\text { Als't } & \text { geijzeld } & \text { is, } & \underline{z e} & \text { risschiert } & \text { heur } & \text { niet } & \text { buiten. } \\ \text { when it } & \text { frosty } & \text { is } & \text { she } & \text { risks } & \text { her } & \text { not } & \text { outside }\end{array}$
'When it is frosty, she does not venture outside.' (Example (1a) in Haegeman and Greco 2018)

Importantly, V2 word order is also possible in this context as shown in (5).
(5) Als't geijzeld is, risschiert ze heur niet buiten.
when it frosty is risks she not outside
'When it is frosty, she does not venture outside.' Example (1d) in Haegeman and Greco 2018)

Haegeman and Greco (2018) note that the temporal adjuncts that give rise to V3 orders can be merged with various clause-types, e.g. subject initial declarative clauses (6), declarative clauses with a fronted element (7), and interrogative clauses with $w h$-words (8). The main restriction on this type of V3 seems to be that it is confined to main clauses, i.e. these V3 types do not appear in an embedded environment.
(6) Adj-subj-V

| Als | mijn | tekst | klaar is, | ik | zal | je | hem | opsturen. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when my | text | ready is | I | will | you | him | send |  |

'When my text is ready, I will send it to you.'
(Example (21a) in Haegeman and Greco 2018)
(7) Adj-top-V

Oa-j eur entwa vroagt, en antwoord en kryg-je if-you her something ask a reply NEG get-you niet.
not
'If you ask her about something, a reply you will not get.'
(Example (28) in Haegeman and Greco 2018)

## (8) Adj-wh-V

Oan-k gereed zyn met dienen tekst, aan wien
if.1SG-I ready am with that text to whom
moen-k hem ipstieren?
must.1SG-I him send
'When I am ready with that text, to whom shall I send it?'
(Example (27a) in Haegeman and Greco 2018)
Temporal adjuncts like those in (6)-(8) can also combine with imperatives. Although examples like the one in (9) do technically not exhibit V3, they do involve deviation from the V1 pattern expected in imperatives. The occurrence of a temporal adjunct in front of regular imperatives can be assumed to be licensed in a similar way as the examples in (6)-(8) (see discussion in Haegeman and Greco 2018).
(9) Oa't vanavond te kukt wordt, zet de chauffage
if.it tonight too cold becomes switch the heating
maar aan.
PRT on
'If it becomes too cold tonight, do switch on the heat.'
(Example (27d) in Haegeman and Greco 2018)

In all the cases of V3 (and the V2 in (9)) the initial adjunct is followed by "a more or less marked break" (Haegeman and Greco 2018:15).

### 2.3 Haegeman and Greco's Analysis

Working with Broekhuis and Corver's (2016) definition of clause-external elements, Haegeman and Greco claim that the temporal adjuncts in the V3 orders are clause-external. According to Broekhuis and Corver (2016), clause-external material includes constituents that occur to the left of the CP. This means that only one constituent is supposed to precede the head of C and if additional material is observed it must be outside the normal clause. The fact that the leftmost element is set aside from the rest of the clause by a marked break in intonation indicates that the element is clause-external, as argued by both Broekhuis (2016) and Haegeman and Greco (2018). Additionally, the clause-external material may have a special function in the discourse. This ties in with another assumption about clause-external material, i.e. that they are not moved from a base position inside the clause, but rather externally merged to the left of the CP layer (Holmberg 2015, Haegeman and Greco 2018). On an account like this, the clause structure of the examples in (6)-(9) is as shown in (10).
(10) [Adjunct [cР ... [тР ...]]] (Haegeman and Greco 2018:35)

Haegeman and Greco (2018) call the projection that is associated with the externally merged adjunct FrameP and claim that it "creates a discourse unit in which Adj-XP serves as a framing device for the assertion in ForceP." The proposed structure is shown in (11). Note that ForceP corresponds to the CP layer in (10).


Although the adjuncts that give rise to V3 are generated outside of the normal clause, they do have a connection with main clause they are associated with. Haegeman and Greco (2018) capture this connection by proposing that the main clause has a temporal modal connector (or index) that ties the adjunct temporally to the main clause and licenses the external merger of it in FrameP. Since locality conditions have to be satisfied in order for elements to be merged in FrameP, the temporal index has to be moved up to the edge of the periphery, i.e. to ForceP. On Haegeman and Greco's (2018:38) account, this happens through the movement of the finite
verb up to Force. If no movement up to ForceP takes place, an external merge of elements in FrameP cannot happen.

## 3 Icelandic V3 clauses with temporal adjuncts

3.1 Verb position in Icelandic

Icelandic is a symmetric V2 language, with the finite verb occurring in second position, both in main and subordinate clauses (cf. Thráinsson). An example of a main clause is given in (12).
(12) bessa bók hefur drengurinn ekki lesid.
this book-the.ACC has.3SG boy-the.NOM not read
'This book, the boy has not read.'

In (13) the clause from (12) has been embedded. As can be seen in (13b), V2 is maintained after topicalization within the embedded clause. Note that embedded V2 in Icelandic is not limited to embedding under verbs of assertion, as in (13), but it also occurs when the main clause has non-assertive verbs (see, e.g., Vikner 1995:71-72). In this way, Icelandic is different from Mainland Scandinavian.


In addition to V2, Icelandic also has V1 orders that are restricted to certain types of clauses, e.g. yes/no questions, commands and narrative inversion (for a general overview and references see Thráinsson 2007:28-31, for declarative V1 see Sigurðsson 2018). I give her only an example of a yes/no question (14).
(14) Ferð-и
go-you.2SG PREP Germany PREP summer
'Are you going to Germany this summer?'

Contrary to yes/no questions, questions with wh-elements have a regular V2 pattern. This is shown in (15) with the wh-word hvert 'where to'.

| Hevert | cetlar | bú | að | fara | $i$ | frí? |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| where-to | go.2SG | you | to | go | PREP | vacation |

'Where are you going to go for a vacation.'

Although Icelandic generally follows V2 (and V1 in certain circumstances), there are instances where the finite verb appears to be in the third position within the clause. This was noted by Maling (1980), but others have also discussed deviations from V2 (e.g. Thráinsson 1986, Sigurðsson 1986, Angantýsson 2001, Angantýsson and Jonas 2016). I give here two examples of V3 orders. In (16), the adverbial kannski 'maybe' appears between the subject and the finite verb.

## (16) Bú kannski kemur i kvöld. <br> You maybe come.2SG PREP evening <br> 'Maybe you will come this evening.'

The example in (17) involves an NP in the accusative case which bears stress and is detached from the rest of the clause with a comma intonation. This type of V3 has sometimes been referred to as Contrastive Dislocation (Thráinsson 2007:358-359).

| (17)Harald, hann pekki | ég | ekki. |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Haraldur.ACC | him.ACC | know.1SG | I | not |
|  | 'Haraldur, I don't know him.' |  |  |  |

As mentioned above, there is an additional type of V3 in Icelandic which has not been previously discussed in the literature. This type involves V3 orders with clause-initial temporal adjuncts, comparable to the West Flemish and Standard Dutch data in section 2.2. Before I turn to the Icelandic V3 data, I will first briefly discuss two types of adverbial clauses which are relevant for the present context and must be kept distinguished.

### 3.2. Different types of temporal adjuncts

Haegeman (2012 and some earlier work) distinguishes between two types of adverbial clauses: peripheral adverbial clauses (PAC) and central adverbial clauses (CAC). The two types behave in a different way with respect to the fronting of elements within the clause and their integration into a main clause. According to Haegeman and Greco (2018), CACs and PACs can also give different results when they are combined with full V2 main clauses to form V3 orders.

Peripheral adverbial clauses have been noted to allow for so called main clause phenomena (MCP) (see e.g. Haegeman 2002, 2012 for English and Angantýsson and Jonas 2016 for Icelandic). This means that they behave more like full clauses, for instance by allowing topicalization of various elements. Additionally, PACs stand in a different temporal relationship with the main clause they are associated with; they typically modify "the speech act as whole" and not the main clause itself (Haegeman and Greco 2018:17). Interestingly, PACs freely allow V3 patterns in both West Flemish and Standard Dutch (Haegeman and Greco 2018:17). An example of an Icelandic sentence containing a peripheral adverbial clause,
with topicalization, is given in (18). The adverbial connector á meðan 'while' is here taken to introduce contrastiveness and does not carry temporal meaning.

| (18) | Í | ensku | eru | sterkbeygðar | sagnir taldar | óreglulegar, |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| PREP | English | are | strong | verbs | assumed | irregular |
| á meðan | $i$ | fornensku | eru | pcer | taldar | reglulegar. |

Central adverbial clauses are considered to be more integrated into the main clause than PACs since they modify the clause they are associated with. Additionally, contrary to PACs, fronting of arguments and adjuncts is dispreferred in CACs (Haegeman 2012). This holds for Icelandic CACs, although there is some variation among speakers (Angantýsson and Jonas 2016). In (19) I give an example of an Icelandic CAC.
(19) begar pú ferð til Belgíu i sumar...
when you go to Belgium PREP summer
'When you go to Belgium this summer...'

As can be seen in (20), fronting of adjuncts and arguments is ungrammatical in the clause under discussion.

| a. *Pegar | $i$ | sumar | ferð | bú | til | Belgíu... |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- |
| when | PREP | summer | go | you | to | Belgium |

Intended: 'When, THIS SUMMER, you go to Belgium...'
b. *Pegar til Belgíu ferð bú i sumar...
when to Belgium go you PREP summer
Intended: 'When TO BELGIUM you go this summer...'
WF and StD differ slightly when it comes to CACs. While WF speakers accept them with V3 word order in all clause types, Standard Dutch speakers do not accept them with V3 orders with a clause-initial subject. Haegeman and Greco (2018:24) give the following example which is acceptable in West Flemish but ungrammatical in Standard Dutch.

| Als | mijn | tekst | klaar | is, | ik | zal | je | hem | opsturen. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when my text ready is | I | will | you | him | send |  |  |  |  | | 'When my text is ready, I'll send it to you.' |
| :--- |

(Example (21a) from Haegeman and Greco 2018)

In my examples of Icelandic V3 clauses, shown in the next section, I focus on CACs in Icelandic, using the temporal adverbial clause presented in (19). I do this in order for the data to be as similar as possible to the WF and StD data given in Haegeman and Greco (2018).

### 3.3 Icelandic V3 with temporal adjuncts

In (22) the temporal CAC seems to give rise to a V3 order in Icelandic in a similar way as in WF (and StD) above. The finite verb in the main clause in marked in boldface.

| Begar bú | ferð | til | Beglíu | i | sumar, | hvað |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when you | go | to | Belgium | PREP | summer | what |
| cetlarðu | að | gera? |  |  |  |  |
| going | to | do |  |  |  |  |

'When you go to Belgium this summer, what are you going to do?'

