# Verb movement in Faroese: New perspectives on an old question

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### **Abstract**

The question of whether verb movement out of the VP in non-V2 contexts ("V-to-I") is still part of the grammar of contemporary Faroese is a matter of some contention in the literature. There is a degree of consensus that some speakers do not allow V-to-I; however there is considerable debate whether there are other speakers who have it as one option. In this paper we review some of the background to this question, focussing on its theoretical significance; we then present some recent empirical work and discuss its potential and its limitations in addressing the questions raised by this type of variable data.

# 1. Introduction: verb placement in subordinate clauses in Faroese

To most syntacticians, the most salient question about Modern Faroese syntax is whether or not it has completed a change from a grammar in which the verb moves out of the VP in all clauses ("V-to-I") to one in which the verb remains in a low position in the absence of verb second (V2). This question is of particular interest both because of the correlation that has been claimed between this kind of verb movement and inflectional morphology—a claim for which Faroese is a crucial data point—and because similar changes are known to have taken place in the history of the Mainland Scandinavian languages and English, but for all these other cases we have only the necessarily limited written records to work from.

Since Emonds 1978 and the development of his analysis in Pollock 1989, it has widely been assumed that languages may differ in whether the verb moves from VP to Infl (or some other functional head lower than C but higher than Neg) in overt syntax. Thus in English the (main) verb remains within the VP, while in French it moves to Infl, as shown by its position relative to the negative marker *pas*, and also certain VP-initial adverbs. A topic of much theorising in the last 15 years has been the nature of this parameter, and how it is "set."

A familiar observation relating to this question is that movement of the verb out of VP correlates with "rich" inflectional morphology. Most commonly, the relevant morphology has been taken to be number and person agreement (with

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various proposals concerning the correct definition of "rich" agreement (see e.g. Rohrbacher 1992, Roberts 1992, Vikner 1995)); more recently, Bobaljik 2002, Bobaljik and Thráinsson 1998 have proposed that the relevant question is whether the morphology forces the existence of two distinct functional heads—one for Tense and one for (Subject) agreement.

Accounts of the relation between overt morphology and overt verb movement to Infl have also differed on the question of the "strength" of the correlation. These differences in turn motivate (or are motivated by) different theories concerning the nature of the parameter involved, and how it can be set. At one extreme, Rohrbacher 1992, for example, proposes that the relation between "richness" of agreement morphology and Verb-Neg order is a biconditional:

- (1) rich agreement morphology  $\leftrightarrow$  V-to-I
- (2) The Paradigm-Verb Raising Correlate: A language has V to I raising if and only if in at least one number of one tense of the regular verb paradigm(s), the person features 1st and 2nd are both distinctively marked.

More recently, Roberts 1999 proposed a weaker version:

# $(3) \qquad \text{rich agreement morphology} \rightarrow \text{V-to-I}$

The idea here is that the agreement morphology is a *trigger* for acquiring the (marked) value of the parameter that results in the overt movement to Infl. Even if this morphological trigger is absent, however, a child could still acquire the same value of the parameter if there is enough syntactic evidence for it. An unappealing feature of this proposal, however, is that the relation of morphology to verb-movement becomes a completely arbitrary one. That is, it is unclear why the trigger for verb movement should be rich agreement morphology, rather than, for example, impoverished agreement morphology.

The theory proposed in Bobaljik and Thráinsson 1998, Bobaljik 2002 also relies on a unidirectional implication:

### (4) distinct morphemes for agreement and tense $\rightarrow$ V-to-I

Here the essential idea is that the verb movement out of VP occurs necessarily if distinct Agreement and Tense heads are present in the structure. If there are distinct morphemes, there must be two syntactic heads (under the authors' assumptions, essentially those of Distributed Morphology), hence the left-to-right implication; but given the possibility of phonologically null morphemes, these heads may be present without overt morphological realisation, hence the absence of the right-to-left implication.

