

V₂ and V₃ Orders in North-American Icelandic

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Abstract

The finite verb typically occurs in second position in main clauses in Germanic languages other than English. Hence they are often referred to as ‘verb-second languages’ or V₂-languages for short. The difference between a V₂-language and a non-V₂ language is shown in (i)–(ii) with Icelandic examples and English glosses (the finite verb is highlighted):

- (i) *María les aldrei blöð.*
Mary reads never newspapers
‘Mary never **reads** newspapers.’
- (ii) *Maríu þekki ég mjög vel.*
Mary_{ACC} know I very well
‘Mary I **know** very well.’

In example (i) the finite verb occurs in second position in Icelandic, immediately following the subject *María* in Icelandic but in the English gloss it occurs in third position, following the adverb *never*. In (ii) the finite verb immediately follows the fronted (topicalized) object *Maríu* in Icelandic but in the English gloss the finite verb again occurs in third position, this time following the subject. This article discusses the influence of intense language contact (English/Icelandic) on the two V₂-order types in

North American Icelandic (NAMIce), a heritage language spoken in former Icelandic enclaves in North America. We show that the subject-first V₂-order is more robust in NAMIce than the topic-first V₂-order and less vulnerable to English influence, although both types are affected to some extent. This is interesting for two reasons. First, it has been argued that word order is typically less prone to cross-linguistic influence than for instance morphology. Second, these results suggest that, contrary to common assumption, the two types of V₂-orders discussed here may have different syntactic sources in Icelandic syntax.

Keywords

North American Icelandic – heritage language – language contact – verb second – incomplete acquisition – language attrition

1 Introduction

Although the finite verb is found in second position (“verb-second”, V₂) in all Germanic languages in some contexts, the extent to which this word order is found varies from one Germanic language to another. Finite auxiliaries and finite lexical verbs behave differently in this respect in English but not in the other Germanic languages. In English, an auxiliary verb may immediately precede a sentence adverb in contexts where a lexical verb will follow it but in other Germanic languages there is no such difference between auxiliaries and lexical verbs. This is illustrated in (1)–(2) with English and Icelandic examples:

- (1) a. *I have never read a newspaper.* auxiliary verb in second position
 b. *I never read newspapers.* lexical verb in third position
- (2) a. *Ég hef aldrei lesið blað.* auxiliary verb in second position
 I have never read newspaper
 ‘I have never read a newspaper.’
 b. *Ég les aldrei blöð.* lexical verb in second position
 I read never newspapers
 ‘I never read newspapers.’

A similar difference emerges between English and other Germanic languages when a non-subject is fronted in a sentence: In English the subject then intervenes between the fronted element and the finite verb so the verb appears

in third position. In other Germanic languages the finite verb will immediately follow the fronted element and thus appear in second position. This difference is illustrated in (3) and (4), again with examples from English and Icelandic:¹

- (3) a. *I have met Chomsky several times.*
 b. *Chomsky I **have** met several times.*
 (finite verb in third position)
- (4) a. *Ég hef hitt Chomsky nokkrum sinnum.*
 I have met Chomsky several times
 b. *Chomsky **hef** ég hitt nokkrum sinnum.*
 Chomsky have I met several times
 (finite verb in second position)
 ‘Chomsky I have met several times.’

Based on examples of this type, Germanic languages other than English are often referred to as V2-languages (short for ‘verb-second languages’) and they obey the so-called V2-constraint whereas English does not.

Syntacticians have proposed various explanations as to how the similarities and differences between the position of the verb mentioned above might be accounted for. Originally these discussions were almost exclusively based on data from monolingual (or even “ideal”) speakers, but recently there has been growing interest in studying data from bilingual speakers from this point of view, including data from speakers of heritage languages (Eide and Hjelde, 2015; Larsson and Johannessen, 2015). Studies by Benmamoun, Montrul and Polinsky (2010) and others suggest that morphology may be more vulnerable to attrition in heritage languages than syntactic phenomena. Various studies have shown that heritage speakers may have near-native-proficiency of various syntactic constructions, e.g. word order phenomena (see, e.g. Håkansson, 1995 on V2 in heritage Swedish; Montrul, Foote and Perpiñán, 2008 on various word order phenomena in heritage Spanish). Yet there are also reports of exceptions to the V2-order, or violations of the V2-constraint in North American Icelandic (NAMIce, see e.g. Arnbjörnsdóttir, 2006:110), and in Norwegian and Swedish heritage languages in North America by Eide and Hjelde (2015) and Larsson and Johannessen (2015).

1 Idiomatic translations of the Icelandic examples will only be included when they cannot straightforwardly be deduced from the word-by-word glosses. Hence in (4b) but not (4a), for instance.

In this paper, the robustness of syntactic features such as the V2-constraint is placed in relation to notions of incomplete acquisition vs. language attrition in heritage languages (see e.g. Montrul *et al.*, 2008; Polinsky, 2011; Putnam and Arnbjörnsdóttir, 2015). We also hope to shed light on different theoretical notions about the nature of certain syntactic structures and the relationship between them. The data are based on interviews and a battery of tests administered to some 60 speakers of NAmIce (for details see section 4.1 below). Because of the syntactic similarities and differences between Icelandic, Norwegian and Swedish, the results of our study should be of comparative interest. The elicitation methods used make it possible to quantify our results in considerable detail and base our conclusions on data from a relatively large sample of speakers.

The paper is organized as follows: Section 2 provides background information on Icelandic as a heritage language in North America (NAmIce). Section 3 outlines the nature of the V2 order (or the V2 constraint) in Modern Icelandic (IceIce), including a basic overview of its acquisition by Icelandic children. Section 4 describes our empirical study and includes a discussion of the findings. Section 5 concludes the paper.

2 North American Icelandic as a Heritage Language

North American Icelandic is a heritage language with few speakers under the age of seventy. It is spoken mainly in the Interlake region, north of Winnipeg in Manitoba, Northern Saskatchewan in Canada, and in parts of North Dakota in the United States. The number of speakers is not known and because the census is not clear on the number of Icelandic speakers in Canada and the US, it is difficult to accurately account for the number of Canadians and Americans of Icelandic descent today, but they may include fewer than five thousand speakers in the whole of North America.

More is known about the number of emigrants who left Iceland. The bulk of emigration from Iceland to North America took place from 1873 to 1914, when a little over 14,000 Icelanders are documented to have left for North America. Few seem to have left after 1914, and although Icelanders emigrated before and after this period and some may have gone undocumented, this is the number most used as a reference. At the time of the emigration in the nineteenth century, Iceland had approximately 75,000 inhabitants (Kristinsson, 1983).

Icelandic survives as a heritage language mainly among the oldest generation. The Icelandic immigrant group was small and immigration ceased almost entirely in 1914. Thus there was no renewal of speakers from the old

country to maintain the language after 1914. The survival of Icelandic as a heritage language may have many reasons. One is that initially the Icelandic enclaves were isolated from other settlements. The largest Icelandic enclave is in the Interlake region of Manitoba, where Icelanders originally had intended to form “New Iceland”. They established their own government, schools and newspapers. Second, many Icelandic immigrants came in family groups with young children. Third, they brought a cultural tradition and ethnicity defined in terms of their language and literature, and an emphasis on home education that continued after the children had started formal schooling in English speaking schools (Bessason, 1967; Arnbjörnsdóttir, 2006). Literacy practices among the early settlers, letter writing and minimal linguistic variation in Icelandic probably sustained the language and kept it more or less intact despite the isolation from Iceland for almost a century. In 1974, on the 100th anniversary of the settlements, contact between Iceland and the Icelandic settlements in North America increased. As a result, many Canadians and Americans of Icelandic descent visited Iceland and began formal study of Icelandic, which in turn may have enhanced the level of proficiency among the heritage speakers. Speakers who have only learned Icelandic as a second language in formal situations were excluded from this study.

