
VERB-SECOND AND VERB-FIRST IN THE HISTORY OF ICELANDIC*

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ABSTRACT V1 declaratives in Icelandic have attracted much attention in the generative literature (e.g. Sigurðsson 1990, Franco 2008) and are known to be more frequent in earlier stages compared to the modern language. In this paper, we provide an account for the diachrony of V1 and V2 in Icelandic where the decreasing frequency of V1 is argued to be related to an ongoing change concerning the preferred structural position for subject topics. Our claims are supported by corpus evidence from IcePaHC (Wallenberg, Ingason, Sigurðsson & Rögnvaldsson 2011) and the formal analysis is conducted within Lexical Functional Grammar, which allows us to neatly capture the changing associations between clause structure and information structure. As we show, this overall change can also be linked to wider diachronic developments in Icelandic involving Stylistic Fronting and expletives.

1 INTRODUCTION

Many languages exhibit both verb-second (V2) and verb-initial (V1) word order patterns and much has been written about the relationship between

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these two phenomena, in Germanic and beyond (see e.g. [Jouitteau 2010](#) for an overview). Nevertheless, there remain many unanswered questions concerning how this relationship should be handled from a theoretical perspective. In languages where V1 patterns coexist alongside an identifiable V2 system, accounts differ in terms of how the V1 patterns can be licensed by an otherwise V2 grammar; some analyse V1 as a straightforward structural variant of V2 (e.g. [Holmberg 2015](#), [Jouitteau 2010](#), [Wolfe 2015](#)), while others argue for V1 to be analysed on its own terms (e.g. [Rinke & Meisel 2009](#), [Hinterhölzl & Petrova 2010](#)). Furthermore, there is an emerging body of work which considers how V1 patterns in such languages should bear on cross-linguistic typologies of V2 (e.g. [Jouitteau 2010](#), [Wolfe 2019](#)), which sits within a broader ongoing debate concerning the status of variation within V2 languages (e.g. [Brandtler 2014](#), [Cognola 2015](#)).

Icelandic presents an interesting case study for the relationship between V1 and V2 for two prime reasons. Firstly, Icelandic is standardly accepted as a V2 language (e.g. [Rögnvaldsson & Thráinsson 1990](#), [Thráinsson 2007](#)), and also exhibits a wide variety of V1 constructions, including various types of V1 declarative ([Booth 2018](#), [Sigurðsson 2018](#)). Moreover, in contrast to West Germanic, the position of the finite verb appears to be relatively restricted from an early stage. As previously observed ([Faarlund 1994](#), [Rögnvaldsson 1995](#)), and confirmed by a recent corpus study ([Booth 2018](#)), the possibilities are restricted to V1 and V2, with a notable absence of the verb-third (V3) and verb-later (V-later) word orders exhibited in early West Germanic (e.g. [Kiparsky 1995](#), [Axel 2007](#), [Walkden 2015](#)).¹ Secondly, with respect to diachrony it has been claimed that V1 decreases in frequency over time in Icelandic, alongside a concomitant increase in V2 ([Sigurðsson 1990](#)). This has also been confirmed by recent corpus studies ([Butt, Bögel, Kotcheva, Schätzle, Rohrdantz, Sacha, Dehé & Keim 2014](#), [Booth, Schätzle, Börjars & Butt 2017](#)). Nevertheless, a full account of this change and whether it can yield insights as to the overall status of V1 in the language is still lacking.

In this paper, we contribute to the ongoing debates concerning V2 and V1 via an investigation of word order in matrix declaratives in the history of Icelandic, presenting an account in terms of the interaction between clause structure and information structure.² Information structure has been shown

¹ V3 order is possible at least in modern Icelandic with certain adverbs ([Angantýsson 2007](#), [Thráinsson 2007](#), [Sigurðardóttir 2019](#), [Sigurðardóttir 2020](#)). Additionally, [Heycock & Wallenberg \(2013\)](#) observe that there is some limited evidence for V3 and V-later orders in Early Modern Icelandic (1600-1850), but argue that this is an effect of calquing written Danish. Since both of these constitute fringe phenomena, we do not discuss these possibilities further here.

² Icelandic also exhibits V1 in interrogatives and imperatives but since V1 appears to be di-

to play an important role in driving clausal word order patterns in early Germanic (e.g. [Bech & Eide 2014](#), [Hinterhölzl & Petrova 2009, 2010](#), [Meurman-Solin, Lopez-Couso & Los 2012](#), [Struik & Van Kemenade 2020](#)), and is thus an important consideration, though its role has scarcely been considered for early Icelandic.³ In particular, we show that the relative position of the finite verb and subject topics changes throughout the history of the language, whereby a relatively flexible positional distribution of subject topics gradually yields to a new system with an emerging unique subject topic position. Moreover, as we show, this shift not only accounts for the decrease in V1 and concomitant increase in V2, but can also account for wider syntactic changes concerning the phenomenon generally known as ‘Stylistic Fronting’ ([Maling 1990](#)), as well as the rise of expletives. Our claims are evidenced by quantitative findings from a series of corpus-based investigations using the Icelandic Parsed Historical Corpus (‘IcePaHC’, [Wallenberg et al. 2011](#)). The formal analysis is conducted within the parallel architecture of Lexical Functional Grammar (LFG) ([Bresnan & Kaplan 1982](#), [Bresnan, Asudeh, Toivonen & Wechsler 2016](#), [Dalrymple, Lowe & Mycock 2019](#)). LFG assumes an independent dimension for the representation of information structure, which is captured separately from phrase-structure configurations. As we show, this enables us to neatly capture the changing associations between clause structure and information structure in the history of Icelandic.

The paper proceeds as follows. In Section 2, we outline the details of LFG which are relevant to our paper, as well as certain specific theoretical premises which we assume. In Section 3, we provide details on our data sources and methodological approach. Section 4 focuses on Old Icelandic (1150-1350), where we discuss the status and nature of V2 and V1, and also show that subject topics are relatively flexible in terms of their positional distribution. Section 5 builds on these observations and presents our analysis for the structure of the clause in Old Icelandic, accounting for V2 orders as well as different types of V1. In Section 6, we examine subsequent stages in the history of the language and show that a unique subject topic position is emerging, and that this has wide-ranging consequences for the syntactic system, interacting with further changes. Section 7 concludes the paper.

achronically stable in such contexts, and are not particularly special in a Germanic context, we focus on declarative clauses instead, which we know to exhibit change. For reasons of space, we restrict ourselves to matrix clauses, leaving word order in embedded clauses for future work. For a recent study of embedded V2 in early Icelandic, see [Walkden & Booth \(2020\)](#).

³ Rare contributions are [Hróarsdóttir \(2008, 2009\)](#), who explores OV/VO-variation with respect to givenness.

2 LEXICAL FUNCTIONAL GRAMMAR

LFG assumes a ‘parallel architecture’ model of grammar, in which different types of linguistic information are captured at independent but interacting dimensions (Bresnan & Kaplan 1982, Bresnan et al. 2016, Dalrymple et al. 2019). Each dimension differs in terms of its formal representation and must satisfy certain constraints. The core components of syntactic representation are c(onstituent)-structure, which captures information about category and constituency, and f(unctional)-structure, which captures abstract functional information. A third dimension which is relevant to our study is i(nformation)-structure. Each of these three dimensions is outlined below. The various dimensions are related to one another as part of an overall projection architecture, as we also detail below.

2.1 *f-structure*

The abstract functional information associated with a sentence is captured at f-structure. This includes both grammatical functions (GFS), e.g. SUBJ(ect), OBJ(ect) and ADJ(unct), as well as grammatical features e.g. TENSE, CASE, PERS(on), NUM(ber), GEND(er) and DEF(initeness). A special type of functional feature is PRED(icate), which is a pointer into the semantics of a predicate, takes a semantic form as its value, and captures the argument(s) (if any) a predicate requires in terms of grammatical function. F-structure representations take the form of attribute-value matrices which consist of a set of attribute(/feature)-value pairs. An example f-structure for the Icelandic sentence in (1) is given in (2).

- (1) *María sparkaði boltanum*
 María.NOM kick.PST ball.DAT.DEF
 ‘María kicked the ball.’

- (2)
$$\left[\begin{array}{ll} \text{PRED} & \text{'KICK <SUBJ,OBJ>} \\ \text{TENSE} & \text{PST} \\ \text{SUBJ} & \left[\begin{array}{ll} \text{PRED} & \text{'MARIA'} \\ \text{CASE} & \text{NOM} \end{array} \right] \\ \text{OBJ} & \left[\begin{array}{ll} \text{PRED} & \text{'BALL'} \\ \text{CASE} & \text{DAT} \\ \text{DEF} & + \end{array} \right] \end{array} \right]$$

Any f-structure must satisfy certain wellformedness conditions, see (3)-(5) (Bresnan et al. 2016).

(3) **Completeness**

Every function designated by a PRED must be present in the f-structure of that PRED.

(4) **Coherence**

The value of every argument function in an f-structure must be designated by a PRED.

(5) **Uniqueness**

Every attribute has a unique value.

A consequence of assuming f-structure as an independent level of representation for abstract functional information is that grammatical functions such as SUBJ and OBJ are viewed as ‘primitives of the theory’.⁴ As such, unlike in some other generative approaches, SUBJ and OBJ need not be exclusively defined in terms of structural position. This flexibility thus allows for accounts of languages where structural position plays a strong role in encoding grammatical functions (e.g. English), those where morphological marking is the dominant encoding means (e.g. Latin), as well as languages which use a mixture of means (see Nordlinger 1998 for a relevant typology).

2.2 c-structure

Since abstract functional information is captured at f-structure, c-structure captures purely information about category and constituency, and is determined entirely on the basis of constituency tests and linear word order. The representation of c-structure takes the form of a tree diagram. With respect to category, there are lexical categories, e.g. N, V and P, and functional categories, e.g. C, I and D. The functional category relevant to this study is I, as we discuss in Section 5 in relation to Icelandic V2. Another consequence of assuming f-structure as an independent dimension for abstract functional information is that a functional category is only motivated at c-structure

⁴ As has been pointed out (e.g. Dalrymple et al. 2019), ‘primitives’ is perhaps a misleading term here, as SUBJ and OBJ can in fact be further broken down in terms of the intrinsic classification features [\pm r(estrictive)] and [\pm o(b)jective)]. Nevertheless, allowing for this nuance still leaves the possibility for SUBJ and OBJ to be defined independently from structural configuration.

when there is evidence that functional information, e.g. finiteness or definiteness, is associated with a fixed structural position (Kroeger 1993, Börjars, Payne & Chisarik 1999). Again, this distinguishes LFG from some other generative approaches in which any functional information present in the sentence is represented in terms of its own functional projection at phrase-structure (see Rizzi & Cinque 2016 for an overview of such approaches).

With respect to constituency, LFG applies a ‘What You See Is What You Get’ approach and c-structure is constrained by the principle of Economy of Expression, see (6) (Bresnan et al. 2016).

(6) **Economy of Expression**

All syntactic phrase structure nodes are optional and are not used unless required by independent principles (completeness, coherence, semantic expressivity).

Thus, when a c-structure node is not independently motivated it is economised, i.e. not represented at c-structure, as we show in relation to Old Icelandic in Section 5. Additionally, c-structure allows for both endocentric (headed) and exocentric (headless) phrases and c-structure trees need not be exclusively binary-branching. Endocentric phrases follow a version of the X-bar schema (Bresnan et al. 2016), while exocentric phrases lack a c-structure head and are flat structures expanded from a non-projecting category.⁵ Furthermore, languages may mix endocentric and exocentric structures (Nordlinger 1998, Bresnan et al. 2016).

2.3 *i-structure*

Our paper deals with information structure, a domain where terminology is notoriously problematic. We follow an approach in which information-structural features are derived from two primitive binary properties [\pm NEW] and [\pm PROMINENT]. This provides the four-way division in (7), where FOCUS is [+New, +Prominent] and TOPIC [–New, +Prominent] (Butt & King 1996, 1997; based on ideas from Vallduví 1992, Choi 1999).

(7)

	[+New]	[–New]
[+Prominent]	FOCUS	TOPIC
[–Prominent]	COMPLETIVE INFORMATION	BACKGROUND INFORMATION

⁵ An alternative term to ‘exocentric’ sometimes used in the LFG literature is ‘lexocentric’ (Bresnan et al. 2016).

In this view, TOPIC and COMPLETIVE INFORMATION are similar to the traditional topic-comment distinction, and FOCUS and BACKGROUND INFORMATION in line with the traditional focus-background distinction. That is, TOPIC is old information which is relevant in the current context and hence prominent, while COMPLETIVE INFORMATION is new information which is not prominent in the discourse. FOCUS, by contrast, is new information which is prominent. BACKGROUND INFORMATION is old information which may be a necessary part of the sentence for syntactic reasons or required to further clarify the relation between what is already known and the new information introduced in the sentence.

As pointed out by Dalrymple et al. (2019), one problem with this approach is that it does not capture different types of topic. Of particular relevance to this paper, and what we henceforth refer to with the term ‘topic’, are continuing topics (e.g. Frascarelli & Hinterhölzl 2007; cf. also center continuation in centering theory, Grosz, Weinstein & Joshi 1995). We assume that continuing topics are [−New] and [+Prominent] and thus correlate with TOPIC in (7). Continuing topics are thus to be considered on their own terms, though will inevitably overlap with, e.g. aboutness topics (Krifka 2007) and contrastive topics (Choi 1999). For now, we stick with the four-way distinction in (7), and acknowledge that further work on information structure feature classifications within LFG is needed, towards which there is promising progress (Lowe & Mycock 2014, Mycock & Lowe 2014).

We assume a separate level of representation for information structure, i-structure, following work by Butt & King (1996), King (1997) and Butt, Jabeen & Bögel (2016). I-structure is represented as an attribute-value-matrix, just like f-structure. An example i-structure for the second sentence in (8) is shown in (9).⁶

- (8) Q: What did Maria buy?
 A: Maria bought a cactus.
 TOPIC FOCUS

⁶ The features TOPIC and FOCUS at i-structure as in (9) should be considered separately from the functional features TOPIC and FOCUS which can appear at f-structure. The latter are generally reserved for *syntacticised* discourse functions involved in long-distance dependencies or dislocation structures, e.g. fronted *wh*-elements or left-dislocated constituents (see Dalrymple et al. 2019 for a comprehensive overview). However, in some early LFG work on information structure these functions are used to capture information-structural properties (King 1995). Since f-structure is strictly a syntactic dimension for abstract functional information, we capture the information-structural properties which are relevant in our study at i-structure, as in (9).

$$(9) \left[\begin{array}{ll} \text{TOPIC} & \left\{ \left[\text{PRED-FN} \quad \text{'MARIA'} \right] \right\} \\ \text{FOCUS} & \left\{ \left[\text{PRED-FN} \quad \text{'CACTUS'} \right] \right\} \end{array} \right]$$

The values for information-structural features are shown within curly brackets, to indicate that in each case the value is a member of a set. This allows for sentences which have e.g. more than one topic or focus. The `PRED-FN` notation, as opposed to the standard `PRED` feature from f-structure, indicates that the predicate value is picked up from the value of `PRED` in the f-structure. Essentially, `PRED-FN` links information at i-structure to the semantics of the lexical item referred to at f-structure (see Butt et al. 2016).