Alexiadou and Fanselow 2000 have weakened the linkage between morphology and syntax still further than either Roberts or Bobaljik & Thráinsson. They claim essentially that the association of V-Neg order with rich (suffixal) agreement is merely the result of a conspiracy of historical contingencies. In rough summary: suffixal verbal agreement arises through the reinterpretation of a subject pronoun cliticized to a verb. Hence the *genesis* of a rich agreement system is logically

dependent on the leftward movement of the verb. So at that historical moment almost the same one-way implication as (3) holds:

### (5) suffixal agreement morphology $\rightarrow$ V-to-I

But because this explanation, unlike that of Roberts, is in terms of the historical origins of verbal agreement, there is no immediate source of explanation for the differential maintenance of the V-Neg order in subsequent generations depending on the maintenance of the agreement morphology. A priori, as they acknowledge, it should be as easy (or difficult) to lose the verb movement to Infl in a system with rich morphological agreement as in a system with none.

Bobaljik 2002 discusses the evidence gathered by a number of researchers that there exist dialects of Swedish and Norwegian which share the inflectional paradigm of the standard language but which still allow verb movement to Infl—counterexamples therefore to the existence of a biconditional. He further makes the point that although loss of morphology in Danish and English correlates with their loss of V-to-I, in both cases there appears to be a significant time-lag. And finally, to the extent that we have evidence that some Faroese speakers show variation in the placement of the verb but do not show matching variation in their morphology, this language also does not support the biconditional (but remains consistent with the one-way implication he proposes).

Of course, if verb movement to Infl is a grammatical option regardless of morphology (Roberts, Alexiadou & Fanselow), or of overt morphology (Bobaljik & Thráinsson), the fact that this option is typically lost at some point after a morphological paradigm has changed needs to be explained. Essentially, the question that has to be asked is: How does the evidence for verb movement to Infl become so poor that subsequent generations hypothesise instead a grammar with no such overt movement? Alexiadou & Fanselow propose that an Adv-V order arising from Stylistic Fronting of the adverb is reinterpreted by children who have lost Stylistic Fronting from their grammar. Further, it is claimed that Stylistic Fronting depends on pro-drop, which in turn depends on richness of agreement morphology. Roberts on the other hand makes a particular proposal for English that relies crucially on the status of English modals and axuiliary *do*; as far as we are aware there is no natural extension to the Scandinavian languages, so an alternative explanation must be sought for these cases.

One difference between the Scandinavian languages and English that may be crucial in this regard is that of course the former family of languages is still verb-second (V2). That is, in main clauses (with the exception of yes-no questions and certain other verb-initial cases) the finite verb follows an initial XP, whether the subject or some other element. For the moment at least we adopt the analysis due originally to den Besten 1983 in assuming that this order arises from movement of the finite verb to Comp (and some XP to Spec,CP), and we also follow him

<sup>&</sup>lt;sup>1</sup>Faroese appears to pose a problem for this analysis, since the loss of V-Adv orders is taking (or has taken) place although stylistic fronting appears to remain an option (Barnes 1987, Thráinsson et al. 2004).

in assuming that both of these movements take place even in subject-initial main clauses.

The modern Mainland Scandinavian languages, then, have verb movement to Comp but not verb movement to Infl, while Icelandic, for example, has both.<sup>2</sup> As a result, the finite verb precedes negation in main clauses in *all* the Scandinavian languages, since the finite verb is in Comp. With respect to Roberts' view of the triggering of the "marked" value of the parameter forcing V-to-I, this means that a learner cannot use data demonstrating the existence of V-to-C as evidence "triggering" the postulation of the marked value of the parameter forcing V-to-I movement.<sup>3</sup> It is perhaps worth noting that the possibility of V-to-C in the absence of independent V-to-I poses a problem for the Alexiadou & Fanselow account of the origin of the association between verbal agreement morphology and V-to-I. According to their claim, suffixal agreement results from a reinterpretation of one or the other of the structures in (6)–(7).

- (6) [Infl verb] [vP subject ...]
- (7) [Comp verb] [IP subject ...]

Thus, they say, "it becomes clear why a correlation such as [(5)] holds—not because of a principle of UG, but because rich suffixal agreement could not arise in a language without verb movement." The problem is that this argument relies on the assumption that the kind of "verb movement" in (7) guarantees the independent existence in the language of the kind of verb movement in (6): that is, that movement of the finite verb to Comp implies the independent existence of V-to-I. Since we know that this is not the case (mainland Scandinavian has V-to-C but not V-to-I, and Faroese is losing (or has lost) the latter but also retained the former), their assumptions actually do not rule out the genesis of a language with V-to-Comp, rich morphological agreement, but no V-to-I.