Comparing (22) to (23), in (23a) we have a regular word order where the finite verb follows a wh-word which has been moved to Spec,CP, with a temporal CAC generated inside a main clause. The example in (23b), on the other hand, is a type of echo question where the CAC has been topicalized and the $w h$-words remains in situ.

| a. Hvað | cetlarðи | að | gera | begar pú | ferð | til | Belgiu |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| what | going-you | to | do | when you | go | to | Belgium |
| i | sumar? |  |  |  |  |  |  |
| PREP | summer |  |  |  |  |  |  |


| b.Degar bú ferð til <br> when you go to Belgíu | Belgium | PREP | sumarmer |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| wetlarðu | að | gera | hvað? |  |  |  |
| going-you | to | do | what |  |  |  |

'When you go to Belgium this summer, what are you going to do?'
While the CACs in (23a) and (23b) are merged within the main clause, this is presumably not the case in (23). In (22), an intonational break is required between the CAC and the main clause. Additionally, if we assume that the $w h$-word occupies Spec,CP (or Spec,Force in a split CP layer) of the clause, then the CAC can be accounted for with external merge after the derivation of the main clause has taken place. On this account, the CAC in (20) could be assumed to be clause-external in the sense of both Broekhuis and Corver (2016) and Haegeman and Greco (2018).

Although the examples above all included a $w h$-question, it may be noted that V 3 orders with an initial adjunct also work with questions that have the same form as declaratives. This
is shown in (24) with a prepositional phrase and a particle hérna occurring in front of the question. ${ }^{4}$

| (Hérna), | fyrir | partúlo | á | morgun... | ég | má |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| here | for | parthy-the | PREP morrow | I | can |  |  |
| alveg | kaupa | fullt | fullt | af | rauðvini $?$ |  |  |
| ADV buy | lots | lots | of | red wine |  |  |  |
| 'Listen, for the party tomorrow.... I can buy lots and lots of red wine?' |  |  |  |  |  |  |  |

Interestingly, a temporal adjunct that gives rise to V 3 as in (22) does not work with declarative clauses. This is shown in (25).

| * Degar | bú | ferð | til | Belgíu | $i$ | sumar, |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when | you | go to | Belgium | PREP | summer, |  |
| pú cetlar | að | heimscekja | Oostende. |  |  |  |
| you going to | visit | Ostend |  |  |  |  |

Intended: 'When you go to Belgium this summer, you are going to visit Ostend.'

Even with a strong prosodic break there is a stark contrast between (22), which is grammatical, and (25) which is not. However, if the initial adjunct contains a wh-word, such as hvað (svo) sem 'whatever', a combination with a subject-initial declarative is possible (26). ${ }^{5}$


Other instances of an adverbial adjunct occurring in front of a main clause include imperatives (27) and yes/no questions (28). In both these types, a deviation from the expected order is observed even though it does not always result in V3. If the imperative contains the negation $e k k i$ 'not', it occurs either to the right of a finite verb (27a) or to the left of a non-finite verb (27b).

[^1]| (i) | Hérna fyrir partýið á morgun.. ég | má | alveg | kaupa | fullt | fullt |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| here | for party | tomorrow | I | can | ADV | buy | lots | lots | af rauðvíni, er bað ekki? of red wine is it not

'Listen, for the party tomorrow ... I can buy lots and lots of red wine, can't I?'

[^2]| a. Begar | bú | ferб | til | Belgíu | i | sumar, gleymdu |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| when | you | go | to | Belgium | PREP | summer forget |
| ekki að |  | ekja |  |  |  |  |
| not to | vis |  |  |  |  |  |

'When you go to Belgium this summer, do not forget to visit Ghent.'

b. | Segar | pú | ferð | til | Belgíu | i |
| :--- | :--- | :--- | :--- | :--- | :--- |
| when | you | go | to | Belgium | PREP |
| summer | sumi | not |  |  |  |
| gleyma að | heimscekja | Ghent. |  |  |  |
| forget | to visit | Ghent |  |  |  |
| 'When you go to Belgium this summer, do not forget to visit Ghent.' |  |  |  |  |  |

In yes/no-questions, negation can occur either after (28a) or before (28b) a finite verb.

| a. Begar | hann | fór til | Belgiu | i sumar, heimsótti |
| :---: | :---: | :---: | :---: | :---: |
| when | he | went to | Belgium | PREP summer visited.3SG |
| hann | ekki | Oostende? |  |  |
| he | not | Ostend |  |  |

$\begin{array}{lllllll}\text { b. } \\ \begin{array}{lllll}\text { Pegar } & \text { hann } & \text { fór } & \text { til } & \text { Belgíu } \\ \text { when } & \text { he } & \text { went } & \text { to } & \text { Belgium }\end{array} & \text { PREP summer nor }\end{array}$
heimsótti hann Oostende?
visited.3SG he Ostend
'When he went to Belgium this summer, didn't he visit Ostend?'

In subordinate clauses, it seems it may be acceptable to have a temporal adjunct (CAC), giving rise to V3. ${ }^{6}$ Apparently, the CAC can occur either after the interrogative complementizer (the wh-word) (29a) or directly before it (29b). Alternatively, one might want to consider the possibility that the CACs in (29a) and (29b) are more like parentheticals than adjuncts that are externally merged in an embedded position.

| a. ?Hún | spurði | hvort, |  | begar drengurinn | foeri | til |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| she | asked | Belgíu |  |  |  |  |
| whether | when boy-the | go to | Belgium |  |  |  |
| $i$ | sumar, | hann | myndi heimscekja | Oostende. |  |  |
| PREP | summer | he | would visit | Ostend |  |  |

'She asked whether, when the boy would go to Belgium this summer, he would visit Ostend.'