The Icelandic immigrants seem to have had social and geographical mobility and bilingualism and biculturalism came easily to them (Matthiasson, 1989). Matthiasson also warns that although many Icelanders ‘integrated’ relatively quickly, this is not true for all. Icelanders were one of the first immigrant groups to arrive in Manitoba. They were protestant and Northern European much like the English and Scottish inhabitants already there, and they were not too many in number. This may have led to a comparatively welcoming reception once in North America. Icelanders soon took an active part in government, education, commerce and unions. But for many there was also a sense of obligation to retain their old customs and culture and maintain the Icelandic language, and the extent of this obligation was debated in the many newspapers published by Icelandic immigrants (Arnbjörnsdóttir, 2006). Strong mechanisms remained in place to support the survival of Icelandic in North America among the first generations of immigrants. The ability to speak, read and write Icelandic was maintained through home-schooling. Church services and Sunday school were conducted in Icelandic for many years, both in New Iceland in Canada and in Mountain, North Dakota. As early as 1876, during the first winter in Manitoba and North Dakota, a flourishing newspaper business fueled interest in reading and writing Icelandic (Arnbjörnsdóttir, 2006). In 1951 an Icelandic Chair was endowed at the University of Manitoba in Winnipeg and a Department of Icelandic established.

Icelandic as a heritage language survives today as third and fourth generation Canadians and Americans of Icelandic descent are able to converse in the language without great difficulty. Their speech showed, to different degrees, signs of the intense contact with English in the lexicon, phonology, morphology—and syntax. The question arises as to why certain features of the language are more robust than others in intense language contact situations. The present paper is an attempt to add to our understanding of this issue.

3 The Robustness and Vulnerability of the V2-Constraint in Icelandic

3.1 *Two types of V2*

As illustrated in the Introduction, the V2-constraint generally applies in Icelandic declarative main clauses, as it typically does in Germanic languages other than English. Arguably, it comes in two guises. First, the finite verb typically precedes all sentence adverbs in Icelandic, including temporal ones like *alltaf* ‘always’, *aldrei* ‘never’, and *stundum* ‘sometimes’. English is different, as can be seen from the idiomatic English glosses below (the finite verb highlighted):

- (5) a. *María talar alltaf/*alltaf talar* *íslensku við foreldra sína.*
 Mary speaks always/always speaks Icelandic to parents her.REFL.POSS
 ‘Mary always **speaks** Icelandic to her parents.’
- b. *María hefur alltaf/*alltaf hefur* *talað íslensku við þau.*
 Mary has always/always has spoken Icelandic to them
 ‘Mary **has** always spoken Icelandic to them.’

We will refer to this subject-initial order in Icelandic as the S-Vf-Adv order (for “subject – finite verb – adverb”). Note that the V2-constraint in this sense holds for Icelandic regardless of the type of verb involved. In English, on the other hand, it is basically auxiliaries, the copula *be* and modal verbs that precede adverbs of this kind (cf. e.g. the discussion in Warner 1993:8). This can be seen by comparing the English glosses for (5a) and (5b). A common analysis of this phenomenon in English is that auxiliaries and auxiliary-like verbs in English move to the I-position (or to T) in the sentence whereas lexical verbs do not. In this respect English not only differs from Icelandic and other Germanic V2-languages (where the Vf-Adv order in declarative main clauses is standardly attributed to V-to-C movement) but also from Romance languages like French, as discussed first in Pollock’s famous paper (1989:367):

- (6) a. *John* *kisses often/often kisses *Mary*.
 b. *Jean* embrasse souvent/*souvent embrasse *Marie*.

Pollock proposed to account for this difference by claiming that French, but not English, has verb movement to a position in the IP-domain (the I-position, or the T-position in later models of syntactic structures) and this has become a popular account of this phenomenon.

Second, when a non-subject is fronted in the Germanic V-2 languages, the finite verb will immediately follow the fronted element and thus show up in second position, whereas in English the subject will intervene between the fronted element and the finite verb. Thus (7b) is fine in Icelandic while (7c) is ungrammatical. Again, the idiomatic English glosses of the Icelandic examples in (7a-c) illustrate this difference:

- (7) a. *María* *talar íslensku við foreldra sína*.
 Mary speaks Icelandic to parents her.REFL.POSS
 'Mary speaks Icelandic to her parents.'
 b. *Við foreldra sína talar María íslensku*.
 to parents her. REFL.POSS speaks Mary Icelandic
 'To her parents, Mary speaks Icelandic.'

We can refer to the topic-initial order in (7b) as XP-Vf-S (for "any constituent – finite verb – subject"). English differs from Icelandic and other Germanic V2-languages in this respect, as is well known: Fronting of non-subject elements in English does not normally trigger "subject-verb inversion" (cf. the gloss for (7b)).²

There is an important exception to the V2-order in Icelandic, however: Although the finite verb normally precedes all sentence adverbs in the default word order in Icelandic declarative clauses, some adverbs can intervene

2 There are some V2-like constructions in Modern English, such as the following for instance (often referred to as negative inversion and locative inversion, respectively):

- (i) a. Never **have** I seen such a mess!
 b. [Only in Iceland] **can** you pay for a hot dog with a credit card.
 c. [On the wall] **hung** a tall mirror.

This is a very restricted set of examples, however, and they will not be discussed in this paper.

between the subject and the finite verb although they do not have to. This is illustrated in (8):³

- (8) a. *María talar bara/einfaldlega/ íslensku við foreldra sína*
kannski/náttúrulega ...
 Mary speaks just/simply/maybe/ Icelandic to parents her.
 naturally ... REFL.POSS
- b. *María bara/einfaldlega/ talar íslensku við foreldra sína.*
kannski/náttúrulega ...
 Mary just/simply/maybe/ speaks Icelandic to parents her.
 naturally ... REFL.POSS
- 'Mary just/simply/maybe/naturally ... speaks Icelandic to her parents.'

In (8b) we have clear instances of a V₃ order in Icelandic. They involve a subclass of speaker-oriented adverbs, often just referred to as V₃-adverbs for the lack of a better term (see e.g. Thráinsson, 2007:38–39 with references). Note in particular that this class of adverbs does not contain the negation *ekki* 'not' nor temporal adverbs like *aldrei* 'never', *alltaf* 'always' and *stundum* 'sometimes' (see the discussion around (5) above). Although examples like the ones in (8b) are probably not very common,⁴ the existence of such violations of the V₂-constraint may be an important part of the linguistic input that speakers acquiring or using NAmIce are exposed to, especially since sentence adverbs also typically intervene between the subject and a finite (lexical) verb in English, as already pointed out.

The standard analysis of the Germanic V₂-phenomenon has been that in declarative main clauses the finite verb moves to C (see e.g. Vikner 1995, with references). Under this assumption, the fronted PP in (7b) would be in SpecCP, the finite verb in C and the subject in SpecIP.⁵ Now it has also been

3 It is also possible to find examples of V₃-order in certain types of embedded clauses (see e.g. Angantýsson, 2007; 2011 for discussion and references), but these need not concern us here since we are almost exclusively considering word order in declarative main clauses in this paper.