As we have just seen, the existence of V-to-I in a V2 language can only be detected in subordinate clauses. However, since at least Emonds 1969, it has become abundantly clear that the distinction between main and subordinate clauses is not as straightforward as it seems at first glance. Exceptional cases exists in both directions. On the one hand, there are clauses with subordinate clause syntax that can appear without any embedding context: (8) is a typical example from Faroese, functioning as an independent clause, yet exhibiting not only a comple-

<sup>&</sup>lt;sup>2</sup>An alternative formulation is that in Mainland Scandinavian V-to-I is only possible when the verb moves on to Comp; the choice between these formulations must be a matter of theory, as there apppears no empirical distinction

<sup>&</sup>lt;sup>3</sup>In Roberts (1999) it is argued that the loss of V-to-I in English came about because the marked value of the parameter was not "expressed" (there was no evidence for it) in sentences containing modals and auxiliary *do*; this, it is claimed, must have "undermined the syntactic expression of the marked parameter value" enough for learners to fail to acquire it. But note that in the Scandinavian languages at least *no* main (V2) clause expresses the parameter (since V-to-(Infl-to)Comp does not imply independent V-to-I). It seems then guaranteed that such languages will lose V-to-I if they lose the morphological trigger of rich agreement. Under the Alexiadou & Fanselow account, even this would not help them; thus Icelandic (if it really does have both V-to-I and V-to-I-to-C) is the real mystery for acquisition under this combination of assumptions.

mentiser but the negative-before-verb (Neg-V) order that is restricted to subordinate clauses in this language.

(8) At hann ikki skammaðist!

that he NEG shames

He should be ashamed of himself!

On the other, and more relevantly here, there are clauses which appear to be subordinated semantically and syntactically, but which exhibit some aspect of main clause syntax. The classic example of this in Germanic is of course "embedded verb second," as in the German example (9), from Vikner 1995, which coexists with the more straightforward case of subordination in (10), with its complementiser and verb-final order:

- (9) Sie sagte, wir sollten keine Bücher kaufen. she said we should no books buy She said that we should not buy any books.
- (10) Sie sagte, dass wir keine Bücher kaufen sollten. she said that we no books buy should She said that we should not buy any books.

As has been much discussed in the literature, Icelandic and the Mainland Scandinavian languages appear to differ also with respect to embedded verb second: the former former appears to allow this phenomenon in a wider range of environments than the latter, which like German allow it only after a restricted set of verbs. typically referred to as "bridge verbs" in the literature, due to their questionable assimilation to verbs that allow long-distance extraction from their complements. It is a matter of some contention as to whether a unified characterisation can be given of these verbs as a natural class. Iatridou and Kroch 1992 argue that the crucial distinction is between verbs that select a complementiser with semantic content and those that do not. In particular, these authors assume that "inherently negative" verbs such as doubt and deny select a negative complementiser (as do negated verbs), and that factive verbs such as regret also select a distinct complementiser (Hegarty 1992). It is not obvious, however, exactly how this account can extend to explain the reduced acceptability (in Swedish at least) when the matrix verb is either modalised or questioned (Andersson 1975). Vikner 1995:70–72 explicitly gives up on the possibility of establishing a generalization, hence a fortiori a syntactic explanation, arguing that the list of verbs that allows V2 in their complements varies from language to language. Wechsler 1991 argues that the possibility of embedded V2 depends on the illocutionary force encoded by the clause; this seems the most promising line to follow, but it does raise interesting questions about how it is to be cashed out syntactically, given the effect of higher modalization or negation.

In Icelandic, on the other hand, it appears that V2 can be found in a relatively wide variety of subordinate clauses. Whether V2 is fully grammatical in the full range of subordinate clauses, in particular in embedded questions and relative

clauses, is contentious, but there seems to be no dispute that it is less limited than it is in the mainland Scandinavian languages. If this is so, we must assume that the semantico-pragmatic force that is associated with V2 in other languages must somehow be dissociated from it in Icelandic; one possible way of implementing this idea would be to propose that V2 may involve different functional heads, and that in Icelandic the relevant head encodes no illocutionary force.