[^3]```
b. ?Hún spurði, begar drengurinn fori til Belgiu
she asked, when boy-the go to Belgium
\begin{tabular}{llllll}
\(i\) & sumar & hvort & hann & myndi heimscekja & Oostende. \\
PREP & summer, & whether & he & would visit & Ostend
\end{tabular} 'She asked, when the boy would go to Belgium this summer, whether he would visit Ostend.'
```

In any case, a special prosodic break on each side of the CAC is needed in order for (29a) and (29b) to be acceptable.

As with main clauses, V3 orders with temporal CAC adjuncts do not work in embedded declarative clauses. Thus both (30a), with the CAC occurring after the complementizer, and (30b), with the CAC before the complementizer, are ungrammatical. ${ }^{7}$

| a. ${ }^{\text {* Hún }}$ | sagði | ad, |  | begar drengurinn | feri | til |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | Belgíu

Intended: 'She said that, when the boy would go to Belgium this summer, he would visit Ostend.'
b. *Hún sagði, begar drengurinn fori til Belgíu
she said, when boy-the would-go to Belgium

| $i$ | sumar, | $\underline{\boldsymbol{a} \boldsymbol{\delta}}$ | hann | myndi heimscekja | Oostende. |
| :--- | :--- | :--- | :--- | :--- | :--- |
| PREP | summer, | that | he | would visit | Ostend |

Intended: 'She said, when the boy would go to Belgium this summer, that he would visit Ostend.'

Interestingly, for embedded declarative clauses, there are examples in Old Icelandic where a temporal adjunct precedes the complementizer, even though it seems to modify the embedded clause (Nygaard 1905, Rögnvaldsson 2005:620).

'Now it is reported that Börkur goes during the summer to Porskafarðarpings with many people and intends to meet his friends.' (Gísla saga Súrssonar, ch. 28)

[^4]According to Rögnvaldsson, examples such as (31) are not found in Modern Icelandic. This is in itself very interesting and suggests a diachronic change. This, however, remains to be investigated and will not be discussed further in this paper.

### 3.4 Where does Icelandic fit in?

The Icelandic data in Section 3.3 differ from the WF and StD data in two ways. First, Icelandic only allows CAC adjuncts with V3 orders in wh-questions. Second, while the V3 phenomenon is limited to root clauses in WF and StD, it seems like it can be embedded in Icelandic. Leaving aside the examples of embedded V3 in Icelandic, I briefly discuss how and why main clause V3 in $w h$-questions works for Icelandic. First, Table 1 summarizes what is possible in each language.

|  | Central Adverbial Clauses adj |  |  |
| :--- | :--- | :--- | :--- |
|  | adj-subj-V | adj-top-V | adj-wh-V |
| StD | X/OK | OK | OK |
| WF | OK | OK | OK |
| Icelandic | X | X | OK |

Table 1: V3 orders with CACs in Standard Dutch, West Flemish and Icelandic.

As mentioned in section 2.3, Haegeman and Greco (2018) link the merger of an external element in FrameP with a temporal index that is moved to the edge of the CP layer (to ForceP) of the main clause. On their account, the index is connected to the finite verb. In sentences where an external temporal adjunct cannot be merged, there is no verb movement to ForceP. This is the case with regular V2 clauses in StD where the subject occupies the first position: the finite verb presumably stays in Fin and, as a result, a CAC adjunct cannot be merged externally. ${ }^{8}$ In WF, however, the finite verb always moves to ForceP and licenses the external merger.

Assuming that Icelandic functions in a similar way to StD, i.e. that the finite verb stays low in regular V2 declarative sentences, the observation that CACs cannot be externally merged in such clauses is immediately accounted for: the temporal index needed for the external merger has not been moved to the edge of the clause and external merger in FrameP cannot be licensed. The tricky part, however, is to understand why Icelandic seems to allow for CACs with wh-questions and NOT with V2 declarative clauses with topicalization. If V2 clauses with topicalized elements are derived in a similar way as in Dutch, i.e. with a verb movement up to C (or ForceP) and the topicalized element in Spec,CP (or Spec,ForceP), then one would expect CACs to be able to merge externally with such clauses in Icelandic. This is, however, not possible, as is shown in (32).

[^5]| a.*Pegar hann kom frá | Belgíu, | Haraldi | gaf |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| when | he came | from | Belgium | Harald.DAT | gave |
| Jón | súkkuladi. |  |  |  |  |
| John.NOM | chocolate |  |  |  |  |

Intended: 'When he came from Belgium, to Harald John gave chocolate'

| b. | * eegar <br>  hann <br> when kom | frá | Belgíu, súkkulaði | gaf | Jón |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Haraldi |  |  |  |  | from | Belgium chocolate | gave | John.NOM

Intended: 'When he came from Belgium, chocolate gave John to Harald.'

The fact that externally merged CACs only work with wh-questions and not with declaratives implies that there is a need to connect the licensing mechanism with the use of a wh-word. It might be possible to claim either that the temporal index is carried up to the left periphery with the $w h$-word itself, or that a strong clause typing feature, i.e. [Q], is required in order for the licensing to go through. This would assume that the movement of the temporal index up to the edge of the left periphery works slightly differently Icelandic than in both Standard Dutch and West Flemish.

Another way to account for the Icelandic data is to assume that topicalization is associated with a TopP or a FocP projections that is below the ForceP projection but above other projections in the clause. This structure is shown in (33).

$$
\begin{equation*}
\text { [ForceP [Force }][\text { TopP/FocP topicalized element }[\text { Top/Foc verb] [FinP ... [TP ...]]]] } \tag{33}
\end{equation*}
$$

On this account, it would be possible to assume that Icelandic works in exactly the same way as StD and WF. For locality conditions to be met for the licensing of FrameP, the temporal index that originates within the main clause must be moved with the finite verb up to ForceP. In Icelandic, this would only happen in $w h$-questions, since in other instances the finite verb stays lower in the clause, either in TopP/FocP, FinP, or as low as in TP. In wh-questions, the wh-element would be moved to Spec,ForceP and the finite verb to Force (28); consequently an external merger of an adjunct in FrameP is licensed.

$$
\begin{equation*}
\text { [ForceP } \boldsymbol{W} \boldsymbol{h} \text {-element [Force verb] [TopP/FocP [Top/Foc }][\text { FinP ... [TP ...]]]] } \tag{34}
\end{equation*}
$$

Both (33) and (34) build on the assumption that Icelandic has an articulated CP layer. However, in addition to explaining the differences between the possibility of V3 in main-clause whquestions and the ungrammaticality of V3 in other types of main clauses, a split CP account may facilitate accounting for embedded $w h$-questions and the possibility of V3. Recall that in example (29b) a CAC clause that was temporally related to the embedded clause was noted to precede the embedding $w h$-element. For convenience the example is repeated here as (35).

| ?Hún | spurdi, begar | drengurinn | foeri | til | Belgíu |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| she | asked, when | boy-the | go | to | Belgium |  |
| $i$ | sumar, | hvort | hann | myndi heimscekja | Oostende. |  |
| PREP | summer, | whether | he | would visit | Ostend |  |

'She asked, when the boy would go to Belgium this summer, whether he would visit Ostend.’

If the wh-element hvort 'whether' is assumed to move to ForceP the example in (29) might be accounted for in much the same way as main clause $w h$-questions, i.e. with movement to ForceP licensing a temporal adjunct which is externally merged in FrameP. This type of approach would require embedded clauses to have an articulated CP-layer which is a somewhat controversial assumption and not in line with the analysis of Haegeman and Greco (2018).

Although the analysis sketched out here seems promising for V3 in wh-main clauses in Icelandic, still some questions remain, for instance how to account for embedded clauses where a temporal adjunct goes between the embedding $w h$-element and the rest of the embedded clause (cf. example (29a)). This will be a task for future investigation.

## 4 Conclusions

In this paper, I have discussed examples of V3 orders in Icelandic that involve a temporal central adverbial clause that occurs to the left of a regular V2 clause. I contrasted the data with V3 clauses of the same type from Standard Dutch and West Flemish.

Just as in WF and StD, the Icelandic V3 clauses require a prosodic break between the central adverbial clause and the main clause. This might be taken to suggest that the CAC is merged externally on top of a regular V2 clause.

Contrary to WF and StD, Icelandic only allows V3 orders (that include an initial CAC) with wh-questions. In both WF and StD CACs can be merged with V2 sentences that involve wh-question words or topicalization. Additionally, WF allows for a regular subject-initial V2 clause to combine with a CAC temporal adjunct. Finally, Icelandic seems to allow for the V3 pattern to be embedded. This is, however, not possible in StD and WF. Leaving aside examples of embedded V3 with temporal adjuncts (which might be a case of parentheticals), I suggested that Icelandic main clause V3 with an adverbial adjunct occurring in front of a wh-question might be accounted for in the same way as the WF and StD data: a finite verb from the main clause has to carry a temporal index to ForceP. The reason why Icelandic only allows for V3 with CACs in $w h$-questions is that those are the only instances where the finite verb goes up into ForceP. In other cases, the finite verb stays lower, presumably either in TopP/FocP, FinP, or as low as TP.

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# Relative sá and the dating of Eddic and skaldic poetry 

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#### Abstract

This paper investigates the use of $s a ́$ as a relative pronoun in Eddic poetry, in skaldic poetry, and in Old Icelandic prose. Sapp (2019) proposes that relative sá emerges just before the first Old Icelandic prose appears in the 12 th century, and this study supports that contention with data from poetry, much of which was composed before the earliest prose texts were written. In all three genres, sá is very frequent before the relative marker er and in that context often lacks demonstrative force. In the earliest skaldic poetry, sá er is just one way that relative clauses are introduced, competing with er alone and er appearing with other pronouns such as hinn. However, by the 11 th century sá becomes the most frequent relative marker, peaking in 12 th-century skaldic poetry and prose. Having established this timeline for the development of relative sá, I propose that the rates of different types of relative clauses can help date individual Eddic poems, with the purportedly earliest poems showing the lowest frequencies of relative sá and the later poems showing the highest rates.


## 1 Introduction

Relative clauses in Old Norse prose are usually introduced by the relative "particles" sem or er. These may be preceded by an apparently demonstrative pronoun, most frequently sá but occasionally hinn or sjá. Traditionally, this pronoun has been considered a genuine demonstrative (Nygaard 1905:261-262, Gordon 1988:296, Faarlund 2004:264), while other scholars have interpreted it as correlative pronoun (Lindblad 1943) or a relative pronoun (Åfarli 1995).