2.4 The projection architecture

Correspondences between the various linguistic dimensions are captured in terms of a projection architecture. Various versions and modifications of LFG’s projection architecture have been proposed (see e.g. Kaplan 1987, 1989, Falk 2001, Asudeh 2006, 2012, Bögel 2015, Bresnan et al. 2016, Dalrymple et al. 2019), but most of these nuances are not relevant to our study. In terms of the correspondence between c-structure and f-structure, we uncontroversially assume that this is formally handled via the correspondence function ϕ , whereby c-structure nodes are related to f-structures (Bresnan et al. 2016, Dalrymple et al. 2019). The place of i-structure within the overall projection architecture requires some more detail, as here various proposals have been put forward. In this paper, we follow Butt & King (1997) in assuming a model where i-structure projects from c-structure as defined by the function ι , which can be considered as a parallel to the ϕ function which relates c-structure nodes to f-structures.⁷ This is in line with the overall projection architecture proposed by Asudeh (2006), see Figure 1. The projection architecture sits between FORM (string) and MEANING (model), so that a series of functions maps from linguistic form to linguistic meaning. All linguistic dimensions are present in parallel, with the functional projections indicating the ‘information flow’. In addition to c-, f- and i-structure, Asudeh’s architecture assumes m(orphological)-structure, a(rgument)-structure, p(honological)-structure and s(emantic)-structure. In terms of the dimensions relevant to this paper, c-structure is projected from FORM via the projection function π , and c-structure then maps to f-structure

⁷ For a different proposal, see Dalrymple et al. (2019) who present a model where i-structure instead projects from s-structure.

via ϕ and to i-structure via ι . Moreover, the ϕ projection function is a composition of μ , α and λ ($\phi = \mu \circ \alpha \circ \lambda$), i.e. ϕ can be decomposed into the functions mapping between c- and m-structure (μ), m- and a-structure (α), and a- and f-structure (λ). Both i- and f-structure are mapped to s-structure (via separate functions), which in turn projects to MEANING.

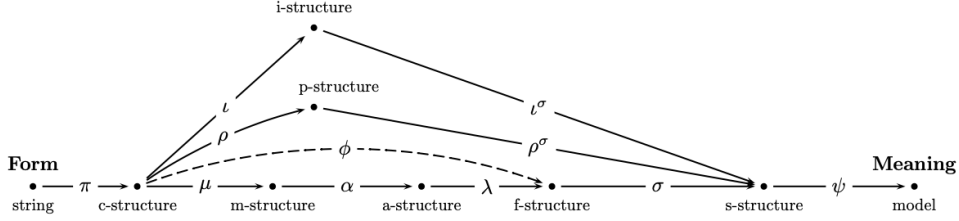
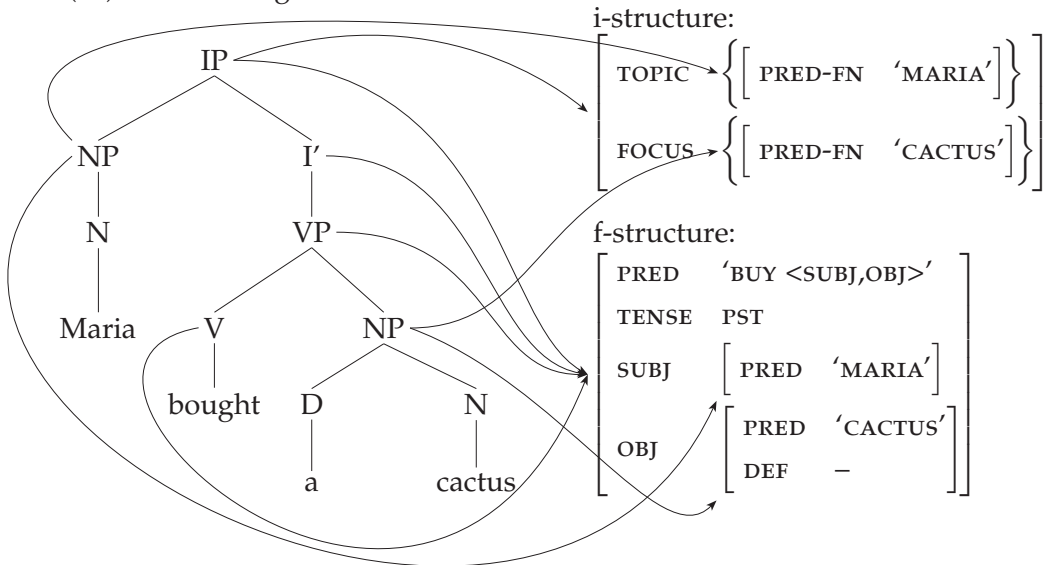


Figure 1 Parallel projection architecture of LFG after [Asudeh \(2006: 369\)](#).

For sake of readability, in this paper we will represent the correspondences handled by the mapping functions ϕ and ι pictorially, via arrows connecting c-structure nodes with f-structures and i-structures respectively. For reasons of clarity, we omit the functional annotations on c-structure nodes (see [Bresnan et al. 2016](#), [Dalrymple et al. 2019](#)). A simple example from English is provided in (10). We show the mapping for all c-structure nodes apart from those internal to the NP, since internal noun phrase structure and properties are not relevant to our paper.

(10) Maria bought a cactus.



3 DATA AND METHODOLOGY

The corpus data discussed in this paper stems from the IcePaHC corpus (Wallenberg et al. 2011). IcePaHC constitutes an ideal testbed for a diachronic investigation of Icelandic by covering the Icelandic diachrony from 1150-2008 CE, with 61 text excerpts from varying genres, which altogether contain around 1 million words. IcePaHC is syntactically annotated according to the Penn treebank format established for historical English (Santorini 2010), which allows for the extraction and quantitative investigation of specific hierarchical structures and linear orders. In this paper, we examine the positional distribution of subject topics in relation to the finite verb in matrix declarative clauses in the Icelandic diachrony. We restrict our investigation to matrix clauses not introduced by a conjunction, as such environments are known to behave differently in early Germanic with respect to clausal word order (e.g. Zimmermann 2014 and Bech 2017 on Old English). Relevant for our investigation, IcePaHC annotates for clause type (i.e. main versus embedded; declarative versus question), (some) grammatical functions (e.g. subjects and objects), parts-of-speech (e.g. pronouns, lexical nouns, proper nouns) and finiteness (via tense and mood). As an example of the annotation, the sentence in (11) is represented in IcePaHC as (12); for further details on IcePaHC, see Rögnvaldsson, Sigurðsson, Ingason & Wallenberg (2012).

- (11) *Síðan fer Hákon jarl til Noregs.*
 then go.PRS Hákon.NOM Earl.NOM to Norway.GEN
 ‘Then Earl Hákon travels to Norway.’ (1260, Jomsvikings.597)

- (12) ((IP-MAT (ADVP-TMP (ADV Síðan-síðan))
 (VBPI fer-fara)
 (NP-SBJ (NPR-N Hákon-hákon)
 (NP-PRN (N-N jarl-jarl)))
 (PP (P til-til)
 (NP (NPR-G Noregs-noregur)))
 (. -.))
 (ID 1260.JOMSVIKINGAR.NAR-SAG,.597))

Also relevant for part of our investigation, IcePaHC marks ‘empty’ subjects, e.g. referential subjects which are covert (*pro*-drop) and ‘null expletives’, i.e. sentences which would be expected to have an overt expletive in the modern language but which lack it in the attested example.

Each sentence from IcePaHC is equipped with a unique sentence ID,

which provides information about the age of the text via a year date, the name of the text, the text genre and the number of the sentence in the text, see (12). When citing an example from IcePaHC, we provide the year date, the text name and the sentence number, allowing for the identification of the example in the corpus. In the examples, we mark the relevant finite verb in bold. For data extraction, we use the CorpusSearch programme (Randall 2000, 2005) in combination with our own Python scripts.⁸ For the most part, we take the IcePaHC annotations at face value, as there is generally too much data to manually check every example which results from a particular search query. All the same, when small numbers of examples of a particular phenomenon present themselves and manual assessment is manageable, we qualitatively assess each example.

IcePaHC does not annotate for information structure. Given the size of the corpus, manual tagging of the data for information-structural properties is not practically viable within the scope of this paper. Moreover, in order to accurately tag for information structure one would ideally have access to prosodic information, which is largely absent with respect to historical texts. This is unfortunately part of a broader problem for studies seeking to investigate the interaction between syntax and information structure in historical corpora.⁹ On balance, we take the view that having quantitative data which represents an approximation of certain information-structural properties at this point outweighs the alternatives of (i) not investigating information structure at all or (ii) having only small amounts of qualitatively assessed data. As such, in this paper, we will use an approximation of subject topics which is searchable via the IcePaHC annotation and allows us to quantitatively leverage the properties which are encoded in the corpus. The approximation of subject topics we assume comprises any referential subject noun phrase which is pronominal or has overt definite marking, since these properties can be extracted from the annotation.¹⁰ We are well aware of the

8 The relevant search queries are available under <https://github.com/christinschaetzle/JHS-v1v2-icelandic>. This also provides information regarding the dataset used for the statistical analysis and the statistical models as described below.

9 Some efforts have been made to accommodate annotations for information structure in historical corpora. For example, the PROIEL treebank (<https://proiel.github.io>), which results from the project ‘Pragmatic Resources of Old Indo-European Languages’ (Haug & Jøhndal 2008), contains information-structural annotations for several ancient Indo-European languages, e.g. Latin and Ancient Greek. Unfortunately, to our knowledge, there exists no such annotated resource for historical Icelandic.

10 This excludes instances of expletive (i.e. non-referential) *það*, which bear their own tag in IcePaHC (ES). Of course, we do not rule out the possibility that some annotations in the corpus are erroneous, but manual work by Booth (2018) found the tagging of expletives in

limitations to this approach: (i) not all pronominal and definite noun phrase subjects will be topics and (ii) definiteness marking was not yet obligatory for semantically definite noun phrases in Old Icelandic, so we will not have captured all semantically definite noun phrases. Still, in Old Icelandic, definite articles are generally anaphoric (Kossuth 1980, 1981), referring to an entity previously given in the discourse. In line with our overall approach to the corpus data, we additionally conduct qualitative checks on the extracted sentences and are confident that most of the ‘approximate subject topics’ fit the bill in being more likely to be topics than e.g. foci. Keeping all this in mind, we are convinced that the data provided here gives valuable clues about the positional distribution of subject topics in Old Icelandic and see this as a promising starting point for further investigations.

As mentioned, IcePaHC contains texts from various genres: narrative texts, religious texts, biographies, legal texts and scientific texts. However, these are not distributed evenly across the temporal dimension of the corpus. That is, certain genres are over-represented in the corpus, while others are under-represented in individual periods. Most of the texts are narrative, with a preponderance of the traditional Icelandic sagas in the earlier stages and modern fiction in the later stages of the corpus. From the 16th to the 18th century on the other hand, religious texts and biographies are dominant. Previous studies which investigate syntactic change in Icelandic via IcePaHC (Butt et al. 2014, Booth 2018, Kinn, Rusten & Walkden 2016, Schätzle 2018, Schätzle & Booth 2019) have found that syntactic patterns in specifically these two centuries deviate from general trends and overall developments. We will refer to this as the ‘genre effect’ inherent to IcePaHC throughout this paper.

For statistical testing of the effects of time and genre on different word orders involving V1, V2 and subject topics, we calculate generalised linear mixed-effect models based on the logit link function in R (R Core Team 2020) via the packages *lme4* (Bates, Mächler, Bolker & Walker 2015) and *lmerTest* (Kuznetsova, Brockhoff & Christensen 2017). For each investigated word order, we compute a separate model with the word order in question as response variable, specifying ‘year’ (1150-2008) and ‘genre’ (narrative, religious, biography, law, scientific) as fixed effects and ‘text’ as a random effect.¹¹ This is the maximal random effects structure justified by our study design. Model comparisons using the *anova()*-function showed that models which include text as a random effect are significantly better at capturing

IcePaHC to be relatively reliable.

11 The levels of the factor genre were re-ordered so that narrative texts become the base level for reference in the regression models, since these are most representative of the corpus.

the data than models where text as a random effect was excluded ($p < 0.001$ for each word order condition).¹² In addition, we plot the occurrence frequencies of each word order in each text across time via the *ggplot2* package in R to illustrate and track the diachronic developments in more detail (see Figures 2-4 in Section 6.1), using local regression ('loess') for smoothing the fitted curves of the individual distributions. The occurrence frequencies of each investigated word order represent their percentage share of the sum of the investigated clauses, i.e. all matrix clauses with a finite verb (V1/V2) and a subject topic.

4 V2, V1 AND THE FLEXIBILITY OF SUBJECT TOPICS IN OLD ICELANDIC

In recent decades, crosslinguistic research has shown that languages standardly labelled as 'V2 languages' are by no means all alike (e.g. [Vikner 1995](#), [Wolfe 2019](#)). Rather, there are different shades of V2, and all languages classified as V2 languages allow for varying levels of deviation, i.e. V1, V3 and/or V-later orders ([Holmberg 2015](#)). As such, closer examination of individual V2 varieties is worthwhile in terms of furthering both our understanding of a particular variety and also the nature of V2 itself. While Old Icelandic has standardly been recognised as a V2 variety for some time ([Faarlund 1994](#), [Eythórsson 1995](#), [Rögnvaldsson 1995](#), [Faarlund 2004](#)), a broader examination of the precise nature of the phenomenon is still lacking.

In this section, we examine the status of V2 in Old Icelandic, taking into account what can occupy the clause-initial prefinite position (henceforth 'prefield'), as well as different types of V1 declarative which, as we show, are robustly attested at this language stage. We also examine the relationship between the finite verb and topicality in Old Icelandic, focusing specifically on subject topics, as opposed to other non-subject topics, since by our approximation we might get more than one topic candidate per clause. Thus we focus on subject topics which are more likely to be 'primary topics' ([Dalrymple & Nikolaeva 2011](#)), since topicality and subjecthood are generally assumed to be closely linked ([Givón 1990](#)). Additionally, subject topics can be approximated via the corpus annotation, as outlined in Section 3. While this approximation appeared to be largely accurate for subject topics on manual spot-checks, the comparable approximation for object topics yielded many examples where the object could not be considered

¹² We did not improve the models by adding a random slope because our study design is between-subjects: each matrix declarative clause can only have one of the different word order conditions (and can only be attributed to one year date, one genre, and one text).

a primary topic. We leave the behaviour of non-subject topics for future research, in the hope that more corpora with information-structural annotations become available. The investigation of Old Icelandic presented in this section sets the scene for later changes in the history of the language, which we show in Section 6.

4.1 V2, the prefield and Stylistic Fronting

As shown in the corpus study by Booth (2018), V2 is robustly attested in Old Icelandic matrix clauses, exhibited in 82% of cases. A classic illustration of V2 is provided in (13).

(13) (a) SUBJ-V

Hann átti hesta góða.
he.NOM own.PST horses.ACC good.ACC.PL
'He had good horses.' (1310, Grettir.1767)

(b) OBJ-V-SUBJ

Hana átti Gamli Þórhallsson...
she.ACC own.PST Gamli.NOM Þórhallsson.NOM
'To her was married Gamli Þórhallsson...' (1310, Grettir.15)

(c) ADJ-V-SUBJ

Þar átti hann heima...
there own.PST he.NOM home.ACC
'He lived there...' (1250, Sturlunga.389.30)

Although the prefield in V2 clauses is most frequently occupied by a subject (61.7%), prefield objects and adjuncts are robustly attested; see Table 1, taken from Booth (2018: 109), which covers V2 matrix declaratives in the IcePaHC data from 1150-1350, with the exception of those involving 'Stylistic Fronting' (Maling 1990), a relatively small number ($n=401$) which we discuss separately below.

A relevant discussion here concerns the status of V2 in Old Icelandic, given the dominance of subject-initial clauses which could perhaps be taken to be indicative of an SVO system. However, the corpus data indicates that Old Icelandic is not extraordinary in a Germanic V2 context, since high levels of subject-initial word order have been observed for a wide range

13 All percentages – including those of the subtypes in brackets – are calculated as percentages of the total 6,985 sentences.