### 2. Faroese: in transition?

As stated in the introduction, Faroese has attracted a good deal of attention in the syntactic literature because it appears to be undergoing —or possibly to have recently completed—the syntactic change that the mainland Scandinavian languages completed centuries ago: the loss of V-to-I (Jonas 1996, Bobaljik and Thráinsson 1998, Thráinsson et al. 2004). That is, there are no speakers of the language who consistently produce the "Icelandic" order in subordinate (non-V2) clauses, but there do appear to be speakers who variably produce this order (and judge it to be grammatical), as well as speakers who produce only the order found in the standard Mainland Scandinavian languages. What is unclear is what the status of the order is for speakers who appear to exhibit variable behaviour.

A related question is whether Faroese is like Icelandic in exhibiting general embedded V2, or whether it (now?) is like the mainland Scandinavian languages in showing only restricted embedded V2. This question has received much less attention in the literature, although Thráinsson et al. 2004 describe Faroese as having only restricted embedded V2 (without using exactly this terminology; they state that fronting of non-subject constituents is "easiest in *at* complements, although we apparently have a difference between the complements of bridge verbs and other verbs here too with bridge verb complements again being more similar to main clauses [...] Fronting in other types of embedded clauses is usually impossible" (p. 297).

# 3. Methods for looking at variable and gradient data

The actual occurrence of embedded V2 is variable in all the mainland Scandinavian languages (and by hypothesis also in Icelandic). Nevertheless, one would expect to be able to discover the grammaticality of V2 in different contexts by investigating grammaticality judgments. However, this is not a completely straightforward task because the judgments of acceptability on embedded V2 tend to be *gradient*, and also, at least in Icelandic, rather *variable* (see for example Vikner 1995:p. 160, fn 7). Similarly, the work of Thráinsson (see in particular Thráinsson 2003) and Petersen 2000 has shown that judgments on V-to-I in Faroese seem to be gradient and/or variable. Further, while we know that there is both inter- and intraspeaker variation in the production of V-to-I, we do not as yet know how this variation in production relates to judgment data, and—ultimately the question that we would like to resolve—to the underlying grammar or grammars. Given these considerations, as much as possible we would want to consider data both from

production and from judgment tasks that are specifically designed to take account of gradience.

# 3.1. Comparison of frequency in text

There is currently no parsed corpus of Faroese; however a certain amount of work on the placement of the verb in subordinate clauses has been done on the basis of written texts.

## 3.1.1. Word order in different types of clauses in Faroese

A first step in investigating the question of whether Faroese has V-to-I and/or embedded V2 is to count the relative proportions of V-Neg and Neg-V orders in subordinate clauses. Clearly, one would want to do this for as many speakers as possible. Höskuldur Thráinsson has done this for a number of texts produced by different speakers born in the 19th and 20th centuries. A summary of some of his data is given in Table 1.

Clause type	Number of authors, grouped by date of birth										
	3, pre-1900			5, 1900–39			3, 1940–50				
	V-Adv		Adv-V	V-Adv		Adv-V	V-Adv		Adv-V		
+Bridge	18	(62%)	11	29	(97%)	1	12	(80%)	3		
-Bridge	4	(33%)	8	10	(45%)	12	2	(22%)	7		
Adv clause	17	(55%)	14	36	(59%)	25	6	(21%)	23		
Indirect qu	3	(60%)	2	3	(38%)	5	0	(0%)	2		
Relative	1	(14%)	6	5	(45%)	6	0	(0%)	7		

Table 1: Frequency of different orders of finite verb and adverb in different types of embedded clauses in some 19th & 20th century texts. From Thráinsson 2003:p. 176

If we consider the youngest speakers represented (those born between 1940 and 1950), it seems that V-Adv order is impossible in relative clauses and indirect questions, although the Ns are so small (there are a total of 2 and 7 clauses of these types in all the texts studied in this period) that we cannot be sure whether this order is impossible or merely rare. The V-Adv order is most frequent in the complements to bridge verbs (80% of the relevant sentences have this order) but occurs also in the complements to nonbridge verbs and adverbial clauses at a much reduced—but still not negligible—frequency (22% and 21%). A first hypothesis about these younger speakers, then, is that they may still have general V2 but have lost V-to-I.