Sapp (2019) presents evidence that in Old Icelandic prose, sá can have all three of these functions. Sometimes, it is a true demonstrative pronoun (1), namely when it maintains demonstrative force. Sometimes, it merely anticipates a subsequent relative clause; because it is adjacent to the antecedent but not the the relative clause, it is a kind of demonstrative, but one with cataphoric reference to the relative clause, i.e. a "correlative" in traditional terms (2). Finally, there are some unambiguous instances in which sá must be a relative pronoun, as it is adjacent to the relative clause but not the antecedent (3). Of course, many examples are ambiguous, as when the pronoun in question is adjacent to both the antecedent and the relative clause (4).
(1) demonstrative sá:

correlative sá:
Vér eigum dag pann fyr hendi, er domadagur heitir.
we have day SÁ at hand RP doomsday calls
'We have the day at hand that is called doomsday.'
(1150.HOMILIUBOK.REL-SER,.940)
(3) relative sá:

Hann setti jarl í hverju fylki, pann er dœma skyldi lọg He set earl.acc in each district, SÁ.ACC RP [e].NOM judge should law 'He placed an earl in each district, who should judge the law.' (Heimskringla 98)
(4) ambiguous demonstrative/correlative/relative:
synir Herodis pess, er börnum lét fara.
sons H-GEN SÁ.GEN RP [e].NOM children let kill
' ... sons of (that) Herod, who had the children killed.'
(1150.HOMILIUBOK.REL-SER,.237)

A perhaps suprising property of relative sá is that it displays "case attraction", i.e. it is in the same case as the antecedent noun (Nygaard 1905:261). ${ }^{1}$ In (3), sá appears in the masc.acc.sg form pann, agreeing with the accusative antecent jarl, despite the fact that it represents the subject of the relative clause. Similarly, sá appears in the genitive in (4) in agreement with the antecedent Herodis, although again the relativized argument is the subject of the relative clause.

Sapp (2019) argues that relative sá consistently shows case attraction in Old Icelandic prose because it was reanalyzed from a correlative pronoun (inside the main clause) to a relative pronoun (at the beginning of the relative clause) just before the emergence of Old Icelandic prose. ${ }^{2}$

This paper examines the different types of relative clauses not only in prose, but also in Old Norse poetry, much of which was composed before the earliest prose texts were written. The goals of this examination are: i) to provide evidence for the reanalysis of sá to a relative pronoun in the pre-prose period, ii) to establish a timeline for that reanalysis based on the frequencies of different types of relative clauses in early prose and datable skaldic poetry, and iii) use that timeline to help confirm dates of Eddic poetry.

## 2 Types of relative clauses in Old Icelandic prose

This section reviews some of the arguments by Sapp (2019), an investigation of relative clause types in the Icelandic Parsed Historical Corpus (IcePaHC v. 0.9; Wallenberg et al. 2011). While Sapp (2019) examines the entire corpus, covering the whole history of Icelandic, the following data are limited to texts from 1150-1350. With a coding query written in the Corpus Search language (Randall 2009), I extracted all Noun Phrases (NP) from IcePaHC texts from the 12th to 14th centuries that contain a relative clause and/or a

[^6]demonstrative. ${ }^{3}$ Each NP is tagged for: type of relative particle; type of demonstrative; presence or absence of a relative clause; position of the demonstrative vis-à-vis any antecedent noun, adjective, quantifier, possessor, other demonstrative, or relative clause; case of the antecedent noun, demonstrative, and trace in the relative clause; and century. The results were loaded into $R$ for analysis.

### 2.1 Old Icelandic relative particles and demonstrative/relative pronouns

First, let us examine the distribution of the relative particles by century. Throughout the Old Icelandic period, er and sem exist side by side; sem slowly becomes more frequent at the expense of er, but er remains the most frequent particle into the 15th century. In addition, there are a small number of other particles ( $a ð$, eð, and sem að), as well as relative clauses with no relative particle. The frequencies are given in Table 1, and the percentages are illustrated graphically in Figure 1:

Table 1: Type of relative particle by century

|  | er | sem | others | no particle | Total |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 12th century | 620 | 27 | 0 | 0 | 647 |
| 13th century | 774 | 108 | 7 | 3 | 892 |
| 14th century | 1010 | 386 | 10 | 10 | 1416 |
| Total | 2404 | 521 | 17 | 13 | 2955 |



Figure 1: Type of relative particle by century
The few clauses with no relative particle tend to occur in religious texts, and these often have sá as the sole relative marker (5). ${ }^{4}$

[^7]| (5) | Og | sá | pað | margir | vitrir | menn | beir há | honum voru |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| and | saw | that | many | wise | men | SÁ.NOM.PL with | him were |  | 'and many wise men who were with him saw that'

(1210.THORLAKUR.REL-SAG,.73)

As mentioned in section 1, the relative particles sem and er are often preceded by a pronoun. This pronoun may be sá 'that', sjá/bessi 'this' (hereafter simply pessi), or hinn 'that/the'. ${ }^{5}$ Beginning with pessi, it is the proximal demonstrative ('this'). According to Wagener (2017: 64-65), the proximal demonstrative pessi can point to a referent in the linguistic context (as an anaphor) or in the extralinguistic context. The demonstrative sá, despite its traditional description as a distal demonstrative 'that' (e.g. Gordon 1988: 295), is shown by Wagener (2017: 67) to be an 'anaphoric demonstrative,' i.e. it has deixis only within the linguistic context. Finally, the old demonstrative hinn is has evolved into a preadjectival definite article, and according to Wagener (2017: 69) it cannot be anaphoric. As will be shown below, these pronouns may actually function as relative pronouns, especially sá (pace Wagener 2017). The paradigms for these three pronouns are given in Tables 2-4.

Table 2: Paradigm for sá (Gordon 1988: 295):

|  | m. sg. | f. sg. | nt. sg. | m. pl. | f. pl. | n. pl. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| nom. | sá | sú | pat | peir | beer | bau |
|  | acc. | pann | pá |  | pá |  |
| dat. | peim | peirri | pví | beim |  |  |
| gen. | pess | peirrar | pess | peirra |  |  |

Table 3: Paradigm for sjá/bessi (Gordon 1988: 295):

|  | m. sg. | f. sg. | nt. sg. | m. pl. | f. pl. | n. pl. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| nom. | sjá/pessi | sjá/pessi | petta | pessir | pessar | pessi |
| acc. | benna | pessa |  | pessa |  |  |
| dat. | pessum | pessi | bessu | pessum |  |  |
| gen. | bessa | pessar | pessa | bessa |  |  |

Table 4: Paradigm for hinn (Gordon 1988: 294-295):

|  | m. sg. | f. sg. | nt. sg. | m. pl. | f. pl. | n. pl. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| nom. | hinn | hin | hitt | hinir | hinar | hin |
|  | hacc. | hinn | hina |  | hina |  |
| dat. | hinum | hinni | hinu | hinum |  |  |
| gen. | hins | hinnar | hins | hinna |  |  |

Table 5 shows that the pronoun sá occurs in the same NP as the relative clause in a large majority (over 75\%) of Old Icelandic relative clauses. The other demonstratives, pessi and hinn, occur in NPs with a relative clause much less frequently. Relative clauses with no
pronoun occur, but much less frequently than those with sá. The percentages for Table 5 are illustrated graphically in Figure 2:

Table 5: Pronouns occuring with relative clauses by century

|  | sá | bessi | hinn | wh-pron. | no pronoun | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12th century | 529 | 13 | 6 | 0 | 99 | 647 |
| 13th century | 642 | 22 | 11 | 1 | 216 | 892 |
| 14th century | 1068 | 39 | 14 | 3 | 292 | 1416 |
| Total | 2239 | 74 | 31 | 4 | 607 | 2955 |



Figure 2: Type of pronoun occurring with relative clauses by century
Finally, let us consider whether there is a correlation between the choice of relative particle and the presence of a pronoun. Apparently there is not: as shown in Table 6 and Figure 3, the proportion of er to sem is about the same in relative clauses following sá as it is in those with no preceding pronoun. Thus there is no hint yet at this stage of the later replacement of sá er by the sole use of sem, as we find in Modern Icelandic.

Table 6: Pronouns occuring with relative particles in Old Icelandic

|  | sá | bessi | hinn | wh-pron. | no pronoun | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| er | 1827 | 58 | 25 | 2 | 492 | 2404 |
| sem | 387 | 15 | 6 | 1 | 112 | 521 |
| other particle | 13 | 1 | 0 | 0 | 3 | 17 |
| no particle | 12 | 0 | 0 | 1 | 0 | 13 |
| Total | 2239 | 74 | 31 | 4 | 607 | 2955 |

[^8]

Figure 3: Correlation between type of particle and pronoun

### 2.2 Pre-relative-clause sá in Old Icelandic prose

When sá occurs before a relative clause, it is sometimes an unambiguous demonstrative, sometimes a correlative pronoun, and sometimes a case-attracting relative pronoun.

The first argument that sá is not simply a demonstrative pronoun comes from its surprisingly frequent occurrence in relative clauses: of the 3,419 instances of sá in my Old Icelandic corpus, over $65 \%$ co-occur with a relative clause. By comparison, only $3-4 \%$ of the instances of pessi and hinn co-occur with relative clauses:

Table 7: OIcel. demonstratives in relative and non-relative contexts

| relative context? | sá | pessi | hinn | Total |
| :--- | :--- | :--- | :--- | :--- |
| relative clause | $2,239(65 \%)$ | $74(4 \%)$ | $31(3 \%)$ | 2,344 |
| no relative clause | $1,180(35 \%)$ | $1,591(96 \%)$ | $1,022(97 \%)$ | 3,793 |
| Total | 3,419 | 1,665 | 1,053 | 6,137 |

Secondly, in terms of semantics, if sá were always a genuine demonstrative, it should not occur in indefinite NPs. However, as Wagener (2017: 124) points out, "the mere presence of [a relative clause] is enough to license sá..." My data supports this: sá frequently occurs with an indefinite N when immediately preceding a relative clause (6)-(7):
(6) hver tunga hefir hljód pau er eigi finnast í annarri. each tongue has sounds SÁ RP not find-MP in another 'every language has (*those) sounds that are not found in others'
(7) og koma peir of kveldið til búanda eins, bess er Atli hét, and come they at evening-DEF to farmer one SÁ RP Atli called 'and they went in the evening to a farmer, (*the one) who was called Atli'
(1260.JOMSVIKINGAR.NAR-SAG,.1053)

In such instances sá appears to have no demonstrative force, but simply serves to introduce the following relative clause. On the other hand, pessi and hinn seem to preserve their deixis even in the presence of a relative clause (8a). Other examples of hinn are preceding an adjective and thus appear to be the use of hinn as a pre-adjectival definite article (8b):
a. Hafi stafróf petta er hér er áður ritað have alphabet this RP here is before written 'Let him have this alphabet, which is written above'
(1150.FIRSTGRAMMAR.SCI-LIN,.182)
b. in helga María, er bar Drottin the holy Mary RP bore Lord 'the holy Mary, who bore the Lord'
(1150.HOMILIUBOK.REL-SER,.120)

This means that unlike the other two demonstratives, sá has a non-demonstrative function, i.e. it serves to merely introduce a relative clause, whether as a correlative pronoun inside the antecedent NP or as a relative pronoun inside the relative clause.

Thirdly, sá has different word-order distributions when co-occurring with a relative clause. Old Icelandic demonstratives strongly tend to precede N ; in particular, sá occurs before the N about $73 \%$ of the time. Depending on the semantics of sá in given instance, this could be a demonstrative as in (1) or a correlative. It cannot be a relative pronoun because it is not adjacent to the relative clause. Less frequently, sá can occur after the N ; however, this word order is strongly favored ( $88 \%$ ) when a relative clause is present, as shown in Table 8.

Table 8 Order of Old Icelandic sá and noun in relative and non-relative contexts

| relative context? | $s \dot{l}>\mathrm{N}$ |  | $\mathrm{N}>$ sá |
| :--- | :--- | :--- | :--- |
| relative clause | $600(42 \%)$ | $469(88 \%)$ | 1069 |
| no relative clause | $825(58 \%)$ | $62(12 \%)$ | 887 |