4 A quick search by Google gives the following raw results for the two possible orders with the subject *hún* 'she', the verb *tala* 'speak' and the V₃-adverbs mentioned in (8):

<i>hún talar bara</i> (V ₂) vs. <i>hún bara talar</i> (V ₃):	510	vs.	70
<i>hún talar einfaldlega</i> (V ₂) vs. <i>hún einfaldlega talar</i> (V ₃)	5	vs.	1
<i>hún talar kannski</i> (V ₂) vs. <i>hún kannski talar</i> (V ₃)	5	vs.	3
<i>hún talar náttúrulega</i> (V ₂) vs. <i>hún náttúrulega talar</i> (V ₃)	7	vs.	0

5 This can be translated into frameworks that assume more complex structures of CP and IP (see e.g. Angantýsson, 2011 and references cited there).

argued that Icelandic has obligatory V-to-I (or V-to-T, assuming a more detailed analysis of the I-domain) in all clause types (see e.g. Thráinsson, 2010 and references cited there). This means, then, that the default word order S-Vf-Adv observed for instance in (2) **could** be generated without V-to-C, although it is standardly assumed that it does involve V-to-C and movement of the subject to SpecCP. The topicalization order in (7b) (i.e. the XP-Vf-S-type), on the other hand, would have to involve V-to-C. Under this analysis, the order S-Vf-Adv would simply be derived by V-to-I, presumably like the English a-example below:

- (9) a. Mary **has** often spoken/**will** never speak/**is** always speaking ...
Icelandic to her parents.
b. *Mary **speaks** often/never/always ... Icelandic to her parents.

The difference between the Icelandic and English V-to-I-movement would then be that in Icelandic it applies to all finite verbs but in English it only applies to auxiliaries and modals. We will return to this issue in the next sections.

3.2 *Acquisition of V2 in Icelandic*

As will be demonstrated below, the V2-order is not always observed in NAmIce. One possibility is that the position of the verb in NAmIce is affected by incomplete acquisition. It is therefore important to examine briefly the acquisition of V2 in Icelandic spoken in Iceland (IceIce). As Sigríður Sigurjónsdóttir has pointed out, it seems that Icelandic children acquire the typical S-Vf-Adv order very early (Sigurjónsdóttir, 1999; 2005a; b). As has been reported for children acquiring other Germanic languages, Icelandic children go through the so-called “optional infinitive stage” (roughly between the ages of 1;6 and 2;6), where they either produce sentences with the order S-Adv-V_{INF} or S-Vf-Adv as illustrated in (10) (from Sigurjónsdóttir, 2005b:644):

- (10) a. *Pau* *ekki koma.* (Eva 1;7:10)
they not come.INF
‘They don’t come.’
b. *Skotta fer* *ekki.* (Eva 1;6:13)
Skotta goes.IND not
‘Skotta doesn’t go.’

Around the same age they seem to master the V2-order in topicalization structures (i.e. XP-Vf-S): If they front a non-subject constituent, they “move” the verb into a pre-subject position and the verb form is virtually always finite as shown in Table 1 (adapted from Sigurjónsdóttir, 2005b:646):

TABLE 1 *Finite and non-finite verbs in V₂-position in topicalization structures in the language of two Icelandic children.*

child (and age range)	XP-Vf-S		XP-VINF-S	
	%	N	%	N
Eva (1;1:1-2;4:16)	96%	350	4%	14
Birna (2;0:19-2;6:13)	99%	74	1%	1

Although the numbers in Table 1 do not tell us whether or to what extent these children also produced “English-like” examples of the sort XP-S-Vf (i.e. V₃ examples) during this period, they show that very young children have no problem moving the finite verb to the C-position, assuming the standard analysis of topicalization sentences in a V₂-language like Icelandic. This is worth keeping in mind when we consider possible English influence on topicalization in NAMIce and the question of incomplete acquisition vs. attrition.

3.3 *What does this predict about V₂ and V₃ in NAMIce?*

Since English is the dominant language in the Icelandic enclaves in North America, and it is not a V₂-language, one might expect that the V₂-constraint would be vulnerable in NAMIce. This is because all speakers of NAMIce are English-dominant bilinguals. Icelandic is now used almost exclusively with intimates as a family language while transactions outside the home are conducted in English. All the heritage speakers in this study attended English speaking schools and they typically do not speak Icelandic on a regular basis anymore (for details see the discussion around Tables 2 and 3 below). In addition, the “leakage” of the V₂-constraint might contribute to this, namely the fact that there are exceptions to the V₂-constraint in IceIce (cf. the discussion of the V₃-adverbs around (8) above). Hence it is not surprising that violations of the V₂-constraint in NAMIce have been pointed out in the literature (see Arnbjörnsdóttir, 2006:110; cf. also Óladóttir, 2013).

Before we present the results of our study, it is useful to give some thought to what we might expect in this respect. Possible hypotheses include the following:

Hypothesis A:

- Speakers of NAMIce are likely to accept/select and produce English-type topicalization structures, i.e. the V₃-variant XP-S-Vf.

Hypothesis B:

- Speakers of NAMIce are likely to accept/select and produce V₃-structures of the S-Adv-Vf kind, both because such structures are common in English and because certain structures of this kind are found in Icelandic (cf the examples in (8) above).

Hypothesis C:

- The two kinds of possible violations of the V₂-constraint described here, namely the topic-initial XP-S-Vf and the subject-initial S-Adv-Vf structures, need not go hand in hand because the two types of V₂-orders violated may have different syntactic sources (V-to-I vs. V-to-C).

Hypothesis D:

- Early and extensive exposure to English during the acquisition period may influence the acquisition of V₂-order in a negative way because V₃-order is common in English.

Hypothesis E:

- Limited use of and exposure to Icelandic, both at home and outside the home, will weaken the V₂-constraint.

Hypothesis A predicts cross-linguistic influence from English because English is not a V₂-language. Because there are few or no exceptions to the V₂-constraint in Icelandic topicalization structures, the reason for this could just be the dominance of English. If so, this could either be due to incomplete acquisition of this constraint in NAMIce in an English-speaking environment or language attrition. In addition, the relative complexity of the Icelandic topicalization structures might play a role (although they seem to be acquired quite early by Icelandic children, as already mentioned). In their general characterization of heritage language grammars, Benmamoun *et al.* (2010 section 4.4) have pointed out that although core syntactic structures are often relatively completely acquired by heritage speakers “higher projections of the CP-layer (i.e., complex syntax) appear to much less productive and developed in these speakers”.

Hypothesis B can be divided into two sub-hypotheses:

(11) a. V₃-adverbs vs. other adverbs:

Speakers of NAMIce are most likely to accept/select and produce S-Adv-Vf structures where the adverb is a possible V₃-adverb in IceIce (cf. the examples in (8) above).

b. Auxiliaries vs. lexical verbs:

Speakers of NAMIce are most likely to accept/select and produce S-Adv-Vf structures (V₃-structures) when the finite verb is a lexical verb, because V-to-I movement does not apply to lexical verbs in English. Conversely, they are most likely to accept/select and produce S-Vf-Adv structures where the finite verb is an auxiliary (or auxiliary-like) verb, since that is a normal word order in English.⁶

Hypothesis C can be related to ongoing discussions in generative syntax. Assuming that the finite verb ends up in second position in topicalization structures by V-to-C movement but in second position in other types of clauses (main and subordinate) by V-to-I movement, the source of (or reason for) the V₂-constraint will be different in these two types of clauses (cf. the discussion of the V₂-constraint in two different guises around the examples in (1)–(4) above). Hence the prediction in Hypothesis C. Now according to common assumptions, the finite verb would have to move through I on its way to C. So if a speaker has V-to-C in his or her grammar, (s)he should also have V-to-I whereas the reverse need not be true. Given this, we might expect more violations of the V₂-constraint in topicalization structures than in subject-initial clauses because the topicalization structures would involve V-to-I plus V-to-C whereas subject-initial V₂-clauses would only involve V-to-I (for an overview of proposals along these lines see e.g. Thráinsson, 2010). In addition, it has been argued in the literature that there is a connection between V-to-I movement and morphology: If a language has rich agreement morphology, it will have V-to-I movement (see e.g. Bobaljik and Thráinsson, 1998; Thráinsson, 2010). So, if the morphology of NAMIce is not seriously reduced, it should have V-to-I movement.⁷ Finally note that the order S-Vf-Adv order is actually quite common in the English input, namely when the Vf is an auxiliary or an auxiliary-like verb, whereas the XP-Vf-S order is truly exceptional and in fronting constructions XP-S-Vf the general rule in English. This might be relevant in the present context.