Together with some students at Edinburgh, the first author did a similar count of word orders in different clause types for a text produced by a Faroese speaker born in 1941.<sup>4</sup> The results are summarised in Table 2. For various reasons the

<sup>&</sup>lt;sup>4</sup>Harry Potter og Vitramannasteinurin (Harry Potter and the Philosopher's Stone), translation by Gunnar Hoydal, Bókadeild Føroya Lærarafelags 2000, Chapters 1–9, 11–13, approx 53,500 words.

only "adverbial" considered was the negative *ikki*. We do not know exactly which verbs Thráinsson categorised as bridge and nonbridge; we classed *halda* (think), *hugsa* (think), *kenna* (feel), *siga* (say), *siggja* (see), *vita* (know), *gloyma* (forget), *goyggja* (shout), *minna* (remind), *skriva* (write), *vóna* (hope) as bridge verbs, and *ansa eftir* (ensure), *iðra seg um* (regret), *tryggja sær* (make sure), *kæra seg um* (complain), *óttast fyri* (fear), and *visa* (show) as nonbridge.<sup>5</sup>

Type of clause	V	<sup>7</sup> -Neg	Neg-V		
+bridge v comp	21	(75%)	7		
-bridge v comp	2	(33%)	4		
Adj comp	1	(14%)	6		
Extent	8	(80%)	2		
Adv clause	1	(6%)	15		
Ind qu	0	(0%)	2		
Relative	0	(0%)	27		
Not categorised	1	(25%)	3		
Total	34	(34%)	66		

Table 2: V-Neg and Neg-V order in subordinate clauses in *Harry Potter og Vitra-mannasteinurin*, excluding *tí* (*'because'*) clauses

The data from this text given in Table 2 look broadly similar to those from the youngest group of Thráinsson's authors. The rate of the V-Neg order in adverbial clauses for this writer is lower than the comparable rate for the V-Adv order in Thráinsson's youngest group, but it should be noted that we excluded from this table adverbial clauses introduced by ti ('since, because') as we suspected that such clauses might differ from other adverbial clauses in heavily favoring main clause order (there were 8 such cases in our data, all with the V-Neg order); if Thráinsson included these cases with other adverbial clauses that might well have increased the frequency of this order in his adverbial class.

We might then want to conclude that this writer does not have general V2 in embedded clauses (although he does seem to tolerate it in nonbridge verb complement clauses to a nonnegligible extent), and does not have V-to-I at all. That is to say, it looks as though the grammar of this writer, with respect to these phenom-

Although these do not allow "CP-recursion" in Danish (Iatridou and Kroch 1992), they do in Frisian (de Haan and Weerman 1986), and their status in English is somewhat questionable (Heycock 2006, *contra* Hoeksema and Napoli 1993). If the complementiser *at* is absent, the V-Neg word order is obligatory (Zakaris Hansen, personal communication), but only 1 out of the 8 cass of the V-Neg order in our data is of this type.

<sup>&</sup>lt;sup>5</sup>The "extent clauses" cited here are clauses following so+Adjective/Adverb, as in *He was so tall that he could not get in through the door*.

Trøini vóru so víð, at hann sá ikki Snape. the-trees were so thick that he saw not Snape
 The trees were so thick that he did not see Snape.

ena, is identical to the grammar of a speaker of one of the mainland Scandinavian languages. What seems surprising though in this scenario is the very high rate of V2 in bridge verb complements: 75% for this writer, 80% for Thráinsson's youngest group. Is this really the same as mainland Scandinavian languages?

### 3.1.2. Comparison with Danish

In order to investigate this, we looked at a Danish translation of the same text,<sup>6</sup> in order to maximize the similarity of the contexts. The Danish results are given alongside the Faroese ones that we have just seen, in Table 3.