Prefield function	<i>n</i>	% ¹³
Any subject	4,308	61.7%
– Pronominal subject	1,432	(20.5%)
– Lexical subject	2,876	(41.2%)
Any object	253	3.6%
– Pronominal direct object	56	(0.8%)
– Lexical direct object	181	(2.6%)
– Pronominal indirect object	7	(0.1%)
– Lexical indirect object	9	(0.1%)
Any adjunct	2,424	34.7%
Total	6,985	100.0%

Table 1 Functions which occupy the prefield in IcePaHC matrix declaratives, 1150-1350 (Booth 2018: 109).

of modern Germanic languages generally taken to have stable V2 systems. As cited in Lightfoot (1997), in modern Dutch, German, Norwegian and Swedish roughly 70% of clauses are subject-initial. Similarly, Yang (2000) finds that 66.8% of sentences in modern Dutch are subject-initial. By contrast, in Norwegian child-directed speech, non-subject-initial V2 occurs in just 13.6% of total clauses (Westergaard 2009), despite Norwegian being generally considered a robust V2 language. With subject-initial V2 attested at a frequency of 61.7%, and non-subject-initial V2 at 38.3% (see Table 1), Old Icelandic thus lies within the previously established frequency range for subject-initial clauses in Germanic V2 languages.

Yet, even for a V2 language, the range of constituent types which can occupy the prefield in V2 clauses in Old Icelandic is relatively broad. Besides those types shown already, the prefield can also host negation, e.g. (14a), nonfinite verb forms, e.g. (14b), verbal particles, e.g. (14c), as well as nominal and adjectival predicates, e.g. (14d) and (14e) respectively.

- (14) (a) *Eigi myndir þú svo renna frá þínum*
 NEG would.PST.SBJV you.NOM so run.INF from your.DAT
manni...
 man.DAT
 ‘You would not run so from your man...’
 (1260, Jomsvikingar.1481)

- (b) *Mælt hefi eg það.*
 say.PST.PTCP have.PRS I.NOM DEM.ACC
 ‘I have said that.’ (1250, Sturlunga.398.348)
- (c) *Upp mun nú gefin sökin við þig, Halli, segir hann.*
 PTCL will.PRS now give.PASS.PTCP charge.NOM.DEF with
 you.ACC Halli.NOM say.PRS he.NOM
 ‘Your charge will now be remitted, Halli, he says.’
 (1275, Morkin.1158)
- (d) *Grímur hét einn bóndi, mikils háttar og vel fjáreigandi.*
 Grímur.NOM be-called.PST one.NOM farmer.NOM, great.GEN
 importance.GEN and well wealthy.NOM
 ‘There was a farmer named Grímur, of great importance and very wealthy.’ (1210, Jarlein.1)
- (e) *[Svo háleit] er þessa manns hamingja orðin...*
 so sublime.NOM be.PRES this.GEN man.GEN luck.NOM
 become.PASS.PTCP...
 ‘This man’s luck has become so sublime...’
 (1300, Alexander.255)

The examples in (14) are reminiscent of ‘Stylistic Fronting’ (SF) structures in modern Icelandic, about which much has been written (e.g. Maling 1990, Holmberg 2000, Hrafnbjargarson 2004, Egerland 2013). Definitions of SF vary, but the broad definition we adopt here is that SF refers to fronting of elements to the prefield which cannot easily be fronted in a V2 language (i.e. negation, nonfinite verbs, verbal particles and nominal/adjectival predicates).¹⁴ Some classic examples of the phenomenon in matrix clauses from modern Icelandic are shown in (15) (Rögnvaldsson & Thráinsson 1990: 27).¹⁵

14 As such, Stylistic Fronting can involve a non-phrasal constituent, e.g. part of the verbal complex, occupying the prefield. The question as to whether structures with a non-phrasal constituent in the prefield qualify as V2 is up for debate. Since SF in early Icelandic is still little understood, and clearly differs to SF in modern Icelandic as we show in this paper, we assume that structures like those in (14) do indeed qualify as V2, but acknowledge that others might take a different view (see e.g. discussion in Joutiteau 2010).

15 Most of the standard accounts of SF concentrate on the phenomenon in embedded clauses, but in this paper we focus on matrix clauses, where SF is exhibited as well.

- (15) (a) *Keypt hafa þessa bók margir*
 buy.PST.PTCP have.PRS DEM.ACC book.ACC many.NOM
stúdentar.
 students.NOM
 ‘Many students have bought this book.’
- (b) *Fram hefur komið að...*
 forth have.PRS come.PST.PTCP COMP
 ‘It has come out that...’

However, the Old Icelandic examples in (14) contrast with the typical modern SF data in (15) in an important way. In modern Icelandic, SF is standardly claimed to be restricted to clauses with a ‘subject gap’, as first observed by Maling (1990). That is, SF is permitted in clauses with a late indefinite subject, i.e. presentational constructions, see (15a), as well as in clauses which are genuinely subjectless, i.e. impersonals, see (15b). By contrast, SF is ruled out in clauses with an immediately postfinite subject which is definite, as shown by the contrasts in (16) and (17).

- (16) (a) *Þegar komnir verða hvolpar...*
 when come.PST.PTCP become.PRS puppies.NOM
 ‘When puppies will have arrived...’
- (b) **Þegar komnir verða hvolparnir...*
 when come.PST.PTCP become.PRS puppies.NOM.DEF
 ‘When the puppies will have arrived...’
 (Egerland 2013: 70)
- (17) (a) *Þegar komið var þangað...*
 when come.PASS.PTCP be.PST thither
 ‘When there was arrived there...’
- (b) **Þegar komin var rútan þangað...*
 when come.PASS.PTCP be.PST bus.NOM.DEF thither
 ‘When the bus had arrived there...’
 (Maling 1990: 78)

As such, the Old Icelandic data in (14) cannot be accounted for on the same terms as SF in modern Icelandic, where the stylistically fronted element is generally taken to be a structural filler for the prefield when there is no appropriate subject to go there (Maling 1990, Holmberg 2000). Rather, as the data in (14) shows, in Old Icelandic SF can freely occur in clauses with a definite subject. Moreover, when one isolates all examples of SF-like

structures in the Old Icelandic data, and compares the distribution of these examples by their subject properties, the majority are of the type in (14) with a postfinite definite subject, i.e. the type ruled out in modern Icelandic, see Table 2. As we show in Section 6, the changing interaction between word order and information structure we propose in our diachronic account for Icelandic can account for the apparent generality of SF in Old Icelandic, and the later emergence of the ‘subject gap’ condition as a new restriction on the phenomenon. Furthermore, the SF data in Old Icelandic can also reveal insights regarding the status of V2 at this stage, as we discuss in Section 4.4 in relation to V1.

definite SUBJ		indefinite SUBJ (presentationals)		<i>pro</i> -SUBJ		genuinely subjectless (impersonals)	
<i>n</i>	% of total	<i>n</i>	% of total	<i>n</i>	% of total	<i>n</i>	% of total
244	61%	120	30%	6	1%	31	8%

Table 2 Stylistic Fronting in matrix declaratives by subject type in IcePaHC, 1150-1350.

4.2 Types of V1

As mentioned, the only exception to V2 in terms of verb position in Old Icelandic matrix declaratives is V1. Moreover, corpus findings regarding the frequency of V1 matrix declaratives indicate that they are robustly attested: in the corpus study by Booth (2018), 18% of all matrix declaratives were V1; see also previous studies which show V1 declaratives to be a robust phenomenon at this early stage of the language (Hallberg 1965, Rögnvaldsson 2005). As a striking feature, especially within the broader context of Germanic, they have attracted some attention to date (Butt et al. 2014; Faarlund 2004; Platzack 1985; Sigurðsson 1990; Walkden 2014), but much of this work is largely descriptive and either focuses on one specific type of V1 declarative, or ignores altogether the fact that V1 declaratives in Icelandic are not a homogeneous category. In fact, one can categorise such structures into four broad types, see (18) (see also Booth 2018, Sigurðsson 2018).

(18) (a) *Pro-drop V1*

Snýr síðan inn í stofuna.
 turn.PRS then in in room.ACC.DEF
 ‘He then turns into the room’ (1275, Morkin.186)

(b) *Impersonal V1 (subjectless)*

Tekur nú að hausta.
 begin.PRS now to become-autumn.INF
 ‘It now starts to become autumn.’ (1310, Grettir.48)

(c) *Presentational V1 (postfinite subject in focus)*

Eru nú hér með oss margir tígir
 be.PRS now here with we.ACC many.NOM noble.NOM
menn og góðir drengir...
 men.NOM and good.NOM fellows.NOM
 ‘There are now here with us many noble men and good fellows...’ (1275, Morkin.401)

(d) *‘Narrative inversion’ V1 (postfinite subject topic)*

Sat hún hjá fótum hans
 sit.PST she.NOM by feet.DAT he.GEN
 ‘She sat by his feet.’ (1150, Homiliubok.1875)

Corpus findings reported in Booth (2018: 107) indicate that narrative inversion V1 is overwhelmingly the most common of these types, see Table 3.

<i>pro-drop</i>		impersonal		presentational		narrative inversion	
<i>n</i>	% of total	<i>n</i>	% of total	<i>n</i>	% of total	<i>n</i>	% of total
56	6%	82	9%	13	1%	813	84%

Table 3 V1 declaratives by type across matrix declaratives in IcePaHC, 1150-1350 (Booth 2018: 107).

V1 constructions involving *pro-drop* of a subject topic (‘topic-drop’), cf. (18a), have been widely discussed in the context of Germanic V2, both historically (e.g. Axel 2007 on Old High German, Sigurðsson 1993 and Kinn et al. 2016 on early Icelandic) and synchronically (e.g. Franco 2008). V1 in impersonal and presentational constructions, i.e.thetic sentences, has been observed in various early Germanic varieties as well (e.g. Axel 2007 and

Hinterhölzl & Petrova 2010 on Old High German; Breivik 1990 on early English), and also in certain early Romance varieties typically characterised as V2 systems (Wolfe 2015). These three types of V1 all lack an overt subject topic, which distinguishes them from the narrative inversion V1 construction. We will return to impersonal and presentational V1 in Section 4.4 in connection with Stylistic Fronting. In the next section, we focus on narrative inversion V1.

4.3 *Narrative inversion V1 and anaphoric topics*

The narrative inversion V1 construction has been discussed both for West Germanic and North Germanic and has been observed to be characteristic of lively storytelling (e.g. Hopper 1987, Eriksson 1997, Lindström 2001, Lindström & Karlsson 2005, Hinterhölzl & Petrova 2010). Indeed in Old Icelandic the construction is common – but not exclusive – to narrative texts, in particular the sagas (Platzack 1985). In the Old Icelandic sagas, narrative inversion V1 is an anaphoric order, signalling an ongoing narrative with no change in participants (Kossuth 1980). The construction cannot initiate a new discourse (Sigurðsson 2018), and instead typically appears in the reporting of sequenced temporal events (Platzack 1985, Hopper 1987). Similar observations have been made of narrative inversion in modern Swedish, where the construction has been claimed to signal a temporal or causal relationship to the preceding clause, in the absence of explicit temporal/causal markers (Eriksson 1997, Lindström & Karlsson 2005).

Building on these insights, we propose an account of narrative inversion in terms of narrative structure, discourse participants and anaphora (cf. Kossuth 1980). In the Old Icelandic IcePaHC data, narrative inversion occurs discourse-medially in temporally sequenced clauses, see the sentences with V1 in the continuous narrative in (19). This is in line with the observations made by Platzack (1985) and Hopper (1987). While narrative inversion V1 cannot initiate a new discourse (see Sigurðsson 2018), V2 clauses can start a new ‘paragraph’, i.e. a new narrative section (Kossuth 1980). Word order plays a relevant role in defining the internal structure of narrative sections (Kossuth 1980): V2 order establishes a topic in the new narrative section, i.e. introduces a ‘new’ (non-anaphoric) topic. V1, on the other hand, signals an anaphoric topic, i.e. a topic with a direct antecedent in the immediately preceding context in the same narrative section. In addition, verbal event structure/lexical aspect functions as a scene-setting device, e.g. stative verbs interrupt the narrative flow and punctuate a new scene in the narrative section (cf. Kossuth 1980).

- (19) (a) *Gissur kom í Reykjaholt um nóttina*
 Gissur.NOM come.PST to Reykjaholt in night.ACC.DEF
eftir Míritíusmessu.
 after Míritíusmass.ACC
 'Gissur came to Reykjaholt in the night after Míritíusmass.'
- (b) *Brutu þeir upp skemmuna er*
 break.PST they.NOM up storehouse.ACC.DEF REL
Snorri svaf í.
 Snorri.NOM sleep.PST in
 'They (Gissur and his men) broke open the storehouse where Snorri was sleeping.'
- (c) *En hann hljóp upp og úr skemmunni*
 but he.NOM leap.PST up and out storehouse.DAT.DEF
og í hin litlu húsin er voru við
 and in DEM.ACC little.ACC houses.ACC.DEF REL be.PST by
skemmuna.
 storehouse.ACC.DEF
 'But he leapt up and out of the storehouse and into those little houses which were next to the storehouse.'
- (d) *Fann hann þar Arnbjörn prest og*
 find.PST he.NOM there Arnbjörn.ACC priest.ACC and
talaði við hann.
 speak.PST with he.ACC
 'He found there Arnbjörn the priest and spoke with him.'
- (e) *Réðu þeir það að Snorri gekk í*
 plan.PST they.NOM DEM.ACC COMP Snorri.NOM go.PST in
kjallarann er var undir loftinu þar í
 cellar.ACC.DEF REL be.PST under loft.DAT.DEF there in
húsunum.
 houses.DAT.DEF
 'They (Arnbjörn and Snorri) planned that Snorri would go into the cellar which was under the loft there in the houses.'
- (f) *Þeir Gissur fóru að leita Snorra*
 they.NOM Gissur.NOM begin.PST to seek.INF Snorri.GEN
um húsin.
 around house.ACC.DEF
 'Gissur and his men began to search for Snorri around the house.'
 (1250, Sturlunga.439.1765 – 1250, Sturlunga.439.1772)

The V2 clause in (19a) marks the beginning of a new narrative section in Sturlunga saga. In (19a), the predicate *koma* ‘come, arrive’ entails a change of place, i.e. a telic event, setting the scene for the new narrative section. ‘Gissur’, representing ‘Gissur and his men’, is newly introduced as a topic to this section via the V2 structure. We have already heard about ‘Gissur’ in the preceding discourse, it is thus given information, i.e. a topic, but the new narrative section requires a topic to be (re-)established. In the next clause, (19b), the topic is anaphoric with *þeir* ‘they’ referring to ‘Gissur and his men’, and the result is a V1 structure. Moreover, we have a scene change from (19a) to (19b), since *koma* ‘come, arrive’ describes a telic event, including a result state and the event described by *brjóta* ‘break’ is part of a different scene. In addition, the scene changes further as indicated by the aspectual signature of the result verb *brjóta* ‘break’ in the preceding clause which describes a change of state, with the result state further described by *upp* ‘up, open’ (cf. Rappaport Hovav & Levin 2001 on resultatives), leading on to a new scene. However, these scene changes (and further changes within this narrative section) do not interfere with the narrative structure in terms of word order – instead, word order is driven by topic anaphoricity. In (19c), *hann* ‘he’ refers to ‘Snorri’, previously mentioned in the embedded clause in (19b), and the V2 structure signals a topic switch, i.e. a different topic is now at the centre of the narrative. Despite having introduced ‘Snorri’ via an embedded V2 clause in (19b), V2 is maintained in (19c) to properly establish ‘Snorri’ as the topic in the matrix clause. In (19d), *hann* ‘he’ is an established anaphoric topic, and the clause is therefore V1. In (19e), the V1 structure is maintained, since *þeir* ‘they’ still refers to ‘Snorri’, making additional reference to ‘Arnbjörn the priest’. Sentence (19f) is part of the next narrative section and therefore follows a V2 pattern, with ‘Gissur and his men’ reintroduced as the topic of the new section. The new narrative section also involves a scene change, as indicated by the aspectual verb *fara* ‘begin’.