6 As pointed out to us by a reviewer, some studies have found that children acquiring Nordic languages seem to have a stronger tendency to move auxiliaries than lexical verbs early on (see e.g. Håkansson and Dooley-Collberg, 1994; Heycock *et al.*, 2013:16). Larsson and Johannessen (2015:175n), on the other hand, did not find any clear evidence for such a difference in their study of word order in heritage Scandinavian (Swedish and Norwegian), but point out that this may be because of insufficient material.

7 This could be interpreted as predicting that if a the language of a speaker of NAMIce has reduced verbal morphology, (s)he might also lose or have lost V-to-I movement. We cannot test this prediction in the present paper. For relevant discussion see Eide and Hjelde 2015.

Hypotheses D and E are obviously related to the theoretical debate about incomplete acquisition vs. attrition. If it turns out that there is a correlation between the acceptance/selection of V₃-examples in the language of speakers of NAmIce and early and/or extensive exposure to English during the acquisition period, as predicted by hypothesis D, then we might have evidence for incomplete acquisition. And if it turns out that the less frequently the speakers of NAmIce use Icelandic, the more likely they are to choose V₃ over V₂, then that would be consistent with hypothesis E and could be interpreted as a sign of attrition. Reading in Icelandic, taking courses in Icelandic and possibly also visiting Iceland would count here as “use of Icelandic” in some sense or at least being exposed to it.⁸

While hypotheses A–E will not be tested formally below, they will be used as guidelines and we will organize our presentation of the data accordingly.

4 The Study

4.1 *Participants*

The data presented here were collected during three visits to North America: the first one to Manitoba in the spring of 2013, the second to Alberta, British Columbia and Washington State in the spring of 2014 and the third to North Dakota, Saskatchewan and Manitoba in August 2014. We interviewed and tested a total of 126 third and fourth generation speakers of NAmIce, but the results reported here are based on interviews with some 60 speakers who participated in the syntactic investigations that form the basis of this study.⁹ There was an exactly even split between male and female subjects, the mean age of the subjects was 77 years and the age range 26–98 years. In Table 2 we describe some additional characteristics of those subjects (the percentage is always “valid percent”, i.e. with the number of missing cases disregarded since these are always very few, never more than 4):

As can be seen from Table 2, all the subjects were exposed to Icelandic from birth whereas about half of them were first exposed to English in elementary school at the age of 6. About half of the subjects also say that they have taken

8 As already mentioned, none of the speakers included here had just learned Icelandic as a second language, as there is typically a very clear difference between SLA learners and heritage speakers (see e.g. Westergaard and Andersen 2015 for discussion). All the speakers included were thus “genuine heritage speakers”, i.e. they had acquired NAmIce as children (cf. Table 2).

9 As will be seen below, the number of participants taking each syntax test varied considerably since the tests were revised to some extent between visits.

TABLE 2 *The subjects' exposure to Icelandic and English, and their use of Icelandic.*

	from birth	in school	yes	no
a. First exposure to Icelandic	100%	0.0%		
b. First exposure to English	50.9%	49.1%		
c. Learned to read Icelandic before school?			19.0%	81.0%
d. Did you/do you use Icelandic outside the home?			78.0%	22.0%
e. Have you taken any courses in Icelandic?			51.7%	48.3%

TABLE 3 *The subjects' use of Icelandic and English in childhood and now.*

	daily	sometimes	rarely	never
Icelandic used at home in childhood	81.4%	13.6%	3.4%	1.7%
English used at home in childhood	65.5%	27.6%	5.2%	1.7%
Reads Icelandic (books, newspapers ...)	7.0%	28.1%	35.1%	29.8%

some courses in Icelandic, mostly very short and rather informal courses. A few of the subjects had, however, attended more formal courses of some sort. Most of our subjects said that they had at some point used Icelandic outside the home, although most of them said that they no longer do so on a regular basis.

It is important to determine to what extent Icelandic and English were used at home when these speakers were growing up, and the speakers' contact with written Icelandic should also be relevant. Table 3 summarizes this information.

As Table 3 shows, almost one third of the subjects never read any Icelandic and very few of them read Icelandic daily. Figures about following news from Iceland on the Internet were very similar. This confirms our impression that rather few of our subjects were comfortable reading Icelandic.

Finally, it is important to note that there has been increased contact between Iceland and Americans of Icelandic descent in Canada and the US over the last few decades. This is also witnessed by the fact that only 23.2% of our subjects had never been to Iceland, 25% of them had once been to Iceland and over 50% of them had been to Iceland twice or more often.

With the above characterization in mind, our typical subject can be described as follows:

A male or female speaker over 75 years of age, who grew up in a bilingual environment. Icelandic was used on a daily basis at home, at least until the subject started going to school, but so was English, although some of the subjects had not spoken much English until they went to school. The subject most likely did not learn to read in Icelandic before (s)he went to school (and the school was monolingual English) and still does not read Icelandic fluently (and most likely does not read anything in Icelandic on a regular basis, perhaps never). (S)he may use or have used Icelandic outside the home, especially in conversations with close relatives or friends (e.g. on the phone), and will probably have been to Iceland at least once. There is about a 50% chance that the subject has taken some sort of a course in Icelandic at some point, usually just a very brief and informal course.

4.2 *Methods of Gathering Data*

4.2.1 Structured elicitation and spontaneous speech materials

In our field studies we tried various methods to elicit data and obtain grammaticality judgments from the speakers. We asked subjects to evaluate sentences with the options ‘yes/?/no’ and we also experimented with a 5-point Likert scale. Neither method turned out to work well. On the other hand, asking the subjects to choose between variants was effective and was therefore used as the main method for testing various syntactic variables.

First, the subjects were given the following instructions (abbreviated here):

There is more variation in Icelandic than most people realize. [...] We have studied variation of this kind in Icelandic in Iceland and now we would like to see if North American Icelandic is similar or different in this respect. But it is important to remember the following:

- we are only interested in what **you yourself feel that you could say, not what you may have been told or taught that you should say**
- we are mainly interested in **spoken or colloquial Icelandic**
- this is **not a test**

[...]