Type of clause	Faroese				Danish			
	V-Neg		Neg-V	V-Neg		Neg-V		
+bridge v comp	21	(75%)	7	0	(0%)	19		
-bridge v comp	2 (33%)		4	0 (0%)		4		
Adj comp	1	(14%)	6	0	(0%)	5		
Extent	8	(80%)	2	0	(0%)	4		
Adv clause	1	(6%)	15	0	(0%)	7		
Ind qu	0	(0%)	2	0	(0%)	1		
Relative	0	(0%)	27	0	(0%)	18		
Not categorised	1	(25%)	3	0	(0%)	4		
Total	34	(34%)	66	0	(0%)	62		

Table 3: V-Neg and Neg-V order in subordinate clauses, excluding *because* clauses, in Faroese and Danish

What Table 3 shows clearly is that embedded V2 is simply not used by the Danish writer. So even though we know from judgment data and the reports of Danish linguists that embedded V2 is possible after bridge verbs, these data at least suggest that (in the written language) it may be much less common than it is in Faroese—if it is V2 that is responsible for the V-Neg orders in Faroese.

# 3.1.3. Getting an independent measure for embedded V2

It is of course problematic that in Faroese at least there are two potentially different sources of the V-Neg order in subordinate clauses. So we can't know what proportion of the V-Neg cases are due to embedded V2, and what proportion to V-to-I. It would be nice to have a way of determining the frequency of embedded V2 that does suffer from this confound. One way to attempt this is to look at embedded clauses that begin with some element other than the subject. So, for the

<sup>&</sup>lt;sup>6</sup>Harry Potter og de vises sten, translation by Hanna Lützen. Note that we did not search this text independently, but only looked for the sentences corresponding to the Faroese sentences we had already identified; due to variation in the sentence types used for translation this had the result that we considered fewer Danish examples than Faroese.

same two translations, and also the Icelandic translation<sup>7</sup>, we looked at the first 1,000 clauses to determine the proportion of non-subject initial (NS) main clauses and of non-subject initial subordinate clauses (of different types). The results are given in Table 4. Note that for any other type of clause than the ones given in the table, either there were no data, or there were no instances of non-subject initial clauses. So for example there were no instances of non-subject initial relative clauses. Also note that sentences where the first position is occupied by a quotation were excluded from these counts. Quotations were extremely rare as elements of subordinate clauses; when they occurred in main clauses they were most frequently in first position. As a result, to have included them would have inflated the rate of non-subject initial order in main clauses.

Type of clause		Faroese			Danish		Icelandic		
	NS		S	NS		S	NS		S
Main	101	(18%)	453	109	(19%)	450	97	(17%)	472
+bridge v comp	6	(11%)	51	2	(5%)	42	8	(19%)	34
-bridge v comp	0	(0%)	12	0	(0%)	19	1	(17%)	5

Table 4: Word order in Faroese, Danish (and Icelandic)

Table 4 shows that the Danish and Faroese (and Icelandic) texts are essentially identical in the rate of non-subject initial orders in main clauses. All the languages also allow non-subject initial clauses as the complement to bridge verbs, but they occur at different rates: in the Faroese text the proportion of non-subject initial order in the complements of bridge verbs (again, with caveats about how this class should be defined) was 11%, while in Danish it was only 5% (in Icelandic it is even higher than in Faroese, at 19%). We can use these ratios as a very rough indication of the rate of embedded V2 in such clauses. That is, in main clauses in Faroese we know that nonsubject initial order occurs at a rate of 18%. If all bridge verbs complements were also V2, we would expect—making a simplifying assumption of no interaction—that they would also show a rate of 18% non-subject initial orders. But in fact that order occurs only 11% of the time. So we may derive from this the hypothesis that in the Faroese of this writer embedded V2 occurs in bridge verb complements at a rate of 11/18, or 58%. By the same token, for the Danish writer the rate is 5/19, or 24%.

When we compare these data to the data we have already seen concerning Verb-Neg orders, some interesting questions arise. First, although in Danish the rate of non-subject initial orders leads us to expect that embedded V2 occurs in bridge-verb complements at a rate of 24%, we found no cases at all of V-Neg orders. In Faroese, on the other hand, things go in exactly the other direction: the rate of non-subject initial orders leads us to expect that embedded V2 occurs in bridge-verb complements at a rate of 58%, but we actually found a *higher* rate of V-Neg orders (75%). This provides evidence, then, that some of the instances of

<sup>&</sup>lt;sup>7</sup>Harry Potter og viskustinninn, translation by Helga Haraldsdóttir.

V-Neg found in the complements to bridge verbs in Faroese may in fact be due to V-to-I rather than to embedded V2.