We find further support for this account of narrative inversion from embedded clauses. According to Sigurðsson (2018), narrative inversion is a robust root phenomenon in Old and modern Icelandic, and does not occur in embedded clauses. Indeed, on first sight the Old Icelandic corpus data appears to support this claim, with only 13 examples of V-SUBTOPIC orders in simple embedded clauses (i.e. non-coordinated clauses or first conjuncts), most involving misannotations, or being V1 conditionals, e.g. (20).

- (20) [*Gerir þú eigi svo*] *þá fyrirbýð ég þér*
do.PRS you.NOM NEG so then order.PRS I.NOM you.DAT
að...
COMP
‘If you do not do so, then I order you to...’ (1325, Arni.555)

Since V1 conditionals are not generally considered to be matrix declaratives and, like yes/no-questions and imperative clauses, are widely attested across Germanic (Auer & Lindström 2011, Leuschner & Van den Nest 2015, Breitbarth 2019), we leave them aside and focus on the various types of matrix declarative V1 outlined in (18). However, when we look at embedded clauses which are second conjuncts, we find that narrative inversion V1 is robustly attested ($n=49$ /total 182 second conjunct embedded clauses with an overt subject topic), e.g. (21).

- (21) (a) "*Eigi veit eg,*" *segir Urðarköttur,* "*því að*
NEG know.PRS I.NOM say.PRS Urðarköttur.NOM because
eg er ungur og [kann eg á fá
I.NOM be.PRS young and know.PRS I.NOM on few
skyn]."
understanding
‘“I do not know”, says Urðarköttur, “because I am young and I do not have much knowledge”’ (1350, Finnbogi.631.351)
- (b) *Þú skalt... og mæla síðan þessum*
you.NOM shall.PRS and say.INF then these.DAT
orðum við konunginn, að eg leiði hér
words.DAT with king.ACC.DEF COMP I.NOM lead.PRS here
eftir mér einn svein, [og kalla eg þar
after I.DAT one.ACC boy.ACC and call.PRS I.NOM there
öngan mann...]
no.ACC man.ACC
‘You should... and then say these words with the king that I lead here after me a certain boy and I call there no man...’
(1260, Jomsvikingar.1091)

Narrative inversion V1 in embedded second conjuncts alternates with a much more frequent structure where the subject topic in the second conjunct is elided (‘conjunction reduction’), e.g. (22) ($n=559$).

- (22) (a) *Síðan bað hún að hann tæki*
 then ask.PST she.NOM COMP he.NOM take.PRS.SBJV
skinnfeld þeirra [og bæri innar á
 skin-cloak.ACC they.GEN and carry.PRS.SBJV further-in to
stofu]
 room.ACC
 ‘Then she asked him to take their skin-cloak and to carry it
 further into the room’ (1350, Finnbogi.626.86)
- (b) *Sumir svöruðu, að þeir mundu*
 some.NOM answer.PST COMP they.NOM would.PST.SBJV
drukkið hafa vín ungt [og
 drink.PST.PTCP have.INF wine.ACC young.ACC and
mundu af því svo máldjarfir].
 would.PST.SBJV of it so free-spoken
 ‘Some answered that they would have drunk young wine and
 would have thereby become so free with their speech.’
 (1150, Homiliubok.464)

These two patterns, narrative inversion V1 and conjunction reduction, both occur in second conjuncts with an anaphoric topic, i.e. where there is an antecedent in the first embedded conjunct. This contrasts with a further set of embedded second conjuncts ($n=68$), which exhibit V2 with a subject topic in the initial position, e.g. (23).

- (23) (a) *...þá má yður þó vera að mér eigi*
 then may.PRS you.NOM though be.INF to I.DAT NEG
minna fullting, því að hann er vanur mjög
 less assistance because he.NOM is.PRS lacking very
sællífi, [en ég emk vanur bardögum og vesöld
 luxury but I.NOM am.PRS lacking fights and misery
mörgu sinni].
 many times
 ‘...then you may be to me no less assistance because he lacks
 luxury greatly but I lack fights and misery many times.’
 (1275, Morkin.831)
- (b) *Úr Egiptalands ánauð leysumst vér að*
 out-of Egypt.GEN oppression free.PRS.RECP we.NOM to
sökktum óvinum órum í ið Rauða haf.. svo að
 sinking enemies our in DEF red sea so COMP
þeir sökkvi í helvítis djúp, [en vér
 they sink.PRS.SBJV in hell.GEN deep but we

hjálpmist fyr iðrun óra.]
 save.PRS.PASS for repentance our

‘We free ourselves from Egypt’s oppression to the sinking of our enemies in the Red Sea... so that they may sink in the depths of hell but (that) we are saved for our repentance.’
 (1150, Homiliubok.547)

The examples in (23) indicate that subject-initial V2 in embedded second conjuncts correlates with topic-shift contexts, i.e. those where there is no anaphoric relation between topics in the first and second embedded conjunct. Though a full investigation of word order and topicality in embedded clauses is beyond the scope of this paper, we tentatively suggest on the basis of the data examined here that narrative inversion V1 serves a similar information-structural function in embedded clauses as in matrix clauses, namely marking an anaphoric relation between topics in two (embedded) clauses, cf. (21). In turn, this accounts for our finding that narrative inversion is exclusively restricted to embedded second conjuncts and absent from embedded first conjuncts, or simple embedded clauses which do not belong to a coordination structure; as a marker of topic anaphoricity, narrative inversion V1 is only motivated in contexts where there is a directly preceding embedded clause with its own topic as a potential antecedent.

In sum, in this section we have expanded upon previous discourse-related accounts of narrative inversion V1, showing that this word order pattern is connected with topic anaphoricity. We have also shown novel evidence which goes against the standard assumption that narrative inversion does not occur in embedded contexts; whilst ruled out in simple embedded clauses, it can occur in embedded second conjuncts and, as we have argued, this is related to narrative inversion’s connection with topic anaphoricity.

4.4 V1 and Stylistic Fronting

We now turn to impersonal and presentational V1 constructions for which, unlike narrative inversion and *pro*-drop V1, topicality is not relevant, since they constitute topicless constructions (Booth 2018, 2019). These two specific types of V1 in fact alternate with a particular construction type outlined already in Section 4.1, namely V2 structures involving Stylistic Fronting (SF). This is illustrated by the contrasts in (24) and (25), where in each pair the first example exhibits V1 with a potential SF candidate postfinitely (a sort of ‘failed SF’), and the second example exhibits V2 with an SF element in the prefield; in (24) impersonal V1 alternates with SF and in (25) presentational V1 alternates with SF.

- (24) (a) *Var síðan bundið um höndina.*
 be.PST then bound.PASS.PTCP around hand.ACC.DEF
 ‘There was then binding of the hand’ (1210, Jarstein.307)
- (b) *Vakað var í Reykjaholti.*
 wake.PASS.PTCP be.PST in Reykjaholt
 ‘People were awake in Reykjaholt.’ (1250, Sturlunga.1850)
- (25) (a) ...og *mun vera fleira manna en ég hefi séð.*
 and will.PRS be.INF more men.GEN than I.NOM have.PRS
 see.PST.PTCP
 ‘...and there will be more men than I have seen’
 (1350, Finnbogi.657.1867)¹⁶
- (b) *Verða mun eitthvert sögulegt ef ég kem ekki aftur.*
 become.INF will.PRS something.NOM worthwhile.NOM if
 I.NOM come.PRS NEG back
 ‘There will come something worthwhile if I don’t return’
 (1310, Grettir.1937)

Importantly, examples like (24) and (25) shed light on the nature of V1, V2 and SF in Old Icelandic. They show that SF is not simply a structural V2-related phenomenon in Old Icelandic as has been claimed for the modern language (e.g. [Holmberg 2000](#)), but is considerably freer in its application. This in turn informs us about the status of V1 and V2 at this stage of the language: V1 declaratives cannot be considered a last resort in cases where there is no prefield candidate to satisfy V2, because V1 occurs even in contexts where a potential prefield candidate (e.g. an SF candidate) is present postfinitely. This novel evidence with respect to impersonal and presentational V1 and SF adds further weight to previous claims ([Hallberg 1965](#), [Rögnvaldsson 2005](#)) that V1 declaratives are a characteristic feature at this early stage of Icelandic.

4.5 A closer look at subject topics

Next, we take a closer look at the positional distribution of subject topics more broadly, as subject topics are not confined to a particular position in

¹⁶ This example is a matrix clause introduced by a conjunction and therefore comes from beyond our strict dataset. However, given the rarity of V1 presentationals in the corpus data, there were no relevant examples of this combination of features in a matrix declarative without an introductory conjunction.

SUBJTOPIC-V (V2)		V-SUBJTOPIC (V1)	
<i>n</i>	%	<i>n</i>	%
1794	66%	905	34%

Table 4 Relative order of finite verb and subject topic in Old Icelandic (1150-1350).

Old Icelandic. For instance, the narrative inversion V1 construction with an immediately postfinite subject topic alternates with V2 clauses with a subject topic in the prefield. We conduct a corpus investigation of the relative frequencies of (i) V2 with an initial subject topic (SUBJTOPIC-V) and (ii) narrative inversion V1 (V-SUBJTOPIC). The findings in Table 4 show the clear flexibility of the relative ordering of the finite verb and subject topic in Old Icelandic, albeit with a preference for the V2 option. Thus, by this particular measure, the picture is again that V1 is a robust feature, since narrative inversion occurs at a frequency of 34% compared to the V2 alternative.

As an interim summary, we have shown that: (i) the finite verb is strictly restricted to the initial or second position in Old Icelandic matrix declaratives, (ii) that the prefield in V2 clauses can be occupied by a wide range of categories, (iii) that various types of V1 matrix declarative are robustly attested and (iv) that the relative ordering of finite verb and subject topic is syntactically relatively free and conditioned by information structure. In the next section, we provide an analysis within LFG which can account for these facts.

5 ANALYSIS OF OLD ICELANDIC CLAUSE STRUCTURE

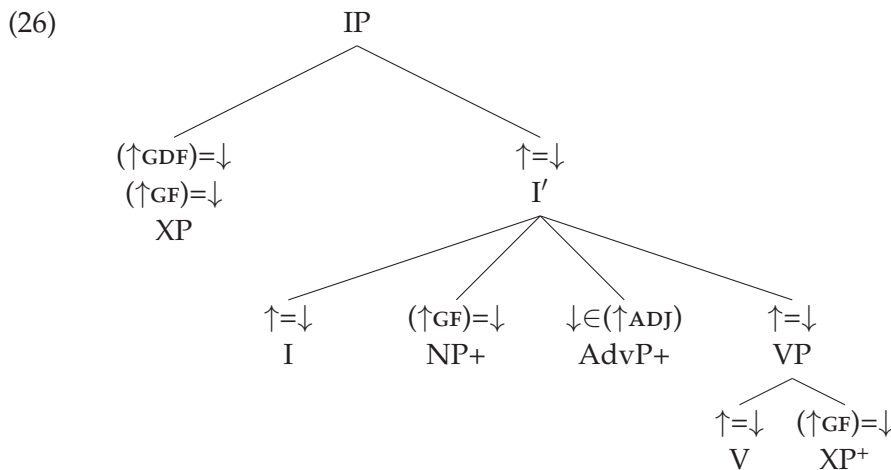
We now turn to our formal account for the V1 and V2 patterns outlined in Section 4. Many accounts which deal with narrative inversion (V-SUBJTOPIC) incorporate the construction into a V2 account where the finite verb occupies C in non-subject-initial V2 clauses (e.g. Sigurðsson 1990). By such an account, the fronted non-subject occupies SpecCP, and the subject SpecIP, in line with the assumption that the latter is a unique subject position. By extension, narrative inversion can be accounted for in terms of a V2-based structure where the finite verb occupies C, the subject is in SpecIP, and SpecCP hosts some sort of null operator (e.g. Sigurðsson 1990 and Franco

2008 for Icelandic; Mörnjö 2002 for Swedish). In such approaches, subject-initial clauses are often analysed in terms of a structure rooted in IP, with the subject in SpecIP (e.g. Sigurðsson 1990; cf. Travis 1984, 1991, Zwart 1991, 1993). Thus, such accounts handle the flexibility in the relative ordering between finite verb and subject topic (SUBJTOPIC-V vs. V-SUBJTOPIC) by way of a fixed subject topic position and different functional heads, typically I and C, which can host the finite verb. As mentioned, this is motivated by the assumption that SpecIP is a unique subject position, within approaches to grammar where subjects are structurally defined.

In LFG subjects are represented at f-structure and need not necessarily be associated with a fixed structural position at c-structure (Dalrymple 2001), as outlined in Section 2. Likewise, information-structural properties concerning e.g. topicality are also captured at a separate dimension, i-structure, and need not be associated with a single c-structure position. This more abstract view of subjecthood and topicality, and the flexibility with which they can be associated with c-structure, allows us to approach the observed word order alternation patterns on a strictly empirical basis, without being tied to a particular c-structure configuration. Thus, in principle an analysis where the subject topic is assumed to occupy a fixed structural position – as in the more standard generative analysis described above – is equally acceptable as an alternative analysis where rather the finite verb is fixed, with two available positions for a subject topic.