When these instructions had been given, the subjects were presented with some practice sentences and then the real test sentences would be presented

as shown in (12) (without the translations, of course). The actual test sentence would be preceded by a context sentence as illustrated in (12):

(12)	Context sentence	<i>Við</i>	<i>erum</i>	<i>búin</i>	<i>að</i>	<i>borða.</i>
		we	are	done	to	eat.inf
		'We have already eaten.'				
	Test sentence	<i>Núna</i>	<i>við skulum</i>	<i>fara</i>	<i>í</i>	<i>bíó.</i>
		now	<i>skulum við</i>	we shall/shall we go	to	cinema

The subjects were presented with the examples one at a time, both visually and orally, i.e. the test sentence was shown to them and then read aloud and they asked to choose between the alternatives given. In most instances there were only two alternatives given but in other cases the subjects were asked to choose between three or more alternatives.¹⁰ Although they had been told that they could check (or point to) more than one alternative, they very rarely did so.¹¹

In addition to this structured elicitation, the subjects were interviewed informally, asked about their background etc., and then they were typically asked to tell the well known Frog story (*Frog, Where Are You?* by Mercer Mayer), often used in to elicit spontaneous speech data from children, monolinguals or bilinguals. Some of the speakers were also asked to tell the *Pear Story* (developed by Wallace Chafe to prompt story telling) after having watched the silent video clip. This spontaneous speech material was transcribed and is used for comparative purposes in the present study.

4.2.2 Different Types of Adverbs and Verbs

As discussed in connection with the two subtypes of Hypothesis B, described in (11) above (potential role of different adverbs and verbs), it is necessary to

¹⁰ We only report on choices between V2 and V3 in the present paper.

¹¹ Although this method worked well in the sense that the subjects found the task relatively easy to perform, it should be noted that it has its drawbacks: The selection of one alternative over another does not really tell us what the exact status of the non-selected alternative is in the language of the speaker in question. Even if a speaker selects alternative A all the time in a given test and never alternative B, this may not mean that alternative B is ungrammatical in his or her grammar. This should be kept in mind in the discussion below.

distinguish at least two kinds of adverbs when considering V2-violations of the S-Adv-Vf kind. Our test sentences contained both kinds of adverbs as well as the negation *ekki* ‘not’. First consider the examples in (13):¹²

- (13) a. *Kristín talar stundum/stundum talar íslensku.*
 Kristin speaks sometimes/sometimes Icelandic
 speaks
- b. *Hann vinnur alltaf/alltaf vinnur fram á kvöld.*
 he works always/always works into evening
- c. *Hann hefur aldrei/aldrei hefur lesið bókina.*
 he has never/never has read book.DEF

All the examples in (13) contain adverbs that should not intervene between the subject and a finite verb in Icelandic, be it a lexical verb or an auxiliary verb. In English, on the other hand, they would, unless the finite verb is an auxiliary, in which case it would normally shift across the adverb (cf. *Kristin sometimes speaks ...*, *He always works ... He has never read ...*). As already mentioned, it might thus make a difference for speakers of NAMIce whether the finite verb is a lexical verb or an auxiliary in this kind of a context.

The adverbs in (14) arguably belong to the special class of V3-adverbs in Icelandic mentioned above (see the discussion around (8)):

- (14) a. *Víð stoppum kannski/kannski stoppum í New York.*
 we stop perhaps/perhaps stop in New York
- b. *Hún spilar líka/líka spilar vel á píanó.*
 she plays also/also plays well on piano.
 ‘She also plays the piano well.’

The adverb *kannski* ‘maybe, perhaps’ is a frequently cited V3-adverb (see e.g. Thráinsson, 2007:38–39 with references). A common analysis is that adverbs of this kind can be adjoined exceptionally high in the syntactic structure so that a V-to-I (or V-to-T) movement will not shift the finite verb across them (for discussions of the relationship between syntactic placement of adverbs and their semantics see e.g. Cinque, 1999; Ernst, 2002). Our intuition, as well as

12 For ease of exposition, we will omit the context sentences in the presentation of the examples.

searches in various online corpora, suggests that *líka* ‘also’ should be classified as a V_3 -adverb in certain contexts. Some examples from the corpus *Mörkuð íslensk málheild* ‘A tagged Icelandic corpus’ are given in (15):

- (15) a. *Ég líka verð að fara núna.* (from a blog)
 I also have to go now
 ‘I actually have to go now.’
- b. *við líka fengum áttatíu þúsund krónur* (from a spoken language corpus)
 we also got eighty thousand crowns
 ‘we in fact got eighty thousand crowns’
- c. *Það líka kom fram að Norðmenn ...* (from a website of a government agency)
 it also came forth that Norwegians
 ‘It also turned out that Norwegians ...’

As indicated by some of the glosses, *líka* does not really mean ‘also’ in all these cases. It has more of a speaker-oriented feel to it, like many of the V_3 -adverbs do in IceIce. It will be interesting to see how speakers of NAMIce treat it in this kind of context, but it was not included in the test sentences.

Finally, since auxiliaries precede sentence adverbs in English whereas lexical verbs do not, it might make a difference for speakers of NAMIce whether the finite verb in a potential V_2 -context is an auxiliary or a lexical verb. Hence some test sentences contained an auxiliary while others only contained a lexical verb (see section 4.3.2 below).

4.3 The Results

4.3.1 Testing Hypothesis A

Hypothesis A:

Speakers of NAMIce are likely to accept/select and produce English-type topicalization structures, i.e. the V_3 -variant XP-S-Vf.

As explained above, there are virtually no exceptions to the V_2 -constraint in Icelandic topicalization structures. This means that if Hypothesis A is confirmed, the reason would probably be the dominance of English in the community, together with the relative structural complexity of topicalization structures, which have been found to present problems for speakers of other heritage languages (see Benmamoun *et al.*, 2010, section 4.4).

To test Hypothesis A, the speakers were presented with sentences containing fronted non-subject elements, mostly simple temporal phrases like

í gær ‘yesterday’, *á morgun* ‘tomorrow’, *í kvöld* ‘tonight’, *næsta vetur* ‘next winter’, *núna* ‘now’, but also one instance of a fronted temporal clause (*Eftir að Jóna missti manninn* ‘After Jóna lost her husband’) and one of a fronted object (*manninn þarna* ‘the man over there’). Representative examples are given in (17), where the context sentences are omitted for simplification as before:¹³

- | | | | | | |
|---------|-------------------------|----------------------------|--------------|-------------|-----------------|
| (17) a. | <i>Á morgun</i> | <i>sjáum við/við sjáum</i> | <i>það.</i> | | |
| | tomorrow | see we/we see | it | | |
| b. | <i>Næsta vetur</i> | <i>ætla hún/hún ætla</i> | <i>að</i> | <i>læra</i> | <i>ítölsku.</i> |
| | next winter | intends she/she intends | to | learn | Italian |
| c. | <i>en manninn þarna</i> | <i>þekki ég/ég þekki</i> | <i>ekki.</i> | | |
| | but man.def | know I/I know | not | | |
| | there | | | | |

A total of eight test sentences involving topicalization was presented to the subjects. No speakers were asked to judge all the sentences and sometimes the interviewer would skip an example, e.g. if the speaker was getting tired. More than half of the subjects who evaluated at least two different topicalization sentences showed some variation in their judgments, i.e. they would check the V2 option in one case and the V3 option in another one or else they would check both options (which was a permitted but rarely used option). This is summarized in Table 4. It shows that although many of the speakers sometimes pick the English-type V3-variant, almost none of them do so all the time whereas a considerable number of the speakers sticks to the Icelandic V2 order in these structures.¹⁴

As Table 4 shows, almost two thirds of the subjects select the V3-order at least some of the time. This can be said to be consistent with hypothesis A.

13 The sentences were presented as shown in (19) and the order of the V2 and V3 variants was randomized. Some of the stimuli in the pilot study did not include a context sentence but it is included in our illustrative examples if it was ever used. In cases where there was a minor change in the stimulus sentence from the first to the last field trip, we present the last version as an illustration.