### 3.2. Grammaticality judgments: a pilot study

In an attempt to determine whether grammaticality judgments could provide a different type of evidence concerning the status of V-neg orders in Faroese, the first author conducted a pilot experiment using the Magnitude Estimation methodology described in Bard et al. 1996. Magnitude Estimation is a technique borrowed from psychophysics. Subjects are asked to assess the relative "goodness" of a sequence of sentences—to this extent it is just like other more common methods of obtaining grammaticality judgments. One important difference, however, is that this technique yields data on an interval scale, so that it is possible to subtract the estimate given to an unacceptable sentence from the estimate given to its corresponding acceptable counterpart: the relative magnitude of the number obtained is a direct indication of the speaker's ability to discriminate between acceptable and unacceptable sentences, and therefore a correlate of the strength of preference for the acceptable sentence. So now we can compare relative acceptability and (perceived) degree of unacceptability.

The ME procedure for linguistic acceptability is analogous to the standard procedure used to elicit judgments for physical stimuli. Subjects are required to assign numbers to a series of linguistic stimuli proportional to the degree of acceptability of the stimuli as they perceive it. First, subjects are exposed to a modulus item, to which they assign an arbitrary number. Then, all other stimuli are rated proportional to the modulus; for example, if a sentence is three times as acceptable as the modulus, it receives a number that is three times as large as the modulus number. The obvious difference between ME of physical stimuli (brightness, loudness, etc.) and ME of linguistic stimuli is the lack of an objective metric to serve as the baseline against which to compare speakers' judgments. However, the validity of linguistic ME has been established by showing that ME data are consistent when elicited cross-modally: two groups of subjects judge the same stimuli in two different modalities and the correlation of the resulting data sets is determined. Using this approach, Bard et al. (1996) were able to obtain a high correlation between ME data elicited using numeric values and line lengths as response modalities. Similar results are reported by Cowart (1997).

With respect to the question at issue here, we tested in 9 different conditions, which represent the crossing of two variables each with 3 values. The variables were clause type and relative position of the finite verb and negation. We tested in three different clause types: complement to a bridge verb, complement to a nonbridge verb, and relative. In each of these types there were three different possibilities with respect to negation: no negation at all, negation before the verb, and the verb before negation. This yielded the 9 different conditions, illustrated in (11)–(13):

(11) Gunnar helt, at Julius (ikki) fór (ikki) at siga nei. Gunnar thinks that Julius (NEG) will (NEG) INF say no

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Gunnar thinks that Julius will (not) say no.

- (12) Tey harmast um, at hann (ikki) fekk (ikki) brævið.

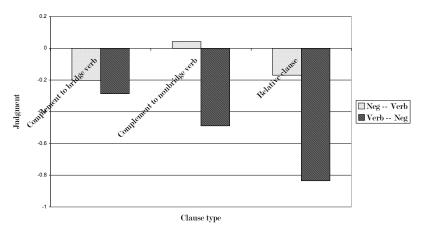
  they regret that he (NEG) got (NEG) the letter

  They regret that he (didn't) got the letter.
- (13) Okkurt hendi hasa náttina, sum han (ikki) hevði (ikki) væntað. something happened that night that he (NEG) had (NEG) expected Something happened that night that he had (not) expected.

A total of 24 native speakers of Faroese did this experiment; 14 from the Tórshavn area and 10 from the southernmost island, Suðuroy. We included the difference in dialect area as a between-subjects variable, as it has been reported in the literature that the southern speakers are more likely to accept V-to-I (Jonas 1996); however, we found no main effect of dialect area (F(1,22) = .041, ns). There was, on the other hand, a significant main effect of clause type (F(1,22) = 27.687, p < .001), of relative placement of negation and verb (F(1,22) = 51.093, p < .001), and a significant interaction between these two (F(1,22) = 12.647, p < .001).

The most perspicuous way to consider the relevant results is to compare, for each clause type (complement to a bridge verb, complement to a nonbridge verb, and relative clause), the "control" case in which there is no negation, with the two possible placements of negation. For each clause type, the following graph shows the difference between the score for the case where there is no negation and the two different possible orders of the verb and negation.