| Total | $1,425(73 \%)$ | $531(27 \%)$ | 1956 |

When the N , sá, and the relative clause are adjacent as in (6), this is structurally ambiguous between a correlative and a relative pronoun. Other instances, however, are unambiguous. When sá is not adjacent to the relative clause but lacks demonstrative force, it is clearly a correlative (2). But sá is clearly a relative pronoun in sentences like (3), where sá immediately precedes the relative clause but is separated from the antecedent by another constituent. As Åfarli (1995:539) points out, such sentences must be analyzed as having an extraposed relative clause (3'); because sá extraposes with the relative clause, they form a single constituent.
(3') Hann setti $\left[\mathrm{NP} \mathbf{j} \mathbf{j a r l}\left[\mathrm{t}_{\mathrm{i}}\right] \text { ]í hverju fylki, [CP pann er dœma skyldi } \log _{\mathrm{Cg}}\right]_{\mathrm{i}}$
In addition to following the N in relative contexts, there are a number of other word-order possibilities for sá when a relative clause follows that are not found in non-relative contexts; for details see Sapp (2019: 12-16).

### 2.3 Summary: relative clauses in Old Icelandic prose

By far the most common type of relative clause in Old Icelandic prose is that introduced by the particle er, especially early on. It is not until the 14th century that sem becomes a frequent alternative to er. In addition to these particles, most relative clauses are accompanied by a pronoun, usually sá, which lacks demonstrative force and is thus a correlative or relative pronoun. While many instances are ambiguous, a few sentences such as (3) provide a clear indication that sá can sometimes function as a relative pronoun. However, it is a relative pronoun with pervasive case attraction. ${ }^{6}$

In Sapp (2019), I argue that Old Icelandic case attraction arose as correlative pronouns were reanalyzed as demonstrative pronouns. Because demonstrative, correlative, and relative sá all frequently occur even in the earliest Old Icelandic prose, I propose that this reanalysis must have taken place before the emergence of prose in the 12th century. In the next section, I will test this hypothesis by examining the status of the relative particles and pronouns in Eddic and skaldic poetry, much of which predates the prose corpus. We will see that the poetry provides even clearer evidence for sá as a relative pronoun, and that this use indeed dates earlier than the 12th century.

## 3 In Eddic \& skaldic poetry

In Old Norse poetry, it has been recognized since Kuhn (1933) that metrical and syntactic breaks closely correspond. For example, Heusler (1950: 161) claims that when sá immediately precedes the relative clause, it belongs to the relative clause. Therefore, we can use the strict metrical rules of Eddic and skaldic poetry to help establish whether a given instance of sá is in the antecedent NP or in the relative clause. In section 3.1, I will examine this more closely in the Eddic corpus. Section 3.2 investigates a subcorpus of skaldic poetry.

### 3.1 Pre-relative-clause sá in Eddic poetry

The twenty-nine core poems of the Old Norse Poetic Edda are contained in a single manuscript, the Codex Regius. Although the manuscript itself dates to the 1260 's, the poems are anonymous and their origins are mysterious. They treat ancient themes of Norse mythology and Germanic legend, and were thus believed by nineteenth-century scholars to be much older than any Icelandic prose. While such an early date is no longer accepted for all the poems (see Fidjestøl 1999 and references therein), at least some Eddic material probably dates

[^9]back to the 9th century (Anderson 2004). It is therefore worth exploring whether Eddic poetry presents any evidence for the reanalysis of sá from a genuine demonstrative pronoun to a relative marker.

This section analyzes the Eddic poems of the Codex Regius, which exist in electronic form in the corpus Greinir skaldskapar (Karlsson et al. 2012). ${ }^{7}$ The corpus is tagged for morphological, syntactic, and metrical features, making it ideal for studies like this one that use philological cues to determine syntactic status. I searched for "word class: relative particle" and received 417 results, 46 of which involved adverbial clauses such as par er 'where'. The remaining 371 relative clauses were copied into a spreadsheet and coded by hand for the supposed date of composition (according to Finnur Jónsson), pronoun (sá, etc.), particle (er vs. sem), position of the pronoun vis-a-vis the particle, and metrical position in the poetic line. Note that relative clauses with no particle would not be picked up in this search.

First, let us examine the overall distribution of relative particles and potential relative pronouns in the Eddic corpus, shown in Table 9. Of the 371 relative clauses, nearly all are introduced by the particle er, with just 3 introduced by sem and one by sems (sem with a cliticized er). ${ }^{8}$ More than half of these clauses are preceded directly or indirectly by the pronoun sá. A small number of relative clauses have the demonstrative hinn or an interrogative (hverr or hvad). Unlike in the prose corpus, no clauses are introduced by pessi.

Table 9: Type of pronouns and relative particles in Eddic poetry

|  | sá | pessi | (h)inn | hverr/hvað | no pronoun | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| er | $223(61 \%)$ | 0 | $9(2 \%)$ | $10(3 \%)$ | $125(34 \%)$ | 367 |
| sem $(s)$ | 0 | 0 | 0 | 1 | 3 | 4 |
| Total | 223 | 0 | 9 | 11 | 128 | 371 |

Note that three of the four instances of $\operatorname{sem}(s)$ are unaccompanied by a pronoun, as in Modern Icelandic). Relative clauses with sem(s) will not be discussed further or included in the tables below.

Having seen that relative clauses in the Eddic corpus are often preceded by sá, let us take a closer look at its exact position. According to Lindblad (1943: 162) sá tends to occur in the same line as the relative clause in poetry. The data from my Eddic corpus are in Table 10.

[^10]Table 10: Position of $s a ́$ and other pronouns vis-a-vis er in Eddic poetry

| poem | date ${ }^{9}$ | $e r$ only | non-adjacent sá and er | adjacent sá er | hinn, hverr | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hávamál, 111-137 | 875-900 | 1 (10\%) | 4 (40\%) | 4 (40\%) | 1 (10\%) | 10 |
| Prymskviða | 900 | 1 |  | 1 | 2 | 4 |
| Völundarkviða | 900 | 10 (67\%) |  | 5 (33\%) |  | 15 |
| Skírnismál | 900 | 12 (75\%) |  | 3 (19\%) | 1 (6\%) | 16 |
| Vafprúðnismál | 900-925 | 6 (43\%) | 6 (43\%) | 1 (7\%) | 1 (7\%) | 14 |
| Grímnismál | 900-925 | 11 (58\%) | 2 (11\%) | 4 (21\%) | 2 (11\%) | 19 |
| Hárbarðsljód | 900-925 | 9 (64\%) | 2 (14\%) | 3 (21\%) |  | 14 |
| Hávamál (rest) | 900-925 | 9 (14\%) | 17 (26\%) | 35 (53\%) | 5 (8\%) | 66 |
| Völuspá | 935 | 1 (8\%) | 2 (15\%) | 10 (77\%) |  | 13 |
| Lokasenna | 935 | 6 (38\%) | 2 (13\%) | 5 (38\%) | 3 (23\%) | 16 |
| Hamðismál | 925-950 | 1 |  | 2 |  | 3 |
| Helgakv. Hund. II | 925-950 | 10 (62\%) | 2 (12\%) | 4 (25\%) |  | 16 |
| Gudrúnarkviða II | 925-950 |  | 1 | 3 |  | 4 |
| Reginsmál | 925-975 | 3 (50\%) | 1 (17\%) | 2 (33\%) |  | 6 |
| Alvissmál ${ }^{10}$ | 950-975 | 2 (13\%) | 11 (73\%) | 2 (13\%) |  | 15 |
| Helgakviða Hjörv. | 950-975 | 11 (65\%) |  | 6 (35\%) |  | 17 |
| Atlakviða | 975-1000 | 4 (44\%) | 1 (11\%) | 4 (44\%) |  | 9 |
| Fáfnismál | 975-1000 | 5 (33\%) | 5 (33\%) | 5 (33\%) |  | 15 |
| Sigrdrifumál | 975-1000 |  | 3 (33\%) | 5 (55\%) | 1 (11\%) | 9 |
| Brot af Sigurðark. | 975-1000 | 2 |  | 1 |  | 3 |
| Gudrúnarkviða I | 975-1000 | 2 |  | 2 |  | 4 |
| Gudrúnarkviða III | 975-1000 |  |  | 1 | 1 | 2 |
| Hymiskviða | 975-1000 | 3 (38\%) |  | 5 (63\%) |  | 8 |
| Helreið <br> Brynhildar | 1000-1025 | 1 (20\%) | 1 (20\%) | 2 (40\%) | 1 (20\%) | 5 |
| Gudrúnarhvöt | 1000-1025 | 1 |  | 1 |  | 2 |
| Helgakv. Hund. I | 1000-1025 | 2 (15\%) |  | 11 (85\%) |  | 13 |
| Oddrúnargrátur | 1000-1025 | 1 (33\%) |  | 2 (67\%) |  | 3 |
| Sigurdarkv. hin sk. | 1050 | 1 (17\%) | 1 (17\%) | 4 (67\%) |  | 6 |
| Atlamál | 1050 | 8 (30\%) | 9 (33\%) | 9 (33\%) | 1 (4\%) | 27 |
| Gripisspá | 1150-1200 | 2 (15\%) | 2 (15\%) | 9 (69\%) |  | 13 |
| Total |  | 125 (34\%) | 72 (19\%) | 151 (40\%) | 19 (\%) | 367 |

Of the 223 instances of sá with a relative clause, 151 have sá adjacent to er (and in the same line of poetry). This is almost always line-initial (or following ok 'and'), which is strongly suggestive that sá introduces the relative clause (9).

[^11]
'From there come the dews, which fall in the dales'

Such examples are infrequent in texts dated by Finnur earlier than 925 and especially frequent in texts purportedly composed after the year 1000; to the extent that Finnur's dates are reliable, this suggests that the relative use of sá developed during the period in which the earlier Eddic poems were composed. (For a statistical analysis, see section 4.)

In the other 72 instances in which sá precedes a relative clause, it is not in the same line as the relative clause. Sometimes, sá immediately precedes the relative clause, but a metrical break intervenes (10). Assuming that the metrical division is equivalent to a clause boundary, examples of sá like (10) are unlikely to be relative pronouns. In other examples, another word intervenes between sá and the relative clause, clearly ruling out the possibility that it is a relative pronoun (11):

| í | ey | peiri | er | Algræn | heitir |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| in | island | SÁ |  | RP | A. | is.called |

'in the/that island, which is called Algræn'

b. Bítia pér pà sverð / er pú bregðir (Helgak. Hund. II 33)
bite-SUBJ-not you SÁ sword RP you draw-SUBJ
'May the/that sword that you draw not cut for you'

These instances of sá are therefore part of the antecedent NP, i.e. they are either demonstrative determiners or correlative pronouns.

Given the strict metrical rules of Old Norse poetry, we can use the metrical position of the relative particle and the various pronouns to help determine what their syntactic status might be. The Greinir skáldskapar database tags each word according to its position within the poetic line and whether it is in a stressed/alliterating position (a "lift") or an unstressed one (a "dip").

Table 11: Metrical position of $e r$, sá, and other pronouns in the Eddic corpus

|  | $e r$ alone | sá $+e r$ | hinn $+e r$ | hverr/hvad $+e r$ | Total |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $e r$ in anacrusis ${ }^{\text {II }}$ | 118 | 66 | 6 | 1 | 191 |
| pron. $+e r$ in anacrusis |  | 109 | 2 | 2 | 113 |
| $e r$ in dip ${ }^{12}$ | 7 | 4 |  |  | 11 |
| $s a ́$ er in dip |  | 20 |  |  | 20 |
| stressed pronoun, $e r$ in dip |  | 24 | 1 | 7 | 32 |
| Total | 125 | 223 | 9 | 10 | 367 |

Of the 367 relative clauses with $e r$, in 304 instances, the particle alone, or the pronoun plus the particle, is in anacrusis, the optional, unstressed position at the beginning of a poetic line. This confirms that the line divisions of Eddic poetry often correspond to clause boundaries. It also strongly indicates that not only the relative particle, but also the accompanying pronoun sá is nearly always unstressed. This can be seen in example (9) above, in which the plural form of sá, the clitic form of $e r$, and the preposition $i$ are in anacrusis, the position preceding the first stressed word (lift) dala. Note that while the beginning of the metrical line allows for these additional syllables, the end of a line does not, so scanning poer in the previous half-line as in (9') would be unmetrical:

## (9') *baðan koma doggvar pær / er ... (first half now has too many syllables)

Note also that the cliticization of er to sá indicates that the two are syntactically closely related. As Harbert (1992) argues for Gothic, this is additional evidence that sá is in the relative clause rather than in the antecedent NP.