In fact, the structure without an additional CP-layer on top of the IP is in our view a better way to capture the key intuition borne out by the Old Icelandic data, namely that the position of the finite verb is restricted. This high level of structural restriction is in contrast to the rest of the clause, i.e. the postfinite domain, where word order is in syntactic terms highly free and primarily driven by information-structural concerns (Booth & Schätzle 2019, Booth 2020a). In this respect, Old Icelandic exhibits a clausal shape which is reminiscent of other diverse languages which exhibit some second position phenomenon but otherwise a good deal of word order freedom in the post-second domain and which have been analysed within LFG, e.g. Tagalog (Kroeger 1993), Warlpiri (Austin & Bresnan 1996), Wambaya (Nordlinger 1998) and Swedish (Sells 2001, Börjars, Engdahl & Andréasson 2003). All of these accounts capture a similar set of empirical observations via an IP structure where the second position phenomenon is captured under I, and some level of exocentricity within I' allowing for post-second freedom. For example, Sells (2001, 2005) provides the tree in (26) as the overall structural possibilities for matrix clauses in modern Icelandic, which assumes a flat structure under I', within which any grammatical function, including the

subject, can occur (see also [Börjars et al. 2003](#) on modern Swedish).¹⁷

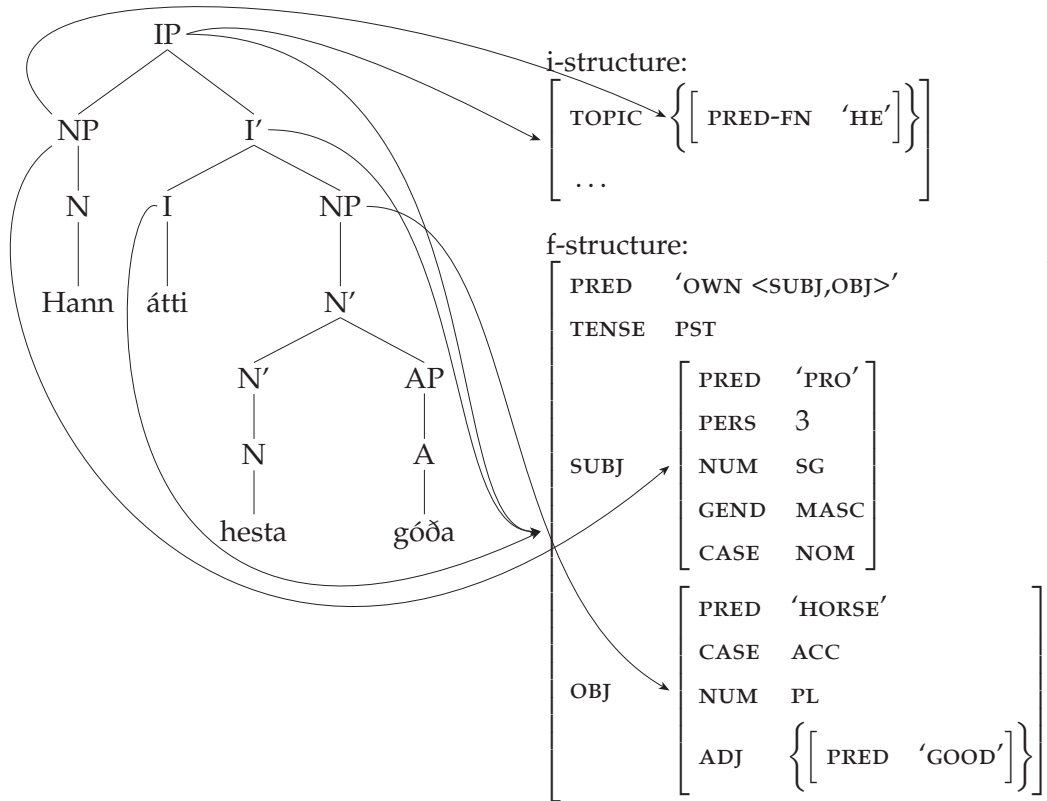


Following previous work within LFG, we thus opt for an analysis which accounts for the word order flexibility concerning the finite verb and subject topic in Old Icelandic in terms of two available subject topic positions which pivot around a fixed position for finiteness. Besides the theoretical precedent, there are also additional justifications for this decision, as we detail below. We assume that the finite verb in both V1 and V2 matrix clauses occupies I (a fixed position for finiteness); SpecIP is thus consistently the prefield position which can host a subject topic in a V2 clause, see (27), as well as various other constituent types, see e.g. (28).¹⁸ When giving i-structures for Old Icelandic sentences, we provide only a partial structure with the feature TOPIC, since this is the relevant information for our paper. A full i-structure is not possible at this stage, since little is known about the behaviour of e.g. focal and backgrounded constituents in Old Icelandic, and crucially the prosodic clues necessary to uncover such behaviour are not available from the written attestation.

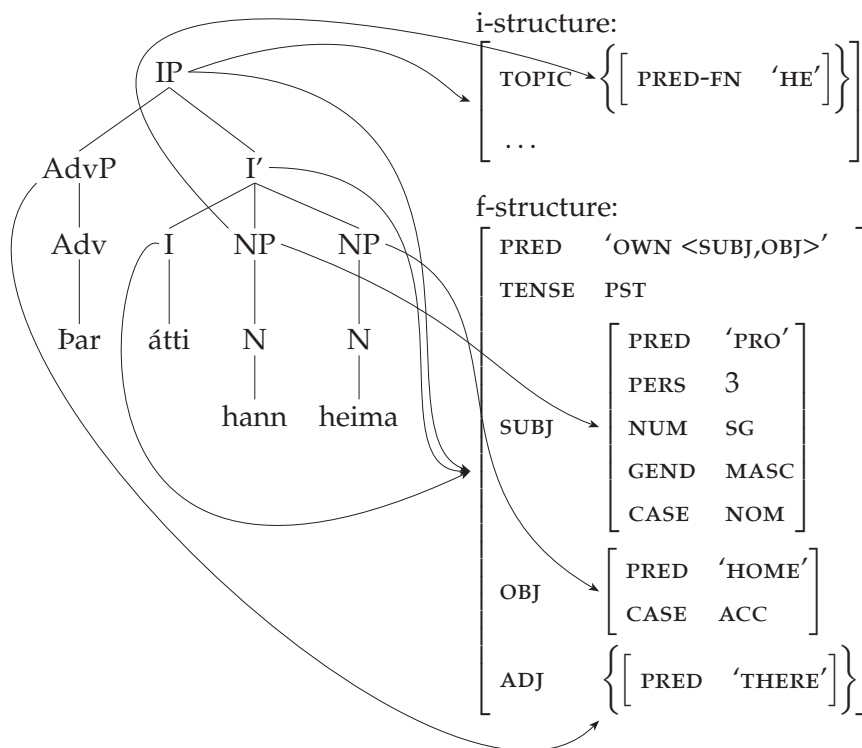
¹⁷ In the tree in (26), \downarrow and \uparrow are metavariables over f-structure variables and serve to relate every node in the c-structure to its corresponding f-structure. \downarrow denotes the f-structure corresponding to that node itself (my f-structure), and \uparrow denotes the f-structure corresponding to that node's mother node (my mother's f-structure). Multiple c-structure nodes may correspond to the same f-structure, in which case they are annotated as $\uparrow=\downarrow$. This indicates that the functional information associated with a given node is the same as the functional information associated with that node's mother node.

¹⁸ We represent noun phrases simply as endocentric NPs, since their internal structure is not directly relevant to our paper; see [Börjars, Harries & Vincent \(2016\)](#) for an LFG analysis of the noun phrase in Old Norse/Icelandic.

- (27) *Hann átti hesta góða.*
 he.NOM own.PST horses.ACC good.ACC.PL
 'He had good horses.' (1310, Grettir.1767)



- (28) *þar átti hann heima...*
 there own.PST he.NOM home.ACC
 ‘He lived there...’ (1250, Sturlunga.389.30)

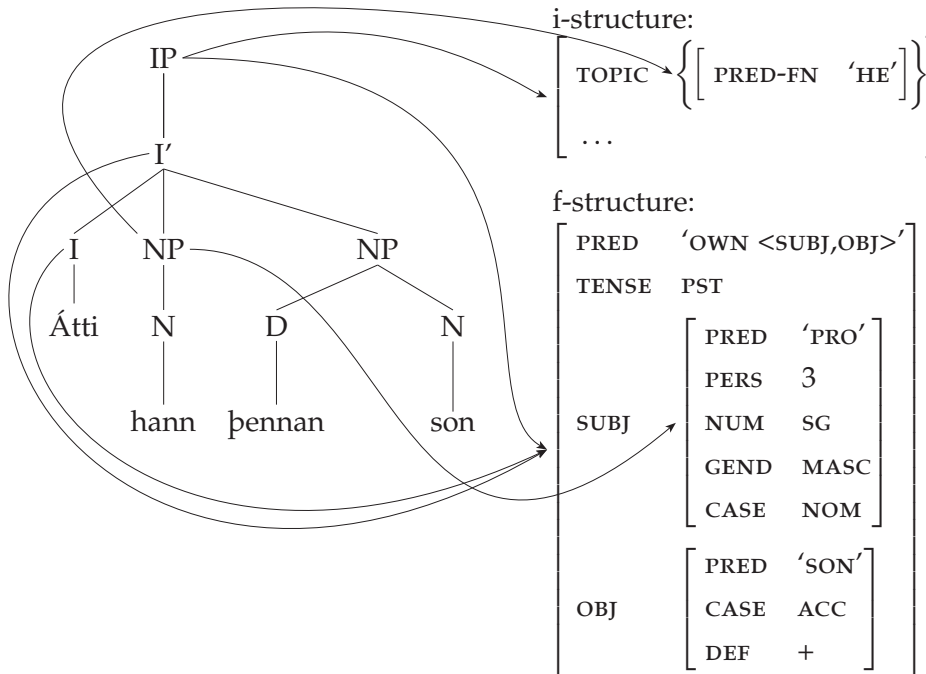


In non-subject-initial V2 clauses, as in (28), the subject occupies a position immediately after the finite verb as an immediate daughter of I'. This is in line with those LFG accounts of modern Scandinavian clause structure mentioned above (Börjars et al. 2003, Sells 2001, 2005) which assume a flat structure under I', within which any grammatical function, including the subject, can occur (Börjars et al. 2003, Sells 2001, 2005), cf. the tree in (26) from Sells (2001, 2005). In addition to this, we do not assume a VP-constituent for Old Icelandic, as there is strong empirical evidence against such a constituent for this early stage of the language, on the basis of constituency-tests (Faarlund 1990), as well as the observation that sentence adverbs, tempo-spatial adverbs, as well as (non-topical) subjects can intervene between the a non-finite verb and its object in the postfinite domain (Booth 2020a). With respect to the full structural organisation within I' in Old Icelandic, we leave this for further research, but acknowledge that word order in this postfinite domain is likely driven by information-structural concerns; see Booth & Schätzle (2019), who provide

evidence for there being a linear preference for topical constituents to precede foci in the postfinite domain, as delimited by certain discourse adverbs acting as discourse-partitioners. Note that in (28) SpecIP hosts an adjunct. In this respect, SpecIP in Old Icelandic need not always map to a discourse-prominent information-structural feature, i.e. TOPIC or FOCUS, as it can also host non-prominent adjuncts. In this respect, our account differs from the modern Icelandic analysis proposed by Sells (2001, 2005) cf. (26), which explicitly links SpecIP exclusively with grammatical functions (e.g. SUBJ, OBJ) which bear a G(rammaticalised) D(iscourse) F(unction). This not only conflicts with the Old Icelandic data but also with the facts for modern Icelandic, where adjunct-initial V2 clauses remain a robust configuration, as in other modern Germanic V2 languages (e.g. Holmberg 2015).

In V1 clauses, the subject topic also occurs within I' and, since the specifier position in such contexts is unoccupied, the SpecIP node in (29) is absent via Economy of Expression (see Section 2).

- (29) *Átti hann þennan son...*
 own.PST he.NOM DEM.ACC son.ACC
 'He had this son...' (1325, Arni.22)



The three remaining types of V1 declarative which do not involve an (overt) subject topic (*pro*-drop V1, impersonal V1, presentational V1, see Section

4.2), can also be accounted for in terms of a structure with the finite verb in I. In such instances, there is no subject topic present within I'. With respect to Stylistic Fronting, we leave a full analysis for future work, since more empirical research is required in order to understand the nature of SF in Old Icelandic, especially in light of recent research which suggests that SF in modern Icelandic has an information-structural effect (Hrafnbjargarson 2004, Molnár 2010, Egerland 2013).

As mentioned above, the exclusively IP-rooted account outlined in this section captures the key intuitions concerning Old Icelandic clause structure, namely that the position of the finite verb is heavily restricted, and is in line with previous LFG accounts on languages with similar second position phenomena. In fact, there is additional empirical evidence to support this analysis over an account where the position for prefield and immediately postfinite subjects is fixed and rather the finite verb is structurally flexible (e.g. Sigurðsson 1990; cf. Travis 1984, 1991, Zwart 1991, 1993). In the latter account, the prefield and the immediately postfinite position available to subjects are captured under one structural position in the tree, SpecIP, as a unique position for subjects. Thus, in order to motivate such an account, one would need to be able to show that the information-structural characteristics of these two positions are the same. In fact, observations by Booth (2020a) suggest that this is not the case. As well as hosting subjects which are (continuous) topics, there is evidence that the prefield can also host the subject of a presentational construction which is generally considered to be a focus, e.g. (30); cf. Booth (2018), 'subject-initial presentationals'.

- (30) (a) *Björn er þar ok á því landi.*
 bear.NOM be.PRS there also on DEM land
 'There is also a bear in that land.' (Faarlund 2004: 199)
- (b) *Kastali var fyrir austan sundið en her*
 castle.NOM be.PST before east strait.DEF and host
manns fyrir sunnan.
 man.GEN before south
 'There was a castle to the east of the strait and a host of men to the south.' (Faarlund 2004: 199)

However, there is no evidence that the other position available to subject topics, the immediately postfinite position, can host focal material. In fact, as Booth (2020a) shows, there is good reason to assume that this position maps exclusively to TOPIC at i-structure; see also Booth & Schätzle (2019). As such, it is clear that the two positions available to subject topics, the prefield and the immediately postfinite position, in fact have nuanced differences in their

information-structural characteristics. This speaks against capturing them under a single position (SpecIP) and thus supports our alternative account outlined in this section. Moreover, as we show in Section 6, an IP-rooted account, together with LFG’s correspondence architecture, can handle the changing diachronic facts well.

6 THE EMERGENCE OF A UNIQUE SUBJECT TOPIC POSITION – AND ITS CONSEQUENCES

In the wider Germanic context, Icelandic is standardly acknowledged to be the most conservative language; present-day Icelandic has retained a complex morphological case system which is overtly marked on various nominal categories (nouns, pronouns, adjectives, determiners), three genders, as well as rich distinctions in the verbal morphology for person, number, tense and mood. Furthermore, Icelandic has not undergone certain diachronic developments characteristic for Germanic in general, such as the innovation of an indefinite article.¹⁹ Nevertheless, various syntactic changes at clause level have been observed for Icelandic, e.g. a decrease in the frequency of V1 declaratives (Butt et al. 2014, Sigurðsson 1990), a decrease in the frequency of Stylistic Fronting (Hróarsdóttir 1998, Rögnvaldsson 1996) and the emergence of expletives in the prefield (Eythórsson & Sigurðardóttir 2016, Hróarsdóttir 1998, Rögnvaldsson 2002, Booth 2018). Previous studies mostly address these changes individually, and an account which brings together the changes in terms of the diachronic status of clausal architecture in the language is still lacking.

In this section, we build on our account for Old Icelandic which captures the flexible ordering of the finite verb and subject topic by examining this phenomenon across the diachrony provided by the IcePaHC corpus (1150-2008). We show that the association between syntax and information structure is changing over time, and that this can be connected with the diachronic picture regarding V1 and V2 variation (see Section 6.1), as well as with further changes in the syntactic system (see Section 6.2).

6.1 *An emerging unique position for subject topics*

To shed light on the diachrony of V1 and V2 in Icelandic, we investigate the positional distribution of subject topics in relation to the finite verb via three different word order patterns in IcePaHC: (i) subject-topic-initial

¹⁹ However, recently, it has been claimed that an indefinite article may be emerging in contemporary Icelandic, see Sigurðardóttir (2019).

V2 (SUBJTOPIC-V), (ii) narrative inversion V1 (V-SUBJTOPIC), and (iii) non-subject-initial V2 (XP-V-SUBJTOPIC).²⁰ In doing so, we compare the relative frequencies of these patterns in Old Icelandic (1150-1350) versus modern Icelandic (1900-2008), see Table 5. Moreover, we look at the word order patterns by individual text (and year) in IcePaHC, as illustrated in Figures 2-4, to investigate their full diachrony; see also Tables 6 and 7 in the Appendix for the full raw data by individual text.²¹

Period	SUBJTOPIC-V		V-SUBJTOPIC		XP-V-SUBJTOPIC	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1150-1350	1794	43%	905	22%	1434	35%
1900-2008	2934	71%	91	2%	1124	27%

Table 5 Positional distribution of subject topics in IcePaHC (1150-1350 vs. 1900-2008).

Table 5 shows that subject-topic-initial V2 clauses are strikingly more frequent in the modern stage than in Old Icelandic (71% vs. 43%). By taking a more nuanced view of the diachrony of subject-topic-initial V2 via Figure 2, we find that the diachronic increase in subject-topic-initial V2 clauses is particularly strong in the last two centuries. The generalised linear mixed-effects model with SUBJTOPIC-V as response variable shows that this increase over time is statistically significant ($p < 0.001$), with a positive effect of the factor ‘year’. Moreover, there is some variation in the distribution of data points around 1600-1700 in Figure 2, which we attribute to the genre effect discussed in Section 3. Indeed, the statistical model shows that biographical texts have a significant negative effect on the distribution of subject-topic-initial V2 ($p < 0.05$). This in turn explains the dip in the blue smooth line in Figure 2 in the late 1600s.