### Comparison to condition with no negation



We know that embedded V2 is always optional. And we also know that all Faroese speakers accept subordinate clauses without V-to-I. We therefore expect

that the Neg-V order should always be as acceptable as the absence of negation (although the added complication of negation might lower the overall acceptability). And that is indeed what we find: in all clause types the differences between the means for the conditions with no negation and those with the Neg-V order—represented in the graph by the pale grey bars—are not significant at the .05 level, as determined by the Scheffé test.

Now we can look at the V-Neg orders. As we know, there are two possible sources for this order: V-to-I and/or embedded V2. If V-to-I is a fully grammatical option, we would expect the judgments on this order to be unaffected by clause type. If this order is possible only because of embedded V2 but there is general embedded V2 as described for Icelandic, we would expect there to be no difference in acceptability between the bridge verb complements and the nonbridge verb complements, but the V-Neg order in relative clauses ought to be degraded. Finally, if the V-Neg order were taken to be possible only because of embedded V2, and there is no free general embedded V2, we would expect that it should be significantly worse than the baseline in the conditions with a nonbridge verb and with a relative clause. What we see is a pattern that approximately conforms to this latter hypothesis. In the condition with a bridge verb there is no significant difference between the V-Neg order, the Neg-V order, and the "baseline" case with no negation at all. But in the condition where the negation occurs in the complement to a nonbridge verb the V-Neg order is judged significantly worse than the baseline and than the Neg-V order (again, both at the .05 level). Finally, in a relative clause the V-Neg order is again judged significantly worse than the baseline and than the Neg-V order—and the V-Neg order in the relative is also significantly worse than the same order after a non-bridge verb.

These findings are largely consistent with the textual data that we considered first, in that they are tend to support the hypothesis that for these contemporary speakers of Faroese, the V-Neg order is interpreted as arising from embedded V2. They also seem to suggest that for these speakers Faroese does not have general embedded V2 (otherwise we would expect the nonbridge verb complements to freely allow the V-Neg order). This is also consistent with the textual data. On the other hand, it is also notable that even the least good case here (the V-Neg order in relative clauses) is judged significantly better than examples like (14), in which there is an unacceptable word order, or even (15), in which an object pronoun has been topicalized within a relative clause.

- (14) Hon rætti hana tallerkin, ið hevði borðinum staðið á leingi. she reached her the plate that had the table stood on long She handed her the plate that had stood on the table for a long time.
- (15) Julius visti nakað um Stefan, sum honum vildi hann fortelja.

  Julius knew something about Stefan that him wanted he tell

  Julius knew something about Stefan that he wanted to tell him.

We do not have space to discuss this further contrast in any detail, but the relative size of the effects can be appreciated by inspecting the graph giving all means of the judgments of all types of sentence that were included, where the last three bars show V-Neg order in relative clauses, nonsubject-initial relative clauses, and sentences with other incorrect word orders and/or morphological errors, respectively.

# 1.00000000 0.50000000 0.50000000 Control where the part of the

Thus again, while it seems that much of the data can be explained by the availability of (restricted) embedded V2, here too there is indirect evidence that some speakers at least still retain V-to-I as an option, and that it is the (marginal) availability of this structure that is responsible for the difference between, for example, the acceptability in relative clauses of V-Neg orders on the one hand and non-subject initial orders on the other.

### 4. Looking ahead

As we hope to have demonstrated, careful analysis of production, and of grammaticality judgment data, particularly when taken in conjunction, can shed new light on the variability related to recent or on-going syntactic changes such as those observed in Faroese. However, a good deal of empirical and theoretical, work remains to be done. We have here relied on the descriptions of Icelandic and Danish found in the literature, but in order to interpret the Faroese data it would be preferable to have comparable data from the other languages. Further, there are many questions even within Faroese concerning other correlates of verb movement, the status of verb movement for pre-literate children, and more. Finally, the confound between embedded V2 and V-to-I raises interesting questions about frequency and

acquisition. We plan to address at least some of these questions in future work.<sup>8</sup>

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<sup>&</sup>lt;sup>8</sup>Together with Zakaris Hansen, of the University of the Faroe Islands, we will be beginning a 3-year project funded by the UK Arts and Humanities Research Council (AHRC) in September 2006. A fuller description of this project can be found at http://www.lel.ed.ac.uk/ heycock/faroese-project.shtml.

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