14 These results present averages over a number of tests and not all the speakers participated in all the tests.

TABLE 4 *The subjects' selection of word order alternatives in topicalization structures.*

topicalization				
V ₂ only	V ₂ or V ₃	both options	V ₃ only	Total
17 (35.4%)	23 (48.0%)	4 (8.3%)	4 (8.3%)	48 (100%)

TABLE 5 *Selection of V₂ and V₃ alternatives in topicalization structures.*

	V ₂		V ₃		Total N
	N	%	N	%	
a. <u>Í gær</u> veiddi kötturinn/kötturinn veiddi ... yesterday caught the cat/the cat caught	6	54.5%	5	45.5	11
b. <u>Á morgun</u> sjáum við/við sjáum ... tomorrow see we/we see	21	60.0%	14	40.0%	35
c. <u>Næsta vetur</u> ætlar hún/hún ætlar ... next winter intends she/she intends	8	47.1%	9	52.9%	17
d. <u>Manninn þarna</u> þekki ég/ég þekki ... the man over there know I/I know	4	66.7%	2	33.3%	6
e. [<u>Eftir að Jóna</u> ...] hætti hún/hún hætti ... after Jóna ... stopped she/she stopped	2	50.0%	2	50.0%	4
f. <u>Í gær</u> fór hann/hann fór ... yesterday went he/he went	10	71.4%	4	28.6%	14
g. <u>Núna</u> vill hann/hann vill ... now wants he/he wants	11	84.6%	2	14.4%	13
h. <u>Í kvöld</u> fer hún/hún fer ... tonight goes she/she goes	9	64.3%	5	35.7%	14
Total:	71	62.3%	43	37.7%	114

It is also of some interest to look at the results for individual test sentences. For most of them the majority of the speakers chose the V₂ variant, although the figures vary considerably from one sentence to another as shown in Table 5. There are two possible reasons for this variation. First, the exact nature of the fronted element might play a role (as has been observed in other situations with variable V₂, e.g. Westergaard, 2009), witness the fact that V₂ is most

frequently selected after the fronted adverb *núna* 'now'. Second, the group of speakers evaluating the examples varies to some extent, as indicated by the actual number (N) of speakers involved in each case. On the average, however, the V2 variant is selected over 60% of the time.

To make sure that the selection by speakers of NAmIce of the V3-order in topicalization structures was truly different from what speakers of IceIce would do, the following four test sentences were presented under the exact same conditions to 15 speakers of NAmIce and 15 speakers of IceIce who were over 70 years old:

- (18) a. *Á morgun* *við sjáum/sjáum við* *það*.
tomorrow we see/see we it
- b. *Ígær* *hann fór/fór hann* *í búðina*.
yesterday he went/went he to store.DEF
- c. *Núna* *vill hann/hann vill* *ávexti*.
now wants he/he wants fruit
- d. *Í kvöld* *fer hún/hún fer* *í bíó*.
tonight she goes/goes she in cinema

The choices by the NAmIce group and the IceIce group are shown in Table 6.

Although this group of speakers of NAmIce performed over average on these test sentences, there is a great difference between their performance and that of the IceIce speakers tested: The native speakers always selected the V2-option.

Given this result of the formal elicitation, it should be easy to find examples of the English-type XP-S-Vf order in the spontaneous speech samples of our

TABLE 6 *Selection of V2/V3-orders in topicalization structures by speakers of NAmIce and IceIce.*

Example	NAmIce speakers			Older IceIce speakers		
	V2	V3	V2+V3	V2	V3	V2+V3
a. <i>sjáum við/við sjáum</i>	41.2% (7)	52.9% (9)	5.9% (1)	100% (15)	0	0
b. <i>fór hann/hann fór</i>	64.3% (9)	28.6% (4)	7.1% (1)	100% (15)	0	0
c. <i>vill hann/hann vill</i>	68.8% (11)	18.8% (3)	12.5% (2)	100% (15)	0	0
d. <i>fer hún/hún fer</i>	66.7% (10)	33.3% (5)	0	100% (15)	0	0

subjects, although we would expect some of the samples not to contain any such sentences. This is borne out. Some representative V₃-examples are given in (19) (gender and age of the subject in parentheses):

- (19) a. *hérna hann er ... að ... hjálpa hundinn upp* (male, 72)
 here he is to help dog.DEF up
 'here he is helping the dog up'
- b. *stundum ég er að hugsa í ensku* (male, 72)
 sometimes I am to think in English
 'sometimes I am thinking in English'
- c. *þá strákurinn er á ee ... the head* (female, 88)
 then boy.DEF is on
 'then the boy is on the head'
- d. *líka ég hefur gert mikið vinnu* (female, 75)
 also I have done much work
 'in addition I have done much work'

The data from the speech samples which have been analyzed so far fall in line with results of the more formal elicitation.

We can conclude, then, that Hypothesis A is supported by our data: Speakers of NAMIce are at least somewhat likely to produce and accept English-type topicalization structures, i.e. the V₃-variant XP-S-Vf, although this varies from speaker to speaker.

4.3.2 Testing Hypothesis B Hypothesis B:

Speakers of NAMIce are likely to accept/select and produce V₃-structures of the S-Adv-Vf kind, both because such structures are common in English and because certain structures of this kind are found in Icelandic (cf the examples in (8) above).

As described above, Hypothesis B can be broken down into two sub-hypotheses (cf. the examples in (8) above and the discussion in section 4.2.2):

Hypothesis Ba. V₃-adverbs vs. other adverbs:

Speakers of NAMIce are most likely to accept/select and produce S-Adv-Vf structures where the adverb is a possible V₃-adverb in IceIce.

Hypothesis Bb. Auxiliaries vs. lexical verbs:

Speakers of NAMIce are most likely to accept/select and produce S-Adv-Vf structures when the finite verb is a lexical verb, because V-to-I

movement does not apply to lexical verbs in English (i.e., V₃ is the normal order in English when the finite verb is a lexical verb). Conversely, they are most likely to accept/select and produce S-Vf-Adv structures where the finite verb is an auxiliary (or auxiliary-like) verb, since that is a normal word order in English.

So let us test these sub-hypotheses in turn.

Hypothesis Ba predicts that the V₃-order should be more commonly accepted/selected¹⁵ if the examples contain potential V₃-adverbs such as *líklega* ‘probably’, *bara* ‘just’, *nefnilega* ‘namely’, *líka* ‘also’ and *kannski* ‘maybe, perhaps’ than adverbs normally disallowing V₃-order in IceIce like *stundum* ‘sometimes’, *oft* ‘frequently’ and *alltaf* ‘always’. Comparison of the results shown in Tables 7 and 8 shows that this is indeed the case.

TABLE 7 *Selection of V₂ and V₃ alternatives in subject-initial declarative main clauses containing potential V₃-adverbs.*

	V ₂		V ₃		Total
	N	%	N	%	N
a. Guðmundur getur líklega/líklega getur keyrt ... Gudmundur can probably/probably can drive ...	1	25.0%	3	75.0%	4
b. Ég vil bara/bará vil vatn I want just/just want water	15	75.0%	5	25.0%	20
c. Smiðurinn kemur nefnilega/nefnilega kemur ... carpenter.DEF comes namely/namely comes ...	10	71.4%	4	28.6%	14
d. Hún spilar líka/líka spilar vel ... she plays also/also plays well ...	10	52.6%	9	47.4%	19
e. Við stoppum kannski/kannski stoppum ... we stop perhaps/perhaps stop	11	57.9%	8	42.1%	19
Total:	47	61.8%	29	38.2%	76

15 We use the term “accepted/selected” here and in similar contexts because the tests typically involved selection between alternatives rather than absolute evaluation, as described above.

TABLE 8 Selection of V₂ and V₃ alternatives in subject-initial main clauses containing adverbs that normally disallow V₃-order in Icelandic.