Similarly, there are 31 cases of er alone or of sá er in a dip (unstressed position following a lift). This is further evidence that these items are generally unstressed. However, in such examples, the beginning of the relative clause is in the middle of the poetic line. In (12a), sá is likely a demonstrative as it functions as the subject of the matrix clause ef sá er horskr, while the relative clause is introduced by er alone. In (12b), the pronoun pad and particle (along with the subject pronoun $t u$ ) are in a dip, because the lexical class items or $\delta$ and meeltir must occupy the two stressed positions. Together with the cliticized spelling of er as $-s$, this indicates that the pronoun pad is not a demonstrative but functions together with the particle to introduce the relative clause.

a. | ef | sá | er | horskr | [CP | er | hefir $]$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| if | SÁ | is | wise | RP | has |  |

'if he is wise who has $[i t=t h e ~ s w o r d] ' ~$
(Skírnismál 9)
$\begin{array}{llll}\text { b. ord } & \text { pad }=\mathbf{s} & \text { tu mæltir } \\ \text { word } \\ S A=R P\end{array}$ you say
(Grípisspá 20)
'the word that you say'

[^12]A final possibility is for the pronoun to be in a stressed position (lift), followed by unstressed er (in the dip). This occurs disproportionately often with hverr/hvad (7 of 10 instances) as in (13a), but it also occurs in about $10 \%$ of the instances of pre-relative sá (13b). ${ }^{13}$
a. Hétu mik allir... / Hildi undir hjálmi, / hverr er kunni. (Helreið 6) called me all Hildr under helmet who RP knew 'All ... called me Hildr under the helmet, who knew (me).'
b. peir er sótto / frá salar steini (Völuspá 14)

SÁ.PL RP sought from hall-GEN stone
'(they) who from the hall's stone sought [seats]'

Let us now consider whether the pronouns are demonstratives, correlatives, or relatives. The comparison between sá and hinn, I believe, is telling. In 6 of the 9 instances of hinn (66.7\%), hinn is in a separate line from the relative clause, and in a 7th instance, it is in a stressed metrical position. There are only two cases where hinn and er form a prosodic unit at the beginning of a line representing a relative clause. Thus it is unlikely that hinn is a relative pronoun at this stage of the language. Sá, on the other hand, is adjacent to er 153 times (69\%), suggesting that the reanalysis of sá to a relative pronoun is well underway. The 70 instances in which sá is separated from er by a line break, together with the instances where sá is in a stressed position, can be taken as evidence for the continuation of the older use of sá as a demonstrative (or perhaps correlative) pronoun. There are several examples of correlative sá in the refrain-like stanzas toward the end of Alvissmál:
(14) Segðu mér ... /hvé pað̃ öl heitir / er drekka alda synir (Alvíssmál 33)
say me how SÁ ale is.called RP drink ages-GEN sons
'Tell me ... what the ale is called that the sons of men drink ...'

Here (and in the other variants of this stanza), pað does not seem to be a demonstrative, as it does not anaphorically refer to previously mentioned ale. Thus there is clear evidence for sá as a demonstrative (12a), correlative (14), and relative pronoun (9) in the Eddic corpus.

### 3.2 Pre-relative-clause sá in skaldic poetry

The other main genre of Old Norse poetry, skaldic poetry, differs from Eddic poetry in a number of formal and thematic respects. Most importantly for this study, skaldic poems were composed by court poets known as skalds, many of whose names are known from historical sources, and the poems often discuss contemporary events. Thus unlike Eddic poetry, many skaldic poems can be dated with more or less certainty.

[^13]I conducted a search for the relative particles er and sem in the poems of the Skaldic Project (Clunies Ross et al. 2012). Words in the database are lemmatized but not otherwise tagged (for details see Wills 2015); I was able to search for er as a relative particle, because the verb er 'is' is lemmatized under vera 'to be'. After removing adverbial uses of er and limiting the results to poems by known skalds, this yielded 294 instances of the particle er and 9 instances of sem in 96 poems. ${ }^{14}$ These were the verified by hand and coded for date (as given in the documentation on the Skaldic Project website), ${ }^{15}$ pronoun, particle, and the position of pronoun vis-à-vis the particle.

As we did in section 3.1 for the Eddic poems, let us examine the overall distribution of relative particles and potential relative pronouns in the skaldic corpus, shown in Table 12. Nearly all of the 303 relative clauses are introduced by er. More than two-thirds of these clauses are preceded directly or indirectly by the pronoun sá. A small number of relative clauses have the demonstrative hinn or one of the interrogatives (hverr or hvad). As in the Eddic corpus but unlike in the prose corpus, no relative clauses are introduced by pessi.

Table 12: Type of pronouns and relative particles in skaldic poetry

|  | sá | bessi | (h)inn | hverr/hvað | no pronoun | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| er | 211 | 0 | 40 | 10 | 33 | 294 |
| sem | 1 | 0 | 0 | 1 | 7 | 9 |
| Total | 212 | 0 | 40 | 11 | 40 | 303 |

Given the tiny number of instances of sem, these will not be included in the counts and analyses below.

Having seen that relative clauses in skaldic poems, as in the Edda, are often preceded by sá, let us take a closer look at the position of the pronoun with respect to the relative clause. Because the numbers for most individual poems are relatively small, in Table 13, I summarize the data by century in order to give a better overview of the diachronic trend. (The counts and approximate dates for each individual skald can be seen in Appendix 1.)

Table 13: Position of sá vis-a-vis er in skaldic poetry

| century | $e r$ only | non-adjacent sá and er | adjacent sá er | hinn, hverr | Total |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 9th | $5(20 \%)$ | $1(4 \%)$ | $10(40 \%)$ | $9(36 \%)$ | 25 |
| 10th | $2(6 \%)$ | $5(15 \%)$ | $16(48 \%)$ | $10(30 \%)$ | 33 |
| 11th | $13(12 \%)$ | $7(7 \%)$ | $70(65 \%)$ | $17(16 \%)$ | 107 |
| 12th | $8(9 \%)$ | $3(3 \%)$ | $71(77 \%)$ | $10(11 \%)$ | 92 |
| 13th | $1(5 \%)$ | $2(11 \%)$ | $12(63 \%)$ | $4(22 \%)$ | 19 |
| 14th | $4(22 \%)$ | $3(17 \%)$ | $11(61 \%)$ | 0 | 18 |
| Total | $33(11 \%)$ | $21(7 \%)$ | $190(65 \%)$ | $50(17 \%)$ | 294 |

[^14]Of the 294 relative clauses with er in this data set, 214 (72.5\%) are accompanied by sá. In most of these, sá and er are adjacent and in the same line. Because the Skaldic Database is not tagged for metrics, I could not automatically query whether these are in anacrusis, later dips, etc. However, I did inspect the examples and was able to tag most of the relative particles as line-initial or non-line-initial. Of 224 instances that I examined, 81 involved a line-initial relative marker. This includes cases where er alone begins the line containing the relative clause (15a), those in which er is preceded by a demonstrative in an earlier line (15b), and those in which sá and er introduce the line together (15c):

| a. | feigðarorð $/$ | es | at | Fjolni | kom. |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | doom-word | RP | at | F. | came |
|  | 'the word of doom that fell upon Fjolnir' |  |  |  |  |

(Ynglingatal 1)
b. Ok sá brann / ... menglọtuðr / es mara kvalði. (Ynglingatal 3) and SÁ burned ring-destroyer RP m. tormented 'And that ring-destroyer, whom the mara tormented, burned ...'
c. en gjoldin jók / sá=s gísla tók. (Runhenda 2) but payments-DEF increased $\quad \mathrm{SA}=\mathrm{RP}$ hostages took 'but he who took hostages increased the payments.'

Again, on the assumption that metrical breaks reflect some syntactic reality, the line-initial position of er can be taken as evidence that in examples like (15a) and even (15b), er alone introduces the relative clause, while in (15c) sá has taken on the function of a relative pronoun and works together with $e r$ to introduce the clause.

This leaves 143 examples where $e r$, or a pronoun plus $e r$, is not line initial but in a dip. This represents nearly $64 \%$ of the examples-a proportion far higher than in Eddic poetry. The reason for this difference between Eddic and skaldic relative clauses could be that the main skaldic meter, dróttkvcett, has longer lines than the main Eddic meter. With additional metrical positions, we find many examples like (16) below, where the antecedent is immediately followed by a line-internal relative marker:
(16) Gamla kind, sú=s granda / ... véum porði. (Einarr sk. Hákonardrápa) Gamli-GEN kin SÁ=RP destroy sanctuaries dared 'Gamli's kin, who dared to destroy the sanctuaries, ...'

In such cases, although the position of sá er vis-a-vis a line break does not indicate whether sá and $e r$ function together to introduce the relative clause, their position within the line does: in 93 of the examples, sá er is in a dip, as in (16). With sá and er together occupying this unstressed position, it seems unlikely that sá in such cases is a post-nominal demonstrative pronoun; rather the two words function together to introduce the relative clause.

As we found in the Eddic corpus, examples of adjacent sá er are less frequent in texts before the year 1000 and increasingly frequent thereafter. As I claimed for the Eddic corpus,
this suggests that the reanalysis of sá as a relative pronoun occurred early in this period. The increase in relative sá peaks in poetry in the 12th century, just as Icelandic prose emerges, and then begins to decline slightly over the next two centuries. (This will be analyzed statistically and compared to the prose and Eddic corpora in section 4.)

As a final note, relative clauses accompanied by a pronoun other than sá were particularly frequent in the first two centuries of the skaldic period:
(17) Ok varð hinn / es Ôlfr of vá / vǫrðr vestals / of veginn liggja, and became HINN RPO. PRT slew guardian altar-GEN PRT slain lie 'And that guardian of the altar, whom Álfr slew, had to lie slain.'
(Ynglingatal 11)

Such clauses make up $36 \%$ of the relative clauses in the 9 th century and $30 \%$ in the 10th. These seem to be genuine instances of demonstrative or correlative pronouns in the antecedent NP, lending support to my claim that sá in examples like (15b) is also a demonstrative or correlative. The frequency of these examples in the earlier centuries of skaldic poetry suggests that early on, sá and hinn competed as correlative pronouns, but that by the 11th century sá has become specialized in the function of introducing relative clauses, ultimately being reanalyzed as part of the relative clause.

### 3.3 Prose and the two types of poetry compared

Let us now sum up the developments by century in the various genres. Setting aside the infrequent particle sem and the infrequent pronouns bessi, hinn, and hverr/hvad, Table 14 focusses on the distinction between er alone, er with sá in a previous line (likely demonstrative/correlative), and adjacent sá er (which I have argued indicates relative sá). Skaldic poems from the 9th century have the low rates of sá er, on par with Eddic poetry. Over time, sá er increases, hitting a high of $87 \%$ of the relative clauses in 12th-century skaldic verse, around the time when the earliest Icelandic prose emerges. Then sá er declines in the 13th- and 14th-century poems, on a similar trajectory to the steep decline of sá er in prose.

Table 14: Position of sá vis-a-vis $e r$ in all three genres ${ }^{16}$

| Genre (date) | $e r$ only | non-adjacent sá and er | adjacent sá er | Total |
| :--- | :--- | :--- | :--- | :--- |
| Eddic poetry $(900-1200 ?)$ | $125(36 \%)$ | $72(21 \%)$ | $151(43 \%)$ | 348 |
| 9th c. skaldic | $5(31 \%)$ | $1(6 \%)$ | $10(62 \%)$ | 16 |
| 10th c. skaldic | $2(9 \%)$ | $5(22 \%)$ | $16(70 \%)$ | 23 |
| 11th c. skaldic | $13(14 \%)$ | $7(8 \%)$ | $70(78 \%)$ | 90 |
| 12th c. skaldic | $8(10 \%)$ | $3(4 \%)$ | $71(87 \%)$ | 82 |