While subject-topic-initial V2 clauses are on the rise, narrative inversion V1 constructions (V-SUBJTOPIC) decrease strongly over time, from 22% to 2%, see Table 5 and Figure 3 for the full diachrony. The corresponding statistical analysis (V-SUBJTOPIC as response variable) confirms this and shows a significant decrease over time ($p < 0.001$). Similar to subject-topic-initial V2, the diachronic trajectory for narrative inversion V1 exhibits variation around 1600-1700, see Figure 3, which we again attribute to the genre effect.

²⁰ XP-V-SUBJTOPIC excludes SF, which we address separately in Section 6.2.

²¹ We follow the IcePaHC developers by using the following abbreviations for genre in Tables 6 and 7: nar = narratives, rel = religious texts, bio = biographies, law = legal texts, sci = scientific texts.

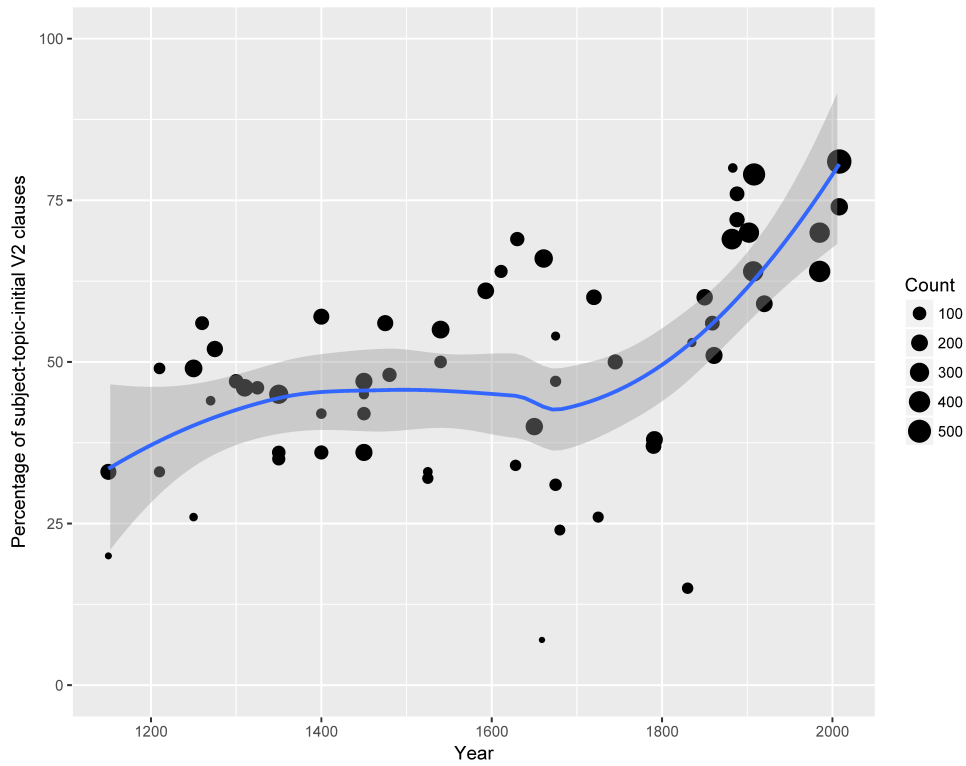


Figure 2 Distribution of subject-topic-initial V2 clauses (SUBJTOPIC-V) by text over time in IcePaHC (1150-2008).

Indeed, the mixed-effects model shows that religious texts, which are dominant at this stage, have a significant negative effect ($p < 0.001$) on narrative inversion V1.

There is one striking outlier in Figure 3 with a high count and a high percentage of narrative inversion V1 (70%) which occurs outside of the genre effect and is from the year 1830. We attribute the divergent behaviour of this text, *Hellismenn*, again to a genre effect: the text is a 19th century composition which aims to imitate the older saga style, and thus includes a high frequency of narrative inversion V1 which, as mentioned, is a well-known characteristic of the medieval Icelandic sagas. This is in line with previous computational work on the automatic identification of language change which has shown that *Hellismenn* is statistically deviant from contempora-

neous texts in IcePaHC with respect to several syntactic features (Schätzle & Booth 2019).

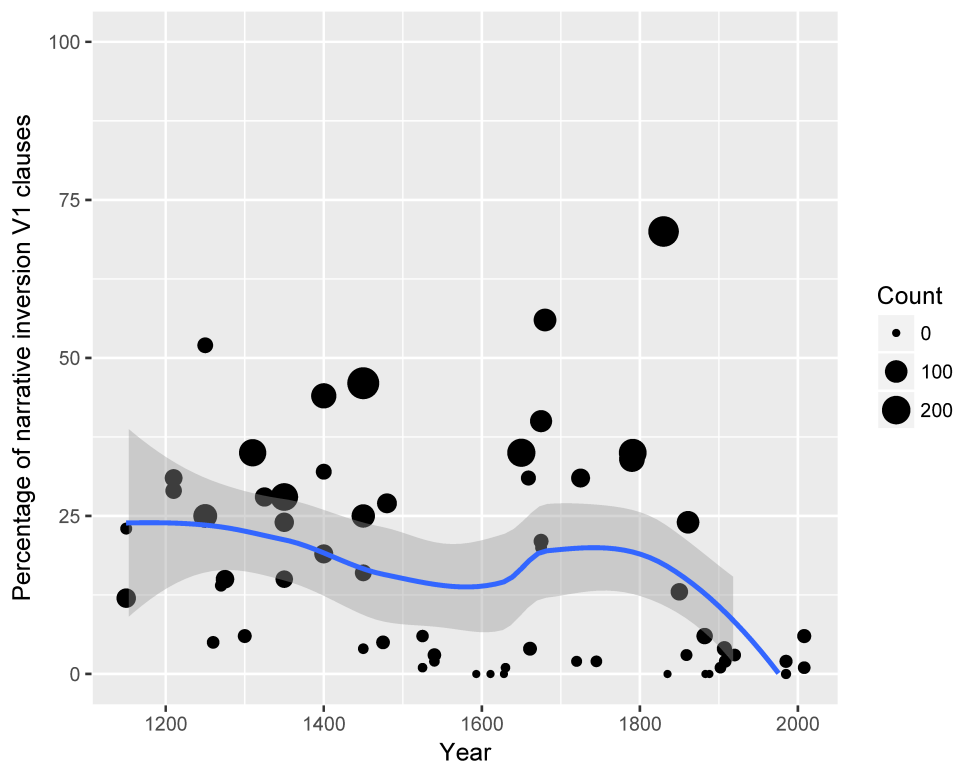


Figure 3 Distribution of narrative inversion V1 clauses (V-SUBJTOPIC) by text over time in IcePaHC (1150-2008).

Compared to narrative inversion V1, non-subject-initial V2 clauses (XP-V-SUBJTOPIC) decrease only slightly over time, see Table 5 and Figure 4. The statistical analysis shows that this decrease is not statistically significant ($p = 0.09$). Yet, genre has a significant impact on the distribution of non-subject-initial V2 clauses. The statistical model reveals that biographies and religious texts, which represent the majority of texts around 1600, have a significant positive effect on non-subject-initial V2 clauses ($p < 0.05$ for biographies and $p < 0.01$ for religious texts). This is visible in Figure 4, where there is a lot of variation around 1600, involving a strong increase of the smooth line at this point.

Additionally, there is one religious text which exhibits a high count and a high percentage of non-subject-initial V2 clauses at an early stage. This is

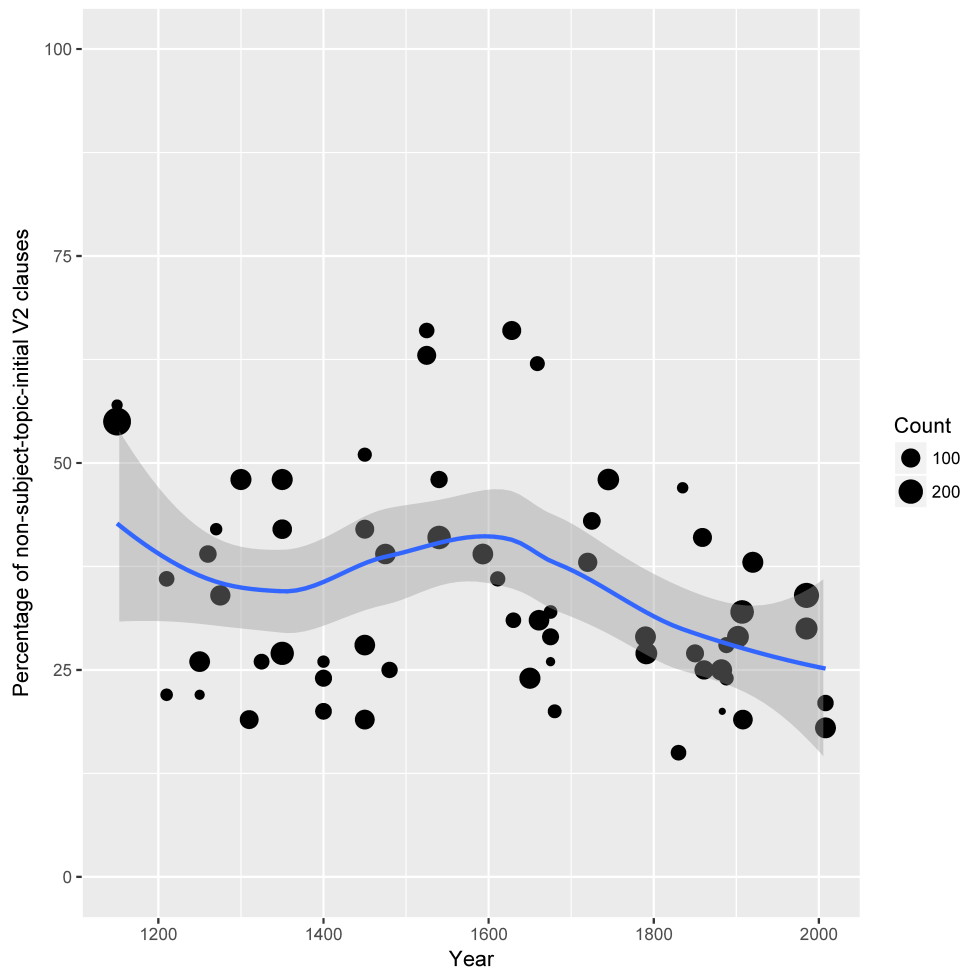
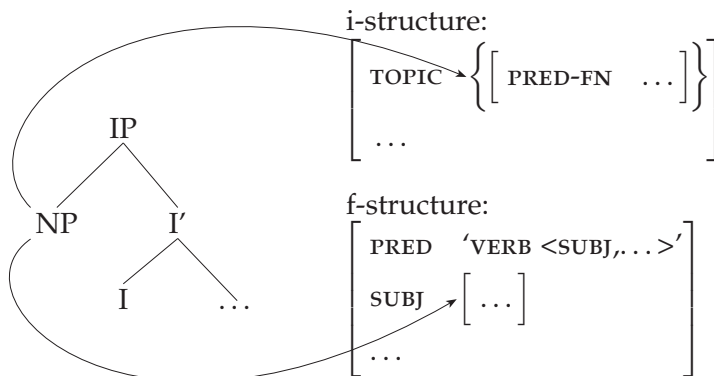


Figure 4 Distribution of non-subject-initial V2 clauses (XP-V-SUBJTOPIC) by text over time in IcePaHC (1150-2008).

the *Homiliubok* text (1150), see the large point on the left of Figure 4, which is known to have a Latin background though the exact nature of this connection remains unclear (Weenen 1993). Moreover, scientific texts exhibit significantly higher frequencies of non-subject-initial V2 ($p < 0.05$). However, there are only two scientific texts in the corpus, *Firstgrammar* (1150), i.e. the upper (smaller) point in Figure 4 at 1150, and *Jonasedli* (1835), i.e. the second point (left-to-right) in the 1800s in Figure 4.

In sum, the diachronic corpus data shows that subject-topic-initial V2 clauses increase strikingly over time in Icelandic, at the expense of constructions with a postfinite subject topic, in particular narrative inversion V1. Overall, this indicates that subject topics increasingly favour the prefield throughout the history of Icelandic. We interpret our findings as evidence that Icelandic is undergoing a change with respect to the association between information structure (i-structure) and clause structure (c-structure). Specifically, we propose that the prefield in Icelandic – SpecIP in our account – is emerging as a unique structural position for subject topics. On the one hand, SpecIP – which could already host subject topics in Old Icelandic – is becoming more restricted to subject topics while, on the other hand, the postfinite domain is losing its association with subject topics. As a result, narrative inversion V1 is becoming increasingly dispreferred over time, with the result that by the very latest texts it can be considered highly marginal. By contrast, postfinite subject topics persist in clauses with an initial non-subject (XP-V-SUBJTOPIC), in particular in the non-narrative genres, but there are some signs that such structures are on the verge of following the fate of narrative inversion. Overall, these findings point towards the increasing generalisation over time of the V2 structure given in (31), with a subject topic in SpecIP.

- (31) Growing syntax-information-structure correspondences in the generalisation of V2



As we show next, this overall change with respect to the association between subject topics and clause structure can be connected with further changes in the grammar, which have been previously observed for later stages of Icelandic.

6.2 Consequences of the changing relation between syntax and information structure

Firstly, we argue that the ongoing emergence of SpecIP as a unique subject topic position can be related to a previously observed decrease in Stylistic Fronting over time (Hróarsdóttir 1998, Rögnvaldsson 1996). With subject topics increasingly targeting SpecIP, sentences with a postfinite subject topic overall are becoming increasingly rare, and thus the word order pattern SF-V-SUBJTOPIC will also decrease in frequency. By contrast, the changing information-structural association of SpecIP will not affect impersonal and presentational constructions, since these lack a subject topic altogether. As such, SF will be heavily dispreferred in sentences with a postfinite subject topic, but stable in impersonal and presentational constructions, as reflected in the observed ‘Subject Gap Condition’ on SF in modern Icelandic (Maling 1990), see Section 4.1.

Furthermore, we also connect the changing information-structural associations between subject topics and clause structure with a further change which has been shown for Icelandic, specifically the rise of the expletive *það* (Eythórsson & Sigurðardóttir 2016, Hróarsdóttir 1998, Rögnvaldsson 2002, Booth 2018, 2019, 2020b). As is well known, in modern Icelandic expletive *það* occurs in impersonal and presentational constructions, e.g. (32a) and (32b) respectively, and is positionally restricted to the prefield (i.e. SpecIP) (Holmberg 2000, Maling 1988, Platzack 1983, Sells 2005, Sigurðsson 2007, Thráinsson 2007, Vikner 1995).

- (32) (a) *Það var að vora.*
 EXPL be.PST to become-spring.INF
 ‘It was becoming spring.’ (2008, Mamma.1066)
- (b) *Það var töluverður snjór yfir öllu.*
 EXPL be.PST considerable.NOM snow.NOM over everything
 ‘There was a considerable amount of snow over everything.’
 (2008, Ofsi.772)

Quantitative studies have shown that expletive *það* increases in frequency in these two contexts over time, with change especially occurring over the last two centuries (Booth 2018, 2019, 2020b, Hróarsdóttir 1998). We relate the rise of the expletive in SpecIP in impersonals and presentationals – which both lack a subject topic – to our claim that SpecIP is emerging as a unique subject topic position. With SpecIP increasingly strongly characterised as specifically a subject topic position, in impersonal and presentational constructions the expletive is motivated as a structural filler for this position,

signalling that the clause lacks a subject topic (Booth et al. 2017, Booth & Schätzle 2019).