	V ₂		V ₃		Total N
	N	%	N	%	
a. Kristín talar stundum/stundum talar ... Kristin speaks sometimes/sometimes speaks ...	12	63.2%	7	36.8%	19
b. Hún fer oft/oft fer til Íslands she goes often/often goes to Iceland	20	80.0%	5	20.0%	25
c. Hann vinnur alltaf/alltaf vinnur ... he works always/always works	35	94.6%	2	5.4%	37
Total:	67	82.7%	14	17.3%	81

Given this, we would expect that it would be rather difficult to find examples of a S-Adv-Vf order in our spontaneous speech samples: The V₂-order should be much more common in this context since it heavily is preferred, except with certain V₃-adverbs such as *líka* ‘also’ and *kannski* ‘maybe, perhaps’. This is borne out: We only found one example of a S-Adv-Vf order involving the adverb *aldrei* ‘never’ in our sample and none with *stundum* ‘sometimes’, *sjaldan* ‘rarely’, *alltaf* ‘always’ or *oft* ‘frequently’ but some with *líka* ‘also’ and *kannski* ‘maybe, perhaps’:¹⁶

- (20) a. *hún aldri sá* *mosquito* (male, 71)
she never saw mosquito
‘she never saw a mosquito’
- b. *ég líka tók* [...] *Lexúr á háskólanum* (male, 25)
I also took [...] Lessons on university.DEF
‘I also took lessons at the university’
- c. *hún kannski skildi það* (female, 77)
she perhaps understood it
- d. *hann kannski skilur eitthvað* (female, 79)
he perhaps understand something

16 The size of the spontaneous speech corpus for each participant varied considerably, a typical range being 500–3,000 words. It is probably “skewed” in the sense that the more proficient speakers were likely to produce a larger sample.

We conclude, then, that Hypothesis Ba is confirmed.

According to Hypothesis Bb, a the V₃-order is less likely to be accepted by speakers of NAMIce if the finite verb is an auxiliary than if it is a lexical verb. The examples in Table 9 contain an auxiliary whereas the ones in Table 8 above only contain a lexical verb. All the adverbs involved are non-V₃-adverbs in IceIce.¹⁷

As Table 9 shows, the V₃-order is only accepted/selected in 12% of the cases when the finite verb is an auxiliary but it is accepted/selected in 17.3% of the cases when the finite verb is a lexical verb, as shown in Table 8. We can conclude, then, that Hypothesis Bb is supported by our data to some extent.

TABLE 9 Selection of V₂ and V₃ alternatives in subject-initial main clauses with auxiliaries.

	V ₂		V ₃		Total
	N	%	N	%	N
a. Maðurinn hefur sjaldan/sjaldan hefur veitt ... man.DEF has seldom/seldom has caught ...	14	77.8%	4	22.2%	18
b. Þórður hefur aldrei/aldrei hefur lesið ... Thordur has never/never has read ...	28	90.3%	3	9.7%	31
d. Hún hefur ekki/ekki hefur farið ... she has not/not has gone ...	14	87.5%	2	12.5%	16
e. Maðurinn er ekki/ekki er búinn með ... man.DEF is not/not is done with ...	14	93.3%	1	6.7%	15
f. Stelpa hefur ekki/ekki hefur farið ... girl.DEF has not/not has gone ...	13	92.9%	1	7.1%	14
g. Strákurinn er ekki/ekki er farinn ... boy.DEF is not/not is gone ...	12	85.7%	2	14.3%	14
Total:	95	88.0%	13	12.0%	108

17 Although the V₂-order S-Aux-Adv is preferred in English for all the adverbs corresponding to the Icelandic ones in Table 9, the V₃-order is only ruled out for the negation, cf. e.g. *He has never ...* vs. *He never has ...* and *He has not ...* vs. **He not has ...*. This difference does not seem to be reflected in a consistent way in Table 9.

4.3.3 Hypothesis C

Hypothesis C:

The two kinds of possible violations of the V₂-constraint described here, namely the topic-initial XP-S-Vf and the subject-initial S-Adv-Vf structures, need not go hand in hand because the two types of V₂-orders violated may have different syntactic sources (V-to-I vs. V-to-C).

The data already discussed in sections 4.3.1 and 4.3.2 support this hypothesis: Violations of the V₂-constraint in topic-initial structures are much more common than violations of the V₂-constraint in subject-initial clauses. V₃-orders were accepted/selected in 37.7% of the cases in topicalization structures (see Table 5), in 17.4% of the cases in subject-first structures where the finite verb was a lexical verb (Table 8) and only in 12.4% of the cases in subject-first structures when the finite verb was an auxiliary (Table 9). Given the results of previous research on heritage languages, this does not come as a big surprise. A similar conclusion is reached by Eide and Hjelde (2015) in their discussion of V₂ in heritage Norwegian, for instance. It has also been noted in the literature that complex structures that are supposed to crucially involve the so-called CP-domain tend to present difficulties for speakers of heritage languages (Benmamoun *et al.*, 2010, section 4.4). So if topic-initial structures involve the CP-domain but subject-initial structures in Icelandic do not necessarily do so, then the observed difference is predicted.

4.3.4 Testing Hypothesis D

Hypothesis D:

Early and extensive exposure to English during the acquisition period may influence the acquisition of V₂-order in a negative way because V₃-order is common in English.

The following background questions are particularly relevant in this connection (see also 3 above):

- At what age were you first exposed to English?
1 = as an adult, 2 = as a teenager, 3 = in school, 4 = from birth
- To what extent was English used at home when you were growing up?
1 = never, 2 = rarely, 3 = occasionally, 4 = daily

As shown in Table 2 above, almost half of our subjects were first exposed to English from birth and the other half when they went to school. Table 3 shows

that English was used “daily” at home in the childhood of 65.5% of the subjects and “sometimes” in the childhood of 27.6% of them.

As discussed in sections 4.3.1 and 4.3.2 above, the most striking violations of the V₂-constraint in NAmIce involve topicalization structures. Here the V₃-order is normally impossible in IceIce (see Table 6) whereas it is the rule in English and it is accepted/selected by our NAmIce subjects in almost 38% of the cases and frequently found in our spontaneous speech data from NAmIce. Hence influence of early and/or extensive exposure to English would be more likely to correlate with acceptance/selection of V₃-orders in topicalization structures than in other types of data under discussion. The coding of the responses to the topicalization examples listed in Table 5 above was done as follows:

- 1 = V₃ rejected (i.e., only V₂ selected)
- 2 = both variants selected
- 3 = V₃ selected

We then computed the “mean evaluation” of each speaker for the topicalization examples (s)he evaluated and computed the correlation of this evaluation with the background variables in question, coded as just described. As shown in Table 10, there was a weak correlation between the acceptance of V₃-orders in the topicalization examples and the background variables and it is statistically significant at the $p < .05$ level.¹⁸

TABLE 10 *Correlation between exposure to English and acceptance/selection of V₃ in topicalization.*

Background variable:	Correlation (r) with acceptance/selection of V ₃ (Pearson Correlation)	Significance (p)
Earliest exposure to English	.277	.040
Use of English at home in childhood	.263	.051

¹⁸ As shown in Table 5, the number of speakers evaluating each example sentence varied considerably, but it was typically around 15.

This means, then, that speakers who were exposed to English from infancy were somewhat more likely to choose the V_3 option than those who first encountered it when they went to school and the difference was statistically significant. Second, more frequent use of English during the speakers' childhood made their choice of the V_3 -alternative in topicalization structures significantly more likely.