| 13th c. skaldic | $1(7 \%)$ | $2(13 \%)$ | $12(80 \%)$ | 15 |
| 14th c. skaldic | $4(22 \%)$ | $3(17 \%)$ | $11(61 \%)$ | 18 |
| 12th c. prose $(1150)$ | $89(15 \%)$ | $82(14 \%)$ | $431(72 \%)$ | 602 |
| 13th c. prose $(1200-1275)$ | $172(23 \%)$ | $209(28 \%)$ | $369(49 \%)$ | 750 |
| 14th c. prose $(1300-1350)$ | $231(24 \%)$ | $230(24 \%)$ | $506(52 \%)$ | 967 |
| Total | $650(22 \%)$ | $614(21 \%)$ | $1647(56 \%)$ | 2911 |

## 4 Relative clauses as a criterion for dating Old Norse poems

If demonstrative sá was reanalyzed as a relative pronoun just before the literary period, perhaps we can add relative clause type to list of criteria for dating Eddic poetry by Fidjestøl (1999). ${ }^{17}$ In this section, I will use the rates of various types of relative clauses in datable prose and skaldic poetry to attempt to establish a chronology of the demonstrative>relative reanalysis. Having done that, I will show how such a chronology might be used to confirm the dates of composition of some individual Eddic poems.

### 4.1 The chronology of demonstrative vs. relative sá

Table 14 above shows that the rate of sá non-adjacent to er (i.e. sá as a demonstrative pronoun) is basically stable, ranging from $4 \%$ of the examples of sá up to $28 \%$, with no discernable diachronic pattern. I believe that this is because throughout the history of Icelandic, demonstrative sá has always been possible, even in the presence of a relative clause. By contrast, adjacent sá + er (likely relative sá) is not particularly frequent in the most archaic skaldic poetry, namely that from the 9th century. Thus the oldest kind of relative clause appears to be that formed by er alone. ${ }^{18}$ Starting in the 10th century, relative sá increases over time, peaking in the 12th century (in both prose and skaldic poetry) before declining again. Because the Eddic poems are extant in the Codex Regius (ca. 1260, likely copied from an even older manuscript) and were supposedly composed orally some time before being put to velum, we can rule out that the Eddic poems date from the 14th century or even the 13th century, when relative sá er began to decline in favor of sem. Therefore, as a

[^15]general rule, the higher the proportion of relative sá in a given Eddic poem, the later its date of composition might be.

### 4.2 Applying this to the Edda

If the above sketch is correct, we can use the frequency of different types of relative clauses to confirm the relative chronology of Eddic poems. My method here will follow that used by Pintzuk \& Ecay (2016), who compare the frequencies of 10 syntactic features in Beowulf with those in a large corpus of datable OE poetry and prose. For each feature, they plot a regression line based on the development in the datable texts, and then they draw a horizontal line representing the frequency of that feature in Beowulf. The intersection of the Beowulf line with the regression line for the datable corpus gives a rough impression of the probable date for Beowulf. Pintzuk \& Ecay find that for most features, the Beowulf line intersects the regression line around the year 850 , suggesting an early date of composition for that poem.

The first step in applying Pintzuk \& Ecay's method to the current study is to plot a regression line for the rise of sá er. In order to do this, the various types of relative clauses discussed in this paper need to be converted into a binary variable; I test relative clauses beginning with adjacent sá er against the relative clauses with other markers (er alone, hinn er, hverr er, and non-adjacent sá er). I also exclude examples from the 13th and 14th century. There are two reasons for this exclusion. First, the rise and fall of sá er throughout the whole period is a non-linear development, so excluding the latter centuries creates a linear development: the rise of sá er from the earliest poetry through the 12th century. Secondly, the Eddic poems are very likely to have been composed before the 13th century (being found in a mid-13th century manuscript), so for comparing Eddic poems with the other genres, the latter centuries are irrelevant.

Before examining the regression analysis, let's review the raw numbers. Table 15 below shows the counts for adjacent sá er vs. relative clauses with er but no adjacent sá. Viewed this way, with Finnur's dates being used as a rough guide, the impression emerges that the purportedly 9th-century Eddic poems have relatively low rates of sá er, on par with the 9thcentury skalds. Similarly, most of Finnur's 10th century Eddic poems have sá er less than $50 \%$ of the time, in line with the 10th-century skaldic ones, with the notable exceptions of Völuspá and Hymiskviða. Most poems from Finnur's late group (except Atlamál) have sá er in more than $67 \%$ of relative clauses; this is in agreement with the high rates of sá er in 11thand 12th-century skaldic verse and in 12th-century prose.

Table 15: sá er vs. other types in Eddic poetry vs. other genres ${ }^{19}$

| poem | date | $e r$ without adjacent sá | adjacent sá er |
| :---: | :---: | :---: | :---: |
| Hávamál, 111-37 | 875-900 | 6 (60\%) | 4 (40\%) |
| Prymskviða | 900 | 3 | 1 |
| Völundarkviða | 900 | 10 (67\%) | 5 (33\%) |
| Skírnismál | 900 | 13 (81\%) | 3 (19\%) |
| Cf. 9th c. skaldic |  | 15 (60\%) | 10 (40\%) |
| Vafprúđnismál | 900-925 | 13 (93\%) | 1 (7\%) |
| Grímnismál | 900-925 | 15 (79\%) | 4 (21\%) |
| Hárbarðsljóð | 900-925 | 11 (73\%) | 3 (27\%) |
| Hávamál (rest) | 900-925 | 31 (47\%) | 35 (53\%) |
| Völuspá | 935 | 3 (23\%) | 10 (77\%) |
| Lokasenna | 935 | 11 (62\%) | 5 (38\%) |
| Hamðismál | 925-950 | 1 | 2 |
| Reginsmál | 925-975 | 4 (67\%) | 2 (33\%) |
| Helgakviða Hund. II | 925-950 | 12 (75\%) | 4 (25\%) |
| Gudrúnarkviða II | 925-950 | 1 | 3 |
| Alvissmál | 950-975 | 13 (87\%) | 2 (13\%) |
| Atlakviða | 975-1000 | 5 (56\%) | 4 (44\%) |
| Fáfnismál | 975-1000 | 10 (67\%) | 5 (33\%) |
| Helgakviða Hjörv. | 975-1000 | 11 (65\%) | 6 (35\%) |
| Sigrdrífumál | 975-1000 | 4 (44\%) | 5 (56\%) |
| Brot af Sigurdarkv. | 975-1000 | 2 | 1 |
| Gudrúnarkviða I | 975-1000 | 2 | 2 |
| Gudrúnarkviða III | 975-1000 | 1 | 1 |
| Hymiskviða | 975-1000 | 3 (37\%) | 5 (63\%) |
| Cf. 10th c. skaldic |  | 17 (52\%) | 16 (48\%) |
| Helreið Brynhildar | 1000-1025 | 3 | 2 |
| Gudrúnarhvöt | 1000-1025 | 1 | 1 |
| Helgakviða Hund. I | 1000-1025 | 2 (15\%) | 11 (85\%) |
| Oddrúnargrátur | 1000-1025 | 1 | 2 |
| Sigurdarkv. hin sk. | 1050 | 2 (33\%) | 4 (67\%) |
| Atlamál | 1050 | 18 (67\%) | 9 (33\%) |
| Cf. 11th c. skaldic |  | 37 (35\%) | 70 (65\%) |
| Grípisspá | 1150-1200 | 4 (31\%) | 9 (69\%) |
| Cf. 12th c. skaldic |  | 21 (23\%) | 71 (77\%) |
| 12th century prose | ca. 1150 | 189 (17\%) | 431 (70\%) |

[^16]The regression analysis was conducted on texts with known dates, i.e. skaldic verse and 12th-century prose texts. Although binned by century in the table above, each relative clause was assigned a precise date, based on the documentation provided by IcePaHC for the prose texts and the Skaldic Database for the skalds. The resulting analysis shows a significant effect of date on the choice of sá er vs. the other types of relative clauses $(p=0.014)$. This effect is illustrated in Figure 4, which shows an increasing likelihood of sá er the later a text is composed.


Figure 4: Regression line for sá er vs. other types in skaldic poetry through 12th cent.
The next step in Ecay \& Pintzuk's method is to find the intersection between the regression line and the rate of that feature in the text of questionable date. While we could do this for each of the Eddic poems, many of the Eddic poems have too few examples of relative clauses to make this a reliable method. With that in mind and in the interest of space, I have chosen several Eddic poems that have at least 10 relative clauses. Using the percentage of adjacent sá er from Table 10, I have drawn a horizontal line representing the frequency of sá $e r$ in the selected poems.

Figure 5 shows the intersections of 5 purportedly early poems with the regression line:


Figure 5: Rates of sá er in Eddic poems composed 900-925 (acc. to Finnur Jónsson)
The rates of sá er in all of these poems intersect the regression line (or its confidence band, shown in gray) at an appropriately early date. The rate of adjacent sá er in Hávamál (excluding stanzas 111-137) intersects the regression line at about the year 975, falling within the confidence band roughly representing the years $850-1025$. While there is much debate on the dating of this poem, this result is consistent with those scholars who believe Hávamál to be relatively old, e.g. Finnur's dating of these stanzas to $900-925$, basically confirmed by Fidjestøl (1999: 221, 245). Völundarkvíða and Hárbarðsljóð, dated by Finnur to 890-925, interect the confidence band in the period 850-900 but would intersect with the regression line itself much earlier. Skirnismál and Vafbrúðnismál, also dated by Finnur to 890-925, have rates of sá er so much lower than the 9th century skaldic poems, that this model seems to predict that they were composed perhaps as far back as the 8th century, an implausibly early date. Nevertheless, this method confirms claims by Finnur, Dronke (1997: 288, 402), and Evans (1989) that these poems are early and speaks against scholars who argue for later dates, e.g. Kristjánsson (1997) who puts Vafbrúðnismál after 1000 and von See (1989) who believes that Hávamál is mostly the product of 13th-century learning.

However, the results are not nearly so neat if we look at four of the longer poems that are dated by Finnur between 925 and 1000. Völuspá was dated to 935 by Finnur, although scholars such as Lönnroth (2003) have argued that parts of the poem must be younger. The line for Völuspá intersects the regression line around 1175, but it intersects the grey
confidence band as early as 1100 . By contrast, the other three supposedly 10th-century poems pattern more with 9th-century skaldic poems in their frequencies of sá er.


Figure 6: Rates of sá er in Eddic poems ca. 925-1000 (Finnur Jónsson):

Finally, not all of the purportedly later poems pattern as expected. The supposedly 11 thcentury Helgakv. Hund. I and Atlamál have wildly different frequencies of sá er, such that the former seems to be implausibly late and the latter seems incredibly early. This is especially troubling in the case of Atlamál, as there is independent linguistic evidence that this poem is relatively late: 3 of the 4 instances of the innovative relativizer sem in the Edda are from this poem, and it shows an alliterative type that must be from the 11th century or later (Borgeirsson 2016). However, the intersection of Grípisspá with the confidence band before 1200 is entirely compatible with Finnur's dating of the poem to the 12 th century, and this daing agrees with the poem's use of late types of negation (Åkesson 2005) and alliteration (borgeirsson 2016):


Figure 7: Rates of sá er in purportedly late Eddic poems:

It should be noted, however, that there are several limitations of applying this method to my Eddic and skaldic corpora. First, my study examines only one feature, so the results are not as reliable as Pintzuk \& Ecay's, who analyzed 10 features. Secondly, my skaldic corpus is not particularly large. Thirdly, some Eddic poems have a very small number of tokens, in which case using percentages may imply a larger effect size than is warranted. Nevertheless, while the frequency of sá er cannot by itself reliably predict the date of an Eddic poem, it can be added to the list of syntactic and metrical criteria used in works such as Fidjestøl (1999), Åkesson (2005), and Borgeirsson (2016). In future work, I plan to examine the interplay of all of these dating criteria in order to come to a new dating scheme for the Edda that is based on linguistic rather than literary grounds.