Thirdly, our diachronic claim regarding subject topics explains the decrease in V1 declaratives and concomitant increase in V2 declaratives, via multiple mechanisms. The decrease in narrative inversion V1 shown in Section 6.1 could simply be viewed as the result of subject topics increasingly occupying SpecIP when this position is available. However, this does not hold for the other types of V1 declarative which crucially lack a subject topic. V1 declaratives involving *pro*-drop of a subject topic also decrease over time, as unexpressed arguments become increasingly dispreferred, as observed in the corpus study by Kinn et al. (2016). This can also be related to the emergence of SpecIP as a unique topic position; as this correspondence is increasingly consolidated, the preference to have an overt (i.e. non-null) subject topic in this position if one is available will become stronger. V1 impersonals and presentationals also decrease in frequency, in line with the rise of the prefield expletive *það* in such contexts, while SF remains stable in these environments. Moreover, we suggest that, since topics cross-linguistically correlate with subjects (see e.g. Givón 1990), subjects overall increasingly target SpecIP, as has been shown via quantitative corpus investigations (Booth et al. 2017). In sum, our account is that V1 declaratives in Icelandic are gradually being eroded on a number of fronts, which can all be traced back to the changing association between information structure and clause structure we propose.

7 CONCLUSION

In this paper, we have provided an account for the generalisation of V2 in the history of Icelandic at the expense of V1 in terms of the changing association between information structure and clause structure. Our account is informed by a series of corpus investigations using IcePaHC, where we examine the relative word order of the finite verb and subject topics in detail, as well as the characteristics of the prefield. We have provided evidence for an ongoing change whereby the prefield is emerging as a unique subject topic position and have shown how this overall change is not only related to the changes with respect to V2 and V1, but also wider changes concerning certain prefield phenomena, specifically Stylistic Fronting and the expletive *það*. Additionally, our investigations of Old Icelandic (1150-1350) specifically have shed light on the status of V1 with respect to V2 at this early stage of the language. Building on previous work, we showed that a particularly common type of V1, narrative inversion, is not just a structural alternative to V2, but carries its own discourse-related function in marking anaphoric

topics. With respect to impersonal and presentational V1 constructions, we showed that these structures surface even when a V2 strategy in the form of Stylistic Fronting is available.

The ongoing generalisation of V2 observed in this paper represents a gradual change which is not completed. SpecIP is on its way to becoming a unique subject topic position, but this association is not yet exclusively fixed. Further changes concerning word order and information structure have been detected in the history of Icelandic (Hróarsdóttir 2008, 2009, Viðarsson 2017) and more work in this area would seem worthwhile. Our proposed account within LFG has modelled the observed changes in terms of changing correspondences between linguistic dimensions, specifically c-structure and i-structure, but we acknowledge that a model of the gradualness involved in this change is not explicitly part of our account. Gradual change has been neatly captured in previous diachronic work within LFG, specifically with respect to grammaticalisation and changes in clause structure (e.g. Clark 2004, Börjars et al. 2016, Camilleri & Sadler 2020), but a precise model for handling gradualness over time with respect to changing correspondences between clause structure and information structure remains to be developed. We leave this enterprise for future work.

REFERENCES

- Angantýsson, Ásgrímur. 2007. Verb-third in embedded clauses in Icelandic. *Studia Linguistica* 61(3). 237–260.
- Asudeh, Ash. 2006. Direct compositionality and the architecture of LFG. In Miriam Butt, Mary Dalrymple & Tracy Holloway King (eds.), *Intelligent Linguistic Architectures: Variations on themes by Ronald M. Kaplan*, 363–387. Stanford, CA: CSLI Publications.
- Asudeh, Ash. 2012. *The Logic of Pronominal Resumption*. Oxford: Oxford University Press.
- Auer, Peter & Jan Lindström. 2011. Verb-first conditionals in German and Swedish: convergence in writing, divergence in speaking. In Peter Auer & Stefan Pfänder (eds.), *Constructions: Emerging and emergent*, 218–262. Berlin: de Gruyter.
- Austin, Peter & Joan Bresnan. 1996. Non-configurationality in Australian aboriginal languages. *Natural Language & Linguistic Theory* 14(2). 215–268.
- Axel, Katrin. 2007. *Studies on Old High German Syntax: Left Sentence Periphery, Verb Placement and Verb-Second*. Amsterdam: John Benjamins.
- Bates, Douglas, Martin Mächler, Ben Bolker & Steve Walker. 2015. Fitting lin-

- ear mixed-effects models using lme4. *Journal of Statistical Software* 67(1). 1–48.
- Bech, Kristin. 2017. Old ‘truths’, new corpora: revisiting the word order of conjunct clauses in Old English. *English Language & Linguistics* 21(1). 1–25.
- Bech, Kristin & Kristine Gunn Eide. 2014. *Information Structure and Syntactic Change in Germanic and Romance languages*. Amsterdam: John Benjamins.
- Bögel, Tina. 2015. *The syntax-prosody interface in lexical functional grammar*. Ph.D thesis, University of Konstanz.
- Booth, Hannah. 2018. *Clause Structure and Expletives: Syntactic Change in Icelandic*. Ph.D thesis, University of Manchester.
- Booth, Hannah. 2019. Cataphora, expletives and impersonal constructions in the history of Icelandic. *Nordic Journal of Linguistics* 42(2). 139–164.
- Booth, Hannah. 2020a. Argument configurationality and discourse configurationality in Old Icelandic. Presented at the *LFG’2020 Conference* (Online).
- Booth, Hannah. 2020b. Expletives in Icelandic. In Bridget Drinka (ed.), *Historical Linguistics 2017: Selected papers from the 23rd International Conference on Historical Linguistics, San Antonio, Texas, 31 July–4 August 2017*, 363–384. Amsterdam: John Benjamins.
- Booth, Hannah & Christin Schätzle. 2019. The syntactic encoding of information structure in the history of Icelandic. In Miriam Butt, Tracy Holloway King & Ida Toivonen (eds.), *Proceedings of the LFG’19 Conference, Australian National University*, 69–89. Stanford, CA: CSLI Publications.
- Booth, Hannah, Christin Schätzle, Kersti Börjars & Miriam Butt. 2017. Dative subjects and the rise of positional licensing in Icelandic. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG’17 Conference, University of Konstanz*, 104–124. Stanford, CA: CSLI Publications.
- Börjars, Kersti, Elisabet Engdahl & Maia Andréasson. 2003. Subject and object positions in Swedish. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG’03 Conference, University at Albany, State University of New York*, 43–58. Stanford, CA: CSLI Publications.
- Börjars, Kersti, Pauline Harries & Nigel Vincent. 2016. Growing syntax: The development of a DP in North Germanic. *Language* 92(1). e1–e37.
- Börjars, Kersti, John Payne & Erika Chisarik. 1999. On the justification for functional categories in LFG. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG’99 Conference, University of Manchester*, Stanford, CA: CSLI Publications.
- Brandtler, Johan. 2014. Review of Federica Cognola’s *Syntactic Variation and Verb Second: A German Dialect in Northern Italy*. *Nordic Journal of*

- Linguistics* 37(1). 107–111.
- Breitbarth, Anne. 2019. Should a conditional marker arise... The diachronic development of conditional *sollte* in German. *Glossa: a journal of general linguistics* 4(1).
- Breivik, Leiv Egil. 1990. *Existential there: A synchronic and diachronic study*. Oslo: Novus.
- Bresnan, Joan, Ash Asudeh, Ida Toivonen & Stephen Wechsler. 2016. *Lexical-Functional Syntax, 2nd Edition*. Oxford: Blackwell.
- Bresnan, Joan & Ron Kaplan. 1982. Lexical-Functional Grammar: A formal theory for grammatical representation. In Joan Bresnan (ed.), *The mental representation of grammatical relations*, 173–281. Cambridge, MA: The MIT Press.
- Butt, Miriam, Tina Bögel, Kristina Kotcheva, Christin Schätzle, Christian Rohrdantz, Dominik Sacha, Nicole Dehé & Daniel A. Keim. 2014. V1 in Icelandic: A multifactorial visualization of historical data. In *Proceedings of the LREC 2014 Workshop on Visualization as added value in the development, use and evaluation of LRs (VisLR)*, 33–40. Reykjavík, Iceland.
- Butt, Miriam, Farhat Jabeen & Tina Bögel. 2016. Verb Cluster Internal Wh-Phrases in Urdu: Prosody, Syntax and Semantics/Pragmatics. *Linguistic Analysis* 40(3-4). 445–487.
- Butt, Miriam & Tracy Holloway King. 1996. Structural topic and focus without movement. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the First Annual LFG Conference*, Stanford, CA: CSLI Publications.
- Butt, Miriam & Tracy Holloway King. 1997. Null elements in discourse structure. In Karumuri V. Subbarao (ed.), *Papers from the NULLS seminar*, Delhi: Motilal Banarsidass.
- Camilleri, Maris & Louisa Sadler. 2020. The grammaticalisation of an auxiliary and a copula: The arabic ‘sit’ participle. *Journal of Historical Syntax* 4(6). 1–60.
- Choi, Hye-Won. 1999. *Optimizing Structure in Context: Scrambling and Information Structure*. Stanford, CA: CSLI Publications.
- Clark, Brady. 2004. *A stochastic optimality theory approach to syntactic change*. Ph.D thesis, Stanford University.
- Cognola, Federica. 2015. How to define relaxed V2 languages and how to distinguish them from non-V2 languages: A reply to Brandtler (2014). *Nordic Journal of Linguistics* 38(1). 930–100.
- Dalrymple, Mary. 2001. *Lexical Functional Grammar*. New York: Academic Press.
- Dalrymple, Mary, John J. Lowe & Louise Mycock. 2019. *The Oxford Reference Guide to Lexical Functional Grammar*. Oxford: Oxford University Press.

- Dalrymple, Mary & Irina Nikolaeva. 2011. *Objects and information structure*. Cambridge University Press.
- Egerland, Verner. 2013. Fronting, background, focus: a comparative study of Sardinian and Icelandic. *Lingua* 136. 63–76.
- Eriksson, Mats. 1997. *Ungdomars berättande: en studie i struktur och interaktion*. Ph.D thesis, Cornell University.
- Eythórsson, Thórhallur & Sigríður Sæunn Sigurðardóttir. 2016. A brief history of Icelandic weather verbs: Syntax, semantics and argument structure. *Working Papers in Scandinavian Syntax* 96. 91–125.
- Faarlund, Jan Terje. 1990. *Syntactic Change: Toward a theory of historical syntax*. Berlin; New York: de Gruyter.
- Faarlund, Jan Terje. 1994. Old and Middle Scandinavian. In Johan van der Auwera & Ekkehard König (eds.), *The Germanic Languages*, 38–71. London: Routledge.
- Faarlund, Jan Terje. 2004. *The Syntax of Old Norse: with a survey of the inflectional morphology and a complete bibliography*. Oxford: Oxford University Press.
- Falk, Yehuda. 2001. *Lexical-Functional Grammar: An Introduction to Parallel Constraint-Based Syntax*. Stanford, CA: CSLI Publications.
- Franco, Irene. 2008. V1, V2 and criterial movement in Icelandic. *Studies in Linguistics* 2. 141–164.
- Frascarelli, Mara & Roland Hinterhölzl. 2007. Types of topics in German and Italian. In Susanne Winkler & Kerstin Schwabe (eds.), *On Information Structure, Meaning and Form*, 87–116. Amsterdam: John Benjamins.
- Givón, Talmy. 1990. *Syntax: A Functional Typological Introduction*. Amsterdam: John Benjamins.
- Grosz, Barbara J., Scott Weinstein & Aravind K. Joshi. 1995. Centering: A framework for modeling the local coherence of discourse. *Computational Linguistics* 21. 203–225.
- Hallberg, Peter. 1965. Om språkliga författarkriterier i isländska sagatexter. *Arkiv för nordisk filologi* 80. 157–186.
- Haug, Dag T. T. & Marius L. Jøhndal. 2008. Creating a parallel treebank of the Old Indo-European bible translations. In Caroline Sporleder & Kiril Ribarov (eds.), *Proceedings of the second workshop on language technology for cultural heritage data (latech 2008)*, 27–34.
- Heycock, Caroline & Joel Wallenberg. 2013. How variational acquisition drives syntactic change. *The Journal of Comparative Germanic Linguistics* 16(2-3). 127–157.
- Hinterhölzl, Roland & Svetlana Petrova. 2009. *Information Structure and Lan-*

- guage Change: New Approaches to Word Order Variation in Germanic*. Berlin: de Gruyter.
- Hinterhölzl, Roland & Svetlana Petrova. 2010. From V1 to V2 in West Germanic. *Lingua* 120(2). 315–328.
- Holmberg, Anders. 2000. Scandinavian stylistic fronting: How any category can become an expletive. *Linguistic Inquiry* 31(3). 445–483.
- Holmberg, Anders. 2015. Verb second. In Tibor Kiss & Artemis Alexiadou (eds.), *Syntax. Theory and Analysis: An International Handbook*, 342–383. Berlin: de Gruyter.
- Hopper, Paul J. 1987. Stability and change in VN/NV alternating languages: a study in pragmatics and linguistic typology. In Jef Verschueren & Marcella Bertucelli-Papi (eds.), *The Pragmatic Perspective*, 455–476. Amsterdam: John Benjamins.
- Hrafnbjargarson, Gunnar Hrafn. 2004. Stylistic fronting. *Studia Linguistica* 58(2). 88–134.
- Hróarsdóttir, Thorbjörg. 1998. *Setningafræðilegar breytingar á 19. öld: þróun þriggja málbreytinga*. Málvísindastofnun Háskóla Íslands.
- Hróarsdóttir, Thorbjörg. 2008. Types of DPs in OV order. *Studia linguistica* 62(3). 261–286.
- Hróarsdóttir, Thorbjörg. 2009. OV languages: expressions of cues. In Roland Hinterhölzl & Svetlana Petrova (eds.), *Information structure and language change: New Approaches to Word Order Variation in Germanic*, 67–90. Berlin: de Gruyter.
- Jouitteau, Mélanie. 2010. A typology of V2 with regard to V1 and second position phenomena: An introduction to the V1/V2 volume. *Lingua* 120. 197–209.
- Kaplan, Ronald M. 1987. Three seductions of computational psycholinguistics. In Peter Whitelock, H. Somers, P. Bennett, R Johnson & M. McGee Wood (eds.), *Linguistic Theory and Computer Applications*, 149–181. New York: Academic Press.
- Kaplan, Ronald M. 1989. The formal architecture of Lexical-Functional Grammar. *Journal of Information Science and Engineering* 5(4). 305–322.
- King, Tracy Holloway. 1995. *Configuring topic and focus in Russian*. Stanford, CA: CSLI Publications.
- King, Tracy Holloway. 1997. Focus domains and information-structure. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the lfg'97 conference, university of california, san diego*, Stanford, CA: CSLI Publications.
- Kinn, Kari, Kristian A. Rusten & George Walkden. 2016. Null subjects in Early Icelandic. *Journal of Germanic Linguistics* 28(1). 31–78.
- Kiparsky, Paul. 1995. Indo-European origins of Germanic syntax. In Ian