4.3.5 Testing Hypothesis E

Hypothesis E:

Limited use of and exposure to Icelandic, both at home and outside the home, will weaken the V_2 -constraint.

We expected that answers to several background questions would bear on this issue, especially the following:

(21) Yes/No questions:

- a. Was your confirmation preparation in Icelandic?
- b. Have you taken any courses in Icelandic?

(22) Multiple choice questions:

- a. Have you ever been to Iceland? If so, how often (once, twice, three times or more)?
- b. How often did you use Icelandic last year (never, a few times, a few times a month, a few times a week, daily)?
- c. Do you read books or magazines in Icelandic? If so, how often (rarely, a few times, daily)?
- d. Do you follow news from Iceland in Icelandic, e.g. on the Internet? If so, how often (rarely, a few times, daily)?
- e. Do you listen to Icelandic radio or TV, e.g. on the Internet? If so, how often (rarely, a few times, daily)?

Although "positive" answers to all of these questions made it somewhat less likely that the subjects would accept/select V_3 -orders in the topicalization sentences discussed in previous sections, the correlation was typically weak and statistically significant only in case of the last question (How often do you listen to Icelandic radio or TV?). This is shown in Table 11, where the background variable questions have been ordered according to the strength of the correlation.

TABLE 11 *Correlation between use of and exposure to Icelandic after childhood and acceptance/selection of V₃ in topicalization.*

Background variable	Correlation (r) with acceptance/selection of V ₃ (Pearson Correlation)	Significance (p)
Listening to Icelandic on radio or TV (frequency)	-.369	.022
Courses taken in Icelandic (yes/no)	-.219	.105
Following news from Iceland in Icelandic (frequency)	-.197	.150
Visits to Iceland (frequency)	-.183	.186
Confirmation preparation in Icelandic (yes/no)	-.137	.324
Icelandic spoken last year (frequency)	-.081	.562
Reading of books or magazines in Icelandic (frequency)	-.066	.633

The figures in the table are to be interpreted as follows: The more often the speakers listen to Icelandic on radio or TV, the less likely they are to accept V₃-order in topicalization structures.¹⁹ Similarly, the speakers who had taken some sort of a course in Icelandic were somewhat less likely to accept V₃-order in topicalization, although the correlation is not significant.²⁰ In general, however, it is somewhat surprising that the exposure to and use of Icelandic as measured by the variables listed in Table 11 does not have greater influence on violations of the V₃-constraint in topicalization structures. So there is very little evidence to support Hypothesis E.

19 The correlation is negative because of the way the answers were coded. Acceptance/selection of V₃ was coded as 3, V₂ as 1 and both options as 2. Never listens to news = 1, rarely = 2, occasionally = 3 and daily = 4.

20 When the speakers were asked about the nature of the courses they had taken, it turned out that these were mostly short informal courses that the speakers had taken to “brush up on their Icelandic” as it were. It seems that the speakers may often have taken such courses as a preparation for going to Iceland for a visit, witness the fact that there is considerable and statistically significant correlation between this course-taking and visits to Iceland ($r = .411$, $p = .002$).

4.4 *Discussion*

The results discussed in the preceding sections can be summarized as follows:

First, as predicted by Hypothesis A, speakers of NAMIce frequently accept/select and produce violations of the V₂-constraint in topicalization structures, i.e. XP-S-Vf. The average selection rate is almost 38% (cf. Table 5). Since this type of word order is virtually non-existent in IceIce (see also Table 6) but the rule in English, this points to English influence.

Second, acceptance/selection and production of V₃-order in subject-first constructions is most common in cases where the adverb is a potential V₃-adverb in IceIce (cf. Hypothesis Ba). The average selection rate is around 38% (cf. Table 7). When the adverb is not a possible V₃-adverb in IceIce, the selection rate drops to about 17% (cf. Table 8). This suggests that many speakers of NAMIce have an intuition about which adverbs are possible V₃-adverbs in Icelandic. But the fact that the selection rate of the V₃-order drops even further (down to 12%) in constructions where the V₂-option would be the preferred or even the only possible variant in the corresponding English examples, namely when the finite verb is an auxiliary (cf. Table 9), suggests influence from English (cf. Hypothesis Bb).

Third, violations of the V₂-constraint are more common in topic-initial than in subject-initial constructions in NAMIce. This suggests a different account of the constraint in the two types of construction, as predicted by Hypothesis C. Note also that this fact militates against the suggestion that violations of the V₂-constraint in NAMIce in general are the result of an overgeneralization of autochthonous Icelandic V₃ since V₃ is virtually non-existent in topicalization structures in IceIce.

Fourth, while there is a statistically significant (albeit weak) relationship between early and extensive exposure of English to speakers of NAMIce in their childhood and acceptance/selection of V₃-orders in topicalization structures (cf. Table 10 and Hypothesis D), there is little evidence that limited use of or limited exposure to Icelandic later in life has the same effect (cf. Table 11 and Hypothesis E). This suggests that violations of the V₂-constraint in NAMIce are somewhat more likely to be the result of incomplete acquisition than of language attrition. On the other hand, we also find support for the attrition alternative in the fact that those speakers who frequently listen to Icelandic radio and TV are significantly less likely to accept V₂-violations in topicalization structures than those who do not (cf. Table 11). The information collected with the background variables does therefore not provide conclusive evidence about the potential link between V₂-violations and either incomplete acquisition or language acquisition. They might, nonetheless, point to the importance of input quantity, regardless of the timeframe for it.

5 Conclusion

In our discussion we have used the term “V2-constraint” rather loosely and in a general sense, but we argued that it actually appears in two guises (see also the discussion in Eide and Hjelde 2015): It is more vulnerable in topicalization structures in NAMIce and more robust in subject-initial clauses, which suggests that these two clause types should be described (derived) in different ways in the syntax.

Interestingly, however, almost no speakers seem to have a consistently English topicalization grammar, i.e. consistently selecting or using V3-order in such constructions (having no V-to-C rule according to common characterization of such structures). There is considerable intra-speaker variation although some speakers never select the V3-order in topicalization structures (see the discussion around Table 4). Intra-speaker variation is also found with respect to the selection of V2 vs. V3 order in subject-initial clauses. This can be deduced from Table 8, for instance, where the speakers of NAMIce accept the V3-order to a varying degree for the examples tested whereas the V3-order would be ungrammatical for all these examples in IceIce.

Finally, we have argued that there is slightly more evidence for the proposal that violations of the V2-constraint in topicalization structures in NAMIce are due to incomplete acquisition than to language attrition (see the discussion in sections 4.3.4, 4.3.5 and 4.4). It must be admitted, however, that the evidence for this conclusion is not very strong. Detailed investigation of longitudinal data would help decide this issue. Some material of this kind exists, e.g. the collection of letters discussed by Björnsdóttir (2014). These letters were written by a female North American Icelander, Jóna, over a period of some 70 years. Judging from the first letters, she was a fluent speaker of native-like Icelandic in the beginning but showed some signs of language attrition later on, e.g. with respect to case marking and agreement. Björnsdóttir discusses examples of V3-order in subject-initial constructions (i.e. the S-Adv-Vf-type) in these letters and reports that although there is apparently some increase over time of such examples, they virtually all involve possible V3-adverbs in IceIce and would thus be consistent with native Icelandic grammar. Björnsdóttir also reports that Jóna uses topicalization in her letters (2014:13) but does not comment specifically on word order in such constructions. We can thus look forward to more research on this kind of material, where data can be mapped to different points in the speakers’ lifespan. Still, the evidence presented in this paper might be considered to point away from a simple dichotomy of incomplete acquisition and attrition, and rather towards a more complex interplay of predictors.

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