## 5 Conclusions

This paper shows that in addition to its demonstrative use, sá can be a relative pronoun in Eddic poetry, in skaldic poetry, and in Old Icelandic prose. The goals of this study were: i) to provide evidence for the reanalysis of sá to a relative pronoun in the pre-prose period, ii) to establish a timeline for that reanalysis based on the frequencies of different types of relative clauses in early prose and datable skaldic poetry, and iii) use that timeline to help confirm dates of Eddic poetry.

In my prose corpus (IcePaHC), sá is very frequent before the relative marker er and in that context often lacks demonstrative force. This relative use of sá is very frequent in 12th-
century prose but begins to decline already in the 13th. Therefore, I proposed in Sapp (2019) that sá must have been reanalyzed from a demonstrative pronoun to a relative pronoun before the 12th century. This hypothesis is supported in the current study of Eddic and skaldic poems.

In datable skaldic poems of the earliest period, sá er competes with other relativization strategies, but by the 12 th century as many as $77 \%$ of relative clauses begin with sá er. While the dates of Eddic poems are not precisely known, those that are considered to be more archaic pattern with the older skaldic poems, while supposedly later Eddic poems such as Gripisspá pattern with the 12th-century skaldic poems Old Norse poetry. Taken together with the prose data, this indicates that relative sá arises in the 9th century, is fully established as a relative pronoun in the 11th century, and peaks in its use in the 12th century, before it starts to be replaced by sem.

Finally, having established a timeline for the rise of relative sá, I attempted to use the rates of various types of relative clauses to date individual Eddic poems. While the results of this were mixed, they suggest that relative sá could be used in conjunction with other linguistic criteria in future studies on the dating of Eddic poetry.

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Appendix 1: Position of sá vis-a-vis er in skaldic poetry, listed by skald

| skald | date | $e r$ only | non-adjacent sá, er | adjacent sá er | hinn, hverr | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bragi | ca. 850 |  |  |  | 2 | 2 |
| Pjóð | 9th cent. | 1 | 1 | 2 | 2 | 6 |
| Phorn | ca. 900 | 4 |  | 8 | 5 | 17 |
| 9th century total |  | 5 (20\%) | 1 (4\%) | 10 (40\%) | 9 (36\%) | 25 |
| KormQ | 970 |  |  |  | 1 | 1 |
| Glúmr | 975 |  | 1 |  |  | 1 |
| Egill | 983 |  | 1 | 1 |  | 2 |
| Tindr | 985 |  | 1 | 1 |  | 2 |
| Eskál | 990 |  |  | 1 | 1 | 2 |
| Eyv | 990 |  | 1 | 4 | 2 | 7 |
| Hfr | 995 | 1 |  | 5 | 2 | 8 |
| Ggnæv | 10th cent. |  |  |  | 1 | 1 |
| Gsind | 10th cent. |  |  | 1 | 1 | 2 |
| Gunnh | 10th cent. | 1 |  |  |  | 1 |
| PHjalt | 10th cent. |  | 1 |  | 2 | 3 |
| Pjsk | 10th cent. |  |  | 1 |  | 1 |
| Eil | ca. 1000 |  |  | 1 |  | 1 |
| UlfrU | ca. 1000 |  |  | 1 |  | 1 |
| 10th century total |  | 2 (6\%) | 5 (15\%) | 16 (48\%) | 10 (30\%) | 33 |
| PKolb | 1023 | 1 |  | 4 |  | 5 |
| Jok | 1030 |  |  | 1 |  | 1 |
| bflek | 1030 |  | 1 |  |  | 1 |
| Porm | 1030 | 1 | 1 |  |  | 2 |
| Ploft | 1034 |  |  | 1 | 1 | 2 |
| Sigv | 1045 | 5 | 2 | 31 | 7 | 45 |
| Pfagr | 1051 |  |  | 3 | 1 | 4 |
| Arn | 1066 | 2 | 1 | 10 | 1 | 14 |
| Hharð | 1066 | 1 | 1 | 1 |  | 3 |
| PjóðA | 1066 | 1 | 1 | 6 | 1 | 9 |
| PSkall | 1076 |  |  |  | 1 | 1 |
| Halli | 11th cent. |  |  | 2 | 1 | 3 |
| Ill | 11th cent. |  |  | 1 |  | 1 |
| Leiðó | 11th cent. |  |  | 1 |  | 1 |
| Okík | 11th cent. |  |  | 1 |  | 1 |
| Ótt | 11th cent. | 1 |  | 3 |  | 4 |
| Refr | 11th cent. |  |  |  | 1 | 1 |
| Skrau | 11th cent. |  |  | 1 |  | 1 |
| Snæbj | 11th cent. |  |  | 1 |  | 1 |
| Stein | 11th cent. | 1 |  | 1 | 2 | 4 |
| Pórál | 11th cent. |  |  |  | 1 | 1 |


| Valg | 11th cent. |  |  | 1 |  | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bkrepp | ca. 1100 |  |  | 1 |  | 1 |
| 11th century total |  | 13 (12\%) | 7 (7\%) | 70 (65\%) | 17 (16\%) | 107 |
| Mark | 1103 | 1 |  | 3 | 1 | 5 |
| Mberf | 1103 | 1 |  | 2 |  | 3 |
| İv | 1139 |  |  | 4 |  | 4 |
| ESk | 1153 | 3 | 1 | 33 | 3 | 40 |
| Gísl | 1150 |  | 1 | 2 |  | 3 |
| Rv | 1158 |  |  | 3 |  | 3 |
| Ník | 1159 | 1 |  | 1 |  | 2 |
| Árm | 12th cent. |  |  | 1 |  | 1 |
| Gamlkan | 12th cent. |  | 1 | 16 | 2 | 19 |
| RvHbreið <br> \& Hbreið | 12th cent. | 1 |  | 4 | 3 | 8 |
| HSt | 12th cent. | 1 |  | 1 |  | 2 |
| Oddi | 12th cent. |  |  |  | 1 | 1 |
| Sigm | 12th cent. |  |  | 1 |  | 1 |
| 12th century total |  | 8 (9\%) | 3 (3\%) | 71 (77\%) | 10 (11\%) | 92 |
| Kolb | 1208 |  |  | 1 |  | 1 |
| GunnLeif | 1218 |  | 1 | 2 |  | 3 |
| Bjbp | 1223 |  |  | 2 | 1 | 3 |
| SnSt | 1241 |  |  | 3 | 2 | 5 |
| Ólhv | 1259 |  | 1 |  | 1 | 2 |
| Sturl | 1284 |  |  | 3 |  | 3 |
| Ólsv | 13th cent. | 1 |  | 1 |  | 2 |
| 13th century total |  | 1 (5\%) | 2 (11\%) | 12 (63\%) | 4 (22\%) | 19 |
| 14th century (Kálfr) |  | 4 (22\%) | 3 (17\%) | 11 (61\%) | 0 | 18 |
| Total |  | 33 (11\%) | 21 (7\%) | 190 (65\%) | 50 (17\%) | 294 |

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[^0]:    ${ }^{1}$ Swedish also allows for similar structures, called fritt annex, which involve e.g. adverbs, particles, and sometimes full adverbial clauses, which seem to be semantically, but not fully syntactically, integrated into the main clause (Teleman et. al. 1999a:173, Teleman et. al. 1999b:101). I thank Johan Brandtler for bringing these facts to my attention.
    ${ }^{2}$ Although many accounts of Icelandic precede the invention of an extended left periphery, some recent scholarship has assumed a split-CP layer (see e.g. Wiklund et al. 2007, Jónsson 2010).
    ${ }^{3}$ I would like to thank those who have provided judgements for the Icelandic examples in this paper, especially Brynhildur Stefánsdóttir (Cornell University) and Pórhallur Eypórsson (University of Iceland).

[^1]:    ${ }^{4}$ The particle hérna frequently occurs in spoken language and although it can be left out, the presence of it does make the example sound more natural. A speaker consulted on this example noted that if a tag question is added (24) becomes even better:

[^2]:    ${ }^{5}$ As pointed out by Haegeman and Greco (2018), the type of the initial adjunct really seems to matter when it comes to possibility of combining them with regular main clauses. Since examples such as the one in (26) do not include CACs, these are not discussed further in this paper.

[^3]:    ${ }^{6}$ I say may be because I have not tested examples such as the ones in (29). My own intuition tells me that they are not ungrammatical, although they might be slightly degraded. Possibly, these are of a different type than the example in (22).

[^4]:    ${ }^{7}$ Interestingly, if the CAC in (29) is changed into a simple temporal adjunct like $i$ sumar 'this summer', the example in (29b) becomes ungrammatical in the intended reading. If $i$ sumar is thought to belong to the main clause and denote the time of the question 'She asked the boy this summer...' the example is always grammatical. Presumably, this has to do with the type of adverbial used. As stated above, I have here chosen to only test CAC temporal clauses in this paper.

[^5]:    ${ }^{8}$ In Table 1 it looks like StD allows for CACs with V2 subject-initial clauses. This is because StD allows for a certain type of V2 subject-initial clauses with CACs, namely those that have a focus on the subject. Haegeman and Greco (2018) suggest that in these cases, a movement up to the edge of the CP layer has taken place.

[^6]:    ${ }^{1}$ Nygaard (1906: 261) maintains that pronouns only very rarely bear the case of the relativized argument in the "popular style." However, this is common in the Latinate "learned style" (Nygaard 1906:263).

[^7]:    ${ }^{2}$ See that paper for a detailed analysis of the syntax of each stage.
    ${ }^{3}$ The distinction between DP and NP does not play a role in this paper, so I use the abbreviation NP throughout.
    ${ }^{4}$ Clauses coded as CP-REL in IcePaHC that have neither a particle nor a demonstrative/relative pronoun are excluded from this study.

[^8]:    ${ }^{5}$ Unless otherwise noted, hinn refers to the non-clitic determiner.

[^9]:    ${ }^{6}$ Since Nygaard (1905), much of the literature on Old Norse relative clauses has claimed that case attraction occurs in the "popular style", while texts in the "learned style" have relative clauses without case attraction. However, non-attracting relatives are extremely rare in my Old Icelandic corpus, occurring only 6 times even in the learned-style Hómiliubók. I thus conclude with Wagener (2017: 128) that so-called learned-style relative clauses are an effect of translation and peripheral to Old Norse grammar.

[^10]:    ${ }^{7}$ There are a handful of Eddic poems in manuscripts other than the Codex Regius; because these are not found in the Greinir skáldskapar, they are not treated in this paper. Note also that the Greinir skáldskapar contains one skaldic poem, Geisli, which is treated with the other skaldic poems in section 3.2 below. Details about the poems and the tagging of the corpus can be found in Eythórsson et al. (2014).
    ${ }^{8}$ Note that er has an archaic form es, which can cliticize to the preceding word as ' $s$.

[^11]:    ${ }^{9}$ These are the dates proposed by Finnur Jónsson (1920), cited in Fidjestøl (1999: 106).
    ${ }^{10}$ Of the 11 instances of $s a$ separated from er, 8 are in a formulaic refrain (stanzas $15,17,19,21,23,25,31$, and 33).

[^12]:    ${ }^{11}$ The numbers for $s a ́+e r$, hinn $+e r$, and hverr $+e r$ in this row indicate that $e r$ alone is in anacrusis, while the pronoun occurs in a preceding line.

[^13]:    ${ }^{12}$ The four instances of $s a \dot{a}+e r$ in this row involve $e r$ alone in the dip, with sá occuring in a preceding line.
    ${ }^{13}$ This is especially common in the meter ljóðaháttr. Example (13b) is especially interesting, because peir fails to show case attraction; thus it may be a demonstrative pronoun (the antecedent) rather than a relative pronoun.

[^14]:    ${ }^{14}$ My analysis of Einarr Skúlason's poem Geisli is based on the digitization in Greinir skaldskapar rather than the one in the Skaldic Project.
    ${ }^{15}$ If the Skaldic Project website gives a range of dates for composition or the life of the skald, I list the latest year in the range (e.g. the year of the skald's death). For the statistical analyses below, skalds with only a century listed will be conservatively dated with the last year of that century, so e.g. Pjóólff of Hvini will be assigned the year 899 .

[^15]:    ${ }^{16}$ The counts in this Table for the two genres of poetry come from Tables 10 and 13 above. The counts for prose come from Sapp (2019); note that the totals for each century amount to the numbers for er in Table 1, minus the 85 co-occurrences of er with pessi, hinn, and hverr given in Table 6.
    ${ }^{17}$ See Sundquist 2002 for a similar approach to relative clauses in Beowulf.
    ${ }^{18}$ Pace Lindblad (1943), who argues that the earliest relative clauses were introduced by $s a$, evidenced by the Blekinge runic inscriptions. Note however, that both examples from Blekinge involve free relatives, so it is very likely that sá is actually the antecedent rather than the relative marker. Moreover, Larsson (1931:38-40) gives other runic examples with demonstrative sa distant from the RC, or no demonstrative, but with iaR or sum as a relative particle, i.e. identical to the construction in Eddic poems that I claim to be the most archaic type.

[^16]:    ${ }^{19}$ The counts in this Table for the poetry come from Tables 10 and 13. The total of 189 examples of non-sá-er in 12th-century prose represent 89 instances of er alone and 82 instances of non-adjacent sá er, plus 18 instances of other pronouns with er; this 189 plus the 431 examples of sá er yields a total of 620 , matching the number of instances of er in the 12th century listed in Table 1. Percentages are not shown for Eddic poems with 5 or fewer tokens.