- Roberts & Adrian Battye (eds.), *Clause Structure and Language Change*, 140–167. Oxford: Oxford University Press.
- Kossuth, Karen C. 1980. The linguistic basis of saga structure: Toward a syntax of narrative. *Arkiv för nordisk filologi* 95. 126–141.
- Kossuth, Karen C. 1981. Unmarked definite NPs and referential cohesion in Old Icelandic narrative. *Islensk mál* 3. 85–100.
- Krifka, Manfred. 2007. Basic notions of information structure. In Caroline Féry & Manfred Krifka (eds.), *Interdisciplinary Studies on Information Structure*, 13–56. Potsdam: Universitätsverlag.
- Kroeger, Paul. 1993. *Phrase Structure and Grammatical Relations in Tagalog*. Stanford, CA: CSLI Publications.
- Kuznetsova, Alexandra, Per B. Brockhoff & Rune H. B. Christensen. 2017. lmerTest package: Tests in linear mixed effects models. *Journal of Statistical Software* 82(13). 1–26.
- Leuschner, Torsten & Daan Van den Nest. 2015. Asynchronous grammaticalization: V1-conditionals in present-day English and German. *Languages in Contrast* 15(1). 34–64.
- Lightfoot, David. 1997. Shifting triggers and diachronic reanalyses. In Ans van Kemenade & Nigel Vincent (eds.), *Parameters of Morphosyntactic Change*, 253–272. Cambridge: Cambridge University Press.
- Lindström, Jan & Susanna Karlsson. 2005. Verb-first constructions as a syntactic and functional resource in (spoken) Swedish. *Nordic Journal of Linguistics* 28(1). 97–131.
- Lindström, Liina. 2001. Verb-initial clauses in narrative. In Mati Erelt (ed.), *Estonian: Typological studies v. (tartu ülikooli eesti keele õppetooli toimetised 18)*, 138–168. Tartu: University of Tartu.
- Lowe, John J. & Louise Mycock. 2014. Issues in the representation of information structure. Presented at the workshop *The Syntax and Information Structure Unbounded Dependencies*, University of Michigan, Ann Arbor, USA.
- Maling, Joan. 1988. Variations on a theme: existential sentences in Swedish and Icelandic. *McGill Working Papers in Linguistics: Special Issue on Comparative Germanic Syntax* 6(1). 168–191.
- Maling, Joan. 1990. Inversion in embedded clauses in Modern Icelandic. In Joan Maling & Annie Zaenen (eds.), *Syntax and Semantics: Modern Icelandic Syntax*, 71–91. San Diego, CA: Academic Press.
- Meurman-Solin, Anneli, Maria Jose Lopez-Couso & Bettelou Los (eds.). 2012. *Information Structure and Syntactic Change in the History of English*. Oxford: Oxford University Press.
- Molnár, Valéria. 2010. Stylistic fronting and discourse. *Tampa Papers in Lin-*

- guistics* 1. 30–61.
- Mycock, Louise & John J. Lowe. 2014. S-structure features for information structure analysis. Presented at the *LFG'14 Conference*, University of Michigan at Ann Arbor, Michigan, USA.
- Mörnsjö, Maria. 2002. *V1 Declaratives in Spoken Swedish: Syntax, Information Structure, and Prosodic Pattern*. Ph.D thesis, Lund University.
- Nordlinger, Rachel. 1998. *Constructive Case: Evidence from Australian languages*. Stanford, CA: CSLI Publications.
- Platzack, Christer. 1983. Existential sentences in English, German, Icelandic and Swedish. In F. Karlsson (ed.), *Papers from the 7th Scandinavian Conference of Linguistics*, 80–100. Department of General Linguistics, University of Helsinki.
- Platzack, Christer. 1985. Narrative inversion in Old Icelandic. *Íslenskt mál* 7. 127–144.
- R Core Team. 2020. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing Vienna, Austria. <https://www.R-project.org/>.
- Randall, Beth. 2000. *CorpusSearch: a Java program for searching syntactically annotated corpora*. Philadelphia: Dept. of Linguistics, University of Pennsylvania.
- Randall, Beth. 2005. *CorpusSearch2 User's Guide*. Philadelphia: Dept. of Linguistics, University of Pennsylvania. <http://corpussearch.sourceforge.net>.
- Rappaport Hovav, Malka & Beth Levin. 2001. An event structure account of english resultatives. *Language* 77(4). 766–797. <http://www.jstor.org/stable/3086847>.
- Rinke, Esther & Jürgen M. Meisel. 2009. Subject-inversion in Old French: Syntax and information structure. In Georg A. Kaiser & Eva-Maria Remberger (eds.), *Proceedings of the Workshop "Null-subjects, expletives, and locatives in Romance"*, *Fachbereich Sprachwissenschaft, Universität Konstanz*, 93–130.
- Rizzi, Luigi & Guglielmo Cinque. 2016. Functional categories and syntactic theory. *Annual Review of Linguistics* 2. 139–163.
- Rögnvaldsson, Eiríkur. 1995. Old Icelandic: a non-configurational language? *NOWELE* 26. 3–29.
- Rögnvaldsson, Eiríkur. 1996. Word order variation in the VP in Old Icelandic. *Working Papers in Scandinavian Syntax* 58. 55–86.
- Rögnvaldsson, Eiríkur. 2002. ÞAÐ í fornu máli - og síðar. *Íslenskt mál* 24. 7–30.
- Rögnvaldsson, Eiríkur. 2005. Setningafræðilegar breytingar í íslensku. In

- Höskuldur Thráinsson (ed.), *Íslensk Tunga III. Setningar. Handbók um Setningafræði*, 602–635. Reykjavík: Almenna bókafélagið.
- Rögnvaldsson, Eiríkur, Einar Freyr Sigurðsson, Anton Karl Ingason & Joel Wallenberg. 2012. The Icelandic Parsed Historical Corpus (IcePaHC). In *Proceedings of LREC 2012*, 1978–1984.
- Rögnvaldsson, Eiríkur & Höskuldur Thráinsson. 1990. On Icelandic word order once more. In Joan Maling & Annie Zaenen (eds.), *Syntax and Semantics: Modern Icelandic Syntax*, 3–40. San Diego, CA: Academic Press.
- Santorini, Beatrice. 2010. Annotation manual for the Penn Historical Corpora and the PCEEC. Department of Linguistics, University of Pennsylvania. <http://www.ling.upenn.edu/hist-corpora/annotation/index.html>.
- Schätzle, Christin. 2018. *Dative subjects: Historical change visualized*. Ph.D thesis, University of Konstanz.
- Schätzle, Christin & Hannah Booth. 2019. DiaHClust: an iterative hierarchical clustering approach for identifying stages in language change. In *Proceedings of the 1st international workshop on computational approaches to historical language change*, 126–135. Florence, Italy: Association for Computational Linguistics. <https://www.aclweb.org/anthology/W19-4716>.
- Sells, Peter. 2001. *Structure, Alignment and Optimality in Swedish*. Stanford, CA: CSLI publications.
- Sells, Peter. 2005. The peripherality of the Icelandic expletive. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG'05 Conference, University of Bergen*, 408–428. Stanford, CA: CSLI Publications.
- Sigurðardóttir, Sigríður Sæunn. 2019. Nascent change in Modern Icelandic: The emergence of an indefinite article. Abstract, talk at the 24th International Conference on Historical Linguistics, Canberra, Australia.
- Sigurðardóttir, Sigríður Sæunn. 2019. Syntax and discourse: Case(s) of V3 orders in Icelandic with temporal adjuncts. *Working Papers in Scandinavian Syntax* 102. 1–17.
- Sigurðardóttir, Sigríður Sæunn. 2020. Icelandic V3 orders with temporal adjuncts: Investigation into prosodic breaks and syntactic parsing. *Recent Advances in Germanic Syntax across Syntactic Domains. Nordlyd* 44(1). 133–151.
- Sigurðsson, Halldór Ármann. 1990. V1 declaratives and verb raising in Icelandic. In Joan Maling & Annie Zaenen (eds.), *Syntax and Semantics: Modern Icelandic Syntax*, 41–69. San Diego, CA: Academic Press.
- Sigurðsson, Halldór Ármann. 1993. Argument-drop in Old Icelandic. *Lingua* 89(2-3). 247–280.
- Sigurðsson, Halldór Ármann. 2007. Argument features, clausal structure

- and the computation. In Tammoy Bhattachayra, Eric Reuland & Giorgos Spathas (eds.), *Argument Structure*, 121–158. Amsterdam: John Benjamins.
- Sigurðsson, Halldór Ármann. 2018. Icelandic declarative V1: a brief overview. *Working Papers in Scandinavian Syntax* 49–55.
- Struik, Tara & Ans Van Kemenade. 2020. On the givenness of OV word order: a (re)examination of OV/VO variation in Old English. *English Language & Linguistics* 24(1). 1–22.
- Thráinsson, Höskuldur. 2007. *The Syntax of Icelandic*. Cambridge: Cambridge University Press.
- Travis, Lisa. 1984. *Parameters and Effects of Word Order Variation*. Ph.D Thesis, MIT.
- Travis, Lisa. 1991. Parameters of phrase structure and verb-second phenomena. In Robert Freidin (ed.), *Principles and Parameters in Comparative Grammar*, 339–364. Cambridge, MA: MIT Press.
- Vallduví, Enric. 1992. *The Informational Component*. New York: Garland Press.
- Viðarsson, Heimir van der Feest. 2017. Grimm’s “floating” datives: Applicatives and NP/DP configurationality in Icelandic from a diachronic perspective. *Working Papers in Scandinavian Syntax* 30–53.
- Vikner, Sten. 1995. *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford: Oxford University Press.
- Walkden, George. 2014. *Syntactic Reconstruction and Proto-Germanic*. Oxford: Oxford University Press.
- Walkden, George. 2015. Verb-third in early West Germanic: a comparative perspective. In Theresa Biberauer & George Walkden (eds.), *Syntax over Time: Lexical, Morphological and Information-Structural Interactions*, 236–248. Oxford: Oxford University Press.
- Walkden, George & Hannah Booth. 2020. Reassessing the historical evidence for embedded Verb Second. In Rebecca Woods & Sam Wolfe (eds.), *Rethinking Verb Second*, 536–554. Oxford: Oxford University Press.
- Wallenberg, Joel C., Anton Karl Ingason, Einar Freyr Sigurðsson & Eiríkur Rögnvaldsson. 2011. Icelandic Parsed Historical Corpus (IcePaHC), version 0.9. http://linguist.is/icelandic_treebank.
- Weenen, Andrea de Leeuw van (ed.). 1993. *The Icelandic Homily Book: Perg. 15 4^o in the Royal Library, Stockholm*. Reykjavík: Stofnun Árna Magnússonar á Íslandi.
- Westergaard, Marit. 2009. *The Acquisition of Word Order: Micro-Cues, Information Structure, and Economy*. Amsterdam: John Benjamins.
- Wolfe, Sam. 2015. Verb-initial orders in Old Romance: A comparative Ac-

- count. *Revue roumaine de linguistique* 60(2-3). 147–172.
- Wolfe, Sam. 2019. Redefining the typology of V2 languages: The view from Medieval Romance and beyond. *Linguistic Variation* 19(1). 16–46.
- Yang, Charles D. 2000. *Knowledge and Learning in Natural Language*. Ph.D thesis, Massachusetts Institute of Technology.
- Zimmermann, Richard. 2014. Distributional differences between Old English main clauses with and without a conjunction. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG'14 Conference, Ann Arbor, Michigan*, 566–585. Stanford, CA: CSLI Publications.
- Zwart, C. Jan-Wouter. 1991. Clitics in Dutch: evidence for the position of INFL. *Groninger Arbeiten zur Germanistischen Linguistik* 33. 71–92.
- Zwart, C. Jan-Wouter. 1993. *Dutch Syntax: A Minimalist Approach*. Ph.D Thesis, Rijksuniversiteit Groningen.

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APPENDIX

Text	Genre	Year	SUBJTOPIC-V		V-SUBJTOPIC		XP-V-SUBJTOPIC	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Firstgrammar	sci	1150	6	20%	7	23%	17	57%
Homiliubok	rel	1150	173	33%	62	12%	285	55%
Jartein	rel	1250	48	33%	45	31%	53	36%
Thorlakur	rel	1210	57	49%	34	29%	25	22%
Sturlunga	nar	1250	236	49%	119	25%	126	26%
Thetubrot	nar	1250	14	26%	28	52%	12	22%
Jomsvikingar	nar	1260	108	56%	10	5%	76	39%
Gragas	law	1270	25	44%	8	14%	24	42%
Morkin	nar	1275	182	52%	52	15%	118	34%
Alexander	nar	1300	129	47%	16	6%	132	48%
Grettir	nar	1310	230	46%	177	35%	96	19%
Arni	nar	1325	97	46%	60	28%	55	26%
BandamennM	nar	1350	89	35%	61	24%	107	42%
Finnbogi	nar	1350	300	45%	184	28%	176	27%
Marta	rel	1350	100	36%	42	15%	132	48%
Gunnar	nar	1400	173	57%	57	19%	71	24%
Gunnar2	nar	1400	38	42%	29	32%	24	26%
Viglundur	nar	1400	115	36%	141	44%	66	20%
Bandamenn	nar	1450	96	42%	36	16%	97	42%
Ectorssaga	nar	1450	214	36%	273	46%	111	19%
Judit	rel	1450	33	45%	3	4%	38	51%
Vilhjalmur	nar	1450	212	47%	112	25%	125	28%
Aevintyri	nar	1475	176	56%	15	5%	123	39%
Jarlmann	nar	1480	118	48%	66	27%	61	25%
Erasmus	nar	1525	26	33%	1	1%	52	66%
Georgius	nar	1525	49	32%	9	6%	97	62%
Ntacs	rel	1540	76	50%	3	2%	73	48%
Ntjohn	rel	1540	240	55%	14	3%	179	41%
Eintal	rel	1593	197	61%	0	0%	126	39%
Okur	rel	1611	88	66%	0	0%	49	36%
Olafuregils	bio	1628	51	34%	0	0%	98	66%

Table 6 Positional distribution of subject topics in IcePaHC (1150-1628).

Text	Genre	Year	SUBJTOPIC-V		V-SUBJTOPIC		XP-V-SUBJTOPIC	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gerhard	rel	1630	119	69%	1	1%	53	31%
Illugi	nar	1650	223	40%	194	35%	134	24%
Pislarsaga	bio	1659	5	7%	23	31%	46	62%
Indiafari	bio	1661	266	66%	16	4%	124	31%
Armann	nar	1675	73	31%	94	40%	69	29%
Magnus	bio	1675	19	54%	7	20%	9	26%
Modars	nar	1675	49	47%	22	21%	34	32%
Skalholt	nar	1680	44	24%	103	56%	36	20%
Vidalin	rel	1720	160	60%	4	2%	101	38%
Biskupasogur	nar	1725	47	26%	56	31%	79	43%
Klim	nar	1745	145	50%	6	2%	141	48%
Fimmbraedra	nar	1790	164	37%	149	34%	128	29%
Jonsteingrims	bio	1791	204	38%	186	35%	146	27%
Hellismenn	nar	1830	52	15%	242	70%	53	15%
Jonasedli	sci	1835	20	53%	0	0%	18	47%
Piltur	nar	1850	188	60%	42	13%	83	27%
Hugvekjur	rel	1859	134	56%	7	3%	98	41%
Orrusta	nar	1861	211	51%	101	24%	103	25%
Torfhildur	nar	1882	372	69%	33	6%	136	25%
Voggur	nar	1883	24	80%	0	0%	6	20%
Grimur	nar	1888	134	76%	0	0%	42	24%
Vordraumur	nar	1888	149	72%	0	0%	59	28%
Fossar	nar	1902	352	70%	6	1%	146	29%
Leysing	nar	1907	359	64%	24	4%	181	32%
Ofurefli	nar	1908	452	79%	10	2%	108	19%
Arin	rel	1920	200	59%	10	3%	131	38%
Margsaga	nar	1985	406	64%	12	2%	215	34%
Sagan	nar	1985	356	70%	2	0%	151	30%
Mamma	nar	2008	585	81%	10	1%	129	18%
Ofsi	nar	2008	224	74%	17	6%	63	21%

Table 7 Positional distribution of subject topics in IcePaHC (1630-2